

Global Longevity Governance Landscape

50 Countries Big Data
Comparative Analysis of
Longevity Progressiveness



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50 Regions Practical Recommendations

Countries with Low HALE and Life Expectancy and High Gap: Recommendations

United States

In death ratio some improvements are observed owing to declining death rates from the three leading causes of death in the country – heart disease, cancer and stroke. But in recent years, in United States costs of healthcare provision have started to rise much more quickly with greater use of modern technological medicine. While spending is highest, the United States ranks not in the top in the world for its levels of health care. So, first of all, in order to improve HALE government should improve health insurance for poor population as there is big income inequality and reduce high administrative costs for cost efficiency. The government should focus on medical advances, some improvements in lifestyle, and screening and diagnosis.

Estonia

Estonia shows the trend of increase in HALE. Estonia implements e-health solutions but digital tools should not increase existing health inequalities. Rather, they should increase equity. One way to do this is to use health data for policy making.

Iran

The health system is one of the most complex systems with many variables and uncertainties. The management of this system needs trained managers. One of the current shortcomings is lack of those specifically trained for this purpose. There is all high income inequality in the country. Government should improve access in healthcare coverage for the families with a low income.

Turkey

Turkey faces a health care system inefficiencies. Infant mortality rate is relatively high and not all population had health insurance, resulting in unequal healthcare access among different population groups. It is need to improve access for high-quality healthcare services and target the main causes of death through government initiatives.

United Arab Emirates

As residents have high HALE than non-residents in the country it is needed to enhance the health of individuals a through the provision of comprehensive health services for both residents and non-residents in order to decrease gap between levels of HALE, through implementing policies, legislations, programs and effective partnerships.

Countries with Low HALE and Life Expectancy and Medium Gap: Recommendations

Brazil

Socioeconomic inequality is one of the biggest problems. The wealthiest are less likely to need help, but when help is needed are more likely to receive formal care, while the poor relied on informal care. Brazil has to make progress towards providing healthcare for all, built on the solid foundations of primary care. It now needs to maintain momentum by exploiting the potential of digital services in healthcare.

India

The country faces public health challenges, particularly for the poor. These include child undernutrition, growth in obesity, diabetes, and tobacco use, leading to cancer and other diseases. There are targets to improve public health: accessible and affordable nutritious food, sanitary facilities, health centres in rural areas, affordable health care.

Poland

To improve public health it is needed to focus on health education, prevention programmes and purchasing of new equipment.

Mexico

In Mexico the main challenge is to reduce inequality in healthcare and ensure that an important proportion of the population gain access to wide health coverage, including, access, quality, and costs. Mexico, due to its high prevalence of obesity, faces serious public health consequences, especially cardiovascular diseases and diabetes, that should also be addressed.

Saudi Arabia

The country need to reduce disparities in health and health care systems between poorer and richer families and underfunded health care systems that in many cases are inefficiently run and underregulated.

Slovakia

The most pressing issues to be addressed are enhancing the efficiency and quality of primary care, modernising hospital infrastructure and management, promoting better care access for the poor population and improving lifestyles through well-designed public health and disease-prevention policies.

Countries with Low HALE and Life Expectancy and Low Gap: Recommendations

Argentina

Argentina's healthcare system is segmented and highly fragmented system. It is needed to develop strategy to advance the integration of healthcare coverage among subsectors. Policies should address healthcare provision in rural areas and better sanitary facilities.

Indonesia

There are important regional and socioeconomic inequities in the health system. Health financing also is low and inequitable. Government should concentrate the use of public funds on delivery of public goods and improving equity for priority health outcomes focus on improving health and on managing the whole health system, control the spread of HIV/AIDS by focusing on prevention.

Russian Federation

The general health of the Russian population has declined significantly since the collapse of the Soviet Union, as a result of several social, economic, and lifestyle changes. One of the problem that should be dealt with is poor quality of healthcare delivery. There is outdated and often nonfunctioning equipment, a lack of medicines and hospital beds, and a shortage of medical specialists.

South Africa

South Africa must focus on making sure all healthcare workers have the right knowledge, skills and resources, for example by training the next generation of scientific leaders. It is needed to focus on the management of institutions and care delivery which is at the districts, hospital and clinic level. Government should address inequality, provide better sanitation facilities, develop agenda to improve public health and decrease burden of chronic diseases.

Countries with Medium HALE and Life Expectancy and High Gap: Recommendations

Belgium

There are disparities in unmet care needs by income group. As cardiovascular diseases and cancer are the leading causes of death, the challenge is to strengthen prevention and primary care.

Chile

In order to improve public health and increase HALE policy should response to the obesity epidemic. Government should take actions for further development of epidemiological surveillance, costing strategy, stronger data governance.

Denmark

Initiatives to reduce levels of drinking and promote healthy lifestyle in Denmark are a welcome development. The proportion of residents who report being in good health is high, although a gap exists between income groups that should be addressed.

Ireland

It should be focused on the proportion of people who are healthy at all stages of life, reduction health inequalities, protection the public from threats to health and wellbeing.

Czech Republic

There is a regional variations in health outcomes in the country. It is important to develop targeted policy solutions, as institutions, life-style and socio-economic characteristics are considered to be the main explanatory factors that affect HALE.

Finland

Alcohol consumption should be considered as it remains an important public health issue in Finland, with more than one-third of adults reporting heavy alcohol consumption on a regular basis.

Germany

A balanced diet and sufficient physical exercise are important aspects of a health-promoting lifestyle in Germany. They can help to prevent the occurrence of obesity, lipid metabolic disorder and hypertension.

Slovenia

Medical workers must continue to be supported in delivering the best evidence-informed high-quality care through firm commitments to training, professional development and access to resources.

Countries with Medium HALE and Life Expectancy and Medium Gap: Recommendations

Cuba

Ageing, an increase in obesity and problems with tobacco and alcohol are main causes of death among Cuba's citizens. Cuban government should address to health challenge, which is a huge investment in public health education around smoking, alcohol, diet and exercise. The foundation of Cuban's preventative health care model that is at primary care level should be in priority.

Greece

Creating an effective network of primary care services is one of the most urgent priorities to respond effectively to the needs of population and reduce overcrowding of emergency departments and unnecessary hospital admissions. Universal health coverage can be financially sustainable, to finance public spending.

Netherlands

Smoking, drinking and obesity are main behavioral factors of bad health which should be addressed. Large inequalities in health persist according to education and income. On the positive side, public health policies are starting to tackle this, but may need time to become effective.

Malta

Malta has the highest obesity rate in the EU, and this remains the major public health issue, both in adults and in children. Poor health behaviours tend to be most common among lower socio-economic groups. Policies should deal with encouragement of health behaviour and reduction of income inequality.

Portugal

The prevalence of chronic diseases in the population means that Portugal, in common with many other countries, needs to introduce new service models that provide integrated care, focused on care delivery and creation of medical networks.

Qatar

The government should focus on improvement of nutritions and promotion of healthy lifestyle, also pay attention to improvement of healthcare services and their accessibility to all income groups.

United Kingdom

The United Kingdom should address inequalities in health by socio-economic status as bad health is more prevalent among population with lower income and education.

Countries with Medium HALE and Life Expectancy and Low Gap: Recommendations

China

China faces many health challenges. These include increasing rates of cancer and cardiovascular disease linked to lifestyle factors like smoking, an ageing population. Therefore, a key component of healthcare should be the promotion of healthy lifestyles and physical fitness, including through the development of healthy cities, to ensure a greater focus on prevention rather than treatment. For greater reduction in infant mortality and rates of infectious diseases, government should invest in expanding health infrastructure, improvement quality of healthcare service and provision of affordable health care in rural areas across country.

Costa Rica

Diseases that most affect quality of life are heart disease, back pain, depressive disorders, hearing loss and diabetes. Inequalities also persist among the various population groups. Country needs to expand its efforts to promote healthy living, particularly young people. The health system needs to contribute to higher levels of equity and solidarity.

Panama

Improve access to health services, as it remains inequitable, a fact readily visible in the marked discrepancy between health outcomes in urban and rural settings. Health infrastructure should be developed more evenly, including availability of health workers, medicine and technological equipment, both urban centres and rural areas where populations face with limited access to health services now. The availability of water has been identified as one of the country's leading environmental problems, that decrease average level of public health. Both the quantity and quality of available water during the dry season should be of concern. The lack of professionals is also an issue limited to the health sector. The government needs commitments to increasing human resources for the healthcare sector, that will necessarily lead to expanding the capacity of the country's medical faculties.

Countries with High HALE and Life Expectancy and High Gap: Recommendations

Australia

Australians are living longer and with more years in a good health. Heart disease is largest cause of death. Adults at high risk of heart attack or stroke should receive appropriate treatment and be aware of their risk factors. In order for the Australian healthcare system to handle the gradual population aging, government and administration must develop new policies and programs to accommodate the needs of changing demographics.

Austria

Behavioural risk factors are a major public health issue in Austria. Alcohol consumption and smoking rates are among the highest across the EU. To increase public health they should be addressed.

Canada

Recommendations suggested facilitating the exchange of information and interaction between health providers and government figures as well as flexible funding would also contribute to improvement and solve the problem of differences in regional care by allowing regions to determine the needs of their general populace and meet those needs more efficiently by allowing target-specific allocation of funds.

France

The main challenges are to promote prevention and healthy behaviour. Disparities of coverage across social groups suggest paying attention to co-ordination between universal healthcare provision and private insurance. The first government responsibility is fixing the rate at which medical expenses should be negotiated. The second government responsibility should be overseeing of health-insurance funds, to ensure that they are correctly managing the sums they receive, and to ensure oversight of the public hospital network.

Italy

Further efforts are needed to reduce smoking rates, so as to reduce deaths from lung cancer and other smoking-related deaths and the prevalence of overweight and obesity.

Luxembourg

A set of health strategies, targeted health awareness promotion and prevention activities aims to address death risks and reduce level of chronic diseases. Also government should provide evidently a direct result in order to decrease high levels of consumption of harmful drinking patterns among people in Luxembourg.

Countries with High HALE and Life Expectancy and High Gap: Recommendations

Norway

The main causes of disability and reduced health are lack of physical activity, mental disorders, cardiovascular disease and cancer. The government should focus on providing effective care and primary care settings. Low back and neck pain has the highest share of total DALYs, but it is slightly decreasing. Therefore, targets that are likely to remain the focus of political attention and policy development are those relating to sustainable consumption and production, health and education, equality, employment, and migration.

Republic of Korea

The government should address the following challenges to improve public health and increase average life expectancy: reduce inequality in health coverage outcomes, improve primary health care and coordination between hospitals and long-term care facilities, meet the needs of the aged population.

Sweden

The government should further develop following initiatives: improve health and medical care that more actively promotes good health, promote good eating habits and safe food to decrease obesity and overweight, reduced use of tobacco and alcohol.

Switzerland

The main challenge to improve public health is to reduce disparities of healthcare coverage across income groups groups. The ministry along with other government bodies should supervise activities at the lower levels, allocates grants and periodically evaluates services to ensure correspondence to national goals.

Countries with High HALE and Life Expectancy and Medium Gap: Recommendations

Iceland

To improve health and wellbeing of people living in Iceland government policies should be focused on obesity, tobacco, healthy workplaces, child wellbeing. eHealth initiatives should meet the needs of the aged population.

Israel

Life expectancy and HALE are increasing in Israel. The country has developed healthcare system, but some improvements should be done: enhance primary care services by expanding the number of chronic disease conditions covered through data monitoring and encouraging younger doctors to work in primary care, boost current efforts to tackle inequalities in health care coverage.

Japan

Japan is facing a rising burden of chronic disease, and a rising number of frail and elderly persons. In addition, Japan faces some relatively unique public health risks, notably a significant exposure to natural hazards such as earthquakes, floods, typhoons, and tsunamis. So, improvement of public health emergencies systems are in priority.

New Zealand

The government should commit to reduce smoking rates, the overall negative impact of alcohol, prevent and manage obesity, and to support and encourage healthy eating and physical activity, provide better access to primary health care.

Spain

The Spanish national health system is a comprehensive network, for its technological capacity and human capital, for the accessibility of its service network, for offering access to the latest advances in medicine and medical technology. There are several ways to improve public health and decrease gap between life expectancy and HALE at birth: increase the efficiency and effectiveness of the health provision system, support and encourage healthy eating and physical activity, address aging, customize healthcare services to meet needs of aged population.

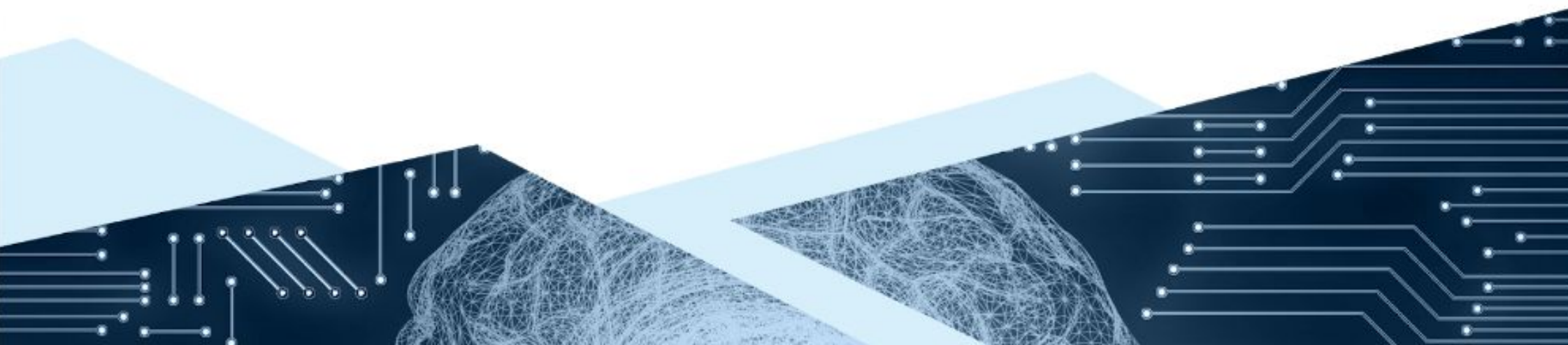
Countries with High HALE and Life Expectancy and Low Gap: Recommendations

Hong Kong, SAR

The government should provide strategic review of health care staff planning to reduce the shortage of healthcare staff. Timeliness for healthcare services is closely linked to staff shortages. In Hong Kong, the elderly population is particularly vulnerable, facing significant difficulties in accessing primary healthcare services. Given the need for improving Hong Kong's health services, the biggest challenge the city will face in the near future is to keep delivering high quality healthcare in a timely fashion and to maintain and enhance the population's health (e.g., health promotion and prevention).

Singapore

Chronic disease care is a critical part of a people's health. The patient should be persuaded about exercise, diet and lifestyle change: all important for chronic disease control. Caregivers and patients should be empowered through education, information and communication. Further implementation of eHealth initiatives will lead to the reduction of number of patient visits to hospitals for routine checks, will free up healthcare resources, enabling healthcare staff to better manage their time and focus on priorities.



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Country Infographics Profiles



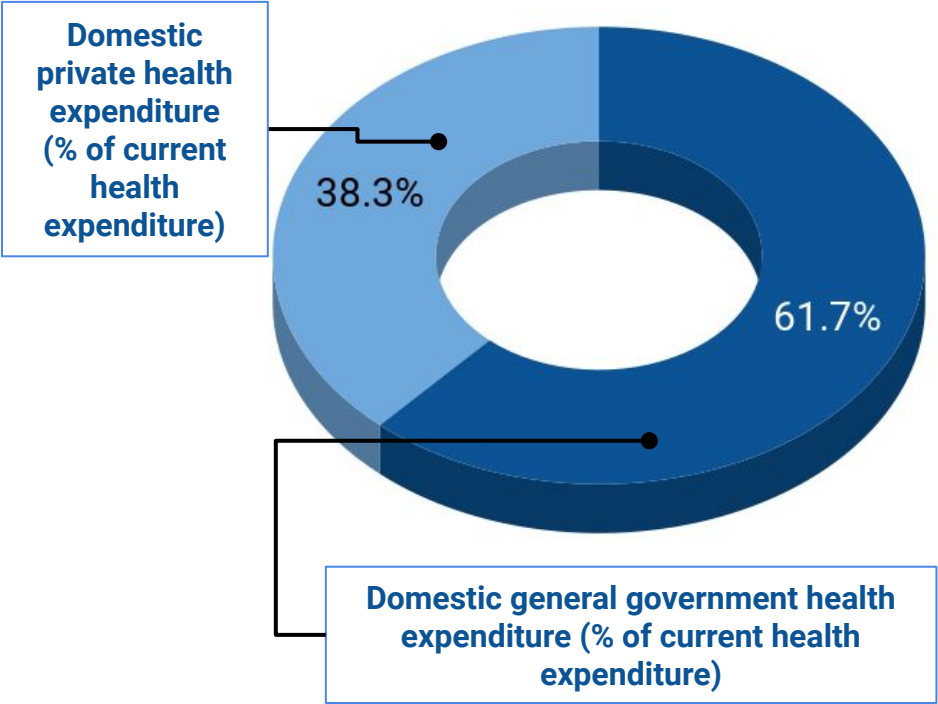
HALE	Both Sexes HALE, 2019	67.1 years
	HALE/Life Expectancy Difference, 2019	9.42
Economy	GDP per Capita, Current Prices, 2019	9.91 thousand (\$)
	Annual GDP Growth, 2019	-2.08 %
Healthcare	Current Health Expenditure per Capita (2018)	1.12 thousand (\$)
	Public Health Care Expenditure, 2019	9.6 % of GDP
Retirement	Age Dependency Ratio, 2019	55.85
	Population over 65, 2019	11.24 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.65
	Annual Cigarette Consumption (Units per Capita), 2019	1176
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	28.3% of adults

Longevity-Related Indices

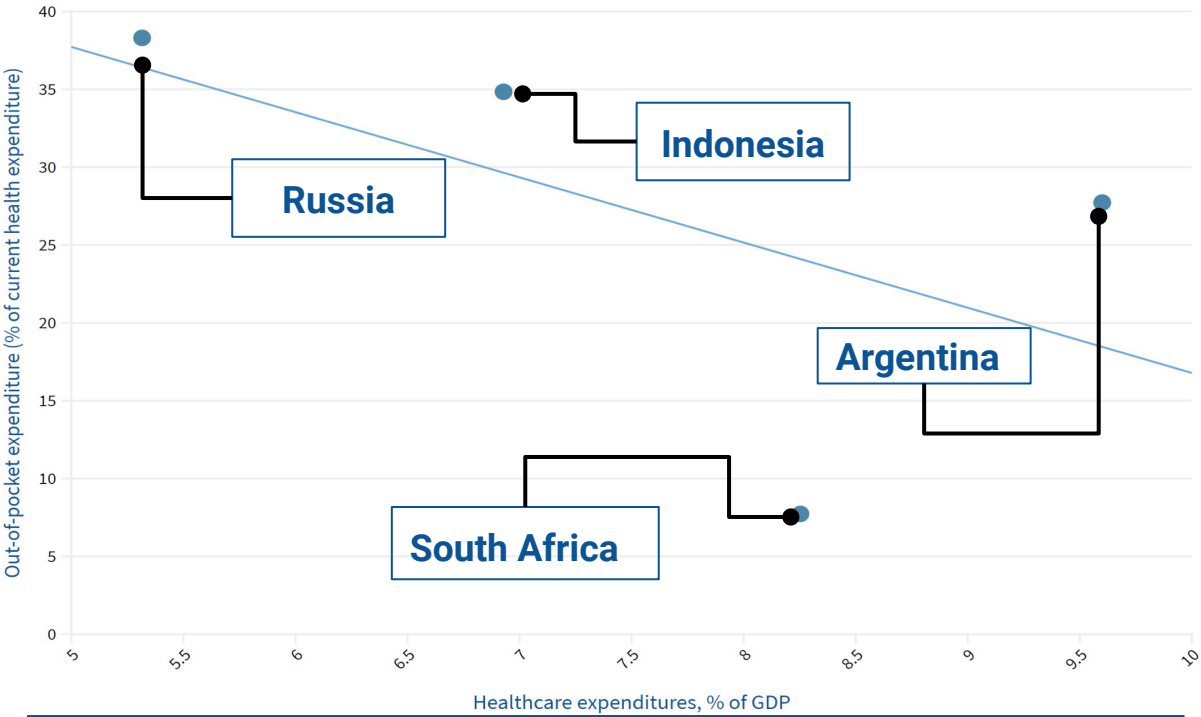


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.84
- E-Government Development Index, 2019:
0.82
- Corruption Perceptions Index, 2019:
42
- Global Gender Gap Index, 2019:
0.75
- Democracy Index, 2019:
7.02

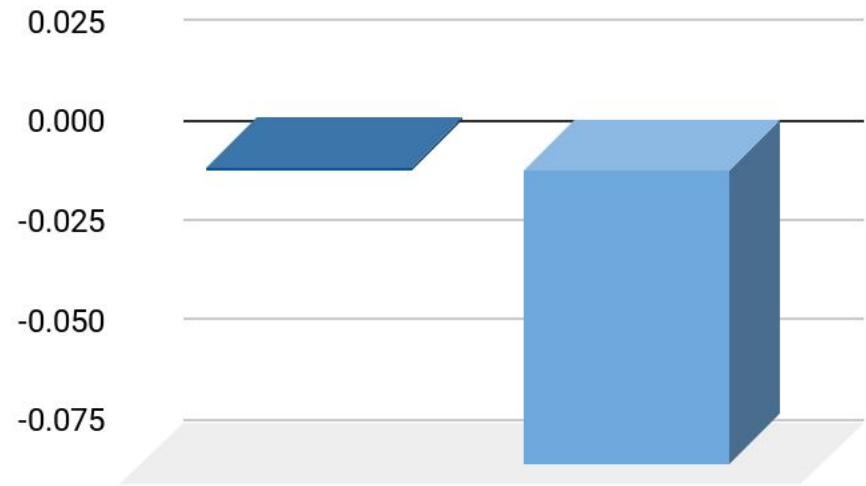
Current Healthcare Expenditure



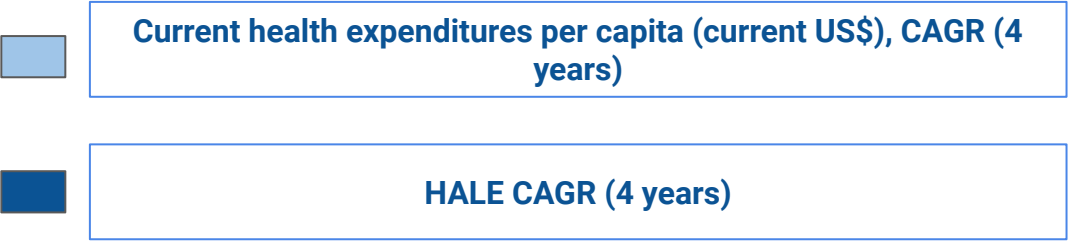
Countries with Low HALE and LE and Low GAP



Compound annual growth rate



Argentina's healthcare system is segmented and highly fragmented system. It is needed to develop strategy to advance the integration of healthcare coverage among subsectors. Policies should address healthcare provision in rural areas and better sanitary facilities.

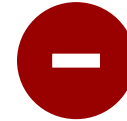


SWOT Analysis of Healthcare in Argentina



STRENGTHS

- There is a wide range of medical specialists and high-quality treatments.
- Large private hospitals and health groups have their programmes that allow to choose different payments, offer discounts and provide easier access to medical service.
- Argentina's health care system is comprehensive and consists of the public sector (50% of the population), the mutual sector (45%) and private (5%).



WEAKNESSES

- The disparity in access to healthcare across urban and rural areas.
- Treatments for some medical conditions may cost for thousand dollars and require huge investments in a short period.
- It is hard to access high quality medicine in less advanced regions and remote area.
- Most of clinics work in the private sector that means part of the population cannot afford to pay for their services to boost their healthy years of life and longer the life expectancy.



OPPORTUNITIES

- Promotion of developed cosmetic surgery among international tourists.
- Surgery is very popular in Argentina so it can bring additional investments in hospitals in the country. Procedures such as eyelid corrections, plastic correction of ears, nose surgery and others are offered.
- Utilize opportunities for AI and other advanced technologies to make the treatments cost- and outcome-effective.



THREATS

- Negative GDP growth and economic crises can cause a decrease in costs invested in the universal health care system and R&D in medicine that will make the equipment less modern and the quality of treatment will be lower than in developed countries and even in countries with the same income.
- High unemployment and socio-economic instability.
- High level of corruption.
- Income inequality plays out in the country: the richest 10%, control more wealth than the poorest 60% of the country.

Analysis of Strengths and Weaknesses of Health Care System in Argentina



- Employees are highly involved in the healthcare system through the Obras Sociales and provide an insurance for employees that helps to acquire additional costs for payments for medical services of doctors and specialists and get certain funds for hospital's modernization. Employees have an opportunity to receive treatments.
- Provision of transparency in social security sector is a key driver for attraction of additional funds in order to finance the programmes for boosting the longevity and the HALE.
- There is a separate network for each of sectors and they can range from rundown public sector to high tech private sectors.
- Everyone in Argentina has an access to the medical system. The public sector involves network of public hospitals and primary health care units that provide help for poor and uninsured population.



- Obras Sociales in Argentina vary in quality and effectiveness that's why 30% of such organizations have an control of 75% resources in health care system of Argentina and held 73% of beneficiaries.
- After Argentina's economic crisis in 2001 lots of people lost their access to insurance that affects general healthcare system badly.
- Relatively high to other OECD countries level of alcohol, tobacco and unhealthy food consumption that have a great impact on the cancer and cardiovascular diseases burden. Nearly a third (29.7%) of adults in Argentina are obese. Cholesterol levels are high and there is 53% increase in patients with hypertension. And environmental factors, including risks of epidemics, distrust the situation more.
- According to 2000 figures, 37.4% of Argentines had no health insurance, that's why nowadays practically over a half of Argentina's citizens use the public sector. They usually have to undergo a lengthy test and can be rejected. The rejection ratio is 30-40%, so this people can't afford to look after own health.

Recommendations for Argentina

- **Promotion the healthy lifestyle.** Smoking, drinking of alcohol, eating fast food and other behavioral factors destruct the healthy life and can shorten it so it should be quit for elongation of nation's life expectancy and HALE.
- **Provide more accessible and comprehensive healthcare coverage.** Accessible healthcare treatment may help to meet patients needs. Diversified portfolio of basic healthcare services with great emphasis on prevention may help to mitigate financial burden and improve health status.
- **Launch of modernisation of equipment in public hospitals.** Most of public sectors' establishments have not up-to-date equipment that reflects on quality of treatment. Basically only surgery provided by private clinics is on top position in Argentina but other types are not so progressive especially if to speak about public hospitals. This is also the question about additional investments and economic reform.
- **To cancel test before acquiring the services.** These test can leave people with serious diseases without an appropriate treatment. The rejection level is also high, which means than the health system in Argentina is less accessible than the government claims.
- **Focus on remote areas.** Concentration on provision of remote regions with useful equipment and well-trained specialists and also provision with access to qualitative treatment will boost populations healthmetrics.
- **Combat with infant and maternal mortality.** Lack of equipped hospitals for alternative care, vaccinations for youngers, appropriate work conditions for women and proven methodologies for abortions and infant care for first month can impact dramatically the mothers' and children's health, so these need to be focused on.
- **Ensuring adequate funding for the health system.** Reducing the high levels of out-of-pocket spending on health is vital for affordable healthcare treatment. Argentina should reduce corruption in healthcare and provide incentives for development of public-private partnership between healthcare providers.

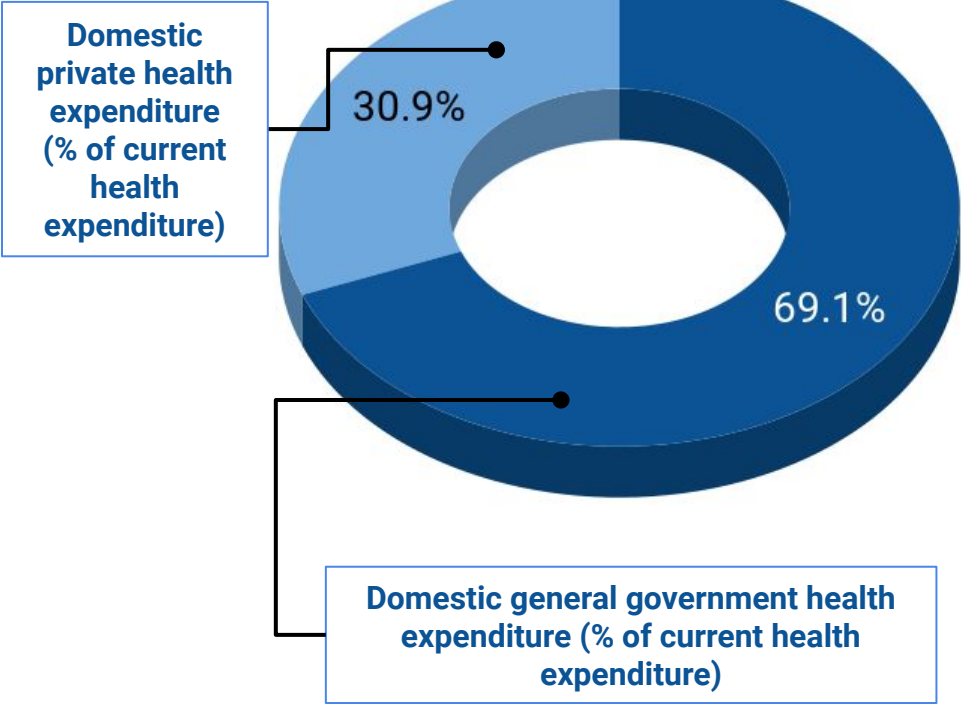


HALE	Both Sexes HALE, 2019	70.9 years
	HALE/Life Expectancy Difference, 2019	11.85
Economy	GDP per Capita, Current Prices, 2019	55.05 thousand (\$)
	Annual GDP Growth, 2019	2.16 %
Healthcare	Current Health Expenditure per Capita (2018)	5.42 thousand (\$)
	Public Health Care Expenditure, 2019	9.28 % of GDP
Retirement	Age Dependency Ratio, 2019	54.31
	Population over 65, 2019	15.92 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	10.51
	Annual Cigarette Consumption (Units per Capita), 2019	916
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	29.00 % of adults

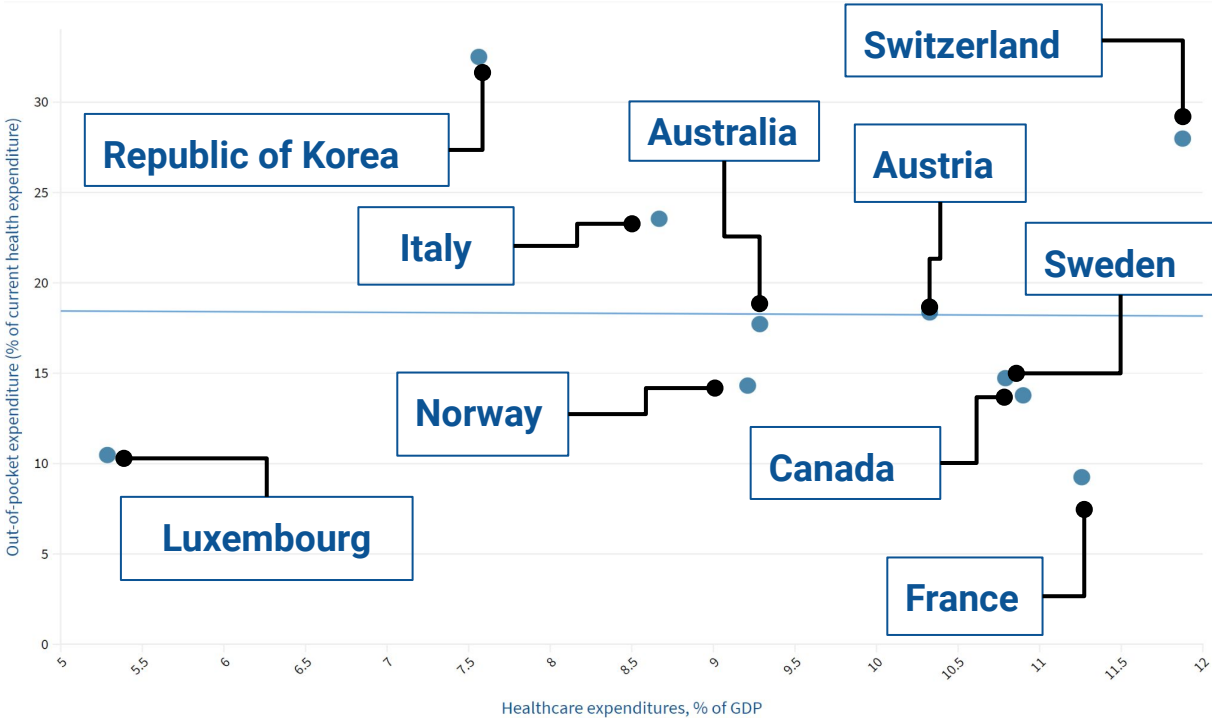
Longevity-Related Indices

- The Healthcare Access and Quality Index,, 2019: **89.5**
- Human Development Index, 2019: **0.94**
- E-Government Development Index, 2019: **0.94**
- Corruption Perceptions Index, 2019: **77**
- Global Gender Gap Index, 2019: **0.73**
- Democracy Index, 2019: **9.09**

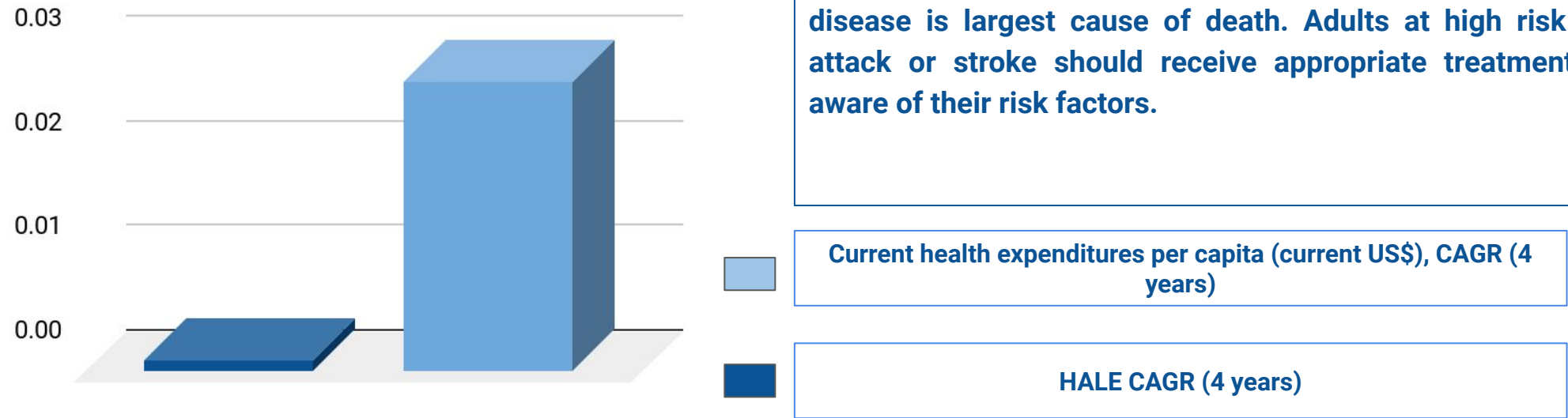
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate



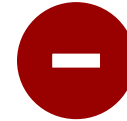
Australians live longer and with more years in a good health. Heart disease is largest cause of death. Adults at high risk of heart attack or stroke should receive appropriate treatment and be aware of their risk factors.

SWOT Analysis of Healthcare in Australia



STRENGTHS

- Australia's healthcare system includes both public healthcare system and private healthcare system, where public healthcare system is comprehensive (Medicare) and provides free or low-cost services for taxpayers with additional benefits.
- High range of different funds that finance services provided by specialists and doctors and hospitals besides government. This funds can be mutual and "for cost".
- Different initiatives of government that helps to encourage people to purchase private insurance.



WEAKNESSES

- The lower level of public healthcare expenditure than average in OECD - 67% in comparison with 72%.
- The health care system is hybrid state model, that makes its institutions an instrument in political games during elections.
- An average level of doctors and specialists for 1000000 population as was fixed in 2011-12.
- The lack of flexibility in public hospitals that not allow patients to choose the doctor or specialist and makes them to wait for some services for 12 month.
- The highest total cancer rate in the world.



OPPORTUNITIES

- Ability to spend more taxes and funds in investment in research and development and boosting of doctors' and specialists' qualifications.
- Providing more free and low-cost services to people with lower income and giving more subsidies for medicines.
- Government should concentrate more focus on remote population its' life expectancy and HALE in order to increase it and on resource allocation.
- Encourage companies to provide their employees with medical insurance that will allow them to visit private hospital and choose a specialist.



THREATS

- Decrease in costs spent on health in % of GDP in 2017-18 according to Australian Institute of Health and Welfare.
- Existence of unique flora and fauna creates a springboard for the epidemics and severe diseases.
- Non-Indigenous Australians live for up to 7 years less than other population that threatens average life expectancy in Australia.
- Less breakthrough progress in medicine that brings new methods and technologies to provide high quality service than in other developed countries.

Analysis of Strengths and Weaknesses of Health Care System in Australia



- Australian people have a high **life expectancy (83) and HALE**, especially, in comparison with other developed countries. Cigarette and alcohol consumption is lower than in North America and most European countries.
- Medicare covers **100% of costs in public hospitals for general services and 85% of costs for specialists and also 75% of costs for public patients** in private hospital that allows reducing out-of-pocket costs.
- **Lifetime Health Cover and Medicare Levy Surcharge** allow the government to stimulate adults to take private hospital insurance that encourages people to protect and maintain their health on a certain level and make universal healthcare system balanced.
- **Deaths in early childhood have reduced substantially over the past 100 years. In 1907, child deaths (aged 0–4 years) accounted for 26% of all deaths compared to less than 1% in 2017.**
- Control of infectious disease and better hygiene and nutrition. The decline in the later years was associated with improvements in road safety measures, a decrease of smoking, detection and prevention of CDV and chronic diseases.



- Though Australia received good positions in the investigation carried out by OECD **countries it's health care system was weaker than Canadian and German.**
- People in remote regions usually live less.
- Public medicine does not allow its patients to choose a doctor or specialist because of a certain load and have a waiting period for up to 12 months on benefits that can be connected with some medical conditions.
- Concerning adults' access to healthcare, **10% of Australians had to wait for 4 months or more for elective surgery whereas only 4% of the patients had to wait for elective surgery in Canada. About 21% of the patients had experienced a care coordination problem in the past 2 years.**
- Coronary heart, Alzheimer disease, dementia, cerebrovascular disease and lung cancer with COPD are top causes for death in Australia for the younger and elder population.

Recommendations for Australia

- **Use of bundled payment mechanism** to reduce costs and maintain the quality of services and patients' outcomes. Bundled payments can also be used to reduce unplanned readmissions.
- **Effective allocation of healthcare resources, giving particular attention to remote areas.** The government should appoint more costs to remote regions. This actions will allow spending more on less developed areas and less advanced regions to provide qualified medical aid and healthcare treatment.
- **Conduct additional activities and initiatives to remove crucial causes of popular diseases that can lead to death, especially, among elders.** Lifestyle, habits and working conditions are the first moving point for keeping the nation healthy for long years.
- **Increase investment in healthcare for creation both tangible and intangible assets.** This will allow spending more on research and development to find out more progressive means and ways to conduct surgery and observations that will improve the average level of quality of medicine in Australia.
- **Move from cure to prevention to combat with non-communicable diseases risk factors.** Prevention faces two main barriers. First, most doctors worldwide are trained to diagnose, treat, and cure diseases, but not to prevent them. Incentive schemes in many health care settings reflect that emphasis. Second, the risk factors for these diseases – tobacco use, the harmful use of alcohol, unhealthy diets, and physical inactivity – lie in non-health sectors and are strongly influenced by the behaviours of powerful economic operators.
- **Support a healthy lifestyle.** This means that government should popularize the healthy food and non-alcohol and non-cigarette life to make teenagers and adults healthier that will positively influence HALE and life expectancy with the help of mass media.



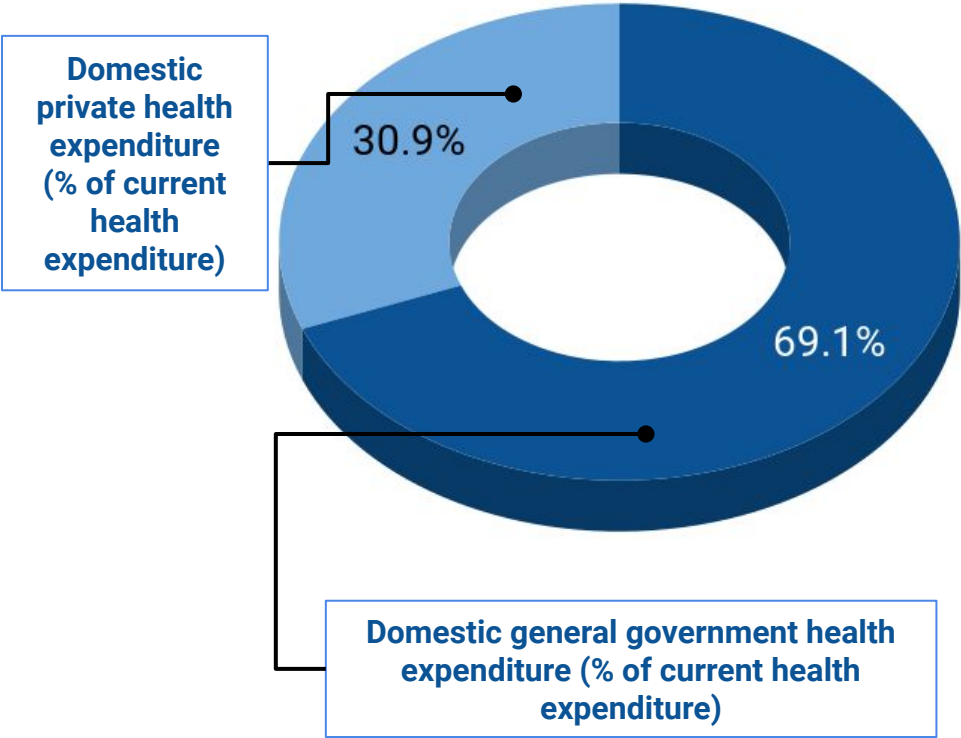
HALE	Both Sexes HALE, 2019	70.9 years
	HALE/Life Expectancy Difference, 2019	10.79
Economy	GDP per Capita, Current Prices, 2019	50.12 thousand (\$)
	Annual GDP Growth, 2019	1.41 %
Healthcare	Current Health Expenditure per Capita (2018)	5.42 thousand (\$)
	Public Health Care Expenditure, 2019	10.33 % of GDP
Retirement	Age Dependency Ratio, 2019	50.23
	Population over 65, 2019	19.07 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.96
	Annual Cigarette Consumption (Units per Capita), 2019	1926
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	20.1% of adults

Longevity-Related Indices

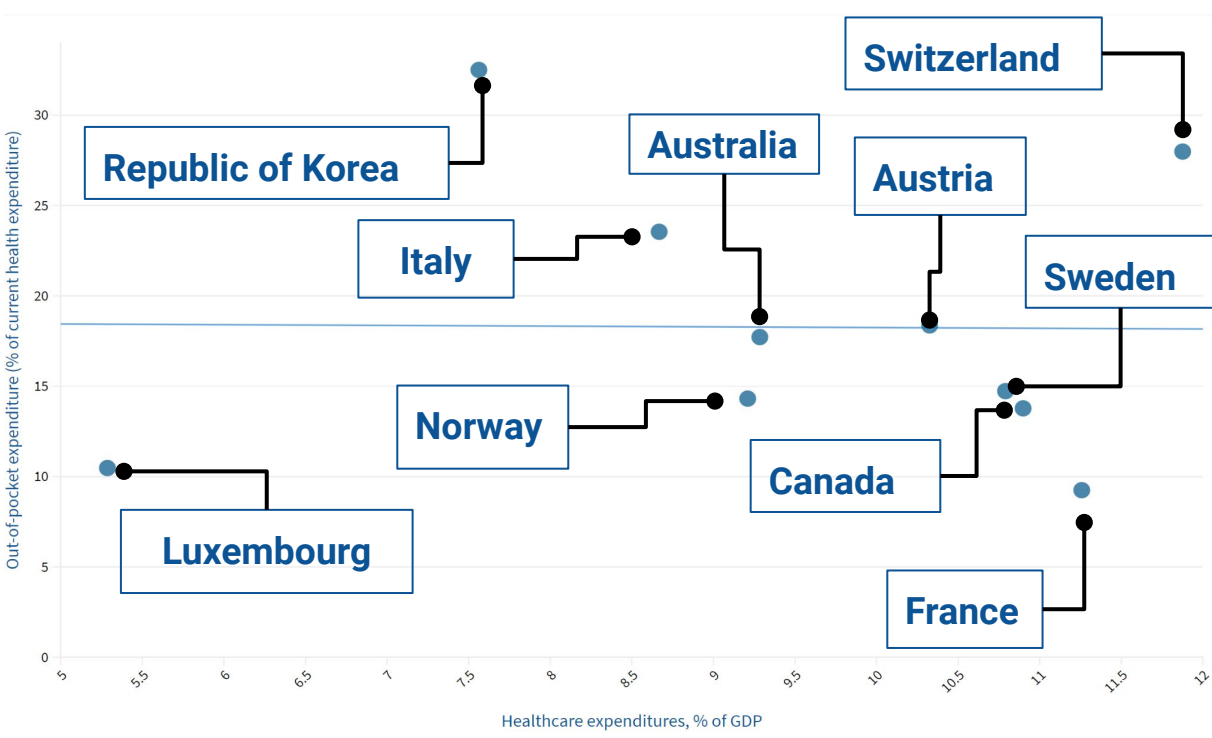


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- Global Gender Gap Index, 2019:
0.77
- Democracy Index, 2019:
8.29

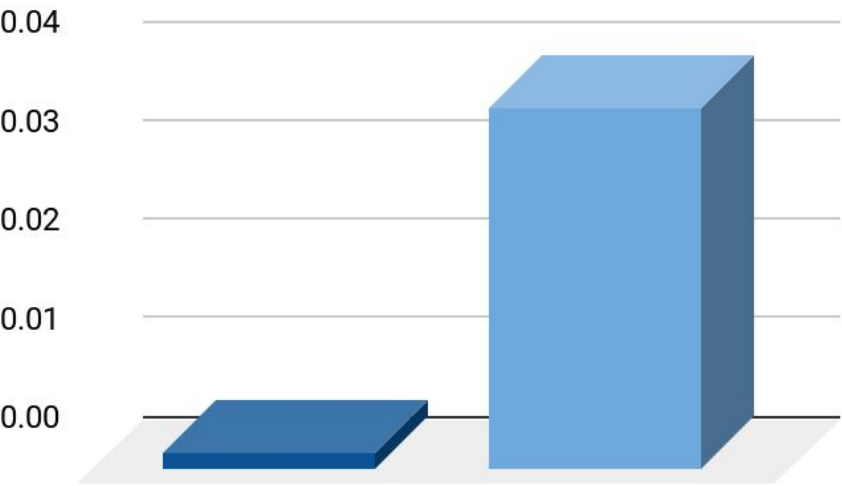
Current Healthcare Expenditure



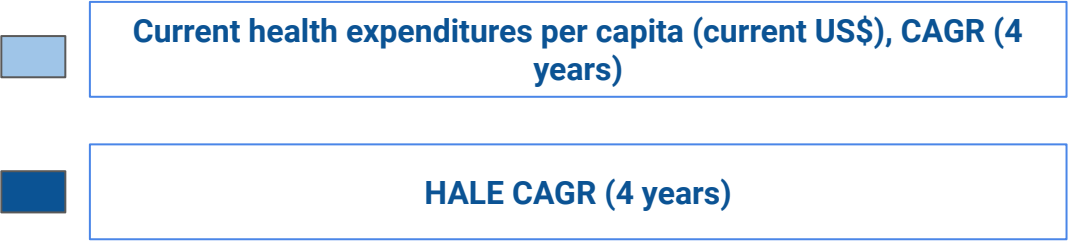
Countries with Low HALE and LE and High GAP



Compound annual growth rate



Behavioural risk factors are a major public health issue in Austria. Alcohol consumption and smoking rates are among the highest across the EU. To increase public health they should be addressed.

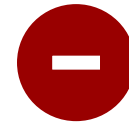


SWOT Analysis of Healthcare in Austria



STRENGTHS

- The two-level healthcare system that allows to receive public medical services and purchase additional private insurance.
- The relatively good economic situation that allows people to use private insurance plans with the opportunity to choose flexible conditions.
- Healthcare in Austria is universal, comprehensive and accessible.
- Residents automatically get involved in healthcare, usually, it is connected with employment, but it is also for co-insured, pensioners, students, disabled etc.



WEAKNESSES

- Low level of WHO age-friendly cities.
- High level of alcohol and cigarette consumption among the population.
- Wasteful health care expenditure.
- Half-of-year and longer waits are normal for some kinds of surgery.
- Lack of flexibility in a social security system - though funds are ranged for effective reaction, the membership is compulsory and citizens can't choose to which fund to belong to.



OPPORTUNITIES

- Money paid for public insurance range based on income not on the individual's medical conditions, that makes the system more balanced.
- Opportunity to use widely e-systems for effective regulation of the public healthcare system.
- The wide range of hospitals allows providing qualitative treatment and hospital stay (6,6 days) to boost health, life expectancy and HALE.
- Well-trained physicians provide good treatment.



THREATS

- After the economic crisis was an increase in out-of-pocket spending on health and now they are 28% of general health costs.
- Social insurance patients need to wait twice and even 3-4 times longer than those ones with private.
- Because of federal status in Austria, a social security system in the country is unusually complex and bulky that can bring additional bureaucracy,
- 54.1% of the adult population (≥ 20 years old) in Austria was overweight that brings the risk of CVD and diabetes.

Analysis of Strengths and Weaknesses of Health Care System in Austria



- Austria's health care was given the 9th place in the rank of WHO. The general health expenditure is fifth higher than in whole of Europe.
- The city of Vienna received first place in the quality of living ratio.
- In a sample of 13 developed countries, Austria was 5th in its population weighted usage of medication in 14 classes in 2009 and fourth 2013. Amenable mortality rates are lower than in many other EU countries.
- Public medicine is one of the most accessible and effective in the world. It is all reinforced by the good environmental conditions and usage of fresh resources and developed infrastructure.
- Austrian specialists are well trained and highly qualified.



- Austria's healthcare system is closely connected with other social security, indicating the proliferating bureaucracy.
- Lack of flexibility in a social security system - though funds are ranged for effective reaction, the membership is compulsory and citizens can't choose to which fund to belong to.
- General behavioural patterns are not appropriate especially if to speak about the longevity - big alcohol and cigarette consumption can be a reason for lowering of life expectancy and HALE indicators. Behaviour factors and working conditions lead to high index mass and obesity among adults and are the reason for death from cancer, CVD and diabetes. But the changes are good for adolescents.
- Long waiting periods for surgery can be the reason for the low quality of treatments mostly in the public sector usually for important and difficult operations which is also the aftermath of the bureaucracy.
- Though the life expectancy in Austria remains long and is above average in the EU, the statistics for healthy years of life hasn't changed and remain to be below the average in the EU.

Recommendations for Austria

- **To take a reform for the healthcare system.** Federative status of Austria causes a lot of bureaucracy during the regulation and decision-making process in the country especially in the public sector that can lead to errors in management. Changes in institutions' organization and their authorities can help to make the healthcare system more advances and manning.
- **Promotion a healthy lifestyle.** Behavioural factors are the key factors that negatively affect healthy longevity in Austria. The prevalence of overweight, insufficient physical activity result in an increase in disability-adjusted years.
- **Struggle with long waiting periods.** Long waiting periods in the public insurance sector testify that it is not so effective as government claims and private hospitals offer better conditions. To lower this gap and make services more qualified government should provide additional actions (for example, more staff, types of equipment and hospitals).
- **Undertake sustained effort to reduce risk factors** such as high body mass index, high fasting glucose, high blood pressure and high cholesterol that increases with ageing population.
- **Initiate more education and training programmes to to sustain improvements in health services.** The knowledge and skills of the health and public health workforce needs to be kept up to date and developed.
- **Usage of Artificial Intelligence in precision care in Austria.** Translating the tremendous growth in data into clinical insights falls into the hands of AI (artificial intelligence)/ML (machine learning) platforms. The rapid growth in investment in AI and cloud computing are beginning to create the foundations for the precision health market of the future. But apart from advanced research, it is important to provide effective, low-cost treatments that work, triggering unnecessary treatments and higher costs down the line.



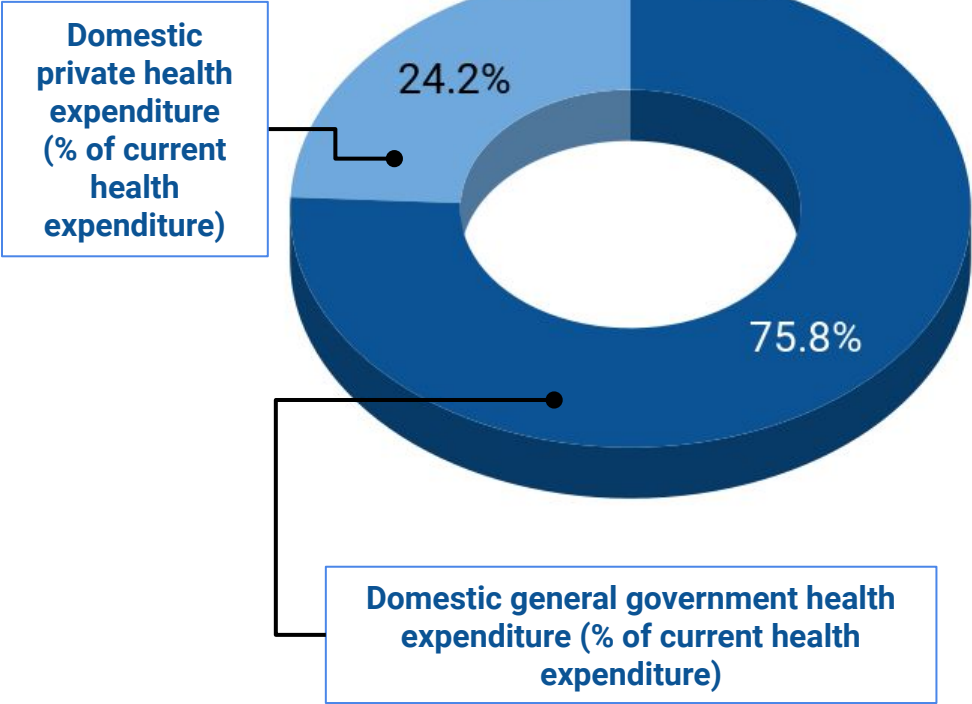
HALE	Both Sexes HALE, 2019	70.6 years
	HALE/Life Expectancy Difference, 2019	11.00
Economy	GDP per Capita, Current Prices, 2019	46.34 thousand (\$)
	Annual GDP Growth, 2019	1.74 %
Healthcare	Current Health Expenditure per Capita (2018)	4.91 thousand (\$)
	Public Health Care Expenditure, 2019	10.32 % of GDP
Retirement	Age Dependency Ratio, 2019	56.40
	Population over 65, 2019	19.00 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.08
	Annual Cigarette Consumption (Units per Capita), 2019	2440
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	22.1% of adults

Longevity-Related Indices

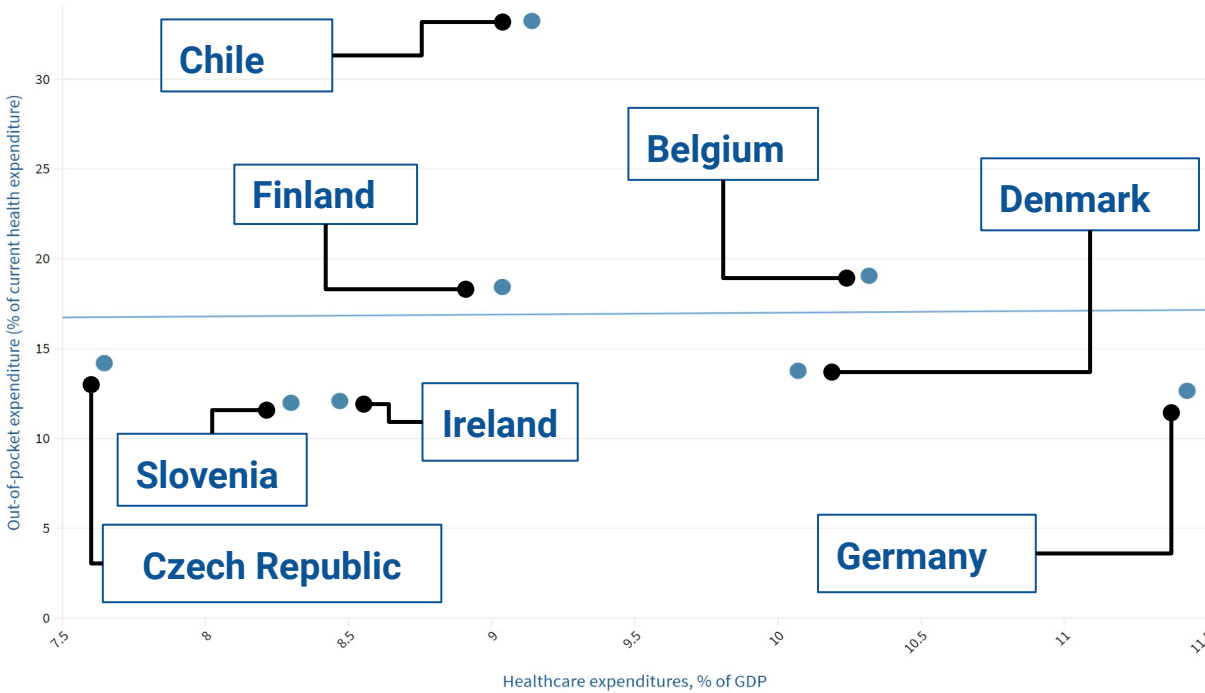


- The Healthcare Access and Quality Index,, 2019: **89.5**
- Human Development Index, 2019: **0.93**
- E-Government Development Index, 2019: **0.80**
- Corruption Perceptions Index, 2019: **76**
- Global Gender Gap Index, 2019: **0.78**
- Democracy Index, 2019: **7.64**

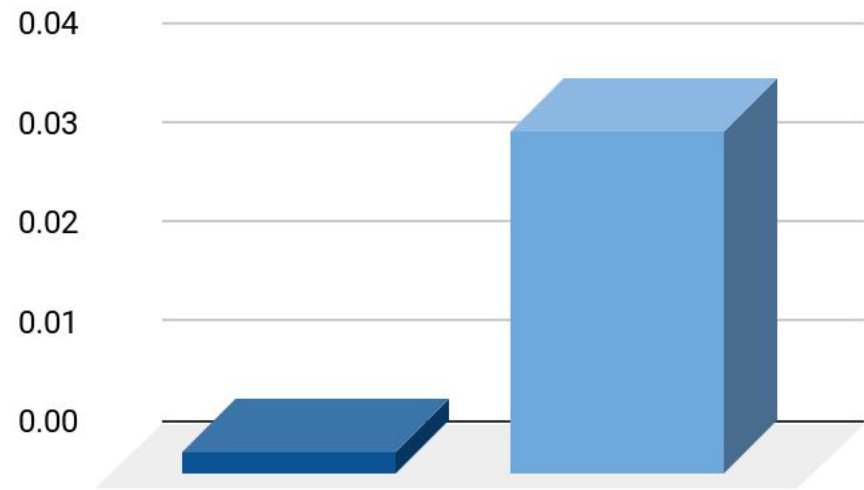
Current Healthcare Expenditure



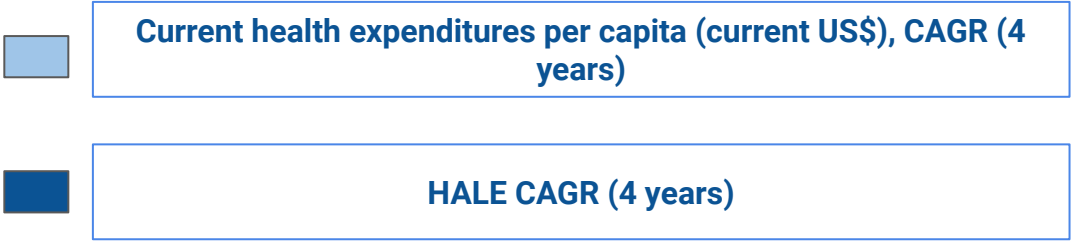
Countries with medium HALE and LE and High GAP



Compound annual growth rate



There are disparities in unmet care needs by income group. As cardiovascular diseases and cancer are the leading causes of death, the challenge is to strengthen prevention and primary care.

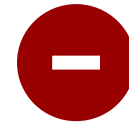


SWOT Analysis of Healthcare in Belgium



STRENGTHS

- Low amenable mortality.
- Nearly universal compulsory health insurance.
- The quality of acute care for cardiovascular diseases is better than the EU average.
- High quality of cancer care.
- Simplified measures to reduce the impact of co-payment for vulnerable groups.
- eHealth helps to manage operations quickly and struggles the bureaucracy.
- Even expats entitled to the universal healthcare system.



WEAKNESSES

- Increasing behavioural risks: regular heavy alcohol consumption in adults is above the EU average, increasing obesity.
- Large inequalities in life expectancy by socioeconomic status.
- Too high antibiotic consumption.
- Cigarette consumption is above the EU average and is very high.
- Belgium medical system is relatively high costed.
- The outcomes of Belgium healthcare system are lower than in other developed countries.



OPPORTUNITIES

- Improve prevention and primary care through utilizing modern technologies and applying modern concepts in healthcare, such as P4 Medicine
- Reducing cancer mortality through early detection and greater prevention.
- Improve hospital efficiency.
- Generate additional databases on health through voluntary patients' contributions.
- Residents have full flexibility in choice of private insurance provider.



THREATS

- Reduced growth in public spending on health.
- Shortage of health professionals, in particular doctors.
- Behavioural factors can shorten life expectancy and healthy years of life.
- Unemployed population, students, pensioners etc have the same subsidies as a working population that bears a disbalance in the system.
- The public healthcare in Belgium is not fully free, it is partly subsidized, so most of patients purchase additional private insurance.

Analysis of Strengths and Weaknesses of Health Care System in Belgium



- Belgium ranked fifth in the 2018 Euro Health Consumer Index.
- Belgium spends 10% of its annual GDP on healthcare expenditure, according to, 2019 figures. This places it ninth out of countries from the EU and European Free Trade Association (EFTA). This indicator is higher than the EU average.
- Economic stability, good infrastructure for healthcare, progressive effective medicine and ability to pay for medical help to increase the life expectancy and HALE.
- Health insurance contributions are 7.35% of gross salary (3.55% from salary; 3.8% paid by the employer).
- Long-term care policy has for a long time aimed at developing care services at home to postpone institutionalisation of elderly people as much as possible. Funding for care at home has increased significantly.



- Dental services can be not covered by basic health insurance and can be expensive enough.
- Dramatical behavioural factors which mean high cigarette and alcohol consumption, fat and unhealthy food popularisation that can decrease the life expectancy and healthy years of life.
- Hospital stay and treatment can cost high and insurance can not cover some of the services so patients usually need to make out-of-pocket spendings on, for example, daily care and some medicine.
- Only prescribed medicines are refunded, those non-prescribed are bought by patients. Some medications are reimbursed fully, while others only up to 20%.
- Smoking, alcohol, fast food consumption and lack of physical activities are the major causes of the diseases, especially, chronic one that can be the reason for a decrease in longevity.
- Ischemic heart disease, Alzheimer and stroke are the top reasons for death in older age.

Recommendations for Belgium

- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioural factors such as insufficient physical ability, overweight, alcohol abuse, smoking. This will stimulate policy initiatives that supplement income and improve educational opportunities, housing prospects, and social mobility as income is strongly associated with morbidity and mortality.
- **Investments into the new progressive ways of medical treatment.** Development of new medicines and innovative approaches to treatment will solve the problem of enormous antibiotic consumption and make treatment even more effective leading to sufficient improvements in health status.
- **Make healthcare more affordable by spending more costs on public medicine.** The public sector in Belgium is developed enough but still, it is just subsidized, that means the public sector covers only part of expenses on healthcare services. The share of out-of-pocket payments in current healthcare expenditures is high which cause a financial burden on low socio-income groups.
- **Initiate social protection programmes to reduce high disparities in health status.** Currently, people with a higher socioeconomic status (SES) live longer. The gap in life expectancy (at age 25) between the highest and lowest educational levels is 6.1 years for men and 4.6 years for women. People with higher SES also live longer in good health. The gap in health expectancy without disability (Healthy Life Years) between the highest and lowest educational levels is 10.5 years for men and 13.4 years for women. The gaps in health expectancy have increased over time.
- **Support development of the pharmaceutical industry and utilizing AI opportunities for drug discovery.** Artificial intelligence can improve efficiency and outcomes in drug development across therapeutic areas.



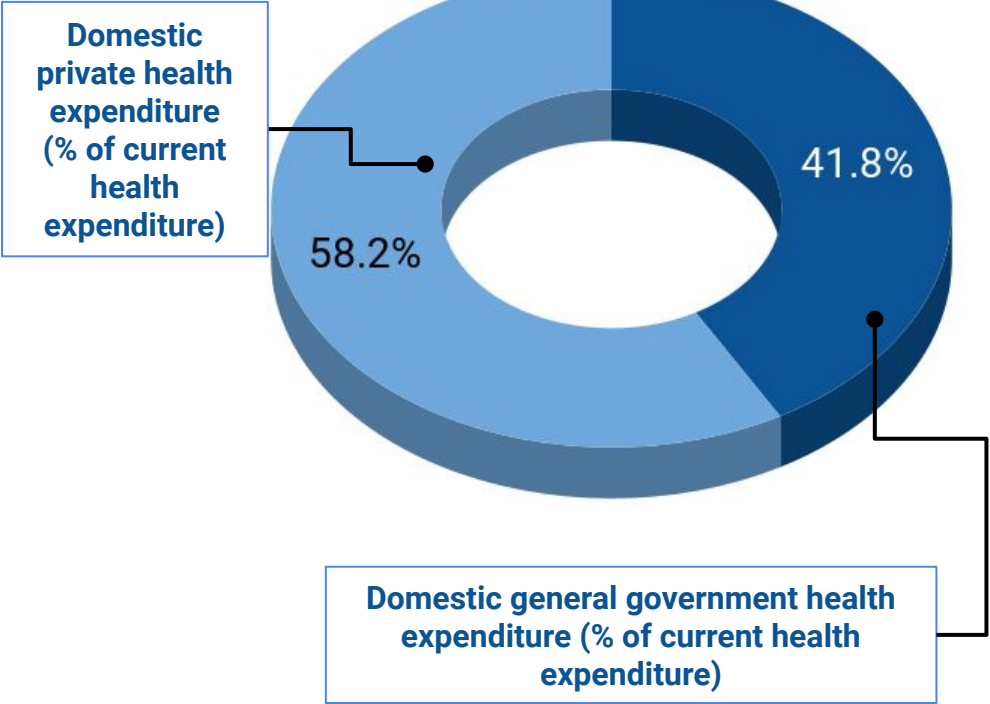
HALE	Both Sexes HALE, 2019	65.40 years
	HALE/Life Expectancy Difference, 2019	10.27
Economy	GDP per Capita, Current Prices, 2019	8.71 thousand (\$)
	Annual GDP Growth, 2019	1.13 %
Healthcare	Current Health Expenditure per Capita (2018)	0.84 thousand (\$)
	Public Health Care Expenditure, 2019	9.51 % of GDP
Retirement	Age Dependency Ratio, 2019	43.39
	Population over 65, 2019	9.25 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.42
	Annual Cigarette Consumption (Units per Capita), 2019	333
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	22.1% of adults

Longevity-Related Indices

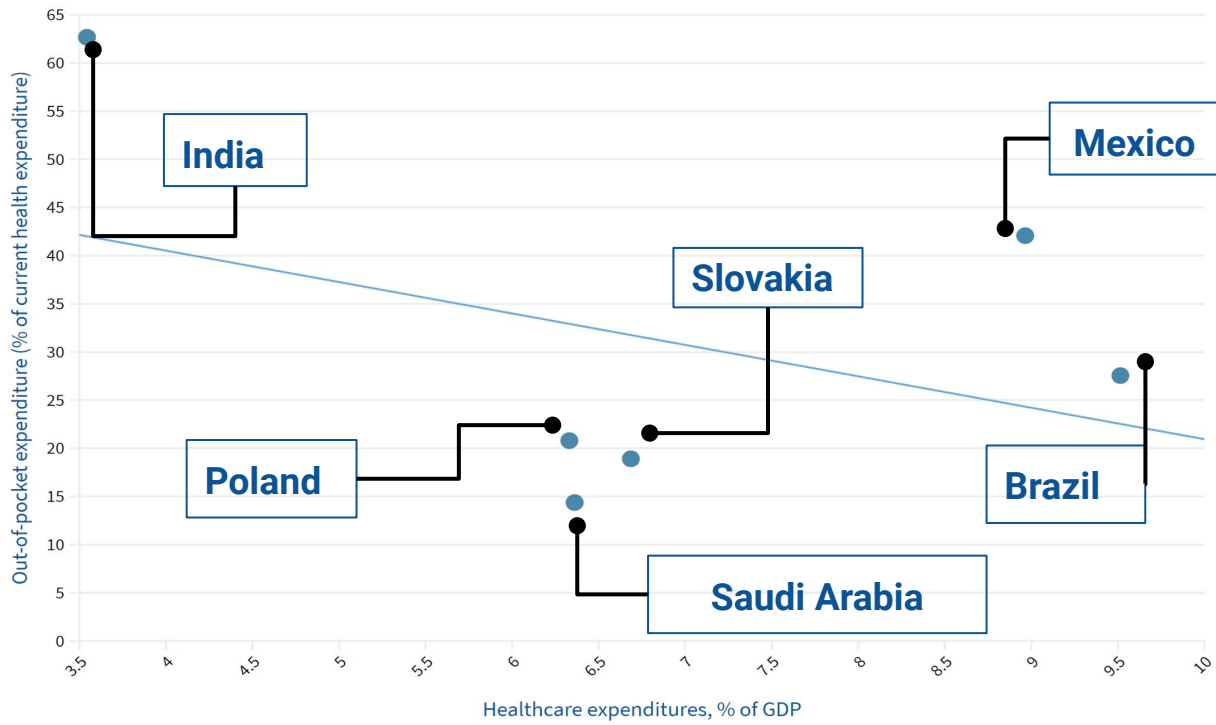


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.76
- E-Government Development Index, 2019:
0.76
- Corruption Perceptions Index, 2019:
38
- Global Gender Gap Index, 2019:
0.69
- Democracy Index, 2019:
6.86

Current Healthcare Expenditure



Countries with Low HALE and LE and Medium GAP



Compound annual growth rate



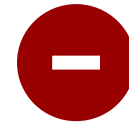
Socioeconomic inequality is one of the biggest problems. The wealthiest are less likely to need help, but when help is needed are more likely to receive formal care, while the poor relied on informal care. Brazil has to make progress towards providing healthcare for all, built on the solid foundations of primary care. It now needs to maintain momentum by exploiting the potential of digital services in healthcare.

SWOT Analysis of Healthcare in Brazil



STRENGTHS

- Relatively low level of cigarette and alcohol consumption in comparison to other countries.
- Citizens are provided with medical services through the universal medical system called the Unified Health System, that is free for everyone.
- The activities of the federal government are to be based on multiyear plans approved by the national congress for four-year periods.
- Legislative control of the food that is used on the territory of Brazil that helps to boost the immunization of the population.



WEAKNESSES

- Uneven location of sufficiency and staffing hospitals in Brazil.
- Most of the hospitals belong to the private sector and are expensive for the entire population.
- In the area of diagnostic support and therapy, 95% of the 7,318 establishments are also private.
- Prevalence of domestic private expenditures on health.
- 78% of hospitals are involved in general medicine, only 16% are specialized and 6% provide outpatient care only that is not enough for the building of the holistic system.
- Less qualified staff in comparison with developed countries that influence the quality of medical services.



OPPORTUNITIES

- Provision of the healthcare reform that can boost the general level of medical services and build an effective regulation of the whole system.
- Laboratories and institutions that can control and regulate the problems connected with epidemics and vaccinations.
- Most of ambulatory care is regulated by the public sector that can provide the entire part of the population with basic healthcare services.
- Brazil is a member of BRICS, one of the countries with a quickly growing economy that can bring additional funds for investment in the healthcare system.



THREATS

- Total health expenditure rises faster than the corresponding increase in the Gross Domestic Product.
- Economic crisis can be more destructive for the countries with an unstable economy in case of financing healthcare initiatives and programmes.
- Higher mortality in comparison with other countries that has a demographic impact.
- Over 55% of public hospitals have less than 50 beds.
- Tendencies to the ageing of the population, dramatic ecological situation and lack of medical infrastructure have a bad impact on longevity.

Analysis of Strengths and Weaknesses of Health Care System in Brazil



- Wide range of government programmes and initiatives, for example, the Ministry of Public Health has been carrying out a health surveillance project in Amazonia that includes epidemiological and environmental health surveillance, indigenous health and disease control components.
- Wide access to medicines and drugs that cost 40% less than brand-named analogues.
- Powerful enough laboratories for producing a certain quantity of vaccines to struggle local epidemics. In 2000, there were 14 industries authorized to produce generic drugs and about 200 registered generic drugs were being produced in 601 different forms.
- Relatively low cancer mortality (Brazil take place in the top five).
- The infant mortality rate in Brazil has fallen greatly over the past two decades.



- In 2014 only 43% of public hospital beds and half the hospital admissions were in municipal establishments.
- Only 25% of the population is covered by at least one of type of health insurances, 75% of which is regulated by commercial organisations and individual plans.
- OECD ranked Brazil's healthcare system as 125 that is a very low indicator, especially, if to compare with other countries.
- The overall regulatory system of the universal healthcare system is too bulky and ineffective that's why all investments in healthcare system can't find the appropriate outcomes.
- Low level of physicians and specialists per 10000 population.
- Emergency services are usually complected with physicians that take this job for supplementary income or had an unsuccessful private clinic practise.
- Behavioural factors such as smoking, alcohol drinking and, especially, obesity cause a decrease in longevity and HALE. Though the life expectancy is still growing the mass index remains to be high because of unhealthy dishes in cuisine.

Recommendations for Brazil

- **Providing economic reform for real development and growth.** Unemployment, crimes, socioeconomic inequality impede economic growth creating barriers for healthy longevity. High level of corruption in conjunction with macroeconomic instability, directly and indirectly, increase the burden of diseases and reduce improvements in health status and well-being.
- **Spending more on healthcare.** Brazil's expenditures on health are lower comparing to more developed countries and advanced economies. Spending more on public health and initiation of obligatory insurance will help to enhance the population's health and HALE.
- **Promotion a healthy lifestyle.** Though consumption of cigarette and alcohol is lower than in the EU it is still high enough and can have a bad impact on health and life expectancy.
- **Utilise AI for collection and analysis of healthcare system information.** Voluntary data contributions from patients via mobile phone applications or from wearable devices can be used to help clarify relationships between diseases on the one hand, and environmental, behavioural, and genetic factors on the other.
- **Strengthen primary and preventive care.** A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. The government should devise a comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy.
- **Increase productivity and quality of the healthcare workforce.** The government should provide initiative concerning smart management of the healthcare workforce. Hiring and working conditions of health personnel should be more flexible. Remuneration mechanisms for physicians should reduce their dependence.



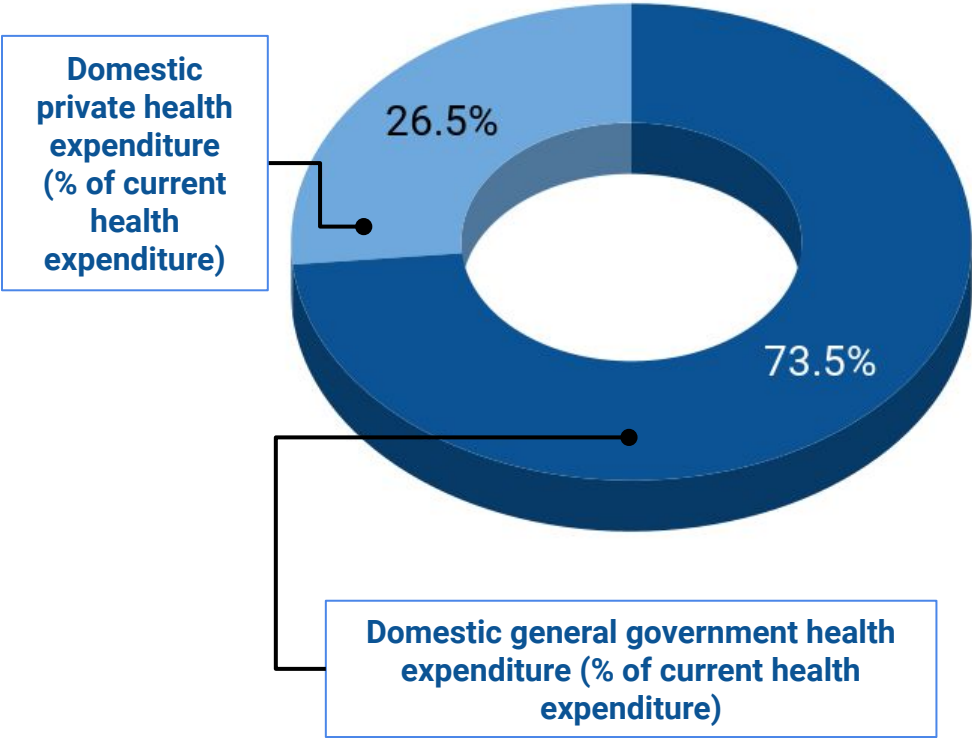
HALE	Both Sexes HALE, 2019	71.30 years
	HALE/Life Expectancy Difference, 2019	10.65
Economy	GDP per Capita, Current Prices, 2019	46.18 thousand (\$)
	Annual GDP Growth, 2019	1.65 %
Healthcare	Current Health Expenditure per Capita (2018)	4.99 thousand (\$)
	Public Health Care Expenditure, 2019	10.79 % of GDP
Retirement	Age Dependency Ratio, 2019	50.36
	Population over 65, 2019	17.64 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	8.94
	Annual Cigarette Consumption (Units per Capita), 2019	1021
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	29.4 % of adults

Longevity-Related Indices

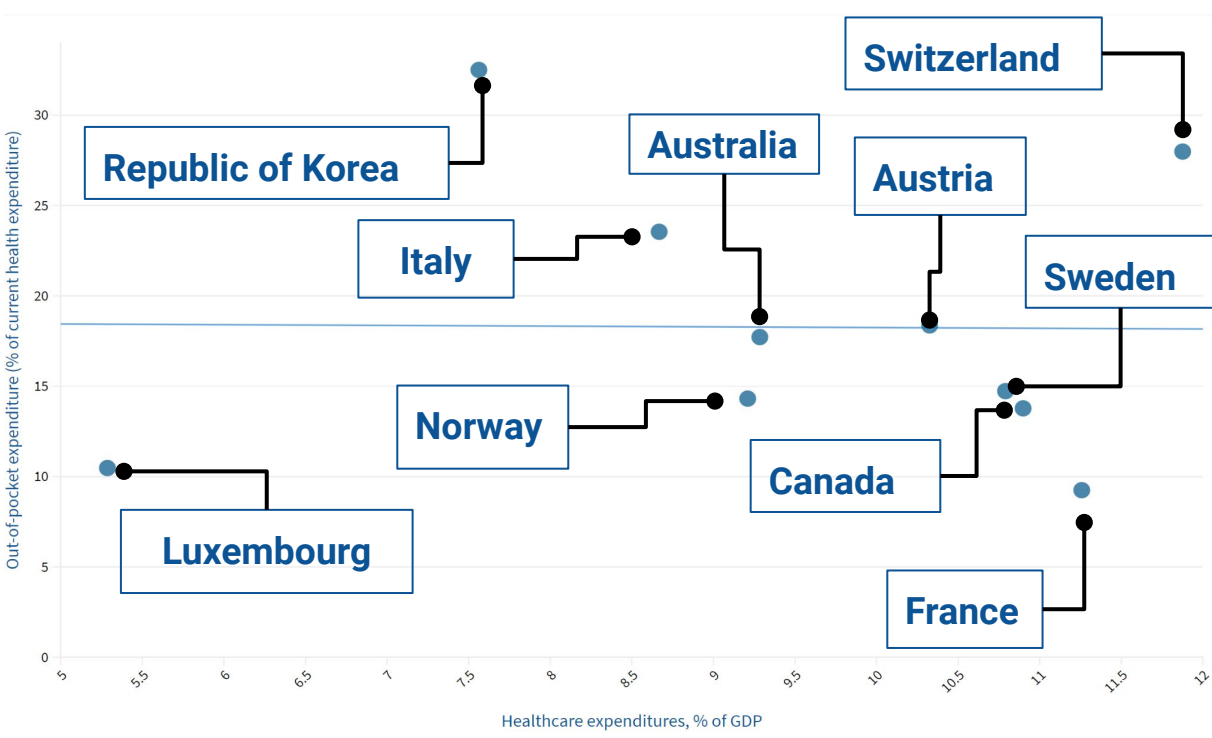


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.92
- E-Government Development Index, 2019:
0.84
- Corruption Perceptions Index, 2019:
77
- Global Gender Gap Index, 2019:
0.77
- Democracy Index, 2019:
9.22

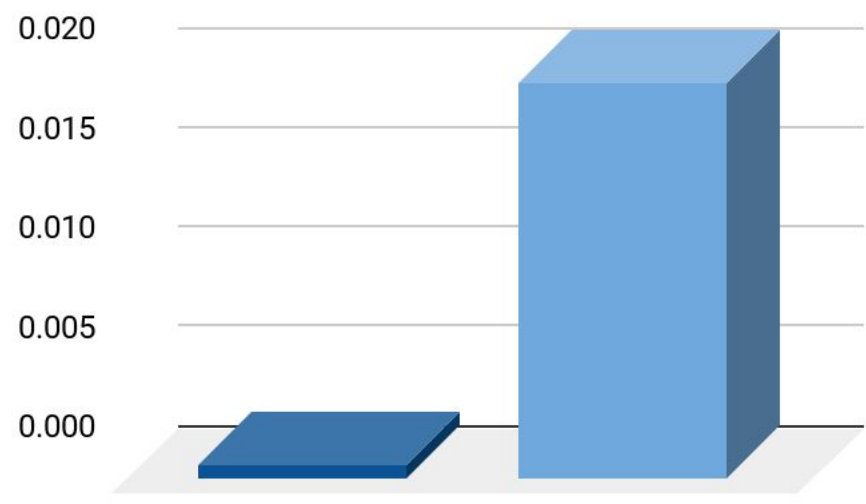
Current Healthcare Expenditure



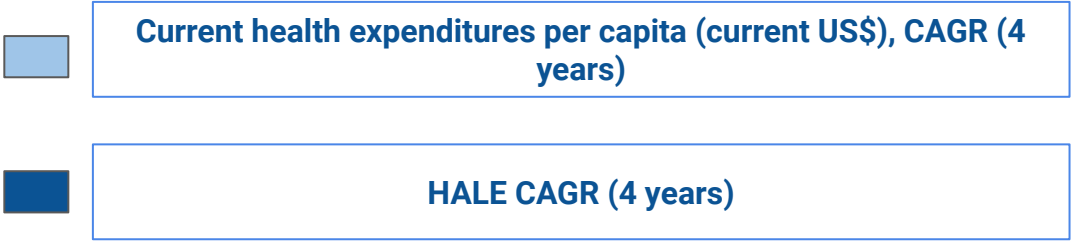
Countries with Low HALE and LE and High GAP



Compound annual growth rate



Recommendations suggested facilitating the exchange of information and interaction between health providers and government figures as well as flexible funding would also contribute to improvement and solve the problem of differences in regional care by allowing regions to determine the needs of their general populace and meet those needs more efficiently by allowing target-specific allocation of funds.

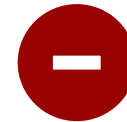


SWOT Analysis of Healthcare in Canada



STRENGTHS

- Life expectancy in Canada is high and is above the average in OECD.
- Existence of universal medicare and subsidizing of drugs and medicines.
- Organisation and functioning are highly decentralized and territories are highly involved in the administering of medicare.
- Canada has a predominantly publicly financed health system with approximately 70% of health expenditures financed through the general tax revenues.



WEAKNESSES

- The limited scope of services covered by medicare is the reason for the gaps in the general healthcare system.
- Large numbers of cancer and cardiovascular diseases that are the main reasons for deaths.
- Unhealthy lifestyle: high consumption of cigarettes, alcohol and unhealthy food.
- Low effectiveness of health expenditures for HALE and life expectancy.
- OECD has ranked the Canadian healthcare system as 30.



OPPORTUNITIES

- Infant and maternal mortality rates are worse than in other Virtual care, big health data and new technological developments as 3D-printing, IoT, robotics and health apps found the utilization in the Canadian healthcare system.
- Regular implementation of deep reforms to enhance the Canadian healthcare system.
- Services can be provided based on need rather than on the ability to pay that creates opportunity to protect the health.
- Canada has cutting-edge technology, big data clouds and digital infrastructure to implement P4 medicine for building systems biology models.



THREATS

- Risk of fiscal imbalances in healthcare.
- The trend for deeper centralization to minimize the influence of regional health authorities.
- Economic crises, health care costs grow faster than the economy, especially, in case of drug development and prescription of medicines.
- Existence of a big number of institutions and programmes can bring problems in regulation and decision-making process in the medical system.

Analysis of Strengths and Weaknesses of Health Care System in Canada



- In spring 2007, all provinces and territories publicly committed to establishing a Patient Wait Times Guarantee that means specialists react quickly on situations.
- The government actively manages and develops the national healthcare system the progress in the treatments and medicines in complex with effective health expenditures that drives HALE to increase.
- The [Canada Health Act](#) discourages the extra-billing and users fees.
- The federal government also provides Equalization payments to less prosperous provinces and territorial financing to the territories.
- The health system offers universal coverage with low rates of cost-sharing.



- The level of private health expenditures is still high.
- Besides the claims territorial programmes are aimed for certain categories of the people and can require additional users' fees.
- [Between the mid-1970s and 2000, capital investment in hospitals declined.](#)
- The number of acute care beds per capita has continued to fall, in part a result of the increase in day surgeries.
- Canadian specialists score poorly in terms of its effective use of ICT relative to other high-income countries.
- Increase in the immigration of foreign-educated doctors and nurses.
- A pan-Canadian drug coverage programme is catastrophic and even government's efforts can't change the situation significantly.
- [The country has turned a blind eye to the troubles of its aboriginal people](#) and it caused an arise of unusual kinds of diseases.
- [Obesity \(26% of adults\) and alcohol consumption](#) are the crucial risk factors for the Canadian nation.

Recommendations for Canada

- **Preventive care is the best way to lower health care costs.** Canada needs a new approach that shifts away from “sick care” to a model of empowering overall health and wellness, providing patients with access to proactive care that identifies risk and manages the chronic disease early to prevent escalation and deterioration.
- **The utilisation of Artificial Intelligence opportunities in preventive medicine to minimise costs and improve the accessibility of healthcare services.** AI has great potential in terms of tackling the problem of bureaucracy and inefficient administration, relieving doctors from time-consuming administrative tasks and giving them more time to spend with their patients. By automating and improving processes, artificial intelligence can benefit both patients and medical staff. By optimising patient processing planning it can reduce the waiting time and length of stay for patients, and it can also help medical staff in their day-to-day work.
- **Enable patient-centred care with information technology systems.** Embracement of technology in health care will lead to personalization and improvement of the quality of medical care through close coordination between patients, caregivers, and professionals.
- **Investment in healthcare infrastructure, facilities and equipment.** As it is known financing of hospitals in Canada decreased for the past years. Quality and effectiveness of treatment usually depend on progressive equipment for observations and investigations that is also can be a key factor in the comprehensiveness of medical system.
- **This shift from treatment to prevention is ultimately leading to a coming age of precision health.** “Precision health” denotes the continuous stabilization of health and the maximum-obtainable maintenance of a young biological age via the routine application of micro-interventions in response to ongoing fluctuations in biomarkers of ageing and health.

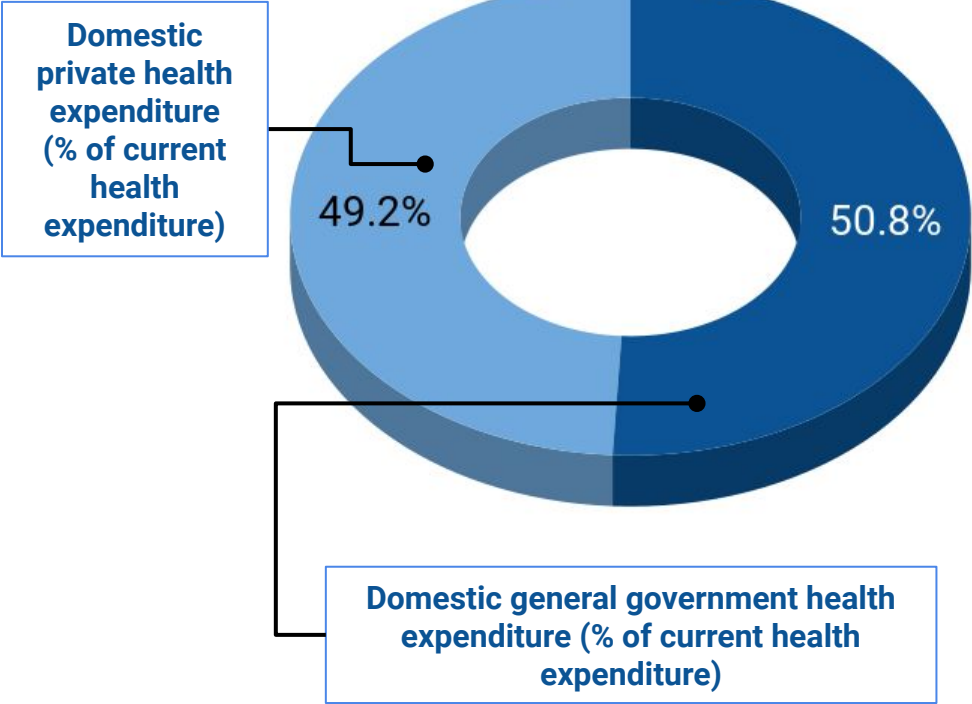
HALE	Both Sexes HALE, 2019	70.00 years
	HALE/Life Expectancy Difference, 2019	10.04
Economy	GDP per Capita, Current Prices, 2019	14.89 thousand (\$)
	Annual GDP Growth, 2019	1.05 %
Healthcare	Current Health Expenditure per Capita (2018)	1.45 thousand (\$)
	Public Health Care Expenditure, 2019	9.14 % of GDP
Retirement	Age Dependency Ratio, 2019	45.72
	Population over 65, 2019	11.88 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.07
	Annual Cigarette Consumption (Units per Capita), 2019	769
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	28.00 % of adults

Longevity-Related Indices

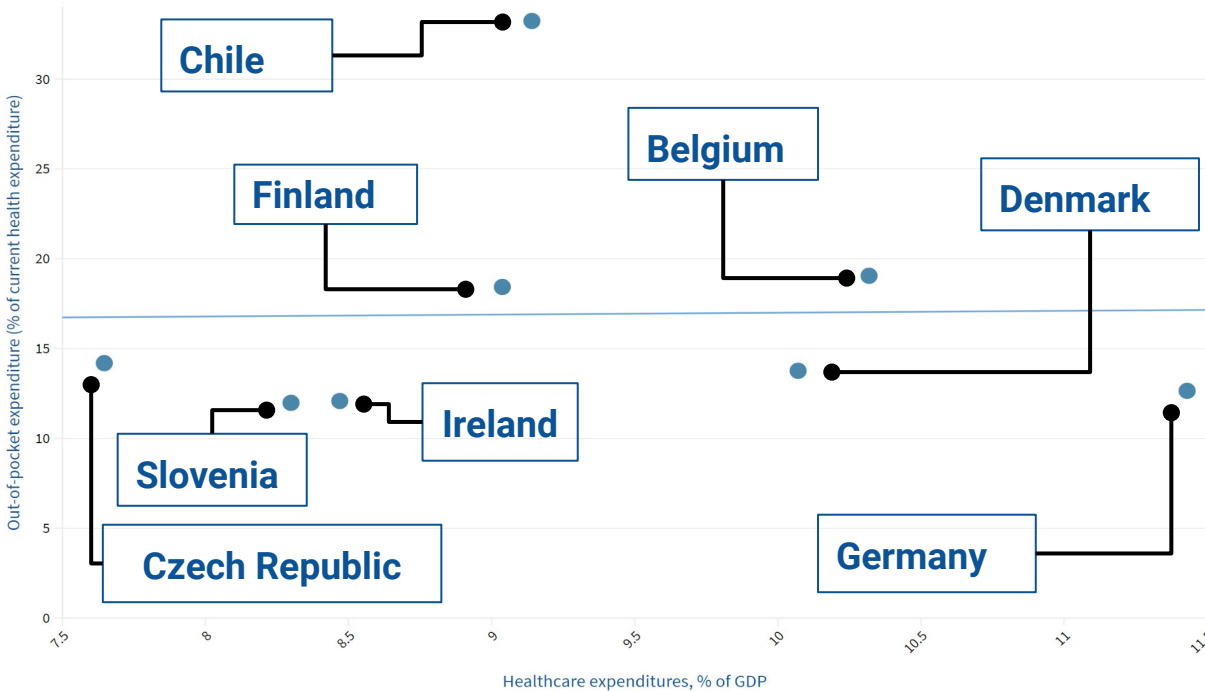


- The Healthcare Access and Quality Index,, 2019: **89.5**
- Human Development Index, 2019: **0.85**
- E-Government Development Index, 2019: **0.82**
- Corruption Perceptions Index, 2019: **67**
- Global Gender Gap Index, 2019: **0.71**
- Democracy Index, 2019: **8.08**

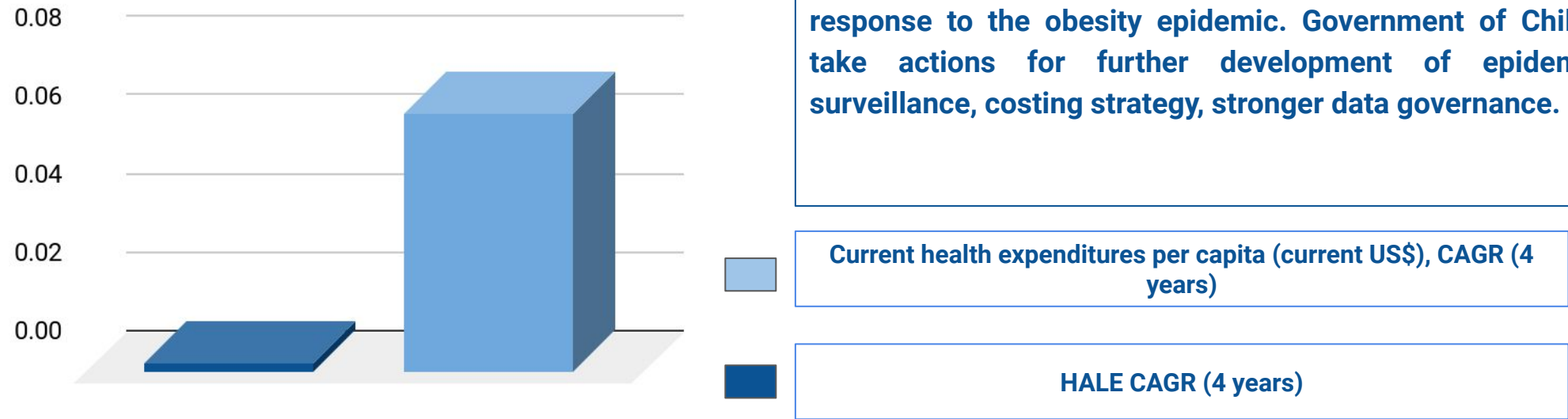
Current Healthcare Expenditure



Countries with medium HALE and LE and High GAP



Compound annual growth rate



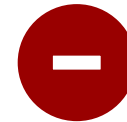
In order to improve public health and increase HALE policy should response to the obesity epidemic. Government of Chile should take actions for further development of epidemiological surveillance, costing strategy, stronger data governance.

SWOT Analysis of Healthcare in Chile



STRENGTHS

- Chile has a complex two-level system that consists of the public level that provides a basic set of services that can't be paid by some layers of the population and private insurances schemes.
- Relatively low level of cigarette consumption.
- The system also provides additional immunization and the supplementary food programme.
- Public sector covers 76.3% of the population that is a relatively good indicator.
- People usually spend 5% of income on health that is not dramatic.



WEAKNESSES

- At present, the health system is fragmented concerning both financing and delivery of services, with unequal availability of resources for serving.
- Out-of-pocket spending are high, 38% of total health expenditures.
- The quality of healthcare in Chile is unsustainable and vary regionally.
- Modern equipment is only in hospitals in big cities, remote area is less supplied.
- State hospitals are usually crowded with long waiting periods.



OPPORTUNITIES

- Medical treatment is affordable and of high-quality in both private and public sectors for residents and expats.
- The quality of medicine in big cities is high.
- Private hospitals provide a standard of care with good equipment and well-trained, usually, overseas, staff.
- Public costs can be partly put in reimbursement of spendings on drugs.
- Improved hygiene and sanitation conditions, universal hospital delivery coverage, the creation of outpatient care facilities and a decrease in diseases.



THREATS

- The country has a rugged and mountainous topography and is vulnerable to natural disasters, such as earthquakes and tsunamis.
- Ageing population.
- Poverty and low level of disposable income: 4% of the population faced the necessity to spend 30% of income on the treatments
- Climate and flora and fauna can be the reason for epidemics - diseases that can take a lot of life - so vaccination is an issue.
- Neoplasms and diseases of the circulatory system are key reasons for death in older ages.

Analysis of Strengths and Weaknesses of Health Care System in Chile



- The life expectancy is high - 79,1 year as a result of the compound impact of the decrease in child mortality, increase in healthcare coverage, development infrastructure, and technological advancement in medical treatment.
- Alcohol consumption among adults is lower than the OECD average.
- Starting from 2005 there was set a benefit basket under the public healthcare system that is guaranteed by the government.
- Chile's healthcare system is accessible in case of provision of the basic set of services.
- Chile's healthcare system is robust and functioning well enough.
- Chile's government implement programmes starting from school interventions and ending with labeling food.



- There is a negative trend in rising alcohol consumption
- Male smoking in Chile is higher than female smoking, 28.2% of Chilean males 20.9% of Chilean females were daily smokers in, 2019.
- The low rate of screening in obesity, cardio and cancer situation that brings high mortality from this factors.
- Decreasing share of the older age group in age structure.
- Limited access to healthcare services in remote areas causes a disparity in healthcare status and self-reported well being across the country
- Unmet public check-up goals: in, 2019 21.1% of the population received an adult blood glucose tests check, still not meeting the 25% goal for coverage.
- Chile is vulnerable to a wide range of severe natural disasters such as earthquakes, air pollution and wastes.

Recommendations for Chile

- **Promotion a healthy lifestyle.** Alcohol consumption, junk food, smoking are a challenge for the government and local Health Authorities, as those behavioural factors are factors that contribute to increase in the level of chronic diseases and increase the probability of premature death. The promotion of a healthy lifestyle with initialisation of programmes targeted on the reduction of the harmful impact of bad habits on the health status.
- **Providing additional programmes for monitoring and managing epidemics.** Hot climate and the existence of certain types of insects can bring epidemics. Establishment of modern laboratories with up-to-date equipment is one of the initiatives that can be undertaken to solve this critical issue.
- **Improve engagement of the population in the process of healthcare to increase health awareness.** People are not so concerned about their health status, which can be a consequence of low development of health screening and preventive medicine.
- **Providing additional insurance for the unsecured layers of the population.** Socioeconomic inequality results in inequalities in life expectancy across different regions and population groups in Chile. Affordable private insurance and high costs on specific treatments and medicine lead to worsening of public health.
- **Even distribution of medicines and progressive equipment among the regions.** It is a well known Chilean problem with the irrational distribution of drugs, other pharmaceutical products and healthcare facilities. Search for progressive ways of treatments and drug discovery can help doctors and specialist to provide advanced services to boost the population's health status. Financing of R&D and utilizing 3D-printing, cloud data storage, eHealth can make medications more effective and accessible.



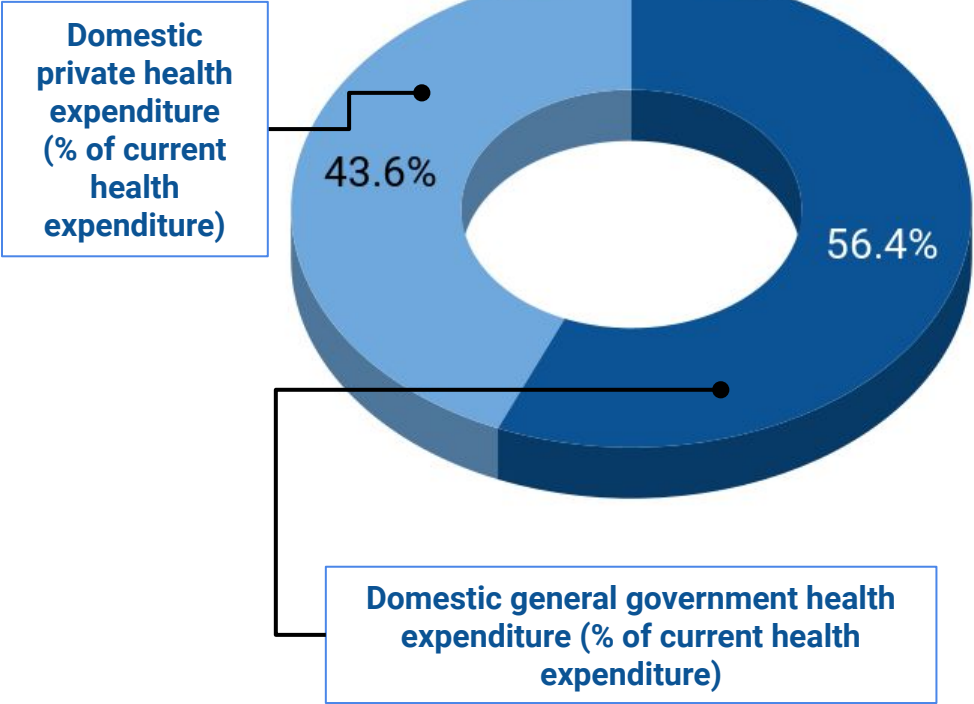
HALE	Both Sexes HALE, 2019	68.50 years
	HALE/Life Expectancy Difference, 2019	8.2
Economy	GDP per Capita, Current Prices, 2019	10.21 thousand (\$)
	Annual GDP Growth, 2019	5.94 %
Healthcare	Current Health Expenditure per Capita (2018)	0.50 thousand (\$)
	Public Health Care Expenditure, 2019	5.35 % of GDP
Retirement	Age Dependency Ratio, 2019	41.39
	Population over 65, 2019	11.47 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.05
	Annual Cigarette Consumption (Units per Capita), 2019	2043
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	6.2 % of adults

Longevity-Related Indices

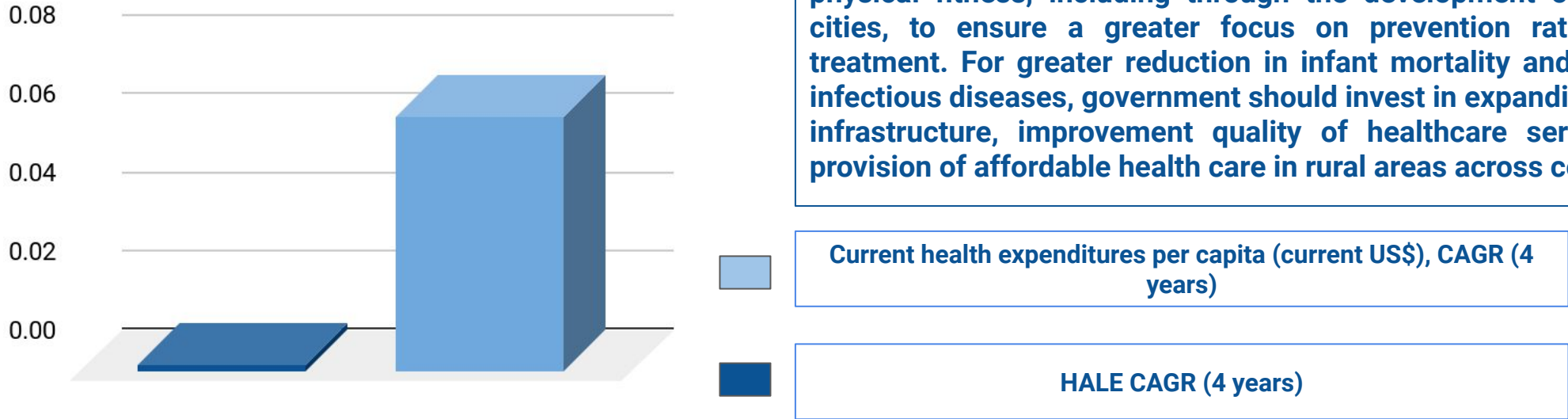


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.76
- E-Government Development Index, 2019:
0.79
- Corruption Perceptions Index, 2019:
42
- Global Gender Gap Index, 2019:
0.68
- Democracy Index, 2019:
2.26

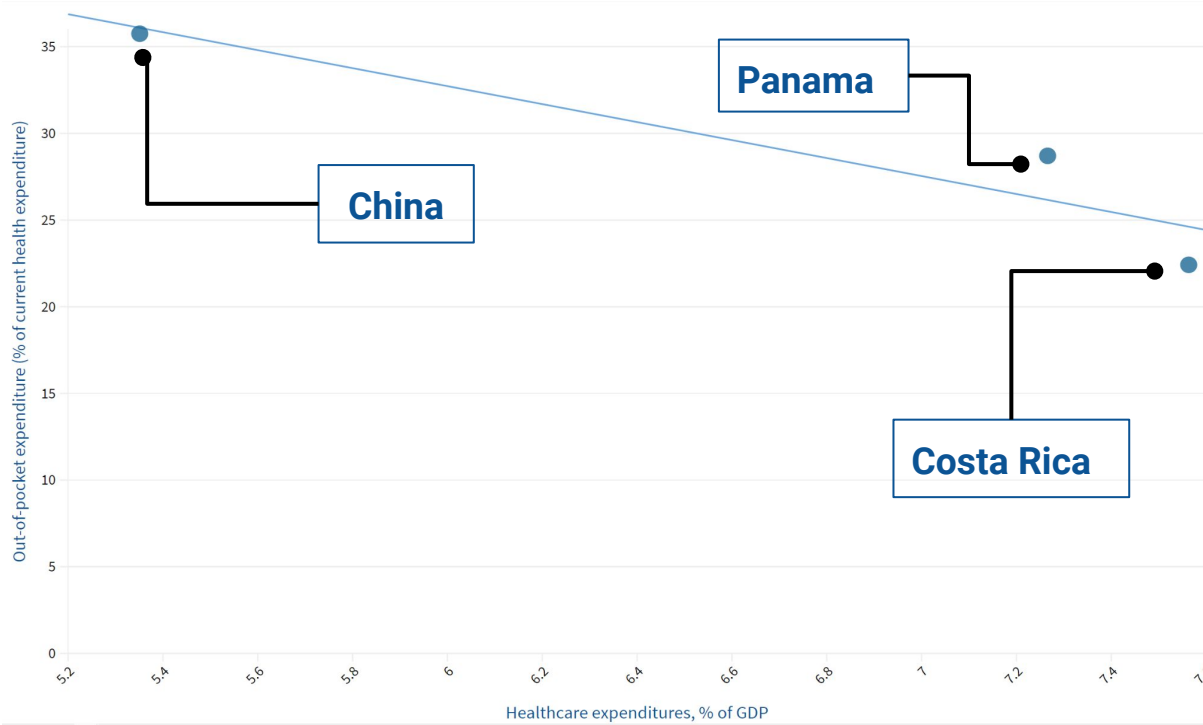
Current Healthcare Expenditure



Compound annual growth rate



Countries with Medium HALE and LE and Low GAP



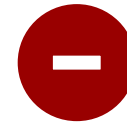
China faces many health challenges. A key component of healthcare should be the promotion of healthy lifestyles and physical fitness, including through the development of healthy cities, to ensure a greater focus on prevention rather than treatment. For greater reduction in infant mortality and rates of infectious diseases, government should invest in expanding health infrastructure, improvement quality of healthcare service and provision of affordable health care in rural areas across country.

SWOT Analysis of Healthcare in China



STRENGTHS

- 95% of the population have insurance for at least basic health coverage that provides treatments on primary care for the population.
- The government claims that public insurance covers 70% of medicare that is a relatively good indicator for healthcare.
- In the then-impoverished country, the system contributed to a remarkable increase in life expectancy by more than 30 years since 1960 to reach 76.2 years in, 2019.
- The infant mortality rate in China has fallen greatly, coming down to 18.3 deaths per 100,000 population in 2018.



WEAKNESSES

- The effectiveness of spending on health is low.
- Public health insurance covers only half of the costs of medication.
- Unaffordable healthcare: people with income lower than average do not afford treatment of serious chronic diseases.
- Shortage of healthcare specialist that cause long waiting periods and low quality of care delivery.
- Uneven distribution of hospitals and specialists - people in the remote area have no opportunity to cure serious diseases.
- The smoking rate is still high and stood at 24% in 2010, three percentage points higher than the OECD average of 21%.



OPPORTUNITIES

- Rapidly growing population's wealth is driving overall health care market expansion.
- China is a major market for different multinational health companies.
- There is an overall tendency in the decrease in smoking rates among the world.
- A fast-growing economy that can learn from advanced countries' healthcare systems and invest in the improvement of its own by the development of modern technologies and P4 medicine.



THREATS

- Environmental crises can be the reason for serious injuries, epidemics and diseases.
- The country has a large health care demand gap due to an ageing population, growing urbanization, proliferating lifestyle diseases.
- The obesity rates are rising and are more than in Japan and Korea.
- Continuing failures in the reforming of healthcare.

Analysis of Strengths and Weaknesses of Health Care System in China



- Obesity is much lower than in other OECD countries. The World Health Organization estimated that 4.6% of men and 6.5% of women were obese in China in 2008.
- Healthcare expenditures in China are growing rapidly from year to year with the growth of income.
- The government became highly concerned about the healthcare system that resulted in the implementation the three types of insurances, two of them on a voluntary basis.
- The health status of the population has been improved for several past decades,
- Living standards and health status of the population have been significantly improved since the 1980s.
- From 1990 to 2000, infant mortality decreased from 65 to 31 per thousand live births, and maternal mortality decreased by nearly 50 per cent.



- With 1.6 physicians per 1000 population in 2012, China had much fewer doctors per capita than the OECD average (3.2 physicians).
- The economic success wasn't mirrored on healthcare and such issues as longevity in particular.
- China's spent on healthcare only 5.4 per cent of gross domestic product (GDP) in 2013 that is much lower as compared to OECD countries.
- The hospitals in China are prevalent in the urban area, in big cities and are very overcrowded, so rural population is left without an appropriate medical establishment and usually get impoverished by the payments for noncommunicable diseases treatment.
- The out-of-pocket cost issue is the most pressing, especially in rural areas.
- Noncommunicable diseases have become the major disease burden, infectious diseases such as tuberculosis, hepatitis, and schistosomiasis are still the major health problems in poor rural areas. The prevalence of noncommunicable diseases such as cancer, diabetes and cardiovascular disease.

Recommendations for China

- **A focus on national-level health status and its temporal trajectory.** Health status is one of the most important indicators of well-being, and it predicts a large proportion of societal expenditures on health and social services for the elderly. Health status depends on individual lifestyle factors, social and community networks, general socio-economic, cultural and environmental conditions. Health status is also reciprocally affected by social and political policies and programs.
- **Improve engagement of staff in healthcare.** Though the government claims that there is basic insurance and treatments for 95% of the population are available, the real situation is the opposite. People find it difficult to receive the qualified treatments because of queries, waiting period and difficult system to sign up for a visit to a doctor. And this is in big cities where the huge public clinics have enough equipment, instruments and well-trained staff.
- **Provide more freedom for private sector development.** Private clinics can bring advanced methods and technologies in treatments, especially, foreign one by following the successful examples of the developed OECD countries that effectively tackle the burden of the noncommunicable diseases and provide the appropriate medications for elders.
- **Health system re-orientation towards the changing epidemiological landscape.** The increasing burden of noncommunicable diseases highlights the need to move from sick treatment to the prevention of chronic conditions. It requires patients' participation and high health consciousness.
- **Combat with undernourishment, poverty and socioeconomic inequality.** Results of our study show an evident linkage of health and wealth. Healthy longevity in China should be started from the provision of basic services for all population, including adequate sanitation facilities, improved water sources, effective prevention and treatment. The focus also should be made on both the healthcare status of adults and children to create favourable conditions for the growth of future generations.



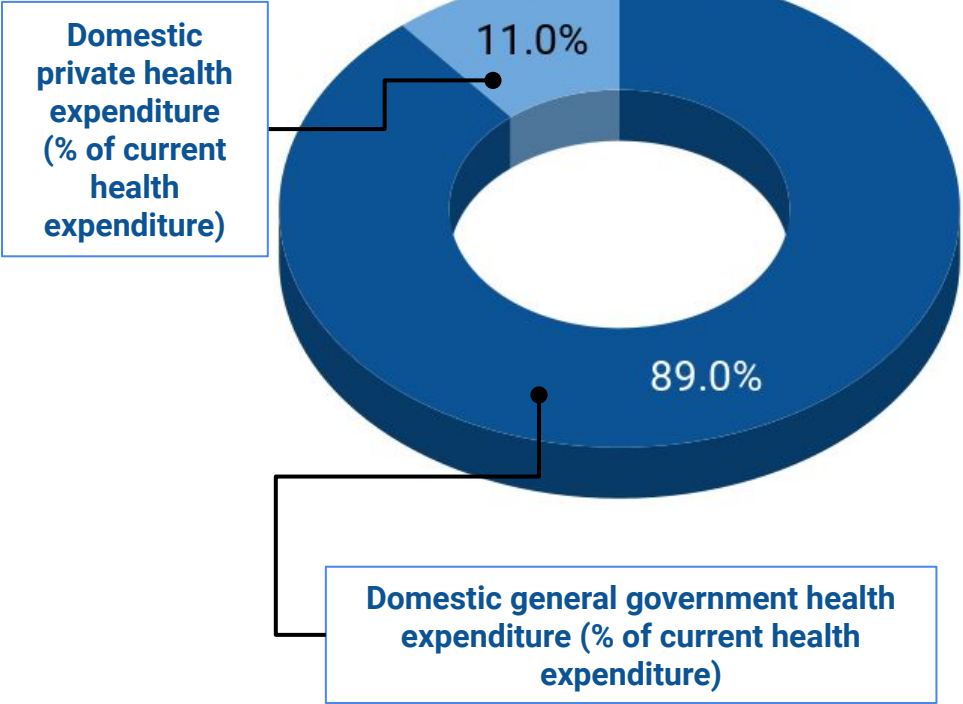
HALE	Both Sexes HALE, 2019	70.00 years
	HALE/Life Expectancy Difference, 2019	10.1
Economy	GDP per Capita, Current Prices, 2019	12.24 thousand (\$)
	Annual GDP Growth, 2019	2.08 %
Healthcare	Current Health Expenditure per Capita (2018)	0.90 thousand (\$)
	Public Health Care Expenditure, 2019	7.56 % of GDP
Retirement	Age Dependency Ratio, 2019	44.84
	Population over 65, 2019	9.88 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	4.87
	Annual Cigarette Consumption (Units per Capita), 2019	411
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	25.7 % of adults

Longevity-Related Indices

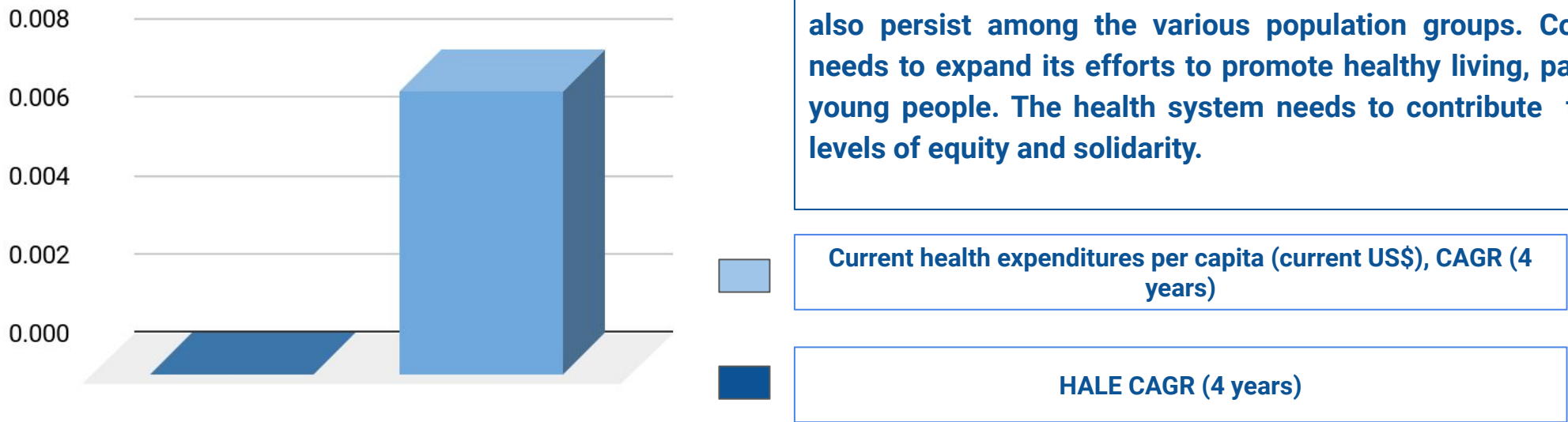


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.81
- E-Government Development Index, 2019:
0.76
- Corruption Perceptions Index, 2019:
57
- Global Gender Gap Index, 2019:
0.78
- Democracy Index, 2019:
8.13

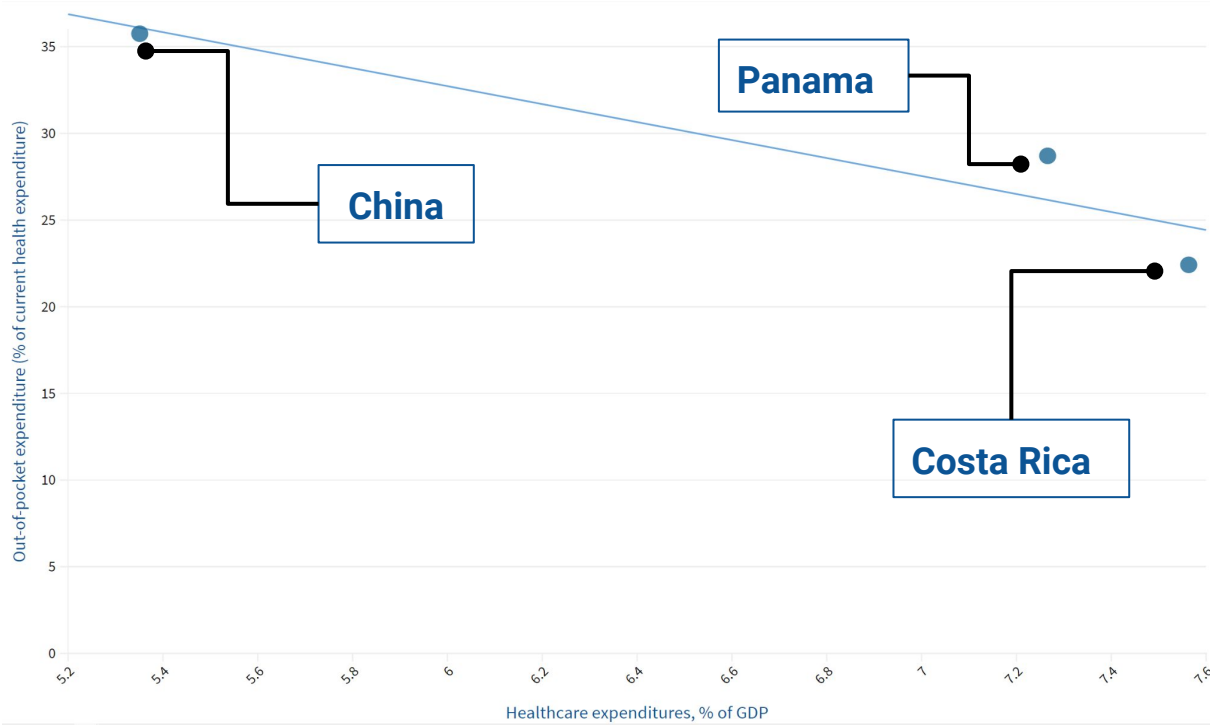
Current Healthcare Expenditure



Compound annual growth rate



Countries with Medium HALE and LE and Low GAP



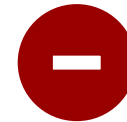
Diseases that most affect quality of life are heart disease, back pain, depressive disorders, hearing loss and diabetes. Inequalities also persist among the various population groups. Costa Rica needs to expand its efforts to promote healthy living, particularly young people. The health system needs to contribute to higher levels of equity and solidarity.

SWOT Analysis of Healthcare in Costa Rica



STRENGTHS

- The life expectancy exceeds the average in the OECD and longevity is above the US because of healthy dietary and favourable climate conditions.
- 11.1% of the population over the age of 20 used tobacco products in 2018. That figure is down from 14.2% in 2010, representing a decrease of more than 33,000 tobacco users.
- Over 95% population is covered by the public insurance that is Caja.
- Healthcare system in Costa Rica is available and universal for people of all ages.



WEAKNESSES

- Diseases of the circulatory system were the leading cause of death, followed by neoplasms; together, these two groups accounted for more than half of all deaths.
- Patients don't have an opportunity to choose provider and service.
- The benefits package mostly covered for primary care but not defined for the secondary one.
- There is a lack of specialists for providing primary care and most of them don't have post-graduate training.
- The death rate for Costa Rica in 2018 was 5.046 deaths per 1000 people, a 1.45% increase from 2017.



OPPORTUNITIES

- Primary care continues to develop with a few established entities such as Centers for Integrated Healthcare.
- Costa Rica has developed a multi-sectoral approach to tackle the challenges of the ageing population that can become an instrument for longevity enhance.
- Implementation of the innovative approach to delivering medical services can make Costa Rica's health care even more sustainable.
- The worldwide decrease in smoking rates.



THREATS

- There is a rapid population ageing. In 2010 the population 65+ was 5% according to the whole population and by 2050 this number expects to increase to 21%.
- The main risks for longevity are NCDs, cardiovascular diseases are the main burden accounting of 30% of deaths and 23% of reasons for deaths are occupied by cancer.
- In 2014 was figured out that 60% Costa Ricans between 20 and 44 were overweight or obese, and there is a tendency in growing risks of obesity.
- Environmental risks, such as earthquakes, tsunamis and epidemics because of tropic fauna.

Analysis of Strengths and Weaknesses of Health Care System in Costa Rica



- Out-of-pocket spending was 24.4% in 2014 that is lower than the average in the region.
- Approval of national strategy that can help to struggle the noncommunicable diseases through the smoking by reduction to 12% in its rates, decrease in obesity with a 15% reduction in salt intake and a 2% reduction in child obesity by 2021.
- Great improvements are achieved in the waiting periods by governmental intervention. After the appropriate initiative in 2014 93% of hospitals were able to reduce waiting periods.
- Services in Costa Rica have relatively low prices for the same quality and availability.
- Healthcare system in Costa Rica is affordable for people of all ages. Healthcare is free for the poorest Costa Ricans.



- Increasing crude death rate: the death rate for Costa Rica in 2018 was 5.046 deaths per 1000 people, a 1.45% increase from 2017.
- The attempt to reform of the healthcare provision through the hospitals was abandoned among the other crucial reforms that are also not effective enough.
- Long waiting periods before receiving the healthcare in different entities is lower than the accessibility of the whole system and patients' outcomes. Almost a third (31%) of patients were waiting more than 540 days for elective surgery. Long waiting periods in primary care cause the poor access to this kind of service that leads to overload in the hospital emergency rooms. Patients have to get up very early to handle the huge query in the clinic.
- Probability of increase in the financial burden of out-of-pocket spending, the catastrophic expenditure in health and impoverishment expenditure.
- Specialists and physician density remains to be 2.1 per 1000 population that is below OECD average.

Recommendations for Costa Rica

- **Concentrate on the planning, assessment and control of the functioning of the universal healthcare coverage.** A key issue concerns long waiting times, which have been a persistent and challenging problem. A preoccupation with waiting times also means that other dimensions of quality, particularly patient outcomes, have not received sufficient attention in recent years. Some key quality indicators, such as those relating to patient experience and patient safety, are not regularly collected.
- **Strengthen primary and preventive care.** A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. The government should devise a comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy.
- **Promotion a healthy lifestyle to decrease the burden of behavioural risk factors.** Increasing obesity in Costa Rica in constellation with smoking and alcohol consumption are major factors that contribute to the slow-motion disaster of non-communicable diseases.
- **Improve engagement of high-qualified staff in healthcare.** The government should provide financial incentives for medical staff in the public sector and funding to state healthcare services.
- **Enhance eHealth infrastructure.** To achieve higher efficiency of the healthcare system and better health outcomes in the context of ageing and life expectancy improvements the government should modernise health centres by providing the latest technological equipment. The government also should give particular attention to the development of eHealth systems, include the creation of electronic patient records in primary health care, e-prescription services and patient registries.



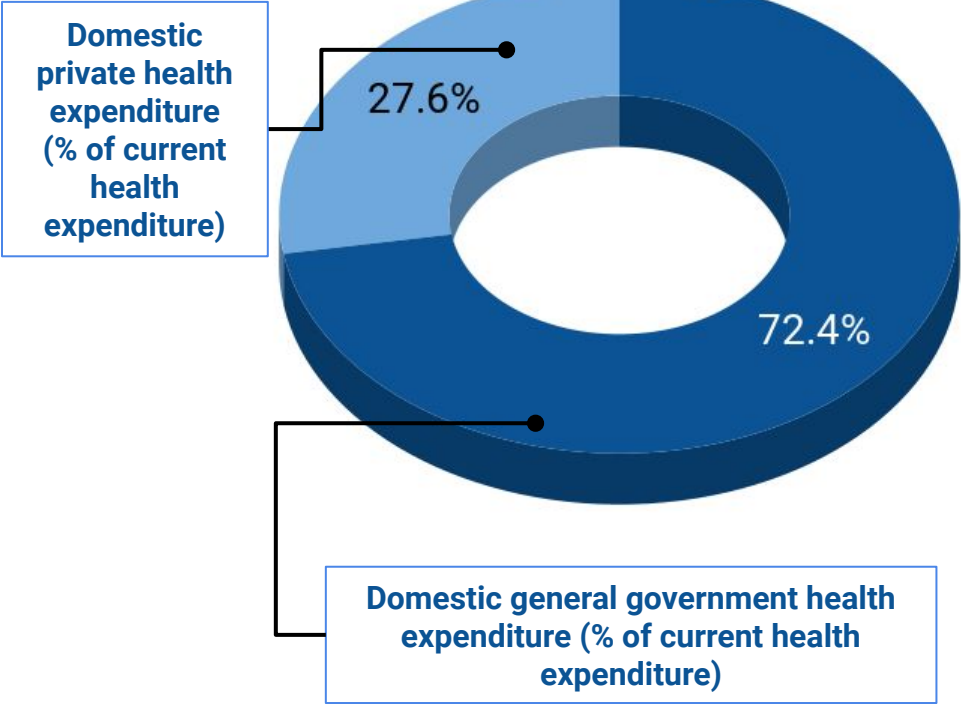
HALE	Both Sexes HALE, 2019	67.80 years
	HALE/Life Expectancy Difference, 2019	10.93
Economy	GDP per Capita, Current Prices, 2019	8.82 thousand (\$)
	Annual GDP Growth, 2019	2.24 %
Healthcare	Current Health Expenditure per Capita (2018)	0.98 thousand (\$)
	Public Health Care Expenditure, 2019	11.19 % of GDP
Retirement	Age Dependency Ratio, 2019	46.21
	Population over 65, 2019	15.56 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	5.83
	Annual Cigarette Consumption (Units per Capita), 2019	233
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	24.6 % of adults

Longevity-Related Indices

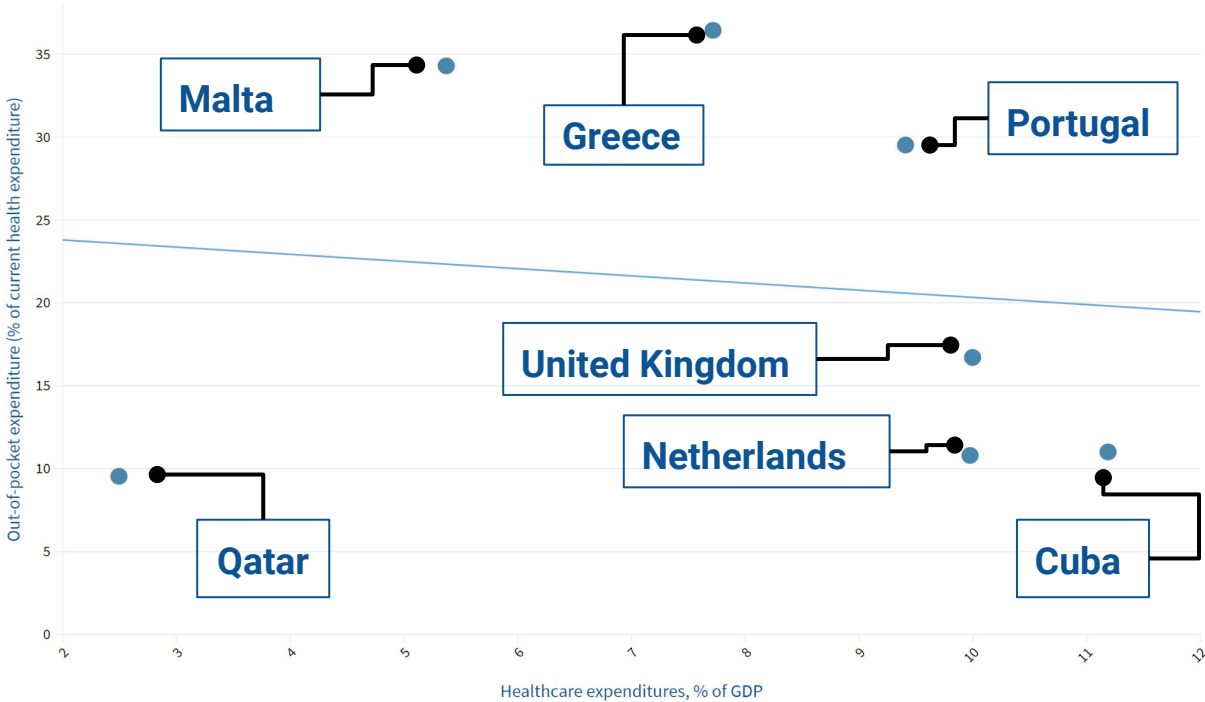


- The Healthcare Access and Quality Index,, 2019: **89.5**
- Human Development Index, 2019: **0.78**
- E-Government Development Index, 2019: **0.44**
- Corruption Perceptions Index, 2019: **47**
- Global Gender Gap Index, 2019: **0.74**
- Democracy Index, 2019: **2.84**

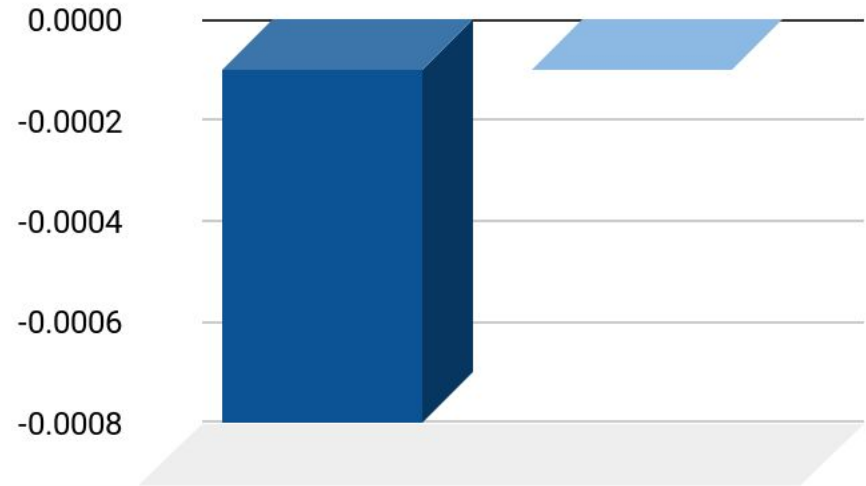
Current Healthcare Expenditure



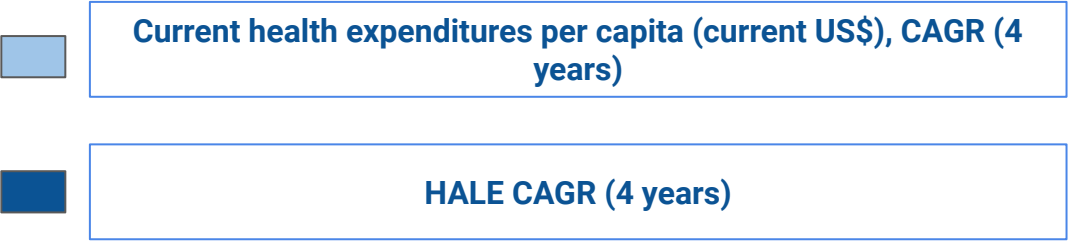
Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate



Ageing, an increase in obesity and problems with tobacco and alcohol are main causes of death among Cuba's citizens. Cuban government should address to health challenge, which is a huge investment in public health education around smoking, alcohol, diet and exercise. The foundation of Cuban's preventative health care model that is at primary care level should be in priority.

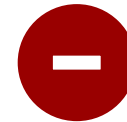


SWOT Analysis of Healthcare in Cuba



STRENGTHS

- The outstanding decrease in child mortality aged less than 5 years for the past decades from 46 death per 1000 40 years earlier to 7 per 1000 in 2014.
- Cuba has a really well-educated population and a surfeit of doctors. Life expectancy on the island is higher than in the U.S. and Cubans have almost more than three times as many doctors per capita.
- Every physician completes a family medicine residency.
- Developed preventive and primary care.



WEAKNESSES

- The age-adjusted death rate for coronary heart diseases is 100.35 per 100,000 of population ranks Cuba #116 in the world and reached 19,504 or 23.02% of total deaths.
- About half of Cubans suffer from obesity
- A national survey revealed that they eat only 3.2 fruits and vegetables per week that is a very low amount.
- Cuba has one of the highest abortion rates.
- The healthcare system is one-tier consistent only of public establishments that bring the lack of flexibility and makes it dependent on government.



OPPORTUNITIES

- Regular provision of reforms in Cuba leads to the modernization of polyclinics and training of good staff that cause a significant improvement in healthcare.
- Government is the key player of the healthcare system in Cuba and can observe, plan and regulate the functioning of the healthcare with no limits that bring simply mechanisms and effectiveness with further equal distribution of resources.
- Streamline establishment of different entities such as polyclinics and laboratories that can struggle the epidemic and the viruses.
- Regular provision of the renovation of the equipment.



THREATS

- Epidemics caused by different viruses are among the major causes of death that increase the risk of premature disability.
- 42 per cent of the Cuban population are overweight and it is a risk of CVD for the country.
- Lack of financial resources can be the obstacle to rebuilding a strong healthcare system.
- Past conflict with the USA that brought the increase in medications' and drugs' costs up to 30%.
- Stroke is the second risk factor for death and it reached 10.77% of deaths in 2017.

Analysis of Strengths and Weaknesses of Health Care System in Cuba



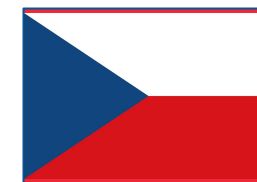
- Cuban life expectancies of 79.5 years and infant mortality rates of 4.3 per 1000 live births (2015) compare well with rich nations like the USA (78.7 years and 5.7 per 1,000 live births).
- Cuba spends 11.1% of GDP on the healthcare that is above the average indicator in the world.
- The patient to doctor ratio has decreased sufficiently for the few past decades and stood for 147 in 2010.
- Cuba could reach the record of 98% full immunization by the age of 2 years, vaccinating children against 13 illnesses; antenatal care for 95% of pregnant women with rates of infant mortality less than 5 per 1000 births; and chronic disease control, including a yearly blood pressure measurements for the entire population.
- By 1999 Cuba could reach the full basic coverage of the population by the functioning of medical teams.
- Smoking and alcohol consumption are below the OECD average.



- Centralized planning brings certain disadvantages to the functioning of the healthcare system because of penalties for physicians in case of bad statistic for the patients' outcomes, so they usually manipulate the data.
- Great disparities in the rural and urban areas because of the uneven distribution of medical facilities and specialists.
- Poor focus on care delivery: too long waiting periods and short consultations.
- Doctors and specialists are usually overworked because of the great amount of visits (800-1000 per day) and their colleagues are involved in the abroad health missions.
- There are severe problems with the diagnostics and supply of up-to-date equipment and even with an electricity supply that destruct the functioning of hospitals and medical centres
- Prevalence of tobacco use was revealed among the 37% of students and alcohol consumption among 74.1%, students with 3.7% classified as at risk for death.

Recommendations for Cuba

- **Struggling against the bureaucracy.** Bureaucracy does not strengthen the healthcare system. It inevitably leads to higher administrative costs, corruption, poor focus on the quality of healthcare and care delivery itself.
- **Resolving the issue with healthcare accessibility.** There must be certain facilities and conditions for the medical staff to provide appropriate diagnostics and effective treatment. Investment in the modernisation of healthcare facilities may help to boost healthcare efficiency and improve health outcomes.
- **Improve staff engagement in the health care system.** Certainly, the government earns from foreign health missions but the entire population in Cuba suffers from bad care delivery and shortage of employees in hospitals. Making physicians tired from overwork is very risky because such a situation can lead to mistakes and bad patients' outputs.
- **Focus on longevity global challenges.** The “silver tsunami” is an actual challenge for Cuba. Government initiatives should follow the worldwide movement to improve physical, mental, social well-being for people as they age. The initiative should aim to comprehensively address the challenges and opportunities presented by the ageing of the population.
- **Tackle rising obesity.** Thus rates of smoking and alcohol consumption are relatively low, the prevalence of overweight among adults is a rising issue. The government should initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioural factors such as insufficient physical ability, overweight, alcohol abuse, smoking.
- **Plan and implement developmentally appropriate programs in school-aged environments, encourage social media responsibility to maintain social network and develop inclusive society for the elderly.**



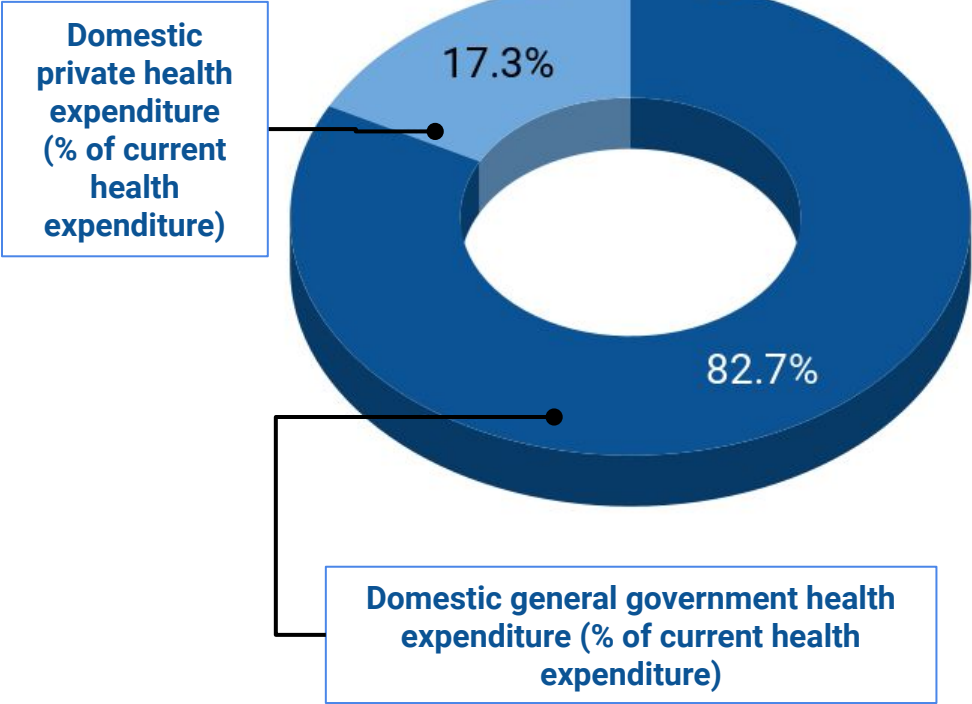
HALE	Both Sexes HALE, 2019	68.80 years
	HALE/Life Expectancy Difference, 2019	10.23
Economy	GDP per Capita, Current Prices, 2019	23.48 thousand (\$)
	Annual GDP Growth, 2019	2.33 %
Healthcare	Current Health Expenditure per Capita (2018)	1.76 thousand (\$)
	Public Health Care Expenditure, 2019	7.65 % of GDP
Retirement	Age Dependency Ratio, 2019	55.09
	Population over 65, 2019	19.80 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	14.45
	Annual Cigarette Consumption (Units per Capita), 2019	2427
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	26.00 % of adults

Longevity-Related Indices

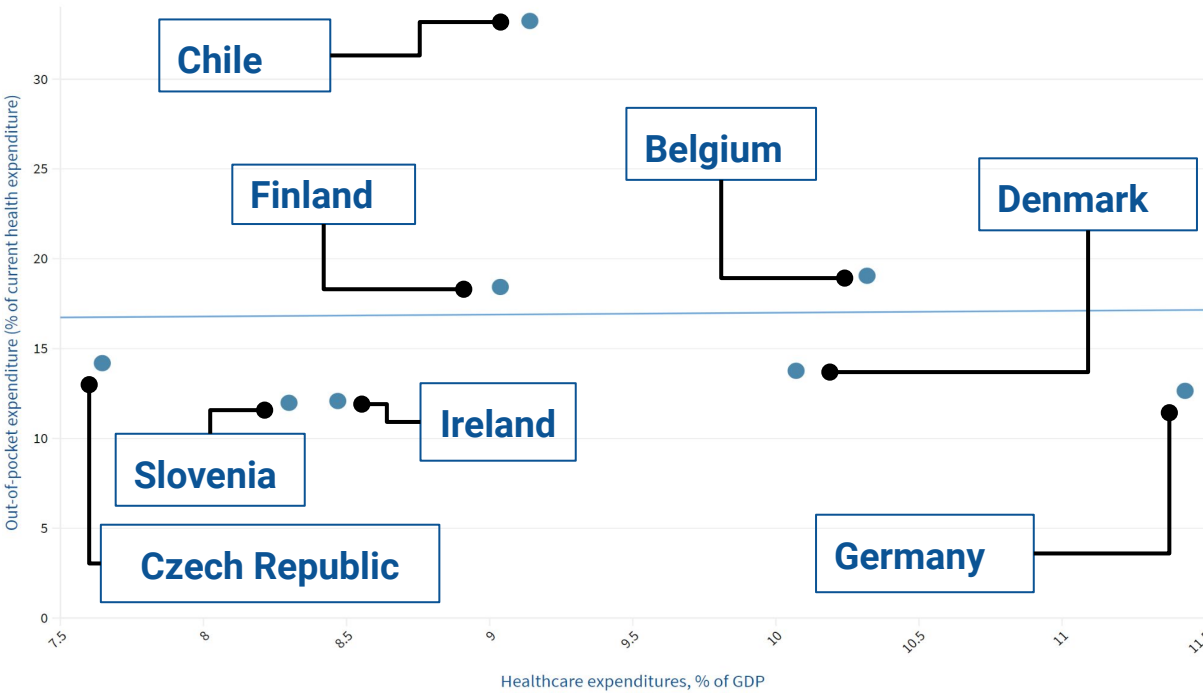


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.90
- E-Government Development Index, 2019:
0.81
- Corruption Perceptions Index, 2019:
54
- Global Gender Gap Index, 2019:
0.71
- Democracy Index, 2019:
7.69

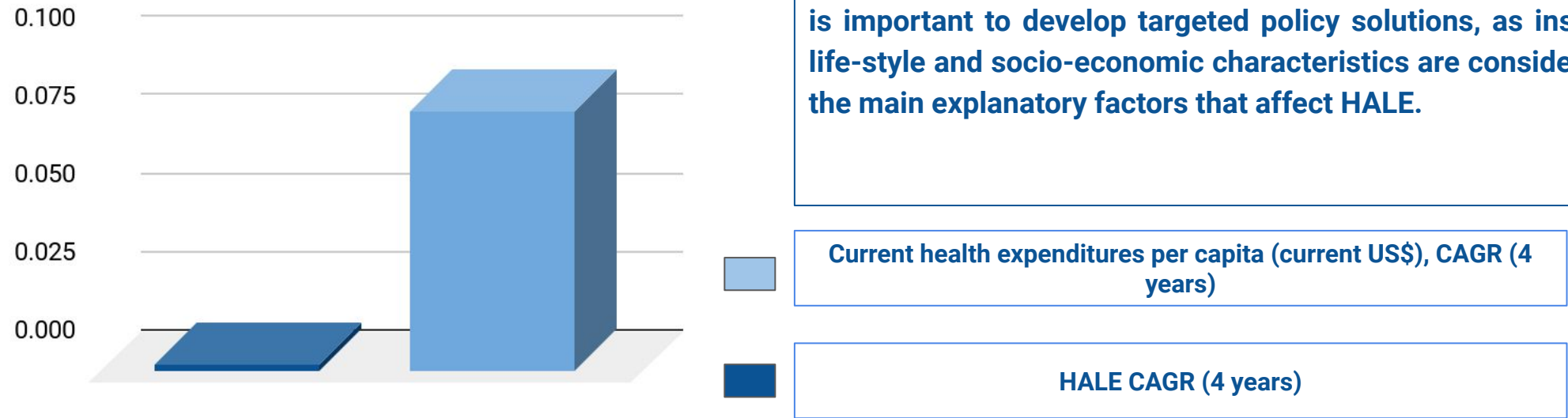
Current Healthcare Expenditure



Countries with medium HALE and LE and High GAP



Compound annual growth rate



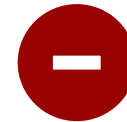
There is a regional variations in health outcomes in the country. It is important to develop targeted policy solutions, as institutions, life-style and socio-economic characteristics are considered to be the main explanatory factors that affect HALE.

SWOT Analysis of Healthcare in Czech Republic



STRENGTHS

- Amenable mortality has decreased greatly and tended to reach the OECD average indicator.
- Relatively low amount of unmet needs for medical care in comparison to other countries and fewer disparities among different income groups.
- Quality of medicine and its accessibility is relatively high and reached 89.0 in, 2019.
- There is a slight decrease in the key risk factors for the country such as tobacco and dietary habits.
- Infant mortality is one of the lowest and rates 2.5 infant death per 1000 live birth in 2015.



WEAKNESSES

- The age-standardised mortality rate for cardiovascular diseases is 60% higher than the EU average. CDV cause about half of the deaths.
- Levels of Ischaemic heart disease, stroke and others remains to be the highest than the EU average while lung cancer is the leading cause.
- Nearly 1 in 4 people of Czechs reports living with hypertension and 1 in 13 with diabetics.
- Only 61% of Czechs feel that they are healthy that is generally lower than in other EU countries.
-



OPPORTUNITIES

- There are certain improvements in the prevention of premature deaths, for example, from cardiovascular diseases.
- The healthcare system is financed by the public sources that are 82.4% and private sector spendings have been stable for the past years because of the financial protection.
- The decrease in amenable mortality is a good springboard for the boost of primary and preventive care and also public services.
- There is a sufficient decline in smoking (from 24% to 18%).



THREATS

- The increase in death from diabetes, cancer, dementia and other diseases are the major risk and issue to resolve.
- CVD mortality though is the main cause of death and is double higher than OECD average.
- Smoking rates in Czech are higher than in OECD.
- There are more obese than in other EU countries and this risk factor is on the rise that creates great concern for society.
- Traditions influenced alcohol consumption in the Czech that is 11.9 litres and higher than the OECD average.
- No political concerns on health problems.

Analysis of Strengths and Weaknesses of Health Care System in Czech Republic



- Death from the respiratory and mental, behavioural disorders are lower than the OECD average.
- The life expectancy of Czech women after 65 years was 19.5 years in 2015.
- The healthcare in the Czech Republic is based on the Social Health Insurance scheme and provides the generally good basket of benefits.
- Czech Republic has the fourth public funding share of 82.4% after such countries as Germany, Denmark and Sweden.
- There is a good number of acute beds for long-term care that is above the EU average.
- The amount of doctors and specialists per population seems to be very high and complete. The staff in the Czech Republic is qualified and well trained.



- Musculoskeletal problems and depressive disorders are some of the leading determinants for disability-adjusted life years.
- The high level of correlation with education, so the population with the lowest levels of education are more likely to have the diabetics and others.
- 29% of 15-year-old girls and 32% of boys have been drunk more than twice and it is above the EU average.
- Nearly 1 in 5 adults (19%) are now obese and the obesity for adolescents is 18% and has been doubled twice.
- There are usually delays in the implementation processes for enhancing the services and the effectiveness of the healthcare system.
- Many institutions and long-term care facilities in the remote area require a certain modernization.
- The physician personnel is ageing and over 30% of general practitioners and 40% of pediatrics are after 60.

Recommendations for Czech Republic

- **Reduce high disparities in healthcare status across regions.** Health and socio-economic inequality inevitably influence the overall health status of the nation. The provision of the activities to enhance and maintain qualitative medicine in rural areas can bring more health-adjusted years for the Czechs.
- **Prepare new job orientations and train the young staff in the healthcare system in the Czech Republic.** New challenges are arising with the increasing global trend of the ageing population. The government should prepare the new staff to minimise the future risk concerning the shortage of personnel.
- **Increase healthcare spendings.** The lack of financing is a key reason for limited access and affordability of healthcare services. Investments can help to combat the disparities in the region with investments in innovations and breakthrough approaches such as 3D-printing, P4 medicine and artificial intelligence.
- **Addressing global longevity challenge through the focus on the elderly's well-being.** Longevity planning can certainly define the key strategies and steps on the way to Healthy Longevity. The government should accumulate affords to build a broad ecosystem for support by enabling scientists, engineers, policymakers, and other stakeholders to coordinate performance for healthy longevity progressiveness.
- **Address the rising burden of non-communicable disease.** Lifestyle risk behaviours are responsible for a large proportion of disease burden and premature mortality worldwide. Risk behaviours tend to cluster in populations. Non-communicable disease is caused by the set of emerging risk factors (sleep, sitting time, and social participation) and unique risk combinations and their associations with all-cause and cardio-metabolic mortality.
- **Health records and linkage to survey data should be used more extensively** to refine disease prevalence estimates and provide more reliable data to guide policy and programmes to address these causes of ill health.

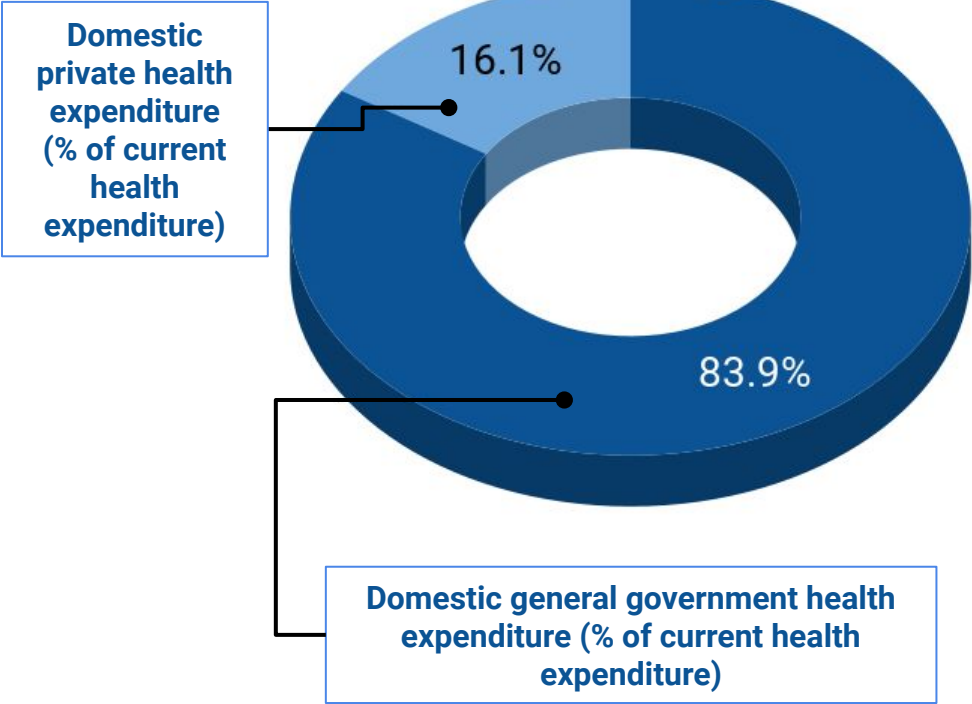
HALE	Both Sexes HALE, 2019	71.00 years
	HALE/Life Expectancy Difference, 2019	9.95
Economy	GDP per Capita, Current Prices, 2019	60.21 thousand (\$)
	Annual GDP Growth, 2019	2.84 %
Healthcare	Current Health Expenditure per Capita (2018)	6.21 thousand (\$)
	Public Health Care Expenditure, 2019	10.07 % of GDP
Retirement	Age Dependency Ratio, 2019	57.14
	Population over 65, 2019	19.96 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	10.26
	Annual Cigarette Consumption (Units per Capita), 2019	1298
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	19.70 % of adults

Longevity-Related Indices

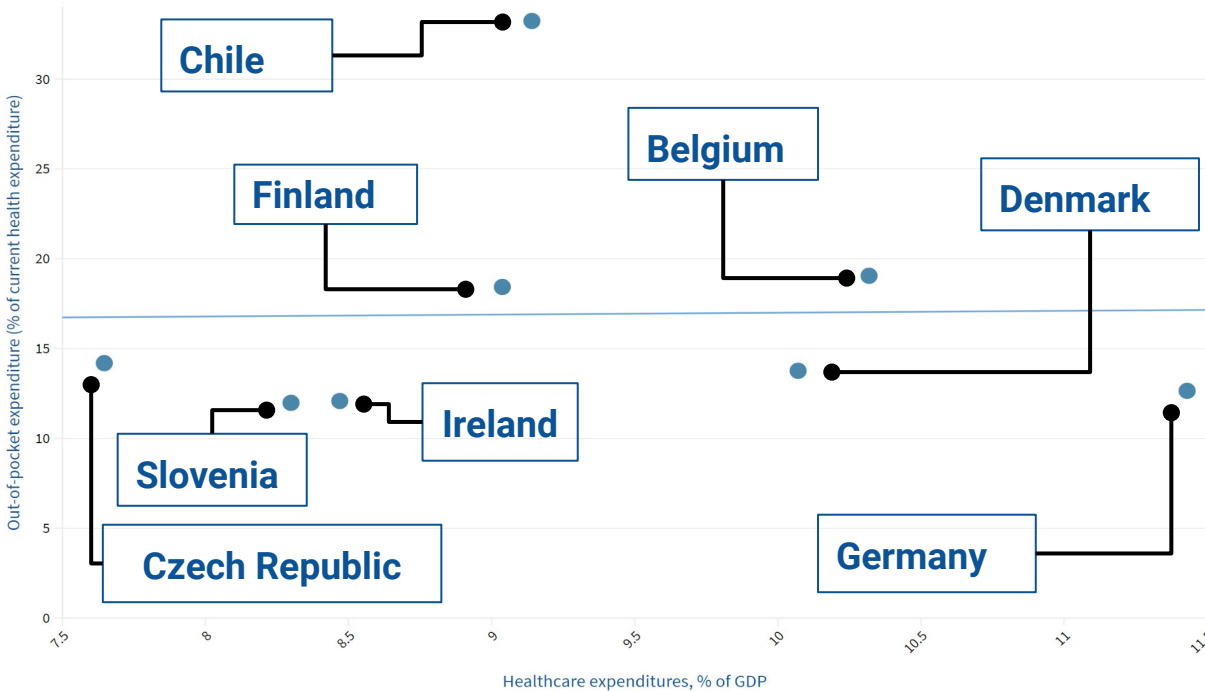


- The Healthcare Access and Quality Index,, 2019: **89.5**
- Human Development Index, 2019: **0.94**
- E-Government Development Index, 2019: **0.97**
- Corruption Perceptions Index, 2019: **88**
- Global Gender Gap Index, 2019: **0.76**
- Democracy Index, 2019: **9.22**

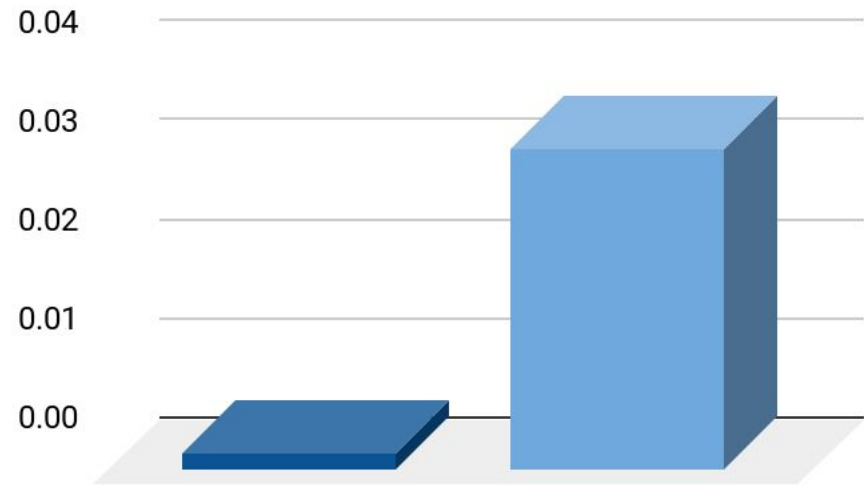
Current Healthcare Expenditure



Countries with medium HALE and LE and High GAP



Compound annual growth rate



Initiatives to reduce levels of drinking and promote healthy lifestyle in Denmark are a welcome development. The proportion of residents who report being in good health is high, although a gap exists between income groups that should be addressed.

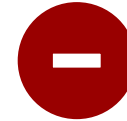


SWOT Analysis of Healthcare in Denmark



STRENGTHS

- Outstanding long life expectancy for elders: at 65 women expect to leave 20 years and men 18 years more.
- Smoking rates now are among the lowest in the EU.
- Amenable mortality is almost the lowest in the EU.
- There is a low amount of unmet health needs in Denmark.
- Great reduce in mortality rates after 65 years that influenced positively the healthy longevity.
- Healthcare system is well-organized, comprehensive and composed of two levels: public and private, where public occupies 84%.
- The obesity levels are much lower than in other EU countries.



WEAKNESSES

- The life expectancy gap is still high for Denmark, only 60% of additional predicted years can be health-adjusted.
- The mortality rate due to cancer is the fourth largest in the EU and this disease remains to be the main burden for the slowdown of life expectancy improvements.
- Nearly 1 in 5 people in Denmark lives with hypertension and 1 in 12 lives in chronic depression.
- Waiting periods for some diagnostic procedures can be long enough.
- OECD ranked Denmark's healthcare system 34th.



OPPORTUNITIES

- The great amount of General Practitioners that provide the effective services (91% compared to the OECD average) for the population and provide an accessible basic medical coverage.
- Healthcare system is effective in treating life-threatening conditions.
- Vast opportunities to finance implementation of AI and other advanced technologies in the healthcare such as robotics in surgery, 3D-printing, smart biomarker panels.
- Modernization of hospitals and other medical facilities with focus on prevention.



THREATS

- 1 in 6 is aged 65 years and suffer from NCDs such as diabetics, arthritis or depression and are used to apply to healthcare system.
- Ischemic heart disease, stroke and Alzheimer's disease and lung cancer are the main reasons of deaths in the elder years.
- Low back pain, diabetes, falls and headache disorders are the main causes of the disability-adjusted years.
- The main diseases burden in Denmark remains to be NCDs including musculoskeletal and depressive disorder.
- 37% of Danish people report to have a regular heavy alcohol consumption.

Analysis of Strengths and Weaknesses of Health Care System in Denmark



- Low disparities in access to healthcare system across different income groups.
- Broaden use of advanced technologies with focus on cost reduction and rise of efficiency.
- Out-of-pocket expenditures on health are relatively low and **are just 19% of total expenses**.
- There is a Danish Patient Compensation Association for control of the provision of the services and dealing with complaints.
- In, 2019 the government has launched the special programme with investments **of EUR 40.2 million dollars in elderly care**.
- Physical activity among adults is higher than the EU average as it was reported that **almost 80% of people are involved in at least moderate activity**.



- High disparities in educational level: **people with lower level of education are nearly 30% more likely to suffer from asthma and 2.5 more likely to have diabetics**.
- The number of doctors is increasing with lower pace compared to other EU countries. That causes disproportions between unmet needs and growing population.
- There is a gap in well-being across different income groups: **82% of people with high income report to feel healthy, while in low income group there are only 68% of people that feel good**.
- **30% of diseases in Denmark are caused by the behavioural risk factors** such as smoking, drinking, eating of the unhealthy food and lack of physical activity.
- **40% of adolescents were drunk at least twice in their life due to the data of the 2013 year**.
- **14% of population were obese in 2014 and this indicator increased if to compare with 2000**.
- Low physical activity among 15-year-olds is a **great concern for Denmark as only 12% were involved in some activities**.

Recommendations for Denmark

- **Devise a strategic plan focused on elderly health status and reduction of disability-adjusted years.** To boost healthy longevity and bring more productive and effective years government should focus on the slow-motion disaster of non-communicable diseases.
- **More focus on elderly support and social inclusiveness.** Increasing demand for age-friendly services and products creates both challenges and opportunities for the government and business. Aging causes pressure on the national budget and stability of the economy. On the other hand, aged people are becoming the "seventh continent", so businesses should adjust their strategies in the long-term perspective.
- **Attract more innovation-focused investments in healthcare.** It is vital for every economy to expand the usage of advanced technologies with focus on cost reduction and rise of efficiency.
- **Reducing obesity with a focus on elimination its negative impact on health.** Rising obesity is one of the most harmful behavioral risk factors. It can be attributed to burden cardiovascular diseases and a great number of deaths in the elder years.
- **Utilising opportunities of Artificial Intelligence and Machine Learning in healthcare.** Denmark is one world's most eHealth-ready countries, it has a strong culture for partnerships between the public and private sector. The country ranks number one in the world for the IT systems in our hospitals and general practice surgeries and for digital communication between healthcare sectors. Advanced health research and development is supported at national, regional and municipal level.
- **Popularization of healthy way of life.** Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioral factors.



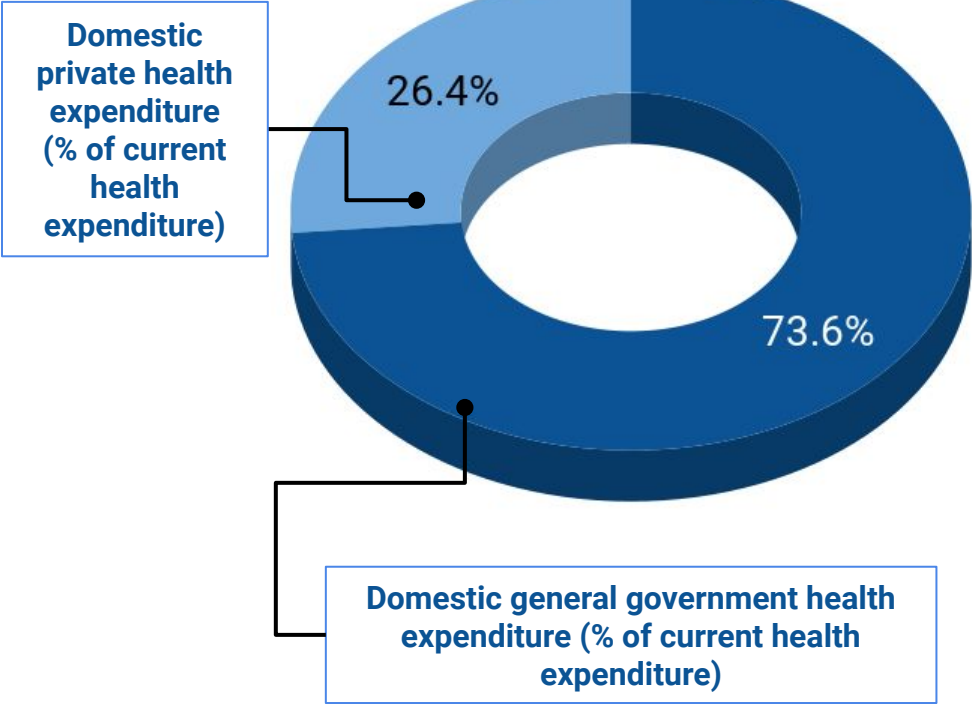
HALE	Both Sexes HALE, 2019	69.20 years
	HALE/Life Expectancy Difference, 2019	9.04
Economy	GDP per Capita, Current Prices, 2019	23.71 thousand (\$)
	Annual GDP Growth, 2019	4.99 %
Healthcare	Current Health Expenditure per Capita (2018)	1.55 thousand (\$)
	Public Health Care Expenditure, 2019	6.69 % of GDP
Retirement	Age Dependency Ratio, 2019	57.36
	Population over 65, 2019	19.99 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.23
	Annual Cigarette Consumption (Units per Capita), 2019	1759
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	21.20 % of adults

Longevity-Related Indices

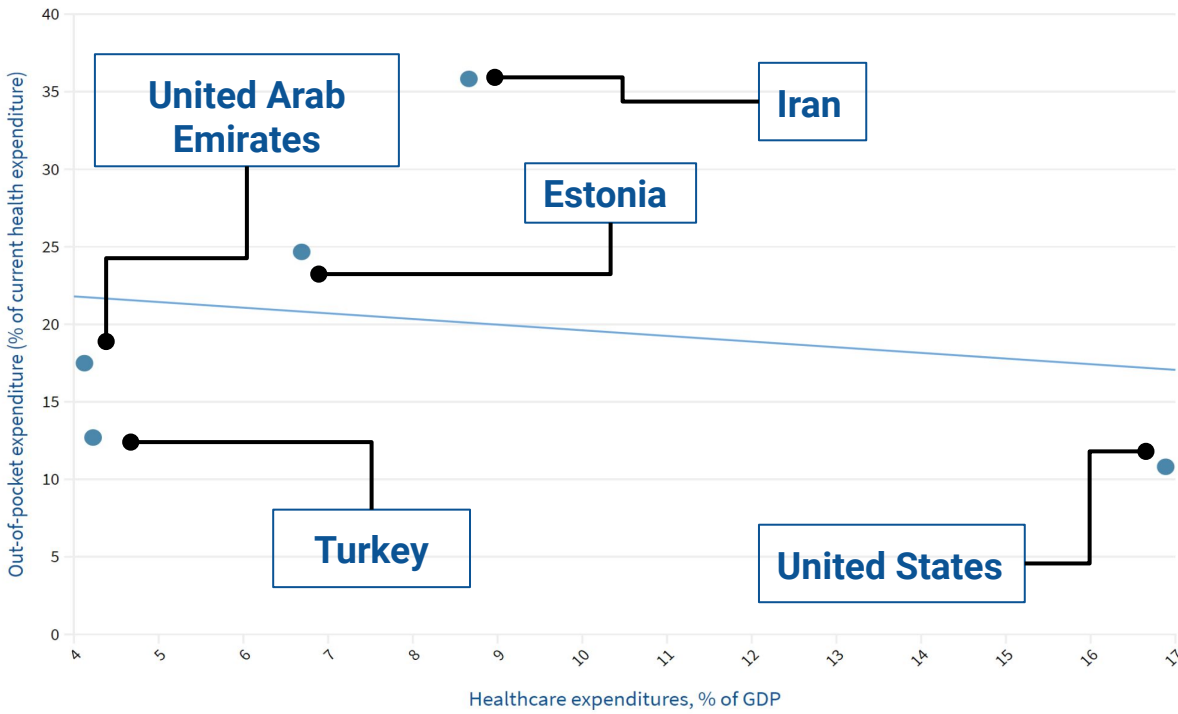


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.89
- E-Government Development Index, 2019:
0.94
- Corruption Perceptions Index, 2019:
75
- Global Gender Gap Index, 2019:
0.73
- Democracy Index, 2019:
7.90

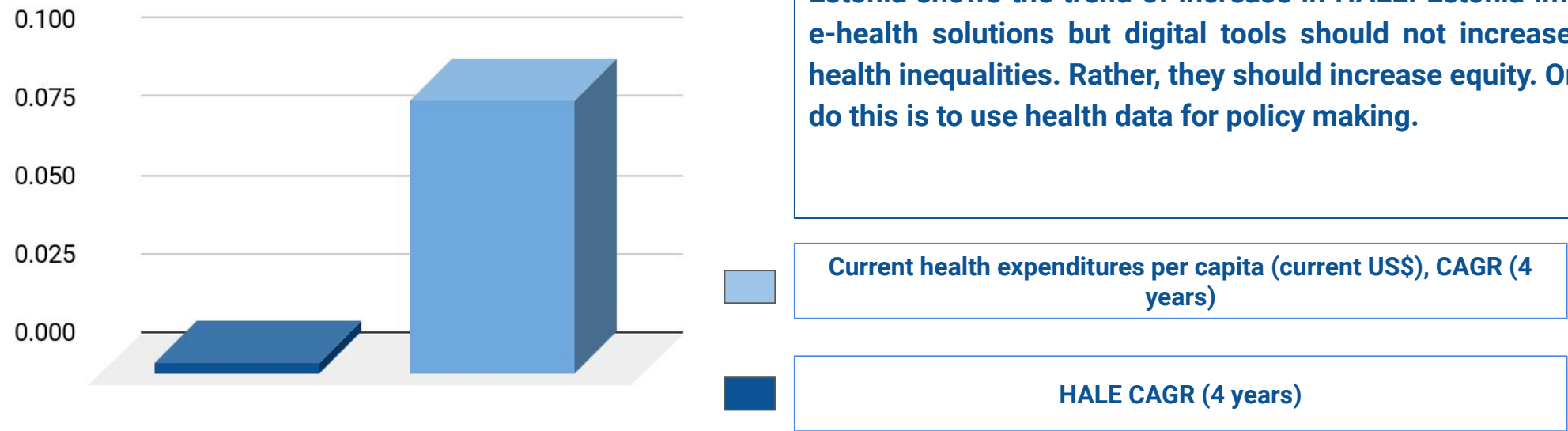
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate



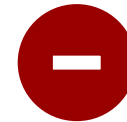
Estonia shows the trend of increase in HALE. Estonia implements e-health solutions but digital tools should not increase existing health inequalities. Rather, they should increase equity. One way to do this is to use health data for policy making.

SWOT Analysis of Healthcare in Estonia



STRENGTHS

- The life expectancy is relatively high (78.0 years).
- Great reductions in premature deaths from CDVs.
- Great aquirings for the elders in LE: women in 65 expect to live 20 years more and men 15 years more.
- 75% of Estonian funding of the healthcare system is governmental.
- The death rates from heart diseases and stroke fell substantially.
- Low level of infant mortality and it is 2.2 per 1000 in 2017.
- The healthcare system is generally accessible and QAH index is 85.9 for Estonia.



WEAKNESSES

- The gap between life expectancy in Estonia and the EU average is still significant.
- Level of health expenditures is 6.5% of GDP and it is significantly lower than the EU average.
- Amenable mortality is one of the highest in the EU and is greatly above the EU average.
- There is a considerable amount of unmet needs and waiting periods for some kinds of services, for example, specialized.
- Existing disparities among the different socioeconomic groups in access to the services.



OPPORTUNITIES

- The good tendency for the disability-free years in Estonia for the past six years that reached 58.7 for females and 54.2 years for males.
- The effective utilization of the national database e-Health Record that is a very convenient platform for patients to search for and receive qualified treatments.
- The great decrease in the HIV that has come down from the onset of the epidemic at 108.1 diagnosed cases per 100 000 in 2001 to 17.4 in, 2019.
- The government plan to create a wide revenue base for healthcare and enhance and maintain its sustainability.



THREATS

- Noncommunicable diseases, especially, CDVs are the main cause of deaths in Estonia including 45% of death for men and 60% for women in, 2019.
- HIV infections and tuberculosis are still the greatest challenges.
- The second largest risks for Estonia is cancer counted 25.3% of deaths in, 2019.
- Injuries and external causes are still the burdens for the health system of Estonia that, for example, caused 5.7% deaths in the, 2019 year.
- The healthcare system is unstable because of the reliance on the payrolls from the population.

Analysis of Strengths and Weaknesses of Health Care System in Estonia



- Adults smoking rates have dropped significantly and were 24% in 2015 compared to 30% in 2000.
- Alcohol consumption per person is declining in Estonia.
- There also was a significant decline in the adoption of risk behavioural factors among adolescents.
- Overweight and obesity levels among adolescents remain to be lower than the EU average.
- The primary healthcare system is comparatively well established and effective.
- The level of vaccination coverage in Estonia is generally good and is about 95-99% of total children under 2 years.
- Estonia is an advanced country in the broader use of the digital images, e-prescriptions and e-consultations.



- There is a great number of disability-adjusted years for Estonian: women live in this state three quarters of four additionally predicted years and men live two thirds of additionally predicted years and only half of them is insured.
- The mortality rate for cancer in Estonia is nearly double high than the EU average and there was no decline in this mortality rate, it remains to be above the EU average.
- CDVs, low back and neck pain, alcohol-related disorders are the main causes for the disability-adjusted years.
- Almost a quarter of Estonians have hypertension, more than 1 in 20 have the diabetics.
- Relatively low health status of the Estonians is contributed by working and living conditions, behavioural risk factors and also low physical activity.
- The increase in obesity level was 40% in 2000-2015 and 1 in 5 Estonians is obese now.
- The levels of smoking and alcohol consumption in Estonia are still higher than the EU average.
- The number of working doctors and nurses in Estonia is starting to decrease in comparison with the EU.

Recommendations for Estonia

- **Reforming health care system.** Estonian government should address the longstanding challenge of financial sustainability of the health system by expanding its revenue base. Currently, Estonia relies predominantly on payroll contributions from the working population, which exposes the system to economic shocks and population ageing.
- **Spending more on healthcare.** The financial sustainability of the Estonian health system will be an ongoing concern, as further reforms and government initiatives should focus on the provision of additional funds to support an ageing population and tackle the increasing prevalence of chronic diseases.
- **Improve engagement of staff in healthcare.** The lack of a workforce can be the reason for waiting periods and unmet needs. So the government should put more effort to engage qualified staff into the healthcare system to cope effectively with life-threatening illnesses.
- **Shift towards disease prevention and health promotion with more focus on elderly health status.** The health promotion and disease prevention approach is one of several possible strategies to deal with the prevalence of multiple chronic illnesses or functional impairments among the elderly.
- **Utilising great opportunities for advanced technologies in health care.** The Estonian e-health system is among the world's most ambitious and clear example of why this small EU country is widely hailed as one of the most advanced digital nations on the planet. This system – which not only improves the cost-effectiveness, sustainability and efficiency of the Estonian healthcare service but also facilitates the transition to preventive, rather than curative, medicine – is underpinned by blockchain technology, a crucial pillar in ensuring the integrity and security of all patient data.
- **International collaboration on ageing.** The strategic partnership between countries would provide access to world's most successful practises for the maintenance the optimal state of health and best forms of AgeTech, WealthTech and other technologies, products, services and social policies.



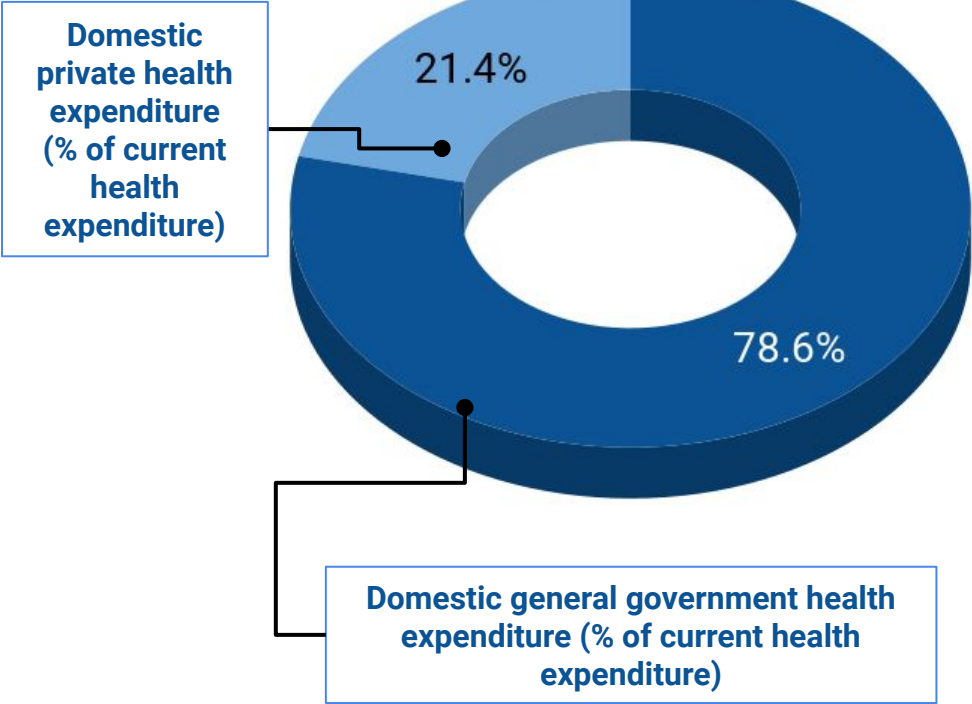
HALE	Both Sexes HALE, 2019	71.00 years
	HALE/Life Expectancy Difference, 2019	10.73
Economy	GDP per Capita, Current Prices, 2019	48.77 thousand (\$)
	Annual GDP Growth, 2019	1.14 %
Healthcare	Current Health Expenditure per Capita (2018)	4.51 thousand (\$)
	Public Health Care Expenditure, 2019	9.04 % of GDP
Retirement	Age Dependency Ratio, 2019	61.69
	Population over 65, 2019	22.14 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	10.78
	Annual Cigarette Consumption (Units per Capita), 2019	1098
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	22.20 % of adults

Longevity-Related Indices

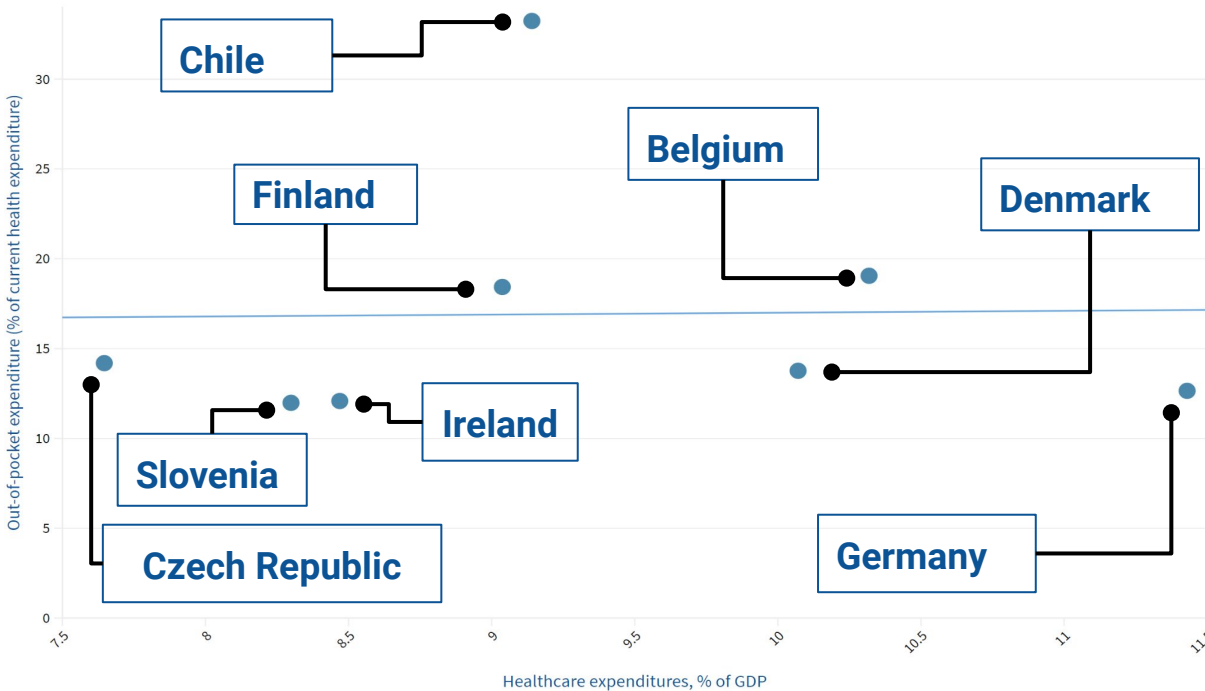


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.93
- E-Government Development Index, 2019:
0.94
- Corruption Perceptions Index, 2019:
85
- Global Gender Gap Index, 2019:
0.86
- Democracy Index, 2019:
9.25

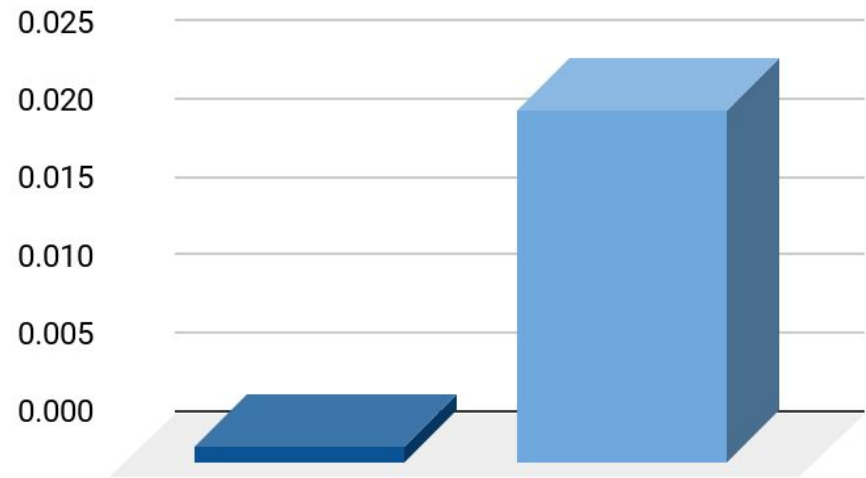
Current Healthcare Expenditure



Countries with medium HALE and LE and High GAP



Compound annual growth rate



Alcohol consumption should be considered as it remains an important public health issue in Finland, with more than one-third of adults reporting heavy alcohol consumption on a regular basis.

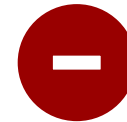


SWOT Analysis of Healthcare in Finland



STRENGTHS

- Life expectancy in Finland is high and now above the EU average (81.6 years).
- There was a great reduce in the mortality from cardiovascular diseases for people aged more than 65 years for the past decades.
- Relatively high spending on health in Finland that is 9.4% and is just slightly below the EU average.
- The public funding occupies the three quarters of total costs that is the relatively good amount and matches the EU average.
- Amenable mortality is lower than the EU average.
- The healthcare is generally accessible and HAQ index is 95.9.



WEAKNESSES

- The gap between HALE and life expectancy is still high: people aged 65 years and higher can live only half of additionally predicted years without a disability.
- There is a considerable amount of spending by households.
- Unmet needs for medical care in Finland are higher than the EU.
- There are disparities among the different income groups: those with lower incomes can be involved in the long waiting periods.
- Men live six years less than women and this indicator is higher than EU average.
- People aged 65 expect to live only half of additional years without disabilities.



OPPORTUNITIES

- Healthcare is focused on care delivery and successful outcomes of medical interventions.
- Increase the financial sustainability of the health system by expanding its revenue base.
- Municipalities organise many services for the elderly to make their lives easier and to enable them to live in their own homes for as long as possible.
- There is a significant reduction in waiting times for the surgery.
- A great springboard for the use of the advanced methods and technologies along with P4 medicine can create an additional force to struggle the NCDs and other diseases burdens.



THREATS

- The unemployed population have no access to occupational healthcare.
- Metabolic and behavioural factors are the main causes of the disability-adjusted years in Finland.
- Cardiovascular diseases (38% of death among women and 37% of death among men), cancer and nervous system disorders are the key reasons for the deaths among all age groups in Finland.
- An ageing population and slow-motion disaster of age-related diseases.

Analysis of Strengths and Weaknesses of Health Care System in Finland



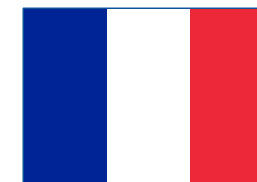
- Finnish women in age 65+ can live additionally 21.9 years and men 18.3 years and this indicator tend to grow.
- The Finnish healthcare system proposes universal coverage for the entire population including some basic service. It is a comprehensive one consisting of the decentralized three-levelled public system and less loaded smaller private sector.
- 70% of population reports to be in a good health that is higher than the EU average.
- There was a sharp decrease in the smoking rates that included the decline from 23% in 2000 to 15% in 2014 with more significant decrease in smoking for the adolescents (from 30% to 13%).
- Cancer care is generally effective in Finland: the overall mortality from cancer is among the lowest in the EU.
- The number of hospital beds has increased and the equipment became more available during the past decade.



- The rate of people died from the Alzheimer's disease and dementia has doubled for the past years.
- Ischaemic heart diseases are the main causes for death in Finland and occupied 20% of deaths in 2014.
- There was an increase in death from the liver diseases through the past years due to the heavy alcohol consumption and increase in the levels of the death from other types of cancer except lung.
- 1 in 9 people in Finland lives with asthma, more than 1 in 10 live in chronic depression and more than 1 in 12 with diabetics.
- There is a big gap in health status among different layers of the population that is connected with education and income.
- The alcohol consumption is still the great burden for the Finland because there is 34% of people that are involved in regular drinking that is significantly higher than the EU average.
- 1 in 5 of adults (18%) in Finland was obese and this rate was above the most countries in EU.

Recommendations for Finland

- **Tackle socioeconomic inequality and reduce disparity in health outcomes.** Struggling with inequalities should be key goals in Healthy Longevity plans and healthcare policies to boost longevity and bring more health-adjusted years to the Finnish population.
- **Accumulate affords to improve care delivery.** Care coordination is closely connected with the primary care that is not fully accessible for all layers of the population. Some people need to go to specialists or emergency to receive treatments that are not needed and should be provided by the primary doctors. The government should solve this problem to reduce out-pocket expenditure and minimise risks exposure.
- **Struggling with heavy alcohol consumption.** Alcohol consumption in Finland is generally the reason for most of the noncommunicable diseases that can cause early deaths. Initiatives should be focused on minimising behavioral risk factors that are key causes of most non-communicable diseases.
- **Popularisation of healthy way of life.** Strong health is a fundamental for the long life expectancy and healthy years of life. Physical exercises, balanced diet help to maintain a healthy body weight, keep sound health.
- **Utilizing advanced technologies in healthcare.** Advanced technologies can help to combat with main disease burden and reduce the bad impact of metabolic processes on health-adjusted life expectancy and can greatly elongate the life expectancy and health-adjusted years.
- **Shift from the primary to the preventive care.** This is the place where P4 medicine can be used when every person in Finland can be in authority of its health and well-being. Preventive care can also reduce the expenditure on health and make treatments more effective when the diseases can be diagnosed in early stages to cure a person quickly, mitigating risk of premature death.



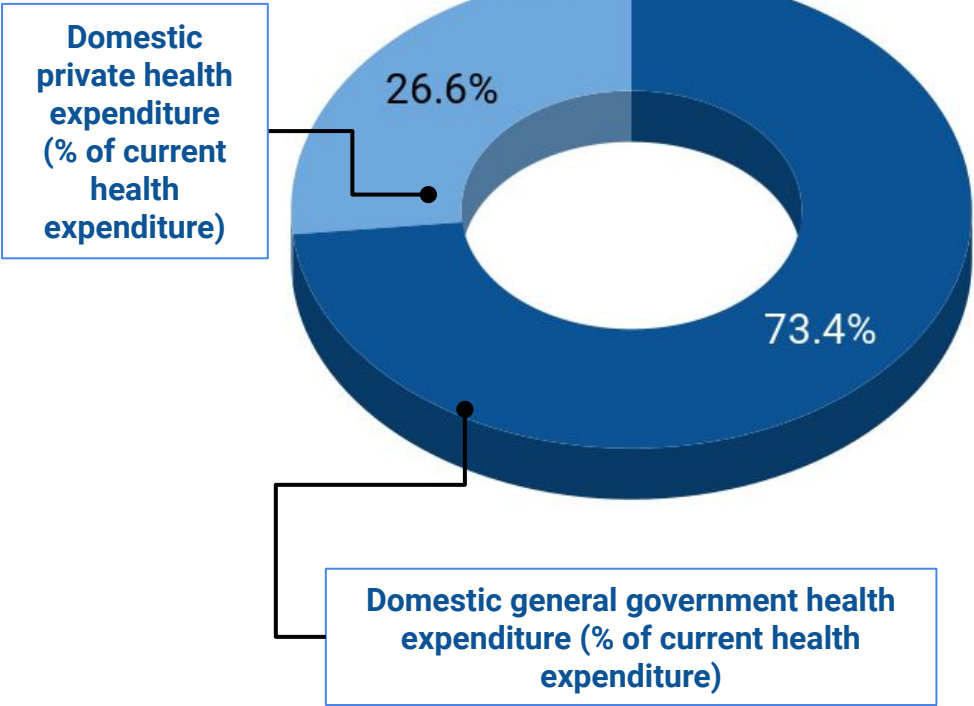
HALE	Both Sexes HALE, 2019	72.10 years
	HALE/Life Expectancy Difference, 2019	10.62
Economy	GDP per Capita, Current Prices, 2019	40.49 thousand (\$)
	Annual GDP Growth, 2019	1.50 %
Healthcare	Current Health Expenditure per Capita (2018)	4.69 thousand (\$)
	Public Health Care Expenditure, 2019	11.26 % of GDP
Retirement	Age Dependency Ratio, 2019	61.79
	Population over 65, 2019	20.39 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	12.33
	Annual Cigarette Consumption (Units per Capita), 2019	1089
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	21.60 % of adults

Longevity-Related Indices

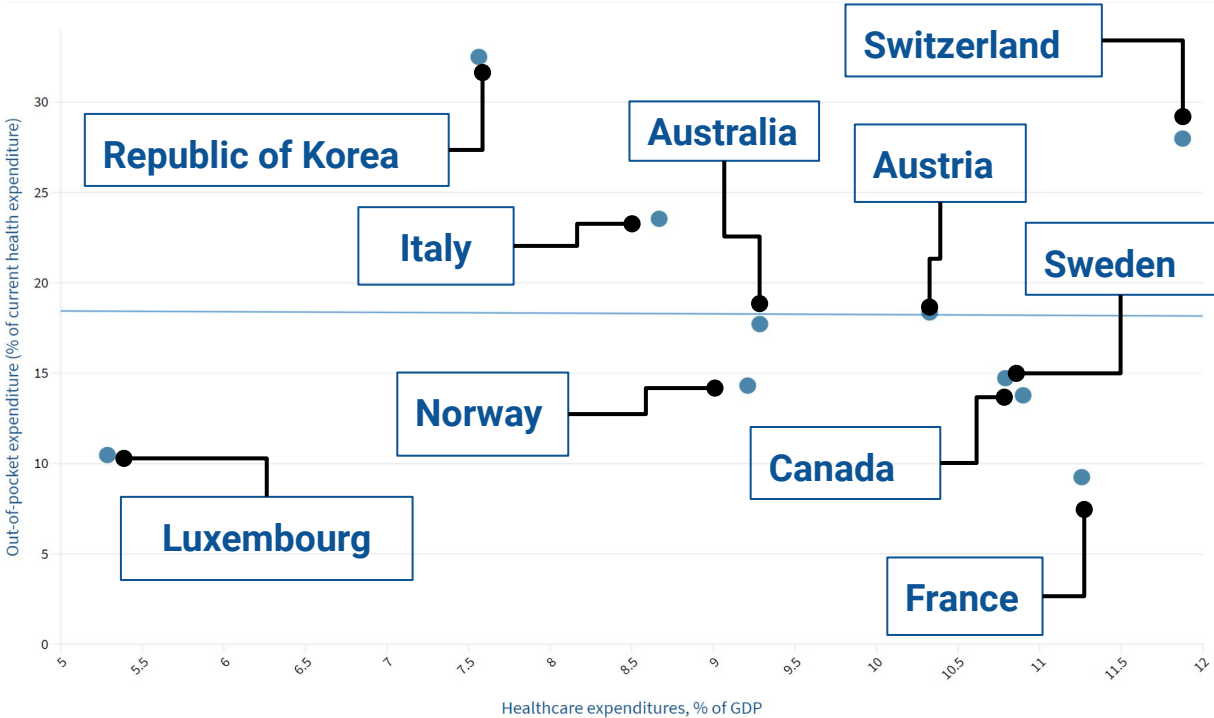


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.90
- E-Government Development Index, 2019:
0.87
- Corruption Perceptions Index, 2019:
69
- Global Gender Gap Index, 2019:
0.78
- Democracy Index, 2019:
8.12

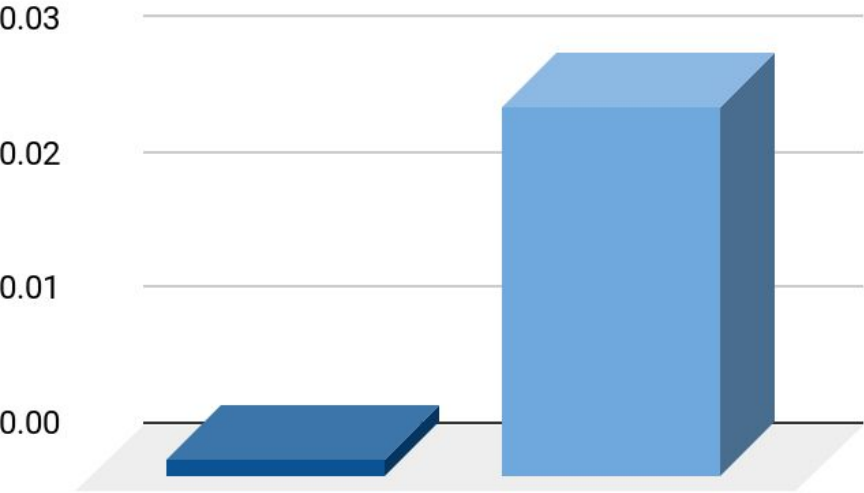
Current Healthcare Expenditure



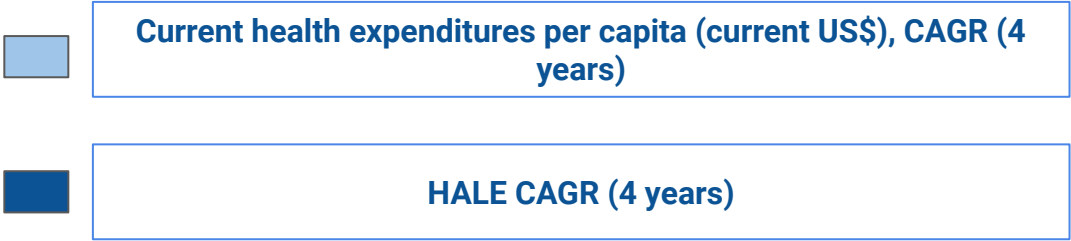
Countries with Low HALE and LE and High GAP



Compound annual growth rate



The main challenges are to promote prevention and healthy behaviour. Disparities of coverage across social groups suggest paying attention to coordination between universal healthcare provision and private insurance.

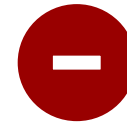


SWOT Analysis of Healthcare in France



STRENGTHS

- France has one of the best healthcare systems in the world according to the World Health Organization data.
- 76.6% of total health expenditures are publicly financed.
- The healthcare system in France is comprehensive consisting of two levels that include public and private one.
- The life expectancy is very high in France and reached 82.4 that is higher than the EU average.
- The share of out-of-pocket spendings is lower than among the other countries.
- Healthcare Access and Quality index is 91.7.



WEAKNESSES

- There is less than half years that elderly people can live disability free, so the LE and HALE gap is still high.
- The gender gap in life expectancy is higher than in most EU countries and is 6 years.
- Prevalence of health status inequality across different socio-economic groups.
- Only 60% of people with low income report to be healthy if to compare with 72% of people with high one and this indicators are among the lowest one in the EU.
- The distribution of doctor and specialists is uneven among the regions.



OPPORTUNITIES

- Patients can easily access the specialists compared to other countries where there are long waiting lists.
- The life expectancy is predicted to increase.
- There was a launch of modernization and streamlining of the hospitals in France.
- Great opportunities to use innovative medicine that can include progressive advanced technologies and development of P4 medicine.
- The effective well-performed governmental structure and infrastructure for the efficient regulation of the healthcare including planning and defining the strategic tasks.



THREATS

- Regular physical activity among the adolescents is much lower than in other EU countries, especially, for girls.
- There are some local disparities in the access to care that can be the threat for health of people in remote areas.
- The main reason for deaths in France is cancer that occupies the 28% of all death.
- The second important risk factor for French people is other type of NCDs - cardiovascular diseases.
- Ischemic heart diseases and others remain to be a great burden for the healthcare in France.

Analysis of Strengths and Weaknesses of Health Care System in France



- Amenable mortality in France is among the lowest in the EU and most people can survive the life-threatening conditions such as heart attack and stroke.
- More than two thirds of population in France report to be in good health (68%).
- There was a sufficient decrease in smoking and drinking in recent years.
- The proportion of adolescents have been drunk more than twice in their life is reported to be lower than in the rest of the EU countries.
- 1 in 10 French people is covered by additional complementary insurance aimed to provide access for services that are not covered by the social one.
- The benefit package of coverage is very broad.



- Musculoskeletal, mental disorders and chronic conditions are the leading causes of the disability-adjusted years in France and are their main determinants.
- 1 in 7 people in France reported leaving with hypertension, 1 in 11 live with asthma and 1 in 10 live with diabetics.
- Smoking (9%) and dietary factors (8.2%) are the main burdens for health-adjusted years among the other factors.
- 24% of adults were still smoking in 2014 that is higher than the EU average. And nearly 1 in 5 adolescents reported to smoke daily.
- The alcohol consumption in France is relatively high if to compare EU average and is 12 litres per person in year.
- More than 1 in 7 adults is now obese and that is 15% of total population that is becoming to be a growing public issue.

Recommendations for France

- **Reduce the discrepancies of medical equipment provision used in hospitals across regions.** These disparities cause unequal access to medicine in different regions and negatively affect the gap between life expectancy and health-adjusted life expectancy (HALE). Despite this concern, investment in new equipment is probably essential to achieve the need level of access to healthcare services.
- **Improve healthcare staff engagement.** For many years the French Government has vigorously applied a system of numerous clausus as an effective tool to limit the growth in numbers of health staff. However, the debate has shifted in recent years and there is now a fear of shortages of doctors, nurses and other health care professionals.
- **Tackle rising “slow-motion” disaster of non-communicable diseases (NCDs).** Management of NCDs includes detecting, screening and treating these diseases, and providing access to palliative care for people in need. High impact essential NCD interventions can be delivered through a primary health care approach to strengthen early detection and timely treatment.
- **Struggle the socioeconomic inequalities and increase access to professional medical treatment.** As it was pointed out there is a great difference in behavioural patterns and health status among different socio-economic groups. Government should work out the policy to eliminate issues concerning inequalities, provide population with the equal access to the qualitative medicine.
- **Movement from primary to preventive care.** Health care leaders must shift the nation’s “sick care” approach to care that is preventive and comprehensive. “Precision health” denotes the continuous stabilization of health and the maximum-obtainable maintenance of a young biological age via the routine application of micro-interventions in response to ongoing fluctuations in biomarkers of aging and health.



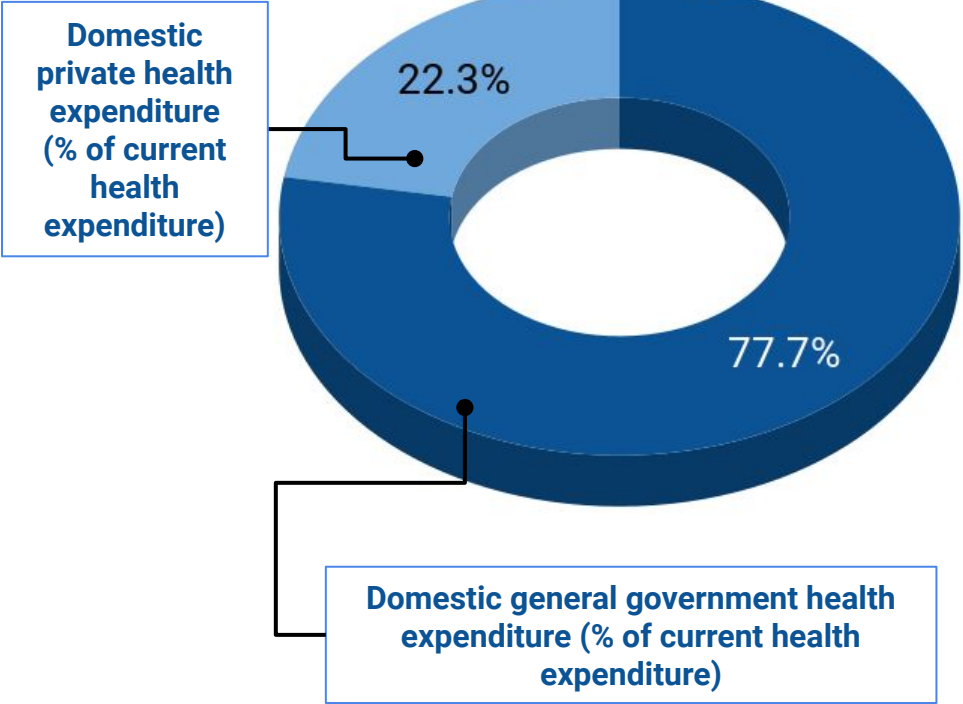
HALE	Both Sexes HALE, 2019	70.90 years
	HALE/Life Expectancy Difference, 2019	10.89
Economy	GDP per Capita, Current Prices, 2019	19.58 thousand (\$)
	Annual GDP Growth, 2019	1.87 %
Healthcare	Current Health Expenditure per Capita (2018)	1.56 thousand (\$)
	Public Health Care Expenditure, 2019	7.72 % of GDP
Retirement	Age Dependency Ratio, 2019	55.85
	Population over 65, 2019	21.94 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	10.18
	Annual Cigarette Consumption (Units per Capita), 2019	2078
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	24.90 % of adults

Longevity-Related Indices

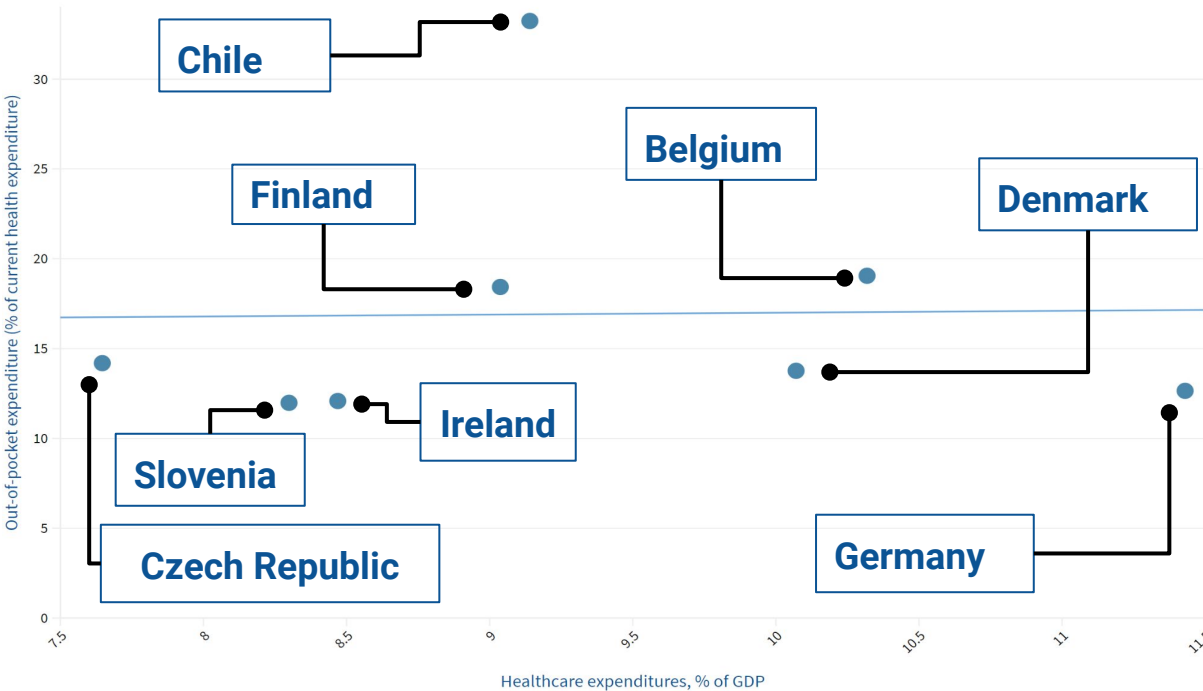


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.88
- E-Government Development Index, 2019:
0.80
- Corruption Perceptions Index, 2019:
50
- Global Gender Gap Index, 2019:
0.68
- Democracy Index, 2019:
7.43

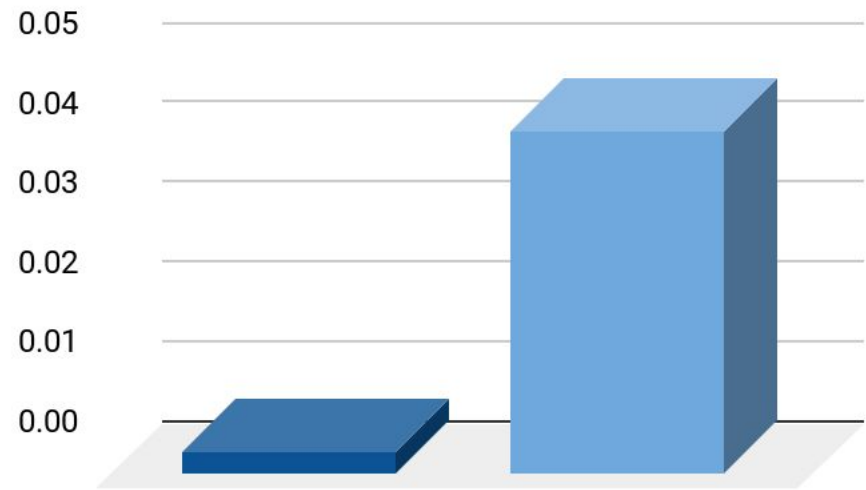
Current Healthcare Expenditure



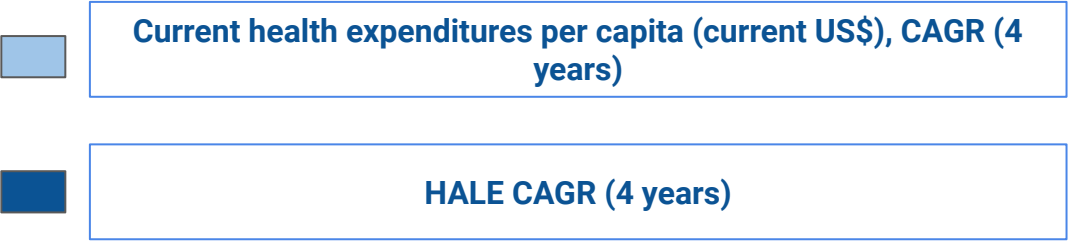
Countries with medium HALE and LE and High GAP



Compound annual growth rate



A balanced diet and sufficient physical exercise are important aspects of a health-promoting lifestyle in Germany. They can help to prevent the occurrence of obesity, lipid metabolic disorder and hypertension.

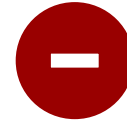


SWOT Analysis of Healthcare in Germany



STRENGTHS

- High life expectancy at a birth (80.7 years) that is slightly above the EU average.
- The number of hospital beds in Germany is higher than in other OECD countries.
- Great spending on health per capita that is 11.2% of GDP and is the second highest in the EU.
- Amenable mortality is below the EU average.
- The level of services in Germany is high.
- There is a high level of public expenditures on the health - 84.5% - one of the highest in Europe.
- Developed preventive medicine subsector and qualified staff.



WEAKNESSES

- Uneven distribution of doctors and specialists
- Self-employed people with low income and migrants have the limited access to the benefits of social insurance in comparison with other citizens.
- Only 60% of additionally prognosed years (21.0 for female and 17.9 for male) German people can live disability free that is low amount.
- There are certain disparities in different income groups - people with lower education and income are twice as tend to live with diabetics and on 30% more likely to have asthma and adopt risky behavioural factors.



OPPORTUNITIES

- The above OECD average amount of doctors and other personnel that is well-trained and qualified.
- There are considerable resources for enhancing and maintaining the healthcare system in Germany that include financial, human and organizational ones.
- There are big numbers of hospitals and physician and well trained nurses for providing the qualitative services to population.
- Investments in R&D in era of advanced medical treatment and disruptive technologies.



THREATS

- Ageing of medical workforce (42% of doctors are more than 50 years old) can lead to the shortage of healthcare personnel in the future.
- Expensive pharmaceuticals products.
- CDVs (cardiovascular diseases) (42% of deaths for women and 35% of death for men) and cancer (23% of deaths for women and 29% for men) are the leading causes of the death in Germany.
- The number of deaths from dementia is increasing.

Analysis of Strengths and Weaknesses of Health Care System in Germany



- The alcohol consumption has declined rapidly in recent years and relatively with faster pace than in other EU countries.
- The proportion of drinking adolescents is slightly lower than in the EU and tend to decline through the years.
- The smoking rates for adolescents had been falling greatly for the past two decades - from 34% in 2000 to 15% in 2014.
- Relatively good amount of adults in Germany is involved at least in the moderate activity.
- The life expectancy gap between eastern and western regions began to narrow and is predicted to decrease.
- The number of hospital beds in Germany is higher than in other OECD countries.



- Musculoskeletal, dementia and mental health disorders contribute a lot to the disability-adjusted years.
- Heart diseases and strokes are the huge burden for the death and DALY.
- 1 in 16 people live with asthma and 1 in 10 live with chronic depression.
- Lower proportion of the population reports to be in good health compared to the EU average - only 65%.
- 1 in 3 adults in Germany reports to be involved in the binge drinking.
- There is a large proportion of smoking adults - one quarter of Germans are smoking regularly for men and 1 in 6 women are smoking daily.
- The prevalence of obesity has been increased for the past years sharply and the level of obesity is now bigger than in the EU.
- The bad impact of high blood pressure, body mass index and high fasting plasma glucose on DALY has increased.

Recommendations for Germany

- **Enable patient-centered care with information technology systems.** Embrace of technology in health care will lead to personalization and improvement of the quality of medical care through close coordination between patients, caregivers, and professionals.
- **Strengthening disease prevention and health promotion with a focus on non-communicable diseases** remains an issue. Favourable living conditions in Switzerland, such as good housing conditions, a high-quality education system and low rates of unemployment contribute to healthy living conditions.
- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioral factors such as insufficient physical ability, overweight, alcohol abuse, smoking. This will stimulate policy initiatives that supplement income and improve educational opportunities, housing prospects, and social mobility as income is strongly associated with morbidity and mortality.
- **The strengthening of incentive mechanisms for the research and development of new antibiotics.** Representatives of the public health institutes within the human and veterinary medicine sector in partnership with government authorities should joint effort to tackle antibiotic resistance.
- **Provide incentives for development of patient-centered treatments.** Strengthen prevention and health promotion across all areas of life including day-care centres, schools and nursing homes, strengthen workplace health promotion and better integrate it with occupational safety and health.
- **Focus on elderly healthcare status through utilizing opportunities of Artificial Intelligence for precision health.** Novel methods of using AI to optimize psychological wellness, social activity, promote neuroplasticity and combat loneliness and social isolation among elderly.

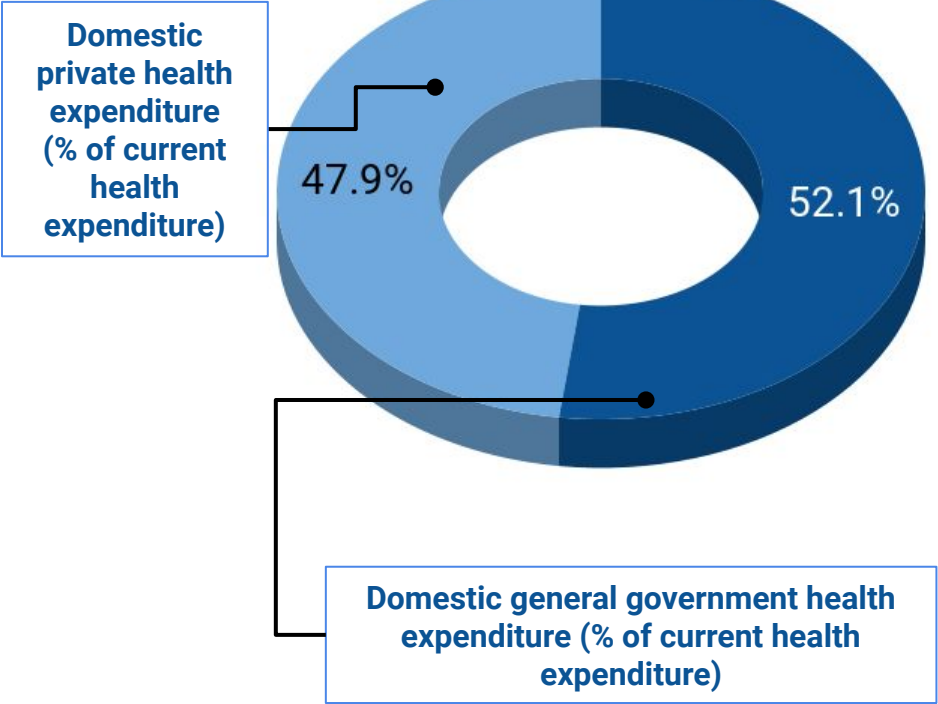
HALE	Both Sexes HALE, 2019	72 years
	HALE/Life Expectancy Difference, 2019	9.2
Economy	GDP per Capita, Current Prices, 2019	18.12 thousand (\$)
	Annual GDP Growth, 2019	-0.2 %
Healthcare	Current Health Expenditure per Capita, 2019	1.51 thousand (\$)
	Public Health Care Expenditure, 2019	8.45 % of GDP
Retirement	Age Dependency Ratio, 2019	53
	Population over 65,, 2019	20.2 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	10.4
	Annual Cigarette Consumption (Units per Capita), 2019	2078
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	62.3 % of adults

Longevity-Related Indices

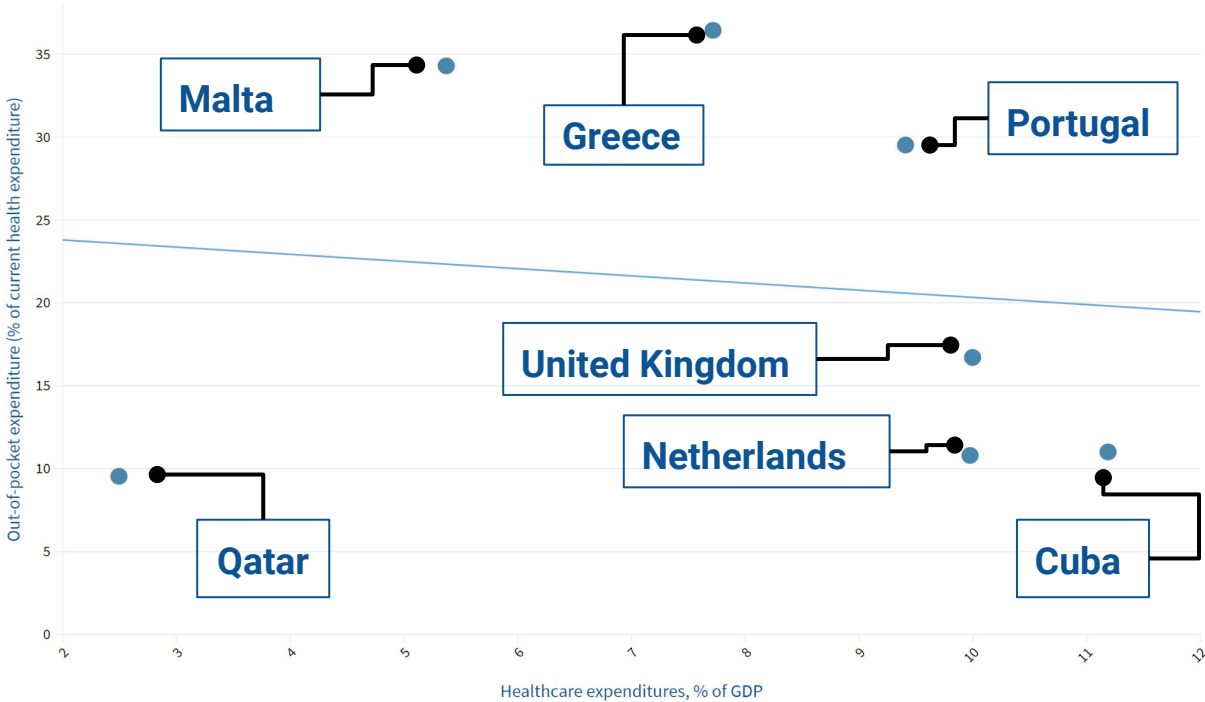


- The Healthcare Access and Quality Index -2016:
90
- Human Development Index, 2019:
0.87
- E-Government Development Index, 2019:
0.69
- Corruption Perceptions Index, 2019:
44
- Global Gender Gap Index, 2019:
0.68
- Democracy Index, 2019:
7.23

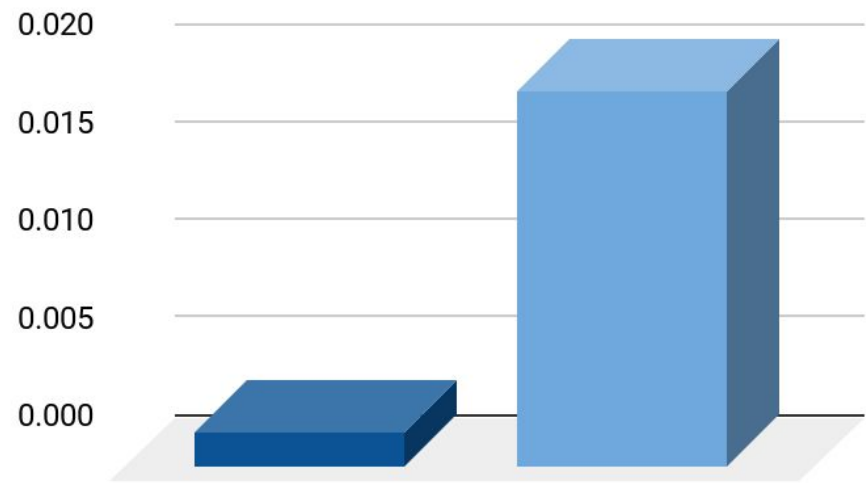
Current Healthcare Expenditure



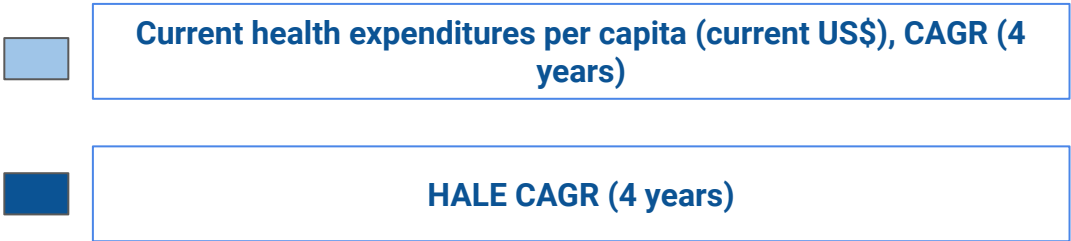
Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate



Creating an effective network of primary care services is one of the most urgent priorities to respond effectively to the needs of population and reduce overcrowding of emergency departments and unnecessary hospital admissions. Universal health coverage can be financially sustainable, to finance public spending.

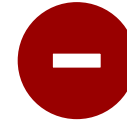


SWOT Analysis of Healthcare in Greece



STRENGTHS

- The healthcare system is comprehensive and mixed and consist of social insurance and central financing of the National Health System.
- Relatively low infant mortality.
- The amount of doctors per population is high (6.3 per 1000 population).
- The amenable mortality has fallen steadily through the past decades.
- The healthcare system is generally accessible and the HAQ index is 90.4.
- Life expectancy is high and is 81.5 years.



WEAKNESSES

- Healthcare system is unjustifiably centralized.
- The universal coverage for basic services is provided only for 83% of population.
- There are long-time delays and waiting times to see the doctor on day.
- Out-of-pocket spendings on health are 33% of the total spending on health in Greece.
- Poor continuity of care, excessive use of curative services, lack of preventive measures, low levels of satisfaction.
- Significant inequalities in the range and quality of health services.



OPPORTUNITIES

- There is a great amount of specialists in Greece per population.
- National strategy for primary health care. Greece should address chronic diseases, which account for 70% of our disease burden.
- The governmental programmes that are aimed to bring not only effectiveness to the healthcare but transparency and accountability through struggling with corruption and bureaucracy.
- Lots of deaths can be eliminated by the development of preventive care.



THREATS

- Economic instability, high level of real unemployment and inflation make healthcare affordable.
- Bad impact of the economic crisis has led to the decline in the healthcare expenditure. Per capita spending has fallen since 2009, when it was EUR 2 287, to EUR 1 650 in 2015.
- Ischaemic heart disease, stroke and lung cancer continue to have a major impact on mortality.
- 27% of adults smoked everyday in 2014 that is higher than in the EU.

Analysis of Strengths and Weaknesses of Health Care System in Norway



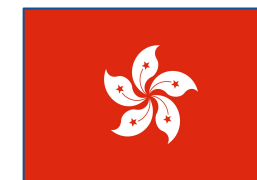
- Children's vaccination is very good and **is above the 96%**.
- Greece has one of the lowest rates of heart disease in the world, which is largely attributed to their diet, which includes lots of garlic, olive oil and red wine.
- Alcohol consumption has declined and is significantly below the EU average.
- **There was a 14% decrease in deaths from cardiovascular diseases** - the major causes for deaths in Greece.
- The hospitals in the more metropolitan areas are of excellent standards. Pharmacies and medications are of good quality with highly trained pharmacist. Medicines are also highly subsidized since only 25% of the actual cost of the prescriptions is charged. Emergency care is provided free of charge in public hospitals to anyone, regardless of nationality.



- There is a little coordination between primary care providers and hospital doctors.
- There are no regular cancer screening programmes in Greece
- Failed attempts of the government to reduce the smoking rates.
- There is a lack in quality assurance of the effective functioning of the healthcare in Greece.
- Two-thirds of the additionally predicted years for elders are spent with the disability.
- A quarter of 15-year-old adolescents is overweight or obese.
- **Currently, only 59% of health spending is publicly funded** that is greatly below the EU average indicator.
- **Cancer causes 20% of death among women and 30% deaths among men.**
- There was a notable increase in suicides after the start of economic crisis.
- Poor continuity of care, excessive use of curative services, lack of preventive measures, low levels of satisfaction and high out-of-pocket expenditures.

Recommendations for Greece

- **Tackling poverty and socio-economic inequality.** Boosting economic growth and investment to create jobs, improve the stability of public finances and provide an effective social safety net are crucial to help Greece recover from the profound social costs of the economic crisis.
- **Ensuring adequate funding for the health system.** Reducing the high levels of out-of-pocket spending on health is vital for affordable healthcare treatment. Greece should reduce corruption in healthcare and provide incentives for development of public-private partnership between healthcare providers.
- **There is a need to develop this focus into longer-term strategic reforms that enhance efficiency while guaranteeing the delivery of health services and improving the overall quality of care.**
- **Create mechanisms that allow adequate planning and allocation of physical and human resources.** Generally speaking, resources are unevenly distributed across the country, with a much higher concentration of health services and medical equipment in large cities compared with rural areas; private facilities are also largely located in urban centres.
- **Addressing the challenge of weak primary care system.** Public health services have taken a back seat in favour of the development of secondary care services. The services that are delivered rarely engage in prevention, health promotion, social care and rehabilitation. The primary care system has not been developed fully, and patients face problems with access, continuity of care and coordination as well as comprehensiveness of services. A mix of public and private providers delivers ambulatory care.
- **Creating an effective network of primary care services.** It is one of the most urgent priorities to respond effectively to the needs of population and reduce overcrowding of emergency departments and unnecessary hospital admissions. Universal health coverage can be financially sustainable, to finance public spending.



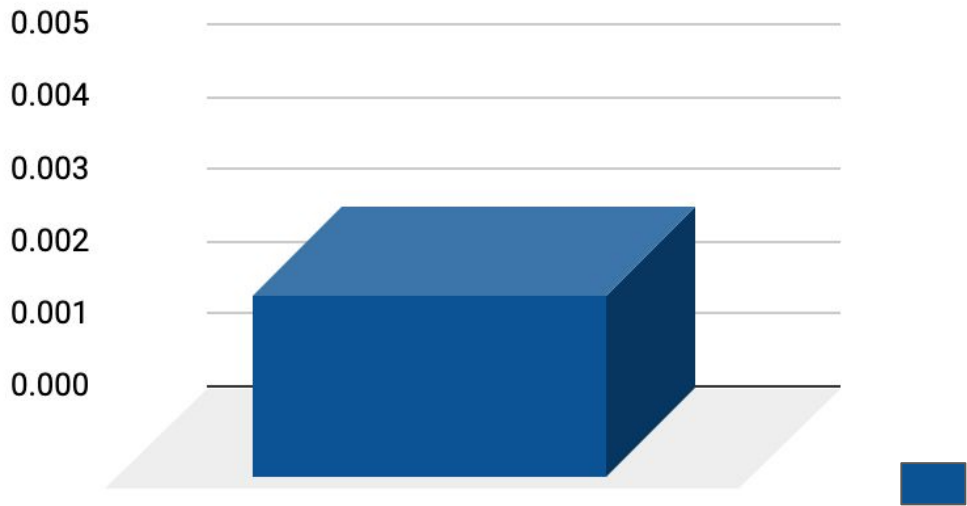
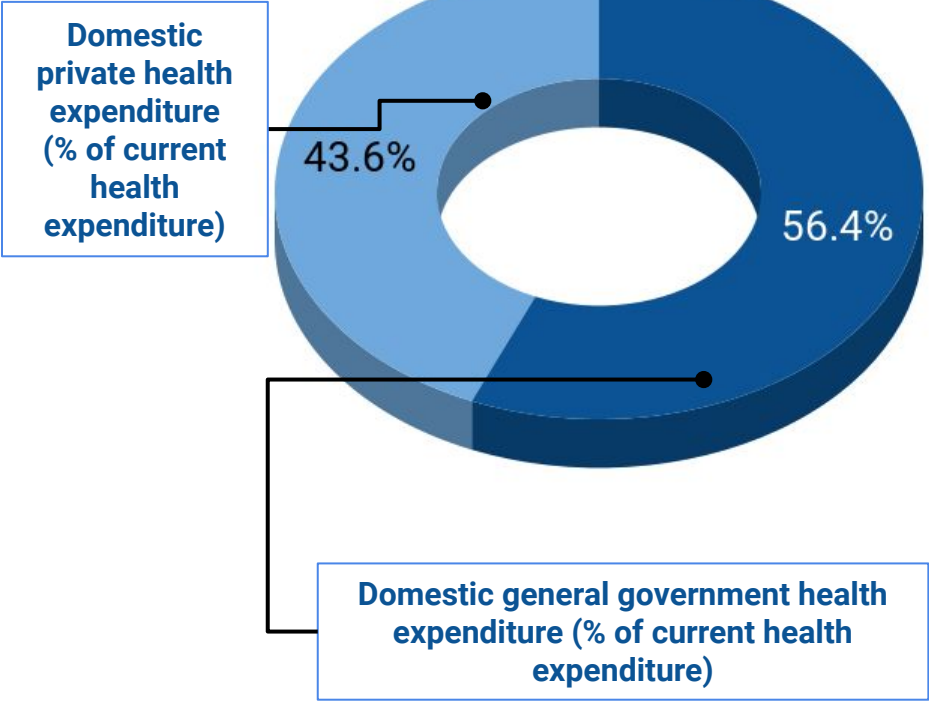
HALE	Both Sexes HALE, 2019	72 years
	HALE/Life Expectancy Difference, 2019	12.89
Economy	GDP per Capita, Current Prices, 2019	48.71 thousand (\$)
	Annual GDP Growth, 2019	-1.25 %
Healthcare	Current Health Expenditure per Capita (2018)	23.82 thousand (\$)
	Public Health Care Expenditure, 2019	5.6 % of GDP
Retirement	Age Dependency Ratio, 2019	42.5
	Population over 65, 2019	17.5 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.05
	Annual Cigarette Consumption (Units per Capita), 2019	1500
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	50 % of adults

Longevity-Related Indices

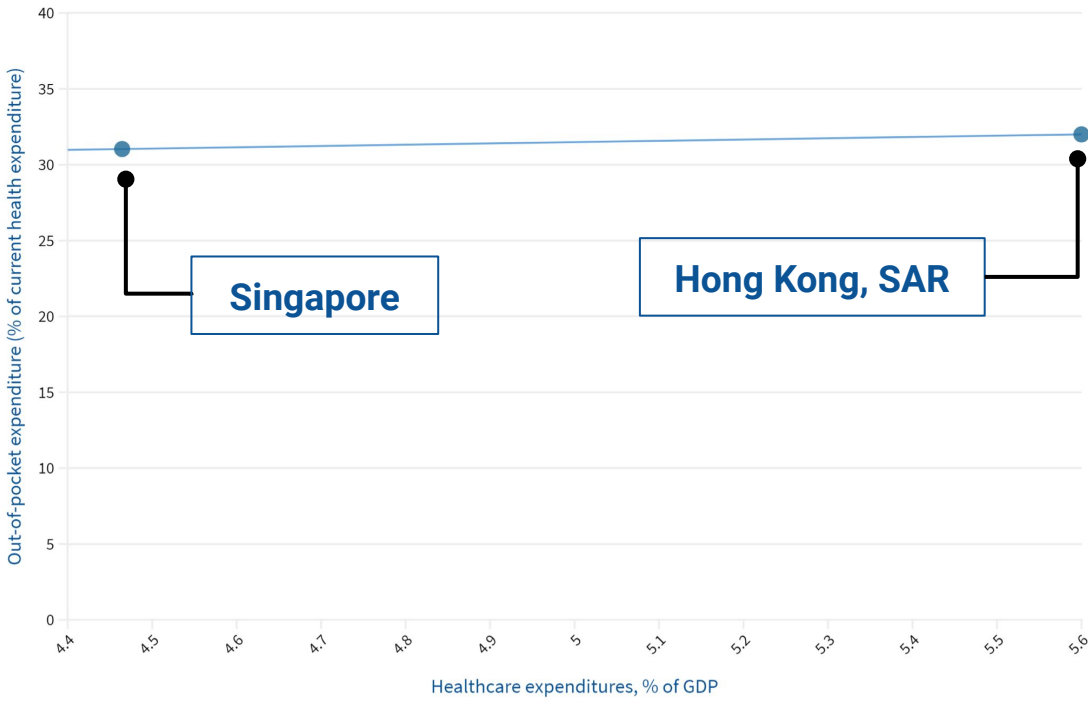


- The Healthcare Access and Quality Index,, 2019:
89.5
- Human Development Index, 2019:
0.95
- E-Government Development Index, 2019:
0.91
- Corruption Perceptions Index, 2019:
77
- Global Gender Gap Index, 2019:
0.71
- Democracy Index, 2019:
6.02

Current Healthcare Expenditure



Countries with high HALE and LE and small GAP



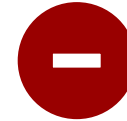
To improve health and wellbeing of people living in Iceland government policies should be focused on obesity, tobacco, healthy workplaces, child wellbeing. eHealth initiatives should meet the needs of the aged population.

SWOT Analysis of Healthcare in Hong Kong



STRENGTHS

- Healthcare system is known for its quality and efficiency, and the healthy population it serves.
- Life expectancy is one of the highest in the world. According to the Department of Health in Hong Kong, life expectancy has reached 81.9 years for males and 87.6 years for females in 2017.
- Infant mortality rate and maternal mortality rate are among the lowest in the world.
- People in Hong Kong are able to enjoy public healthcare services at highly subsidised rates.
- WHO Age-friendly city



WEAKNESSES

- Long waiting times for non-emergency procedures (e.g. cataract surgery, joint replacement surgery)
- Heavy workloads for clinical staff
- Very expensive private system; prices vary greatly depending on doctors' reputation and location.
- High level of prevalence of overweight among adults (38.8% in, 2019)
- High level of out-of-pocket expenditure in Hong Kong (36% of current healthcare expenditure) indicates limited access to high-quality preventive services and diseases treatment.



OPPORTUNITIES

- Provision of subsidies to reduce disparities and obtain treatment at private primary care providers.
- Building a sophisticated national electronic health record system, that collects, reports, and analyzes information to aid in formulation of policy, monitoring of implementation, and sharing of patient records.
- Utilizing their strength in the artificial intelligence industry for meaningful improvements in medical care.
- International partnership on Healthy Longevity.



THREATS

- Increasing service demand and staff shortages are leading to an inadequate health service delivery with long waiting times for certain procedures
- Public clinics, with their limited scale, are not able to provide care to patients with lower socio-economic status, thus increasing their risk of hospitalisation.
- Rising burden of non-communicable diseases: six types of non-communicable diseases, namely, cancers, diseases of heart, cerebrovascular diseases, chronic lower respiratory diseases, injuries and poisoning, and diabetes mellitus, accounted for 59.3% of all registered deaths in Hong Kong in 2017.

Analysis of Strengths and Weaknesses of Health Care System in Hong Kong, SAR



- Life Expectancy in Hong Kong is 84.6 years in 2018.
- Improved medical treatment, diet, resilience, adaptability, healthy lifestyles and technology contribute to longer lifespan.
- The government has established an electronic health record refers to a record in electronic format containing health-related data of an individual.
- There private digital initiatives to help shape its healthcare delivery model, optimise resources, and ultimately benefit society.
- The concept of age-friendly city has high level political commitment.
- The government provides public healthcare services free of charge or for a small fee.



- The major contribution to the improvement in life expectancy in Hong Kong for both males and females was mainly attributable to the older population.
- Private health insurance is one of the most expensive in the world. It is essential to have a good private medical insurance. The private clinics have their own market value and often charge their clients higher rates.
- Hong Kong had been relying on the supply of foreign-trained.
- Noncommunicable diseases have become the major disease burden, infectious diseases such as tuberculosis, hepatitis, and schistosomiasis are still the major health problems in poor rural areas. The prevalence of noncommunicable diseases such as cancer, diabetes and cardiovascular disease.
- Hong Kong population experiencing an accelerating ageing trend.
- Fertility rate is decreasing.
- High burden of mental illnesses that significantly contribute to DALY (Disability-adjusted years)

Recommendations for Hong Kong, SAR

- **Large focus on delivery of care that on insurance.** Primary care services are of limited access due to high prices. The health authorities should focus on delivering healthcare services in Hong Kong in line with a more holistic view of health.
- **Improve engagement of staff in healthcare.** The role of health professionals within a paradigm of the social model of health could be the key for improved healthcare services in general, as well as access to healthcare for the population. Even in a public health system as efficient as Hong Kong's, access might increasingly be at risk due to staff shortages, issues related to health insurance coverage, and increasing waiting lists for certain procedures (timeliness).
- **Health system re-orientation towards the changing epidemiological landscape.** The increasing burden of noncommunicable diseases highlights the need to move from sick treatment to prevention of chronic conditions. It requires patients' participation and high health consciousness.
- **Support healthy and disease-free lifestyles with emphasis on health status of elderly.** Promoting healthy, disease-free aging must be a central priority for Japan, and attention must also be paid to the potential for rising rates of risky health behaviour, alcohol consumption and even rates of obesity.
- **Manage to maintain modest overall spending.** Hong Kong should developed portfolio of targeted tools to address specific problems to respond to aging in the coming years. The coordinated use of these tools ensures that healthcare providers compete on affordability and quality, and that total costs remain relatively low.
- **Develop novel financial systems.** It will be necessary for novel financial systems to be developed which monetize Healthy Longevity, and repeatedly reinvest in the technologically-reinvigorated working population, if they are to survive the silver tsunami.



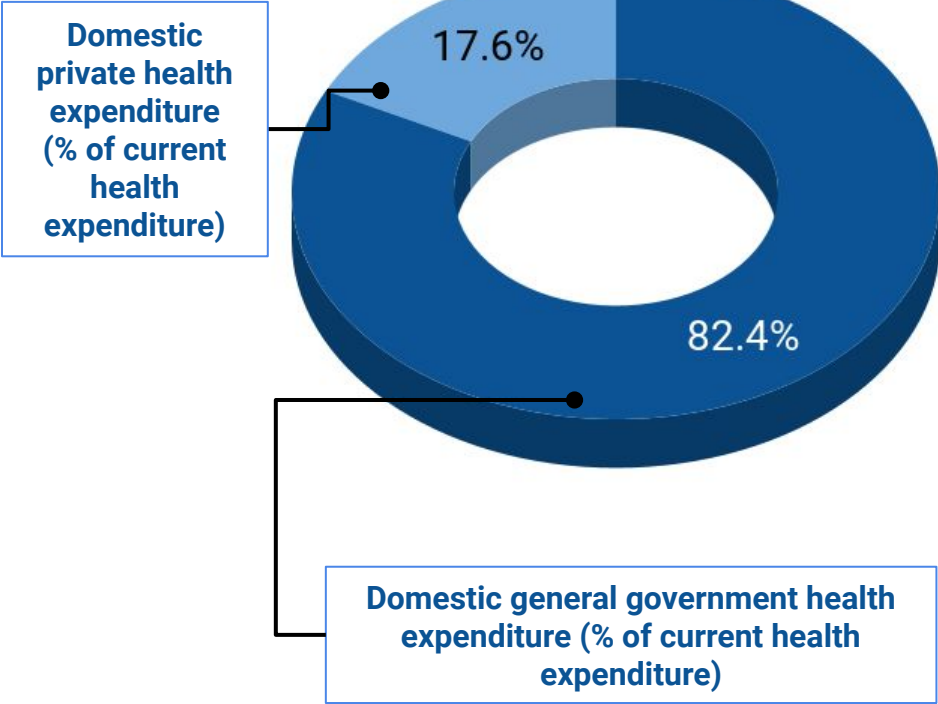
HALE	Both Sexes HALE, 2019	72 years
	HALE/Life Expectancy Difference, 2019	10.86
Economy	GDP per Capita, Current Prices, 2019	67.08 thousand (\$)
	Annual GDP Growth, 2019	1.92 %
Healthcare	Current Health Expenditure per Capita (2018)	6.5 thousand (\$)
	Public Health Care Expenditure, 2019	2.87 % of GDP
Retirement	Age Dependency Ratio, 2019	53.47
	Population over 65, 2019	15.19 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.12
	Annual Cigarette Consumption (Units per Capita), 2019	848
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	21.9 % of adults

Longevity-Related Indices

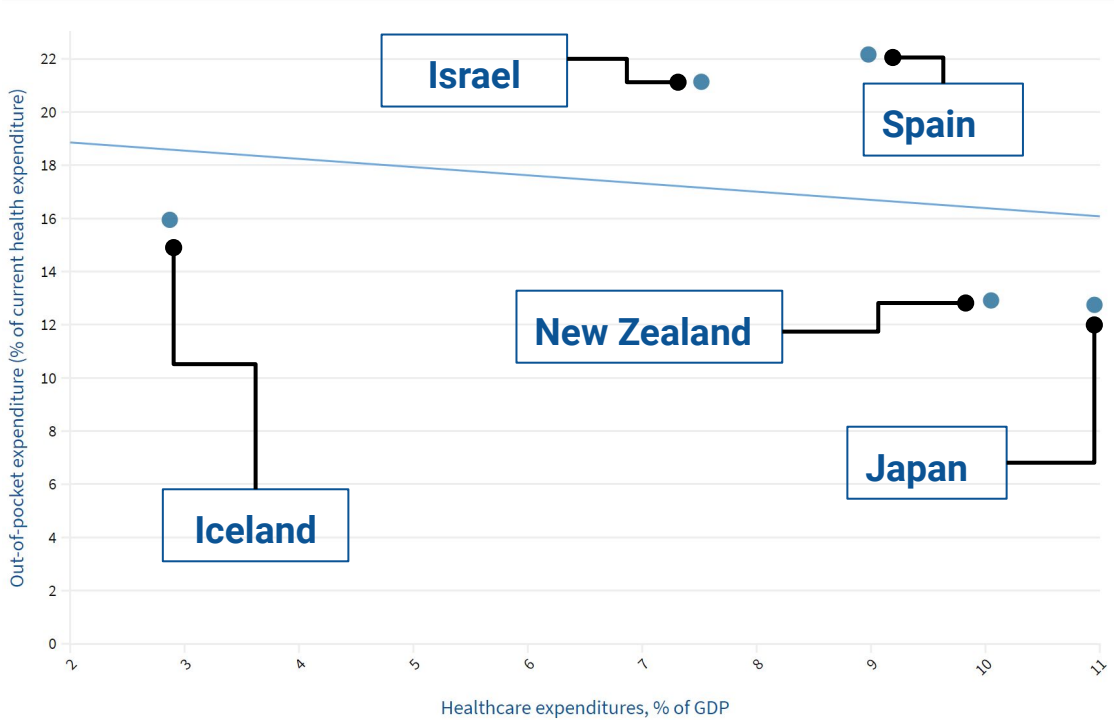


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.95
- E-Government Development Index, 2019:
0.91
- Corruption Perceptions Index, 2019:
75
- Global Gender Gap Index, 2019:
0.89
- Democracy Index, 2019:
9.58

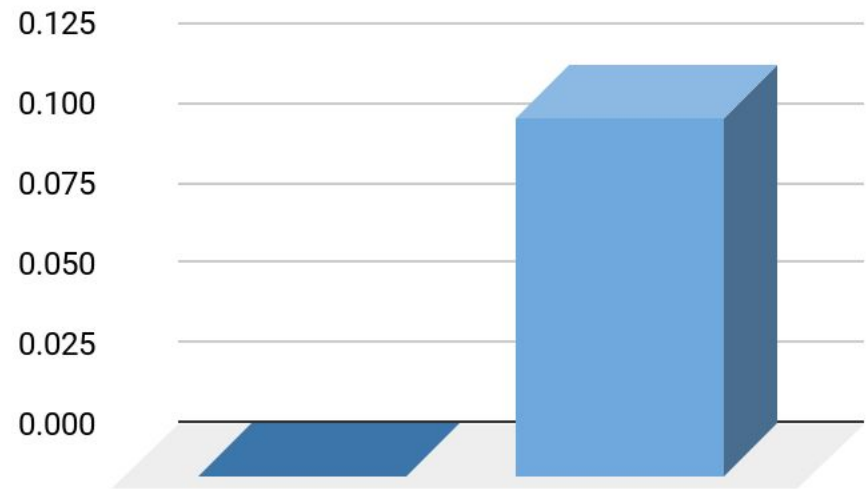
Current Healthcare Expenditure



Countries with high HALE and LE and medium GAP



Compound annual growth rate



To improve health and wellbeing of people living in Iceland government policies should be focused on obesity, tobacco, healthy workplaces, child wellbeing. eHealth initiatives should meet the needs of the aged population.

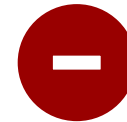


SWOT Analysis of Healthcare in Iceland



STRENGTHS

- The healthcare system is comprehensive and provides the easy and equal access to the healthcare to the whole population and the HAQ index stands for 97.1.
- Infant mortality in Iceland is the lowest in the world and is 1.3 per 1000 population.
- Maternal mortality is the lowest in the world and is 3 deaths per 1000000 of population.
- The population is relatively young and productive.
- Healthcare system shares access to the most optimum health service that can be provided at any time



WEAKNESSES

- The total expenditures on health are 8.8 of GDP that is lower than the Nordic countries.
- There is still a great amount of spending on the inpatient care - the half of the total spendings.
- There is a relatively high level of the unmet needs in Iceland (4%) for medical and dental care.
- There are also the large inequalities in different income groups concerning the access to the medical system and the obesity level and sometimes the waiting times occurs due to the geographical locations.



OPPORTUNITIES

- The crime rate in Iceland is very low, with the majority of incidents involving theft and pick pocketing.
- Universal healthcare coverage includes sickness benefits in case of an illness or injury that leaves you temporarily unable to work.
- Well-composed primary care based on the reimbursement model including transparency, quality control and equal distribution of the resources among the facilities.
- Shift to precision health and development of private insurance market.



THREATS

- The decline in the fertility rate.
- The levels of obesity are high in the Iceland, especially among the adolescents - 22,2% compared to the OECD average and among the adults the obesity rates start to be close to the OECD average indicator.
- The great impact of the economic crisis and the banking system destructions on health and longevity industries.
- The severe climate that demands the sustainable medical system.

Analysis of Strengths and Weaknesses of Health Care System in Iceland



- Waiting times are relatively short and the patient's outcomes are one of the best in the Europe - Iceland occupies the 8th place by the Health Consumption Index.
- The smoking rates are also lower than the EU average - 11,4% compared to the 19,7%.
- People feel relatively good and are more satisfied by their life than other OECD countries.
- The retirement age in Iceland is one of the highest in the OECD.
- The share of out-of-pocket spendings in Iceland is lower than in the other OECD countries.
- The number of nurses and doctors in Iceland is relatively high and is above the OECD average and continue to rise.



- The direct household payments are high for the dental care and pharmaceuticals (60%).
- Only one of fifth doctors are specialized in the general medicine.
- The Iceland had a relatively low consumption of the fruits among the other countries despite the good supply - the mean consumption of vegetables was 120 grams per day and the mean consumption of fruit was 119 grams per day.
- Ischemic heart disease, Alzheimer's disease, stroke and lung cancer are the main reasons of the premature deaths.
- There was the significant increase of the bad impact of the diabetes in the Iceland (39,8%) in 2017, that along with low back pain, headache disorders and neck pain are the main reasons of the disability years.
- High fasting plasma glucose and high body mass index are increasing causes of the death and DALE along with the tobacco that is still the leading reason.

Recommendations for Iceland

- **Develop optimal Panels of Biomarkers of aging.** The necessary biotechnologies for the implementation of P4 Medicine technologies and therapies are in place. Now Big Data analytics is needed to develop optimal Panels of Biomarkers of aging and to determine how to optimize their implementation. A panel of less precise but easily implementable biomarkers of aging would be much better than an extremely precise and comprehensive panel of biomarkers of aging that is too hard or expensive to translate easily into widespread practical use across nations.
- **Creation and application of life data.** Data collected on a massive scale from individuals can be used in scientifically-backed and precise ways to preserve and maintain an optimal state of health. Through voluntary data contribution from patients genomics, transcriptomics, metabolomics, and microbiomics data can be generated in real time.
- **Use AI opportunities in Health and Longevity industry.** Artificial Intelligence provides large amount of opportunities to optimize psychological wellness, create inclusive societies and combat loneliness and social isolation among elderly. Research tools, data storage, and processing technologies generate data from DNA sequence analysis and electronic patient health records.
- **Devise government-led Longevity development plan.** In the next few years several technologically advanced smart states will emerge as global competitors in the development of integrated Longevity Industry ecosystem. To be in forefront of Longevity industry Iceland should develop national Longevity plan with detailed agenda and initiatives to undertake various project on the way of Healthy Longevity, such as smart cities that integrate all subsectors of the multifaceted Longevity Industry to create an optimized ecosystem for the maintenance of health and wealth.
- **Minimise the burden of behavioral risks factors.** The risk factors for non-communicable diseases – tobacco use, the harmful use of alcohol, unhealthy diets, and physical inactivity – lie in non-health sectors. They should be addressed by creation advanced health care ecosystem with sophisticated private insurance, WealthTech, AgeTech available.



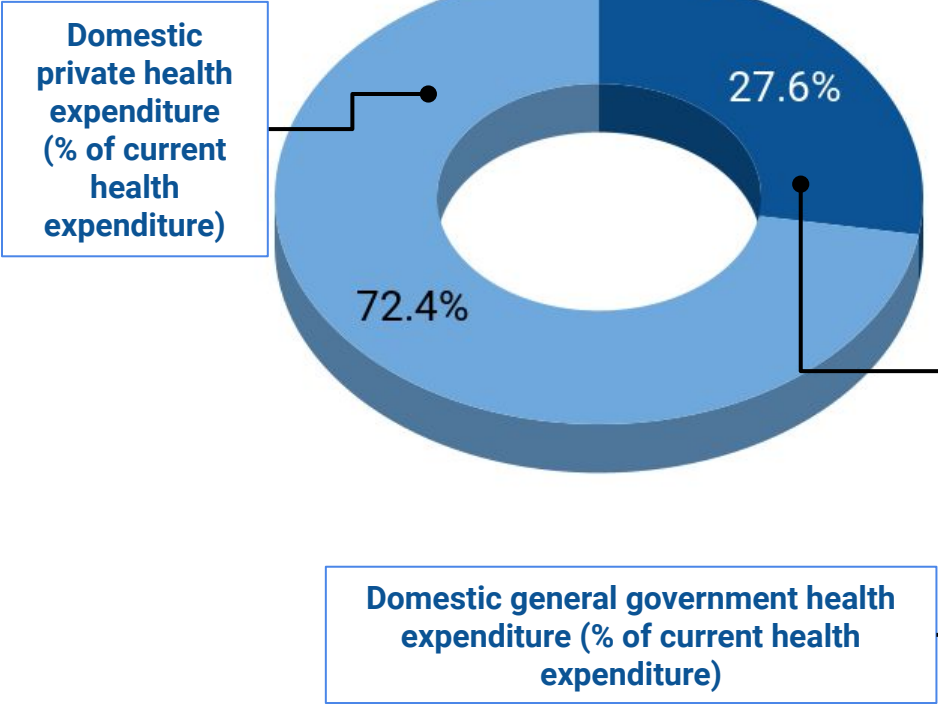
HALE	Both Sexes HALE, 2019	60.3 years
	HALE/Life Expectancy Difference, 2019	9.12
Economy	GDP per Capita, Current Prices, 2019	2.1 thousand (\$)
	Annual GDP Growth, 2019	4.18 %
Healthcare	Current Health Expenditure per Capita (2018)	0.07 thousand (\$)
	Public Health Care Expenditure, 2019	3.54 % of GDP
Retirement	Age Dependency Ratio, 2019	49.25
	Population over 65, 2019	6.38 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	5.54
	Annual Cigarette Consumption (Units per Capita), 2019	89
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	3.9 % of adults

Longevity-Related Indices

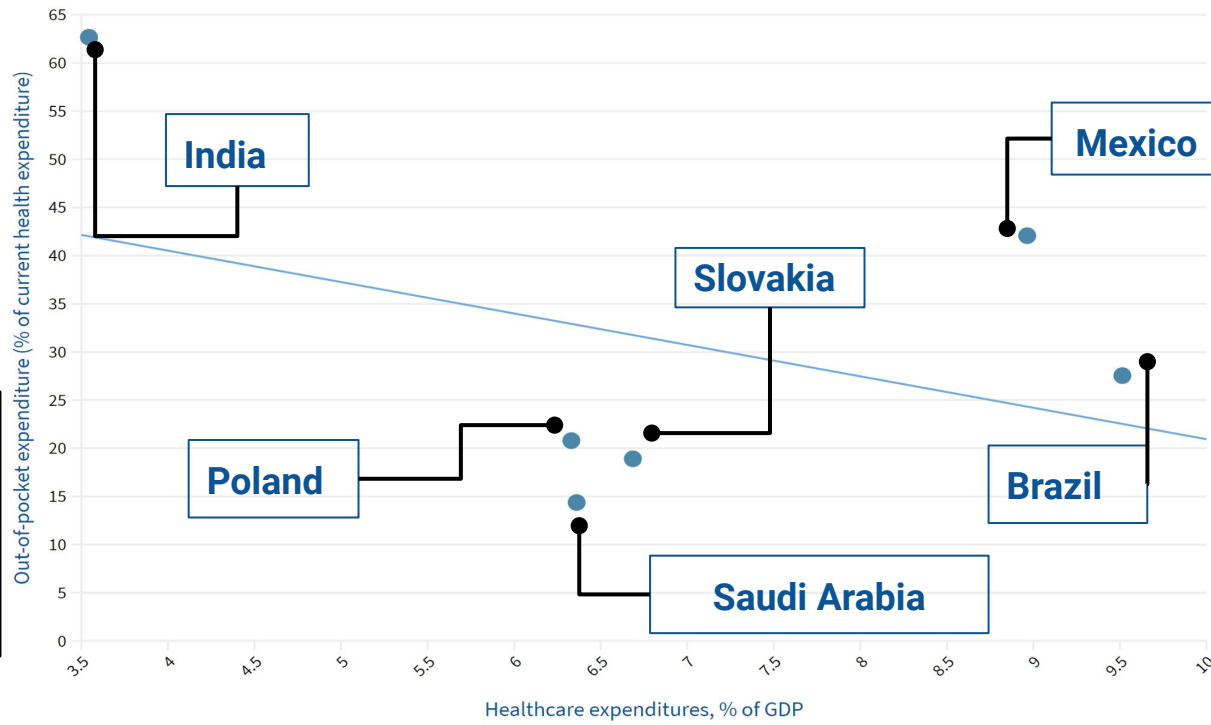


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.65
- E-Government Development Index, 2019:
0.6
- Corruption Perceptions Index, 2019:
40
- Global Gender Gap Index, 2019:
0.63
- Democracy Index, 2019:
6.9

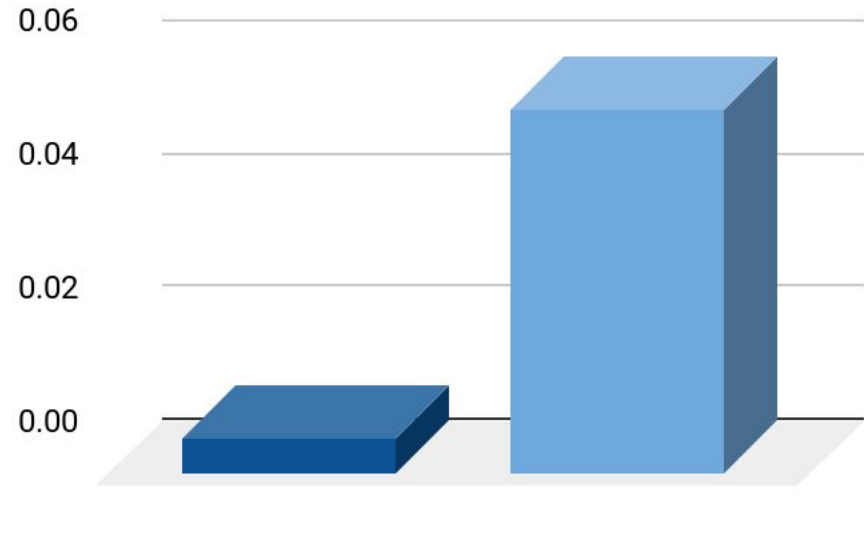
Current Healthcare Expenditure



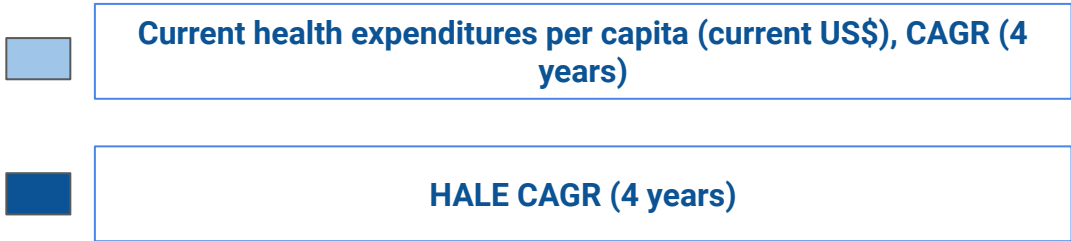
Countries with Low HALE and LE and Medium GAP



Compound annual growth rate



The country faces public health challenges, particularly for the poor. These include child undernutrition, growth in obesity, diabetes, and tobacco use, leading to cancer and other diseases. There are targets to improve public health: accessible and affordable nutritious food, sanitary facilities, health centres in rural areas, affordable health care.

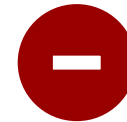


SWOT Analysis of Healthcare in India



STRENGTHS

- Vaccination coverage of the population reaches 75% but is lower than in the OECD countries.
- Life expectancy at birth has increased significantly through the past decades for 25 years.
- There was a significant cut in the infant mortality for the few past decades.
- The smoking rates in India are twice lower than in the OECD and are just 10.7.
- India provided the activities to improve access to the clean water up to 93%.



WEAKNESSES

- Total health expenditures in India are 4% of GDP and it is less than half of the OECD average.
- The value of healthcare spending per capita is critically small.
- Public spending on health in India accounted for only 33% of total expenditures while out-of-pocket one were 60% of total expenditures on health in 2012.
- There is a relatively low amount of doctors and nurses in India compared to OECD countries.
- Relatively low level of access to basic sanitation facilities and poor supply of improved water sources.
- High burden of communicable diseases.



OPPORTUNITIES

- The wide range of policies provided by the government to make better sanitation in India and reduce the infant mortality and children's diseases.
- Preventive interventions such as improving access to a clean water supply, reducing the spread of HIV/AIDS through better sexual education, and vaccination campaigns for other diseases will each deliver significant returns.
- India is one of the BRICs countries that is developing rapidly, so it can afford to direct more funds to the healthcare to make it as effective and reliable as in other OECD countries or countries with the same income.



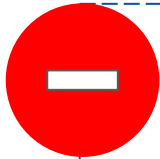
THREATS

- High level of ambient air pollution.
- Chronic diseases are the main reasons for deaths and account almost 50% of total deaths in India.
- The burning of solid fuels is a great risk factor.
- Ischemic heart diseases, lower respiratory infections and chronic obstructive pulmonary diseases are the main reasons for the death in India that can cause a stroke.
- Dietary iron deficiency, headache disorders and low back pain are the most reasons for the disability-adjusted years.
- Socio-economic inequality and high level of poverty.

Analysis of Strengths and Weaknesses of Health Care System in India



- India is a popular destination for medical tourists, given the relatively low costs and high quality of its private hospitals. International students in India should expect to rely on private hospitals for advanced medical care.
- In advanced regions there are usually big hospitals stuffed with all medicines and well-trained personnel that can provide innovative and cost-effective treatment.
- There was a training for the managers of primary health centres and district hospitals to provide efficient administration of the hospital in order to achieve good patient outcomes.
- There was a significant growth in the private sector in order to meet the growing needs and expectations for the outcomes of the population.



- Spending on pharmaceuticals in India is the highest component of the total spendings on health and is 45%.
- The health care system in India is universal. That being said, there is great discrepancy in the quality and coverage of medical treatment in India. Healthcare between states and rural and urban areas can be vastly different. Rural areas often suffer from physician shortages, and disparities between states mean that residents of the poorest states.
- 11% of the lowest economic quintile and 16% of highest one don't undertake any sufficient physical activity.
- Only 16% of households have the access to free or partially fee healthcare and the HAQ index is 41.2.
- The quality of the delivered services varies by the region and the area. 41% of people in rural area and 45% in urban area were not satisfied by their treatments.
- 10% of primary health care centres are without a doctor, 37% are without a laboratory technician and 25% without a pharmacist.
- Lack of adequate coverage by the health care system in India means that many Indians turn to private healthcare providers, although this is an option generally inaccessible to the poor.

Recommendations for India

- **Utilising opportunities of current development of health industry in India.** India is a land full of opportunities for players in the medical devices industry. India's healthcare industry is one of the fastest growing sectors and it is expected to reach \$280 billion by 2020. The country has also become one of the leading destinations for high-end diagnostic services with tremendous capital investment for advanced diagnostic facilities, thus catering to a greater proportion of population.
- **Increase the level of health awareness in both urban and rural areas.** The answers may lie in low educational status, poor functional literacy, low accent on education within the healthcare system, and low priority for health in the population, among others.
- **Improve the access and quality of healthcare services.** The government must encourage discussion on the determinants of access to healthcare. It should identify and analyze possible barriers to access in the financial, geographic, social, and system-related domains.
- **Make healthcare affordable and treatment reliable for all population.** The solutions to the problem of affordability of healthcare lie in local and national initiatives. Nationally, the Government expenditure on health must urgently be scaled up, from <2% currently to at least 5%–6% of the gross domestic product in the short term. This will translate into the much-needed infrastructure boost in the rural and marginalized areas and hopefully to better availability of healthcare– services, infrastructure, and personnel.
- **Combat with undernourishment, poverty and socioeconomic inequality.** Results of our study shows an evident linkage of health and wealth. Healthy longevity in India should be started from the provision of basic services for all population, including adequate sanitation facilities, improved water sources, effective prevention and treatment. The focus also should be made on both healthcare status of adults and children to create favorable conditions for growth of future generations.



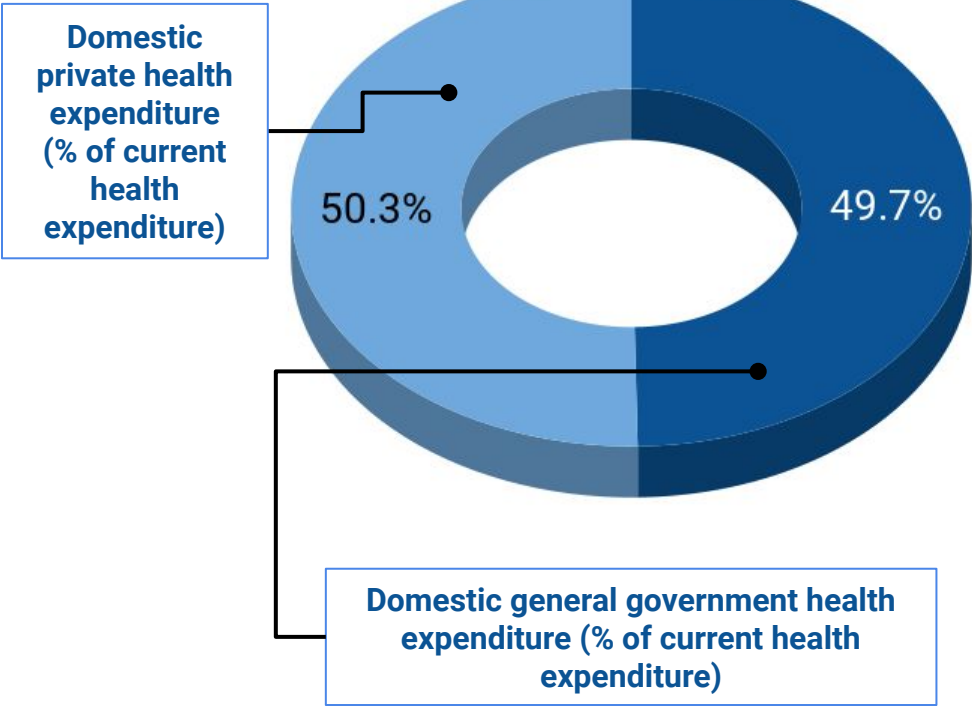
HALE	Both Sexes HALE, 2019	62.8 years
	HALE/Life Expectancy Difference, 2019	8.71
Economy	GDP per Capita, Current Prices, 2019	4.14 thousand (\$)
	Annual GDP Growth, 2019	5.02 %
Healthcare	Current Health Expenditure per Capita (2018)	0.11 thousand (\$)
	Public Health Care Expenditure, 2019	6.93 % of GDP
Retirement	Age Dependency Ratio, 2019	47.64
	Population over 65, 2019	6.05 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	0.57
	Annual Cigarette Consumption (Units per Capita), 2019	1675
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	6.9 % of adults

Longevity-Related Indices

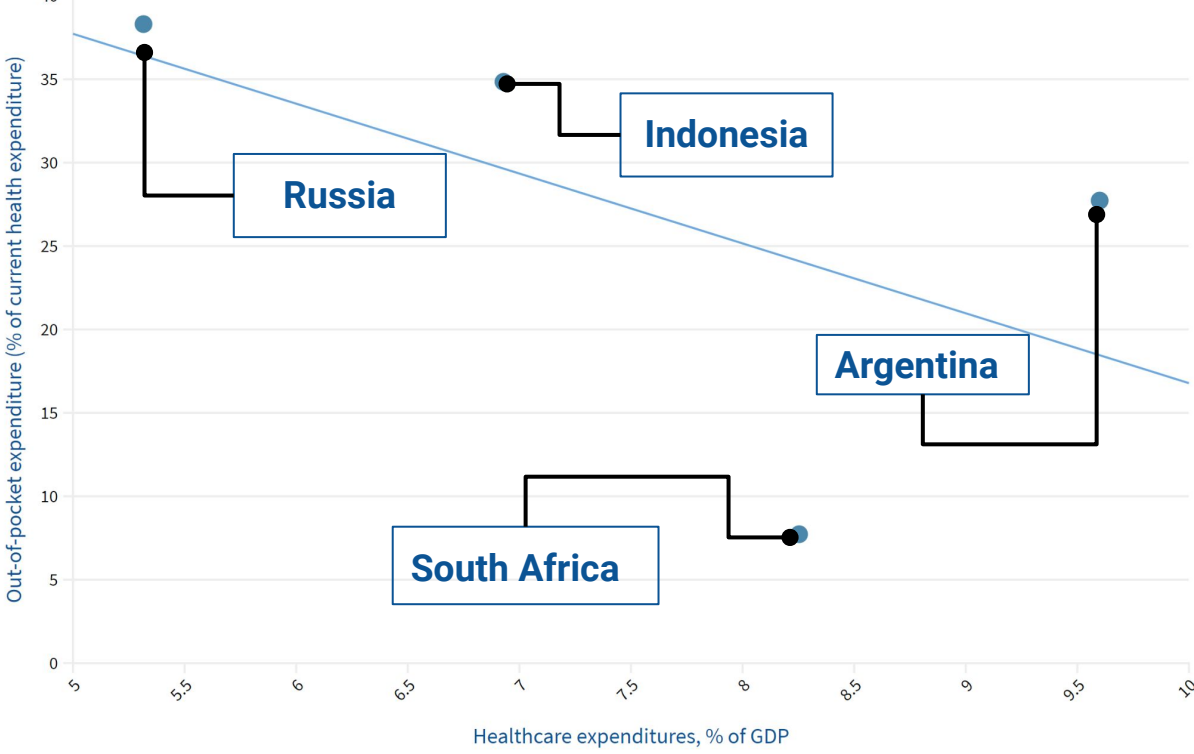


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.72
- E-Government Development Index, 2019:
0.66
- Corruption Perceptions Index, 2019:
37
- Global Gender Gap Index, 2019:
0.69
- Democracy Index, 2019:
6.48

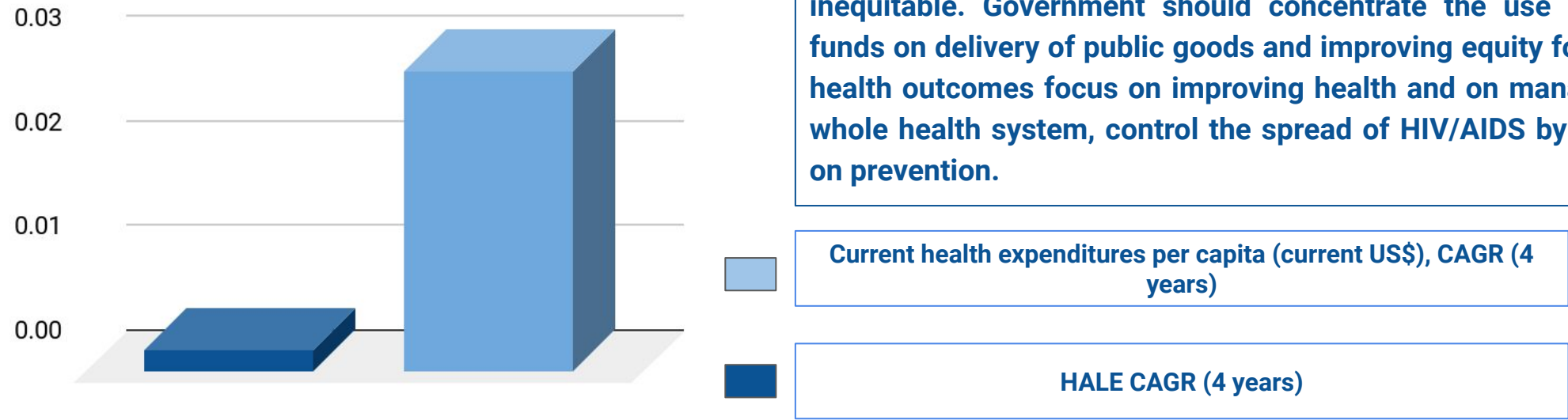
Current Healthcare Expenditure



Countries with Low HALE and LE and Low GAP



Compound annual growth rate



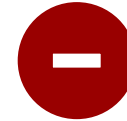
There are important regional and socioeconomic inequities in the health system of Indonesia. Health financing also is low and inequitable. Government should concentrate the use of public funds on delivery of public goods and improving equity for priority health outcomes focus on improving health and on managing the whole health system, control the spread of HIV/AIDS by focusing on prevention.

SWOT Analysis of Healthcare in Indonesia



STRENGTHS

- The life expectancy in Indonesia had increased by 25 years for few past decades and it was 70.2 in 2012.
- The coverage for vaccinations for measles is relatively high and is 80%.
- There was also a great decrease in the mortality rate that had fallen from 62 death to 26 death in 2012.
- There was a slight progress in reducing the spread of HIV/AIDS.
- There was a decline in deaths from tuberculosis by more than a half.



WEAKNESSES

- Total spendings on health are 3% of GDP and it is three times less than the OECD average.
- The healthcare spending per capita is \$150 that is extremely below the OECD average.
- Only 40% of all healthcare costs are funded publicly that is greatly lower than the OECD average of 72%.
- Cancer and tuberculosis are the second major reasons of premature deaths in Indonesia.
- Risk factors for NCDs, such as high blood pressure, high cholesterol, overweight and smoking, are increasing.



OPPORTUNITIES

- Disease epidemiology patterns in the country have become increasingly complex in recent decades.
- The increasing demand on the health service.
- Development of healthcare tourism
- The Indonesian health system has a mixture of public and private providers and financing.
- Utilizing advanced technologies in healthcare.
- The government can initiate the longevity plan based on successful experience of developed countries.



THREATS

- There are only 0.3 doctors per 1000 population and 1 nurse per 1000 that is the threatening situation for meeting the healthcare needs of the population.
- There is a very low coverage of vaccination for children against diphtheria, tetanus and pertussis.
- According to the data of the, 2019 tobacco smoking is still the major risk factor for the Indonesian people as one fourth of the population reported to smoke daily.
- Stroke is the leading cause of death and it causes 19.2% of death in Indonesia.

Analysis of Strengths and Weaknesses of Health Care System in Indonesia



- There was a significant decrease in maternal mortality from 210 to 168 deaths per 100000 people.
- The life expectancy is growing at relatively high rate of 1.05% per year.
- The regulation for the healthcare is branched out and consists of few institutions for the effective regulation.
- Civil society actively participates in the health sector. Various nongovernmental organizations (NGOs) engage in health-related issues in Indonesia, and play an important role in promoting awareness, preventive measures, fund-raising, policy advocacy and working in 27 partnership with the government on monitoring and evaluation.
- Developed pharmaceutical industry.



- The disability-adjusted years in Indonesia are mainly caused by the dietary risks (11%), high blood pressure (10%) and smoking (9%).
- The causes for years of life lost are mainly cerebrovascular diseases, tuberculosis and road injuries.
- Childhood underweight and occupational risks are the main reasons for the death among children up to 5 years old and from 15-49 years old respectively.
- 67.2% of Indonesian has tooth decay.
- Indonesia is ranked among the 10 countries with the highest diabetes and tuberculosis burden.
- 95% of ingredients for pharmaceuticals are imported that can lead to the rise of some of them.
- The access to the healthcare is unequal in different regions and HAQ index is 44.5.
- The high levels of out-of-pocket expenditure impacts access to health services for the poor.

Recommendations for Indonesia

- **Provide wider immunization coverage.** The lack of appropriate vaccinations among children can cause severe problems and spread the broaden epidemics that can lead to the young deaths.
- **Improve engagement of staff in healthcare.** Human resources for health have also grown in the last two decades, with increases in health worker to population ratios. However, the ratio of physician to population is still lower than the WHO-recommended figure, and ongoing geographical disparities exist. There is also a pronounced shortage of nurses and midwives.
- **Expand population coverage.** In response to the high levels of out-of-pocket expenditure and its impact on access to health services by the poor, the Government of Indonesia has to introduce various social insurance programmes for health.
- **Tackle environmental problems.** Bad environmental conditions contribute to poor health and inequality in healthcare status. Indonesia's large cities are prone to pollution, and this can exacerbate existing respiratory conditions like asthma. One of the most significant problems is the fact that tap water in Indonesia is not generally safe to drink.
- **Utilize AI for generating health databases of voluntary self-reported data.** Information on user experience is limited in both the public and private sectors. Requirements for informed consent are regulated but there is no national charter to describe the rights of patients in choice of provider, privacy or information. The ratio of health workers to population has improved over time, but disparities between provinces remain large.
- **Health system re-orientation towards the changing epidemiological landscape.** The increasing burden of noncommunicable diseases highlights the need to move from sick treatment to prevention of chronic conditions. It requires patients' participation and high health consciousness.

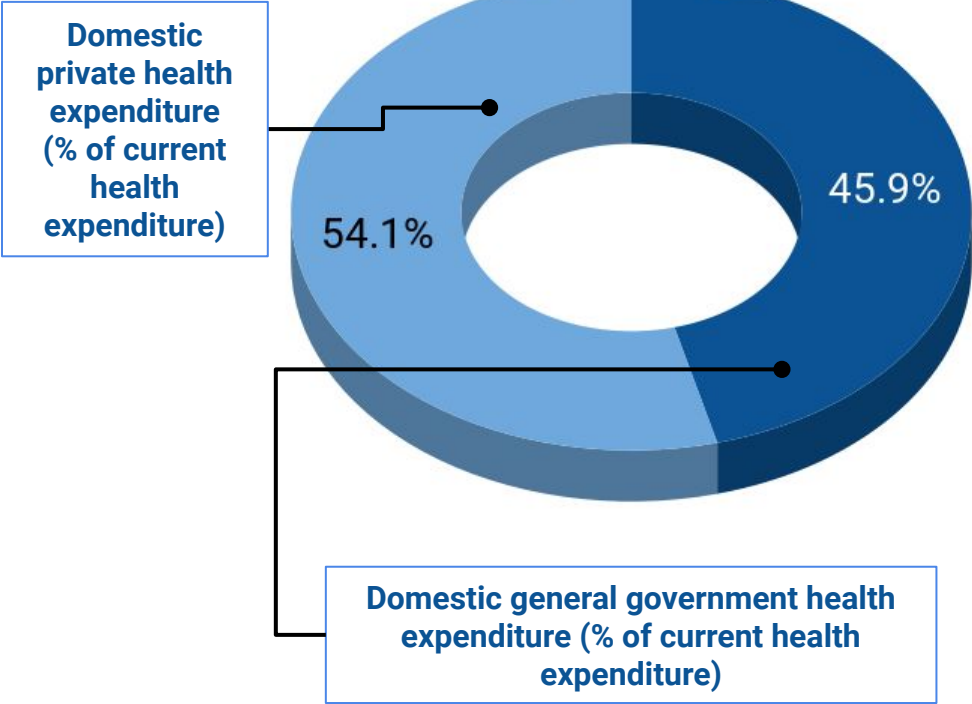
HALE	Both Sexes HALE, 2019	66.30 years
	HALE/Life Expectancy Difference, 2019	10.18
Economy	GDP per Capita, Current Prices, 2019	5.55 thousand (\$)
	Annual GDP Growth, 2019	-6.78 %
Healthcare	Current Health Expenditure per Capita (2018)	0.48 thousand (\$)
	Public Health Care Expenditure, 2019	8.66 % of GDP
Retirement	Age Dependency Ratio, 2019	44.96
	Population over 65, 2019	6.36 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	1.03
	Annual Cigarette Consumption (Units per Capita), 2019	937
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	25.8 % of adults

Longevity-Related Indices

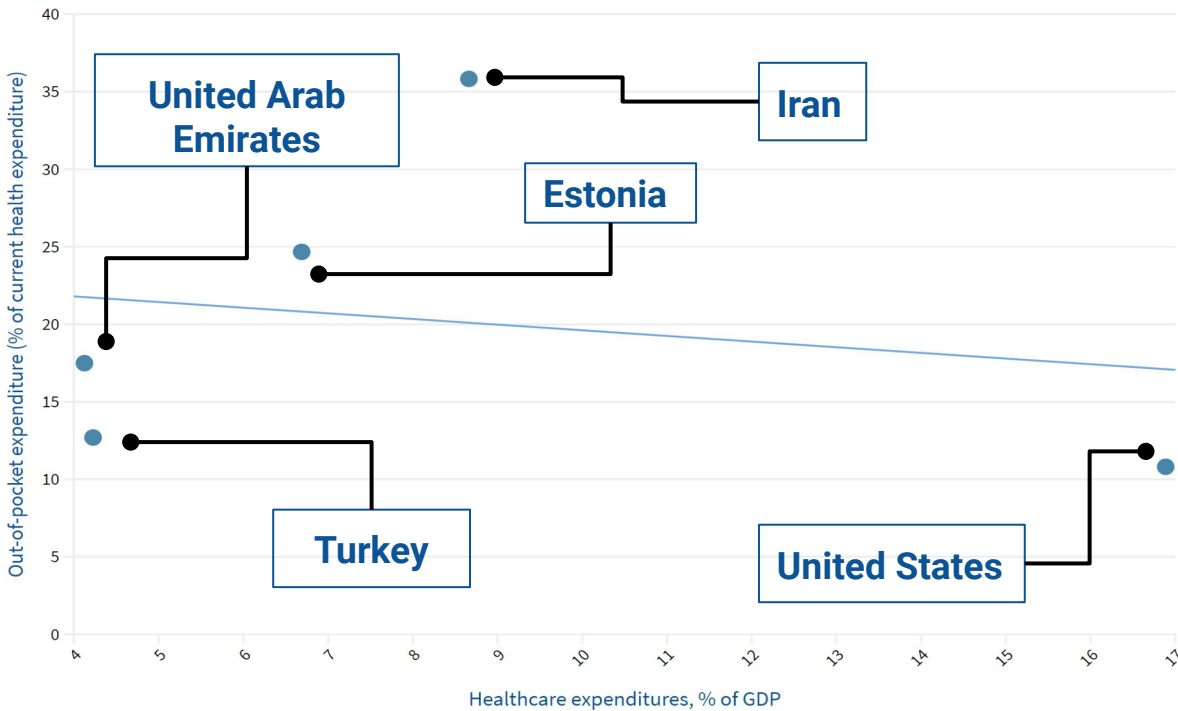


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.78
- E-Government Development Index, 2019:
0.65
- Corruption Perceptions Index, 2019:
25
- Global Gender Gap Index, 2019:
0.58
- Democracy Index, 2019:
2.38

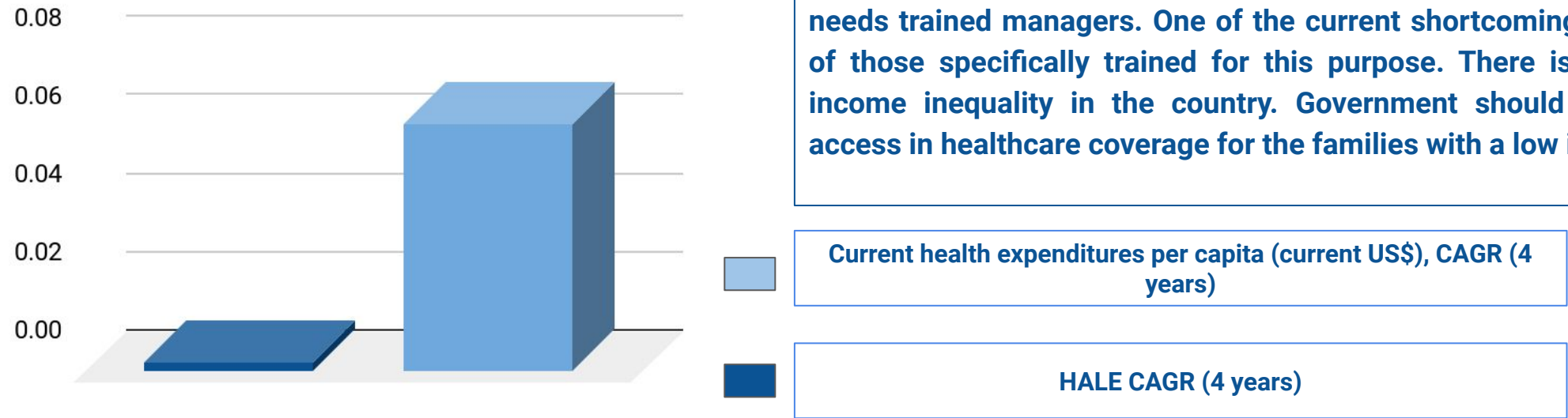
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate

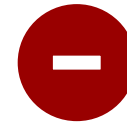


The health system is one of the most complex systems with many variables and uncertainties. The management of this system needs trained managers. One of the current shortcomings is lack of those specifically trained for this purpose. There is all high income inequality in the country. Government should improve access in healthcare coverage for the families with a low income.



STRENGTHS

- Iran population is young - only 5% of the population is over 60 years old.
- The healthcare system is comprehensive includes both public and private healthcare providers.
- The public centre is the main provider of the healthcare services throughout the country, some services are free of charge.
- There are lots of non-profit organizations in Iran that play an active role in resolving healthcare issues such as cancer etc.
- There is relatively high level of density of doctors and nurses.



WEAKNESSES

- Spending on health per capita is lower than in other OECD and EU countries.
- The level of out-of-pocket healthcare expenditures is still high and remains to be 39% of current healthcare expenditures.
- The life expectancy is still low remains to be 71 years for both sexes, but the gender gap is lower than EU-average.
- More than 45% of death in Iran are caused by cardiovascular diseases.
- Accidents are the second risky factor for the Islamic Republic of Iran and occupy 18% of death.



OPPORTUNITIES

- There is a wide range of the training medical universities and schools for the preparation of the qualified medical workforce.
- The living conditions throughout the world are getting better that influence life expectancy and HALE positively.
- There is a significant increase in some healthcare indicators for Iran that will certainly continue to grow.
- Modernization of healthcare facilities and applying modern techniques of treatment and prevention.
- Increase number of reciprocal medical arrangements between Iran and other countries for exchange of knowledge and experience.



THREATS

- There is a considerable shortage of healthcare personnel in peripheral areas.
- Cancer all the reason for lots of death in Iran as there are 14% of deaths because of it.
- Neonatal and respiratory diseases are also the burdens for healthcare in Iran and cause 6% of total deaths in the country.
- There is an increase in the burden of the communicable diseases that threaten life expectancy and HALE.
- Years of Western-imposed sanctions cause problems in the medical field.

Analysis of Strengths and Weaknesses of Health Care System in Iran



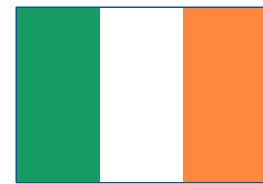
- Government is highly proactive in the questions of healthcare and undertakes steps to make it more balanced.
- More than 90% of Iranian people are under the coverage of at least one of the kind of insurance.
- There is a high level of immunization among children in Iran.
- The performance of the healthcare institutions is great and effectiveness is very impressive due to the decrease though slight in infant mortality and elimination of the burden of the infection in childhood.
- Prices for pharmaceuticals are among the lowest in the region.



- The infant mortality in the Islamic Republic of Iran is still high and is far from the millennium goals.
- There are considerable gaps in the access and quality of the healthcare system and HAQ index is just 71.8.
- Secondary and third tiers entities do not provide the services as effective as primary healthcare does.
- Headache disorders, low back pain and depressive disorders along with the drug addiction are the main causes for the disability-adjusted years in Iran.
- The coverage by the hospitals and hospital beds per population is far from the OECD countries and the growth of their amount is slower than the demand for services.
- Medical education is still not enough community-based.
- High blood pressure, dietary risks and high fasting plasma glucose are the main risk factors for Iran.
- Malaria can be a risk in rural parts of Iran. Expats in these areas should take the necessary precautions such as keeping well covered and using an effective mosquito repellent.
- Despite healthcare coverage out-of-pocket expenditure accounts 39% of current healthcare expenditures

Recommendations for Iran

- **Pay special attention to cardiovascular disease.** Changing trend of mortality causes from contagious diseases to lifestyle affected diseases has brought about striking rate of mortality caused by unintentional diseases, cancers, and cardiovascular diseases.
- **Take actions to monitor and treat communicable diseases.** To completely eradicate malaria, health officials should concentrate resources to prevent and treat the disease in the specific provinces where the disease is most prevalent. Policymakers should monitor borders to prevent the spread of malaria into Iran from outside the country. They should strengthen cooperation between institutions and improve the health system's' ability to quickly identify epidemics.
- **Address the vast divergence of health care access between rural and urban areas.** Iran's rural population face a severe lack of health care infrastructure and people are forced to travel large distances to receive basic care. The government should eliminate the inequality, as the rural population face far higher infant mortality rates and maternal mortality rates, and lower levels of vaccination than urban residents.
- **Shift from sick treatment to preventive medicine.** Greater than half of the under-5 deaths in Iran are the result of preventable or easily-treatable diseases and illnesses, such as malnutrition, which affects some 45 percent of children under the 5-years-old in Iran.
- **Provide effective treatment for marginalized groups.** In conditions of socio-economic instability healthcare facilities should provide services including medical and mental health consultations, testing and treatment for sexually transmitted infections, ante- and postnatal care and family planning.
- **Develop government-led longevity plan.** Although Iran population is relatively young, government should devise longevity strategy with focus on high quality of life, technical innovations in care delivery and medical treatment, and modified business and governmental models.



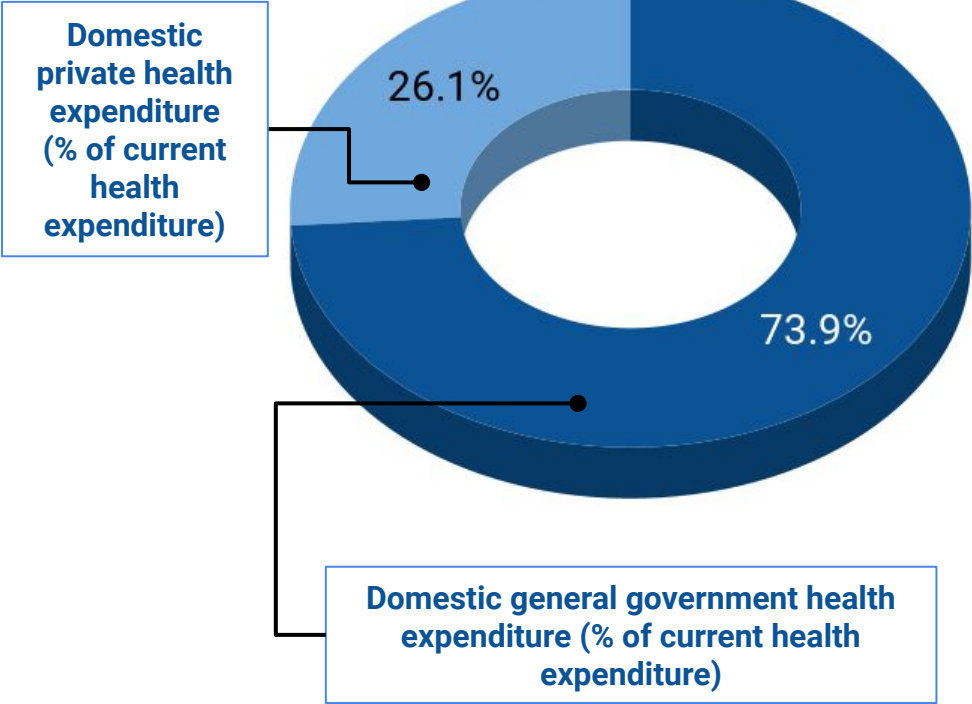
HALE	Both Sexes HALE, 2019	71.1 years
	HALE/Life Expectancy Difference, 2019	11.16
Economy	GDP per Capita, Current Prices, 2019	78.78 thousand (\$)
	Annual GDP Growth, 2019	5.55 %
Healthcare	Current Health Expenditure per Capita (2018)	5.49 thousand (\$)
	Public Health Care Expenditure, 2019	8.47 % of GDP
Retirement	Age Dependency Ratio, 2019	54.73
	Population over 65, 2019	14.22 %
	Number of WHO Age Friendly Cities and Communities	28
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	12.88
	Annual Cigarette Consumption (Units per Capita), 2019	976
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	25.3 % of adults

Longevity-Related Indices

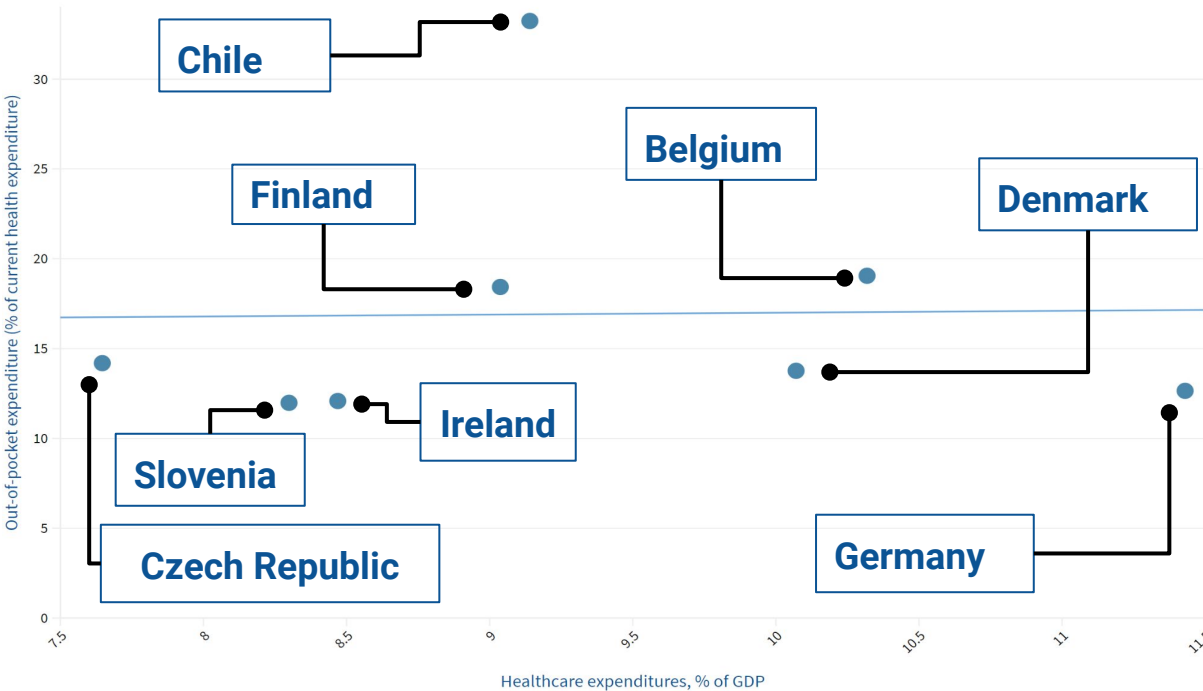


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.96
- E-Government Development Index, 2019:
0.84
- Corruption Perceptions Index, 2019:
72
- Global Gender Gap Index, 2019:
0.8
- Democracy Index, 2019:
9.24

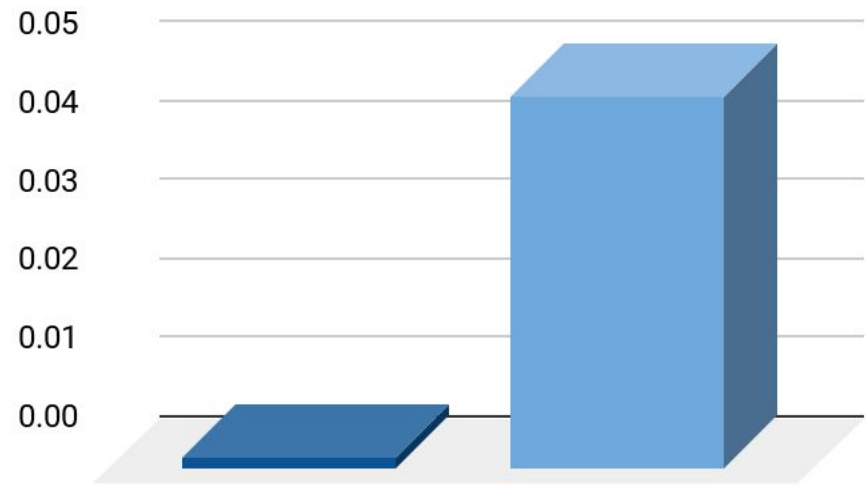
Current Healthcare Expenditure



Countries with medium HALE and LE and High GAP



Compound annual growth rate



It should be focused on the proportion of people who are healthy at all stages of life, reduction health inequalities, protection the public from threats to health and wellbeing.

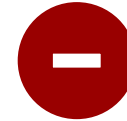


SWOT Analysis of Healthcare in Ireland



STRENGTHS

- One of the highest levels of the occupational rated for acute care beds (98%).
- The healthcare system in Ireland is complex, public funded with developed private sector.
- Ireland's spending on health per capita is more than 40% higher than the OECD average.
- Out-of-pocket payments occupy only 15.2% of total expenditures.
- Life expectancy in Ireland is high. It was 81.5 years in 2015 due to the reductions in premature deaths.



WEAKNESSES

- High occupancy rate for acute beds can be the evidence of increase in waiting times
- Patients wait for more than three months for cataract surgery, knee and hip replacement in Ireland.
- There is a great amount of avoidable hospital admissions because of COPD and asthma that Ireland can avoid.
- Ireland spends only 7.8% on health that is lower than the OECD.
- 19% of adults in Ireland were smoking regularly in 2015 year.
- 32% of adults had at least six drinks in single occasions per month in 2015.



OPPORTUNITIES

- Reforming healthcare system with focus on care delivery and extended access for effective prevention and advanced treatment.
- Medical Cards that function in the Irish healthcare system give an opportunity to visit GPs free of charge and provide reduced costs for medications.
- Gains in health status and this are paralleled by major investment in the health services.
- Explore the potential of new technologies within the healthcare industry.



THREATS

- Current economic crisis has led to the hospital investment postponement and shortage of the medical staff and reduction of healthcare expenditures.
- Ischemic heart disease is the leading cause of the deaths in Ireland.
- There is no universal coverage for the primary care.
- Cancer is the leading cause of death for men (32% of incidents).
- Diseases of old age are major contributors to the slowdown in life expectancy improvements.

Analysis of Strengths and Weaknesses of Health Care System in Ireland



- Amenable mortality in Ireland is below the EU average. Also there is very low level of infant mortality and it is 3 deaths per 1000 population.
- The healthcare system in Ireland is relatively effective in treating life-threatening conditions.
- Life expectancy continues to rise as the result of the improved survival rates after the age of 65.
- Irish women at age 65 are predicted to live 21.0 years more and Irish men are predicted to live additional 18.4 years at the same age.
- The gap in life expectancy between men and women starts to narrow.
- More than 80% of population in Ireland report to be in good health.
- Developed network of preventive medicine.



- Spending on pharmaceuticals is among the highest in the Ireland and is 652 USD per capita.
- The prevalence of obesity in Ireland is above the EU average and it totals 19% of the all Irish population. There is an increase in the overweight among children.
- There are high levels of alcohol consumption per capita that counts for 10.6. Alcohol burden o contributes to death and disability through accidents, assault, violence, homicide and suicide. 20% of the population drinking nearly 2/3 of all alcohol.
- Only 47% of population have a coverage to visit the general practitioners.
- There is a low level density of doctors that causes long waiting periods and limited access for effective treatment.
- Other factors that contribute to life expectancy slowdown are rising obesity and inequality.

Recommendations for Ireland

- **Implementation of the universal healthcare coverage with a particular focus on the elder population needs.** Plenty of households in Ireland prefer to buy additional health insurance to serve their medical needs and fulfill the gaps in universal healthcare coverage.
- **Legislated incentives to provide transparent and readily available information on quality and cost.** Hospitalists need to work collaboratively with their hospital systems to collect and widely report on quality and cost metrics for the patients they serve.
- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** Ireland faces major challenges in curbing the negative health impacts of obesity, diabetes and an increasingly sedentary Western lifestyle. Cardiovascular disease remains the number one killer in Ireland. The government should initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioral factors such as insufficient physical ability, overweight, alcohol abuse, smoking.
- **Holding the healthcare industry to a higher standard.** Ireland’s healthcare system should focus developing advanced treatments. Apart from advanced research, however, it is important to provide effective, low-cost treatments that work, triggering unnecessary treatments and higher costs down the line.
- **Shift from curative to preventive medicine with emphasis on the P4 clinics and advanced technologies in treatments.** Universal coverage is the healthcare’s dimension that government should improve and it can be concerned not primary care at the first point, but preventive one when adults starting from the early ages will look after their one health through regular check-ups. It will allow defining symptoms and illnesses’ markers on early stages to eliminate the diseases and leave people healthy and productive.

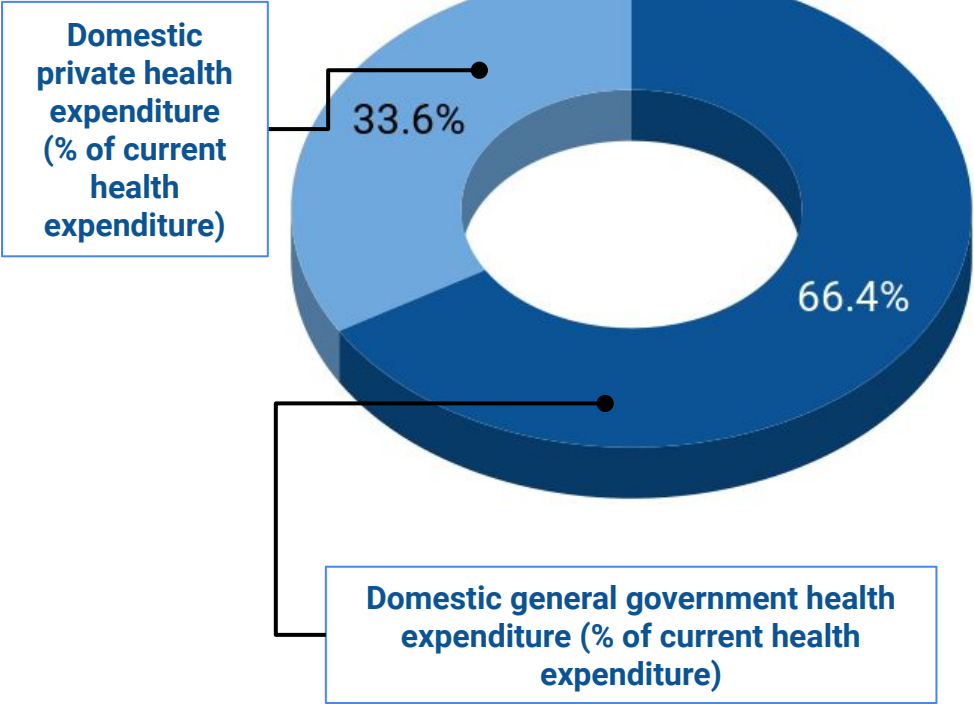
HALE	Both Sexes HALE, 2019	72.4 years
	HALE/Life Expectancy Difference, 2019	10.4
Economy	GDP per Capita, Current Prices, 2019	43.59 thousand (\$)
	Annual GDP Growth, 2019	3.47 %
Healthcare	Current Health Expenditure per Capita (2018)	3.32 thousand (\$)
	Public Health Care Expenditure, 2019	7.52 % of GDP
Retirement	Age Dependency Ratio, 2019	66.93
	Population over 65, 2019	12.21 %
	Number of WHO Age Friendly Cities and Communities	4
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	4.21
	Annual Cigarette Consumption (Units per Capita), 2019	1280
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	26.1 % of adults

Longevity-Related Indices

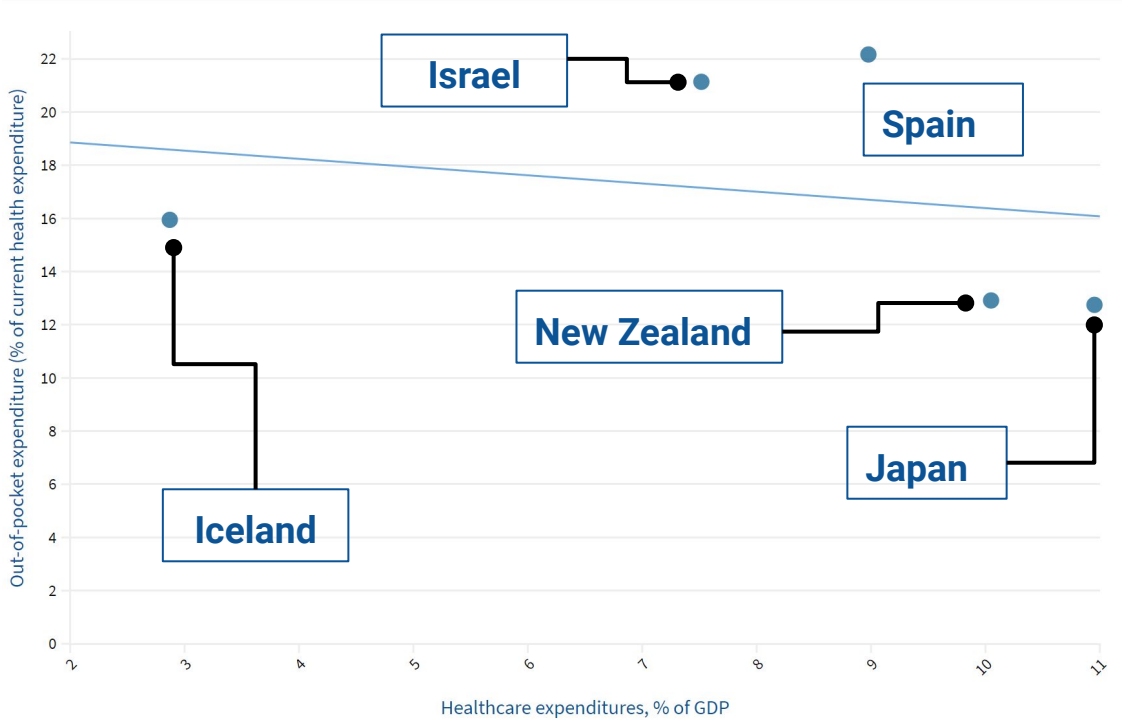


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.92
- E-Government Development Index, 2019:
0.84
- Corruption Perceptions Index, 2019:
60
- Global Gender Gap Index, 2019:
0.72
- Democracy Index, 2019:
7.86

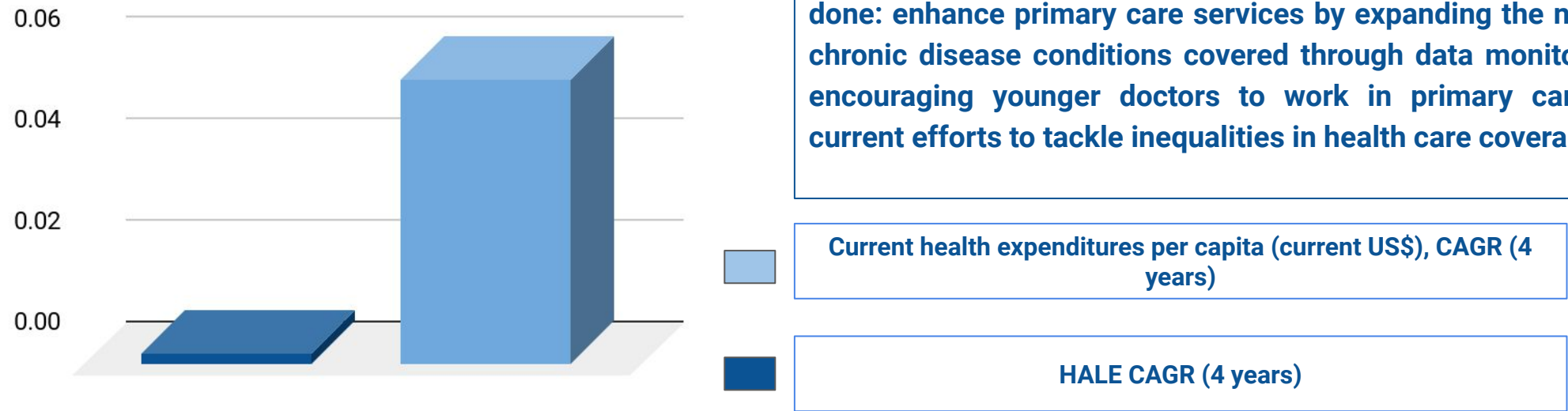
Current Healthcare Expenditure



Countries with high HALE and LE and medium GAP



Compound annual growth rate



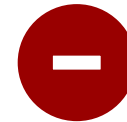
Life expectancy and HALE are increasing in Israel. The country has developed healthcare system, but some improvements should be done: enhance primary care services by expanding the number of chronic disease conditions covered through data monitoring and encouraging younger doctors to work in primary care, boost current efforts to tackle inequalities in health care coverage

SWOT Analysis of Healthcare in Israel



STRENGTHS

- The life expectancy at birth is high and is 81.3 years for males and 84 years for females and is predicted to increase further.
- The healthcare system in Israel is comprehensive consistent of two levels: public and private with prevalence of public sector.
- Medical system of Israel is effective and is example for other countries because its primary care is closely connected with preventive medicine.
- Low levels of amenable and infant mortality.
- Mental health care is broad and includes psychotherapy, medications, and inpatient and outpatient care.



WEAKNESSES

- Healthcare expenditure in Israel is lower than the OECD average. It was 7.3% of GDP in 2013.
- The share of public spending in Israel is only 60% of total health expenditures that is considerably lower than the OECD average.
- There was a significant growth of out-of-pocket spending on health.
- There is a low density of nurses per population.
- Lack of availability of services and professionals in peripheral regions.
- Financial barriers to care, particularly for those with low incomes and other vulnerable populations



OPPORTUNITIES

- Utilize the advanced healthcare technologies in Israel.
- Use the increasing opportunities offered by digitalization and eHealth. Integration of technologies to the healthcare system makes it easier for people to achieve good and equal health and welfare.
- Adoption of P4 medicine will increase efficiency of healthcare system in terms of rise of health-adjusted life expectancy. P4 medicine will use the power of systems medicine and big data to bring to bring all individuals into their 90s with full mental and physical function.



THREATS

- Israel's healthcare system is under pressure of growing demand on services and limited public financing.
- The rising costs on the medicine can lead to the deficit in funding of healthcare facilities.
- Lots of physicians are going to retire that create a risk of shortage of medical workforce.
- The ageing of the population arises the growing demand on the healthcare services and financial resources.
- There was a significant increase in the Alzheimer's disease and lower respiratory infections burden that along with the ischemic heart disease and stroke are the main reasons of death.

Analysis of Strengths and Weaknesses of Health Care System in Israel



- The Israeli healthcare system sets high standards for care to meet growing of population.
- Israel succeeded in building efficient and comprehensive primary healthcare system
- The healthcare system is relatively accessible and highly qualitative due to the [HAQ index that was 84.8 in 2017](#).
- [Smoking rate for Jewish men is lower than for Arabian and is 21% of total Jewish men](#) that is also lower than the OECD average.
- Alcohol consumption is lower than in other OECD countries.
- All health plans have electronic health record (EHR) systems that link all community-based providers—primary care physicians, specialists, laboratories, and pharmacies. All GPs work with an EHR. Hospitals are also computerized but are not fully integrated with the health plan EHRs.



- CDVs and lung cancer are the main reasons of the premature deaths in Israel.
- Low back pain, headache and depressive disorders along with blindness are the major causes for the disability-adjusted years.
- High fasting plasma glucose, tobacco and high-body mass index are the key risks for the death.
- The Middle Eastern country suffers from chronic shortages of nurses, hospital beds, and scanning devices such as MRIs and CTs.
- There are long wait times for hospital care and emergency room care.
- The country is also facing the threat of a physician shortage in the foreseeable future due to retirement.
- Private health expenditures in Israel are high in comparison to the OECD and US averages

Recommendations for Israel

- **Promoting greater poverty awareness at all levels of the health system.** Compiling, analyzing, and publicly disseminating information about health care disparities, including periodic reporting of variations in health and health care access and instituting an annual conference showcasing initiatives to reduce disparities.
- **Implementing intersectoral efforts to address the social determinants of health and promote healthy lifestyles.** Consuming more fruits, veggies and whole grains, along with not smoking, staying lean and exercising 30 minutes daily may help prevent leading causes of death, including high blood pressure, heart disease, diabetes.
- **Reducing surgical waiting times.** Long waiting times are perceived as one of the major causes of the recent growth in private financing and care provision. The government should develop initiatives to reduce surgical waiting times. This will involve additional funding to expand the hours of operation for surgical theaters, as well as a series of organizational changes to improve efficiency.
- **Adoption of P4 Medicine concept in healthcare.** P4 Medicine is the care that is predictive, preventive, personalized and participatory. Together, these capabilities will prevent the development of many of the chronic conditions that ravage our collective health and cost our system billions every year.
- **Development of regenerative medicine.** Regenerative medicine seeks to replace tissue or organs that have been damaged by disease, trauma, or congenital issues. There is a lack of donors for an organ transplant, and the budget set for patients to go abroad is not enough to accommodate the number of people waiting. Approximately 100 people die annually waiting for approval to go abroad for surgery.
- **International collaboration on ageing.** Strategic partnership between countries would provide access to world's most successful practices for the maintenance the optimal state of health and best forms of AgeTech, WealthTech and other technologies, products, services and social policies.

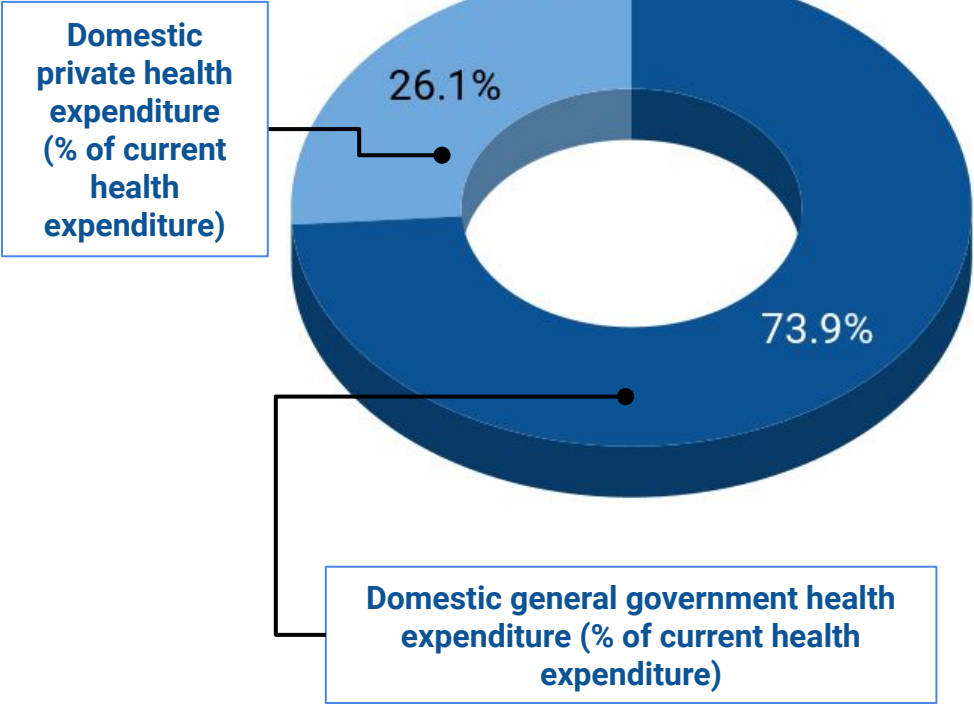
HALE	Both Sexes HALE, 2019	71.9 years
	HALE/Life Expectancy Difference, 2019	11.45
Economy	GDP per Capita, Current Prices, 2019	33.23 thousand (\$)
	Annual GDP Growth, 2019	0.34 %
Healthcare	Current Health Expenditure per Capita (2018)	2.99 thousand (\$)
	Public Health Care Expenditure, 2019	8.67 % of GDP
Retirement	Age Dependency Ratio, 2019	56.69
	Population over 65, 2019	23.01 %
	Number of WHO Age Friendly Cities and Communities	3
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.84
	Annual Cigarette Consumption (Units per Capita), 2019	1493
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	19.9 % of adults

Longevity-Related Indices

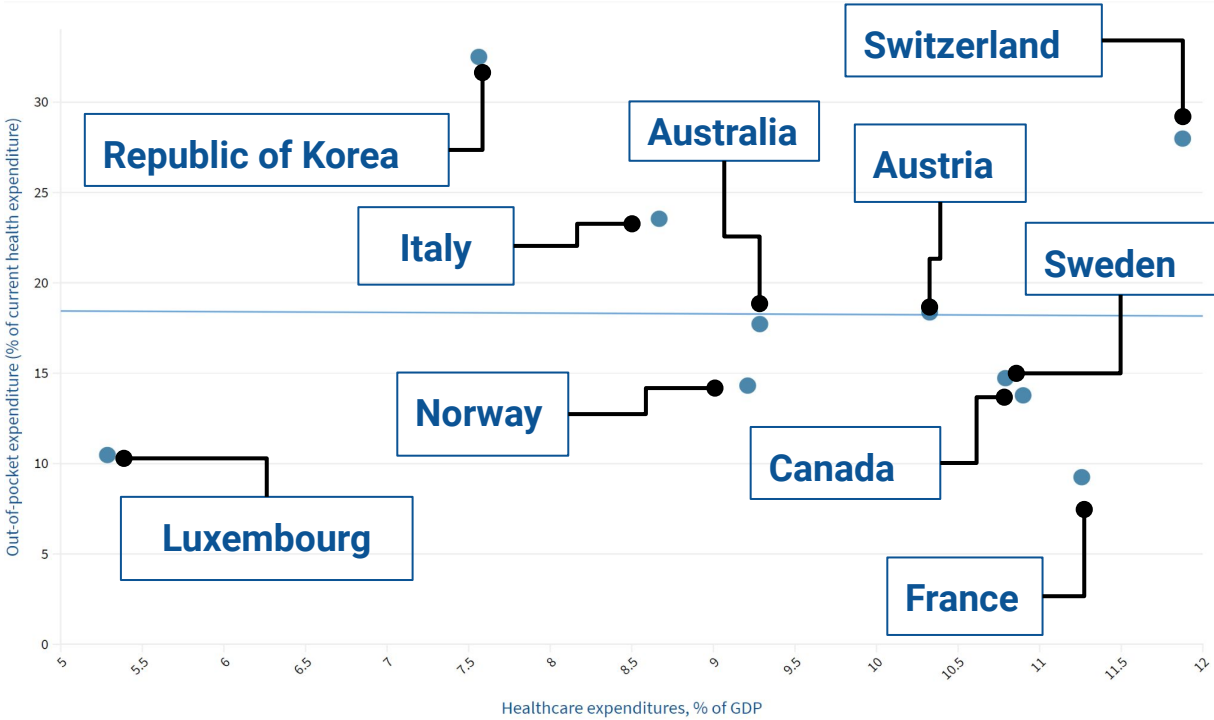


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.89
- E-Government Development Index, 2019:
0.82
- Corruption Perceptions Index, 2019:
53
- Global Gender Gap Index, 2019:
0.72
- Democracy Index, 2019:
7.52

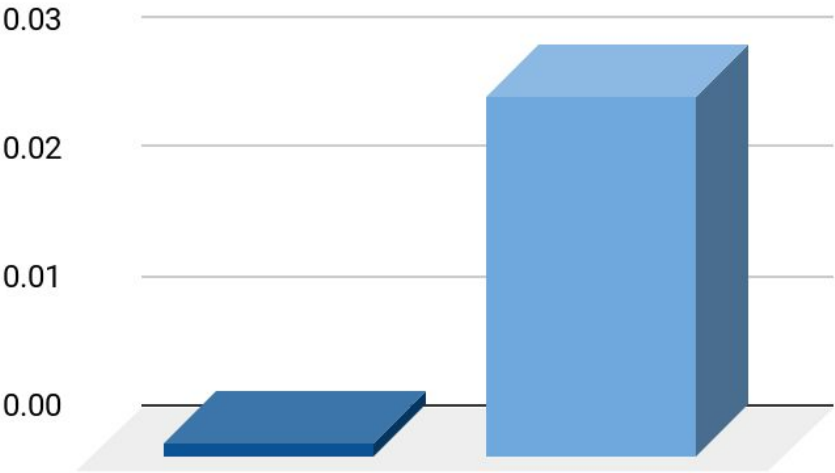
Current Healthcare Expenditure



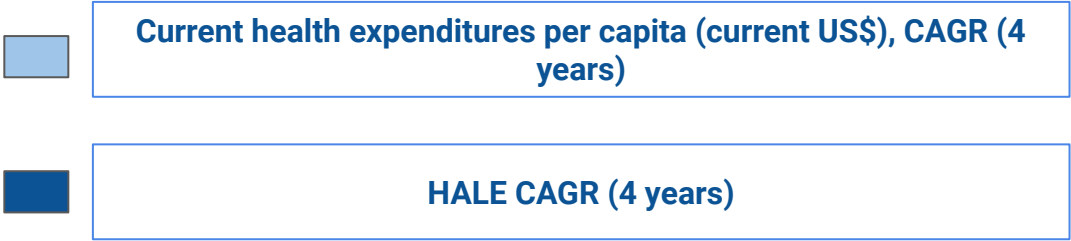
Countries with Low HALE and LE and High GAP



Compound annual growth rate



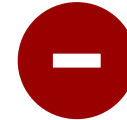
Further efforts are needed to reduce smoking rates, so as to reduce deaths from lung cancer and other smoking-related deaths and the prevalence of overweight and obesity





STRENGTHS

- The life expectancy at births was 82.6 years in 2015 slightly higher than the OECD average and the fourth highest in the EU.
- Italy has one of the levels of obesity that is only 10.3%.
- Healthcare system in Italy is comprehensive offering the universal coverage.
- Primary care in Italy is of high quality with low levels of admissions for some diseases.
- Italy has good levels of cancer survival and mortality.
- There are low levels of amenable and infant mortalities suggesting that the Italian medicine is effective in treating of life-threatening conditions.



WEAKNESSES

- There is a high level of antibiotics prescribed and defined at 27.5 daily doses per 1000 population.
- The level of healthcare expenditure per capita is slightly lower than the OECD average.
- There is the lowest doctors per nurses level in Italy along with the shortage of acute beds in hospitals.
- Community care and preventive medicine are less developed in Italy than in other OECD countries.
- Disparities in health status exist across regions and socioeconomic groups.



OPPORTUNITIES

- The focus on care integration and coordination to improve efficiency of healthcare sector.
- Adoption of P4 medicine will increase efficiency of healthcare system in terms of rise of health-adjusted life expectancy. P4 medicine will use the power of systems medicine and big data to bring to bring all individuals into their 90s with full mental and physical function.
- Strong commitment to adopt new technologies and improve performance measurement by strengthening eHealth and health information infrastructure.



THREATS

- Ageing of the population arises new challenges for the life expectancy.
- Italy has the second highest dementia prevalence among the OECD countries and its ratios are predicted to increase.
- High levels of obesity among adolescents.
- 21% of adolescents in Italy are smoking regularly.
- There are low rates of physical activity among the teenagers in Italy.
- Access to health care in Italy varies largely by region and income group.

Analysis of Strengths and Weaknesses of Health Care System in Italy



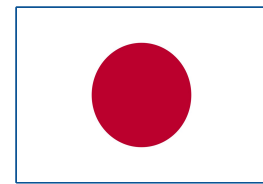
- The smoking rates in Italy are slightly below the EU average and tend to decrease.
- The alcohol consumption in Italy fell and it is well below the EU average.
- Healthcare system is accessible and core services are free for citizens and foreigners both as the HAQ index is 94.9.
- Italian women at age 65 can live 22.2 years more while Italian men are expected to have additional 18.9 years at 65.
- Two-thirds of the Italian population report being in good health, a rate close to the EU average.
- Italian primary healthcare makes the strong emphasis on the effective care coordination and guarantees.



- The population is ageing dashingly (22% of total population are older than 65 years) and it is the oldest in Europe.
- Disparities in the use of specialist care, diagnostic services and basic medical tests are largely connected to higher health literacy of the well-off (affecting the utilisation rates of preventive services and screening), and low-quality services and long waiting lists.
- Provision of the long-term care in Italy remains to be poor if to compare with other developed countries.
- There is a relatively high out-of-pocket spending in Italy - 23% of total costs.
- There is a low amount of disability-free years that Italian elders can live.
- Cardiovascular diseases and cancer are the main reasons for the deaths for Italian people.
- There was a significant increase in the deaths from Alzheimer's disease and other forms of dementia since 200 year.

Recommendations for Italy

- **Stop focusing on “sick care.”** Health care leaders must shift the nation’s “sick care” approach to care that is preventive and comprehensive.
- **Reduce socioeconomic inequality and disparities in health outcomes.** Despite full coverage for basic medical services, 7% of Italians reported some unmet needs for medical care in 2015 either for financial reasons, geographic reasons (having to travel too far) or waiting times. This is a higher proportion than the EU average (less than 4%) and has grown in recent years. Most of the unmet medical needs are attributable to care being too expensive, with waiting lists and geographic barriers accounting for a relatively small share.
- **Adoption of P4 medicine concept in healthcare.** Preventive, precision, personalised and participatory care will increase efficiency of healthcare system in terms of rise of health-adjusted life expectancy. P4 medicine will use the power of systems medicine and big data to bring to bring all individuals into their 90s with full mental and physical function.
- **Utilizing AI opportunities for preventive medicine and precision health.** Translating the tremendous growth in data into clinical insights falls into the hands of AI (artificial intelligence)/ML (machine learning) platforms. The rapid growth in investment in AI and cloud computing are beginning to create the foundations for the precision health market of the future. But apart from advanced research it is important to provide effective, low-cost treatments that work, triggering unnecessary treatments and higher costs down the line.
- **Focus on health status of elderly.** The government should initiate strategy focused on health status of elderly and ageing population. Provision of increasingly complex mechanical and electronic devices for the treatment and rehabilitation of older persons, development of socialization activities for elderly to handle stress better, social activities may lead to important increases in cardiovascular health and an improved immune system.



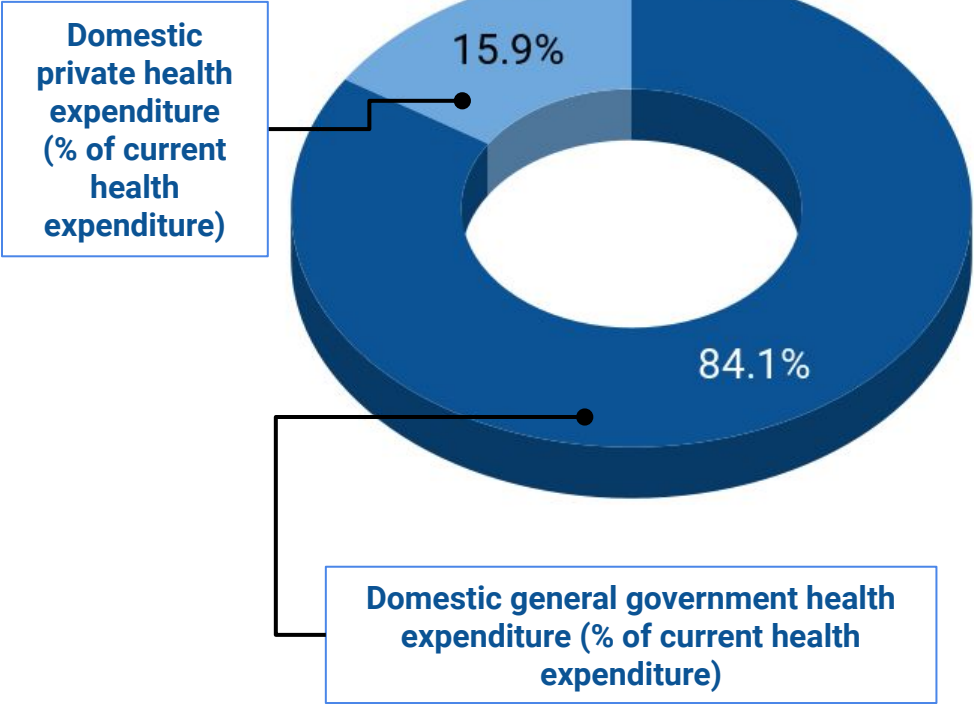
HALE	Both Sexes HALE, 2019	74.1 years
	HALE/Life Expectancy Difference, 2019	10.11
Economy	GDP per Capita, Current Prices, 2019	40.25 thousand (\$)
	Annual GDP Growth, 2019	0.65 %
Healthcare	Current Health Expenditure per Capita (2018)	4.27 thousand (\$)
	Public Health Care Expenditure, 2019	10.95 % of GDP
Retirement	Age Dependency Ratio, 2019	68.28
	Population over 65, 2019	28 %
	Number of WHO Age Friendly Cities and Communities	24
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.96
	Annual Cigarette Consumption (Units per Capita), 2019	1583
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	4.3 % of adults

Longevity-Related Indices

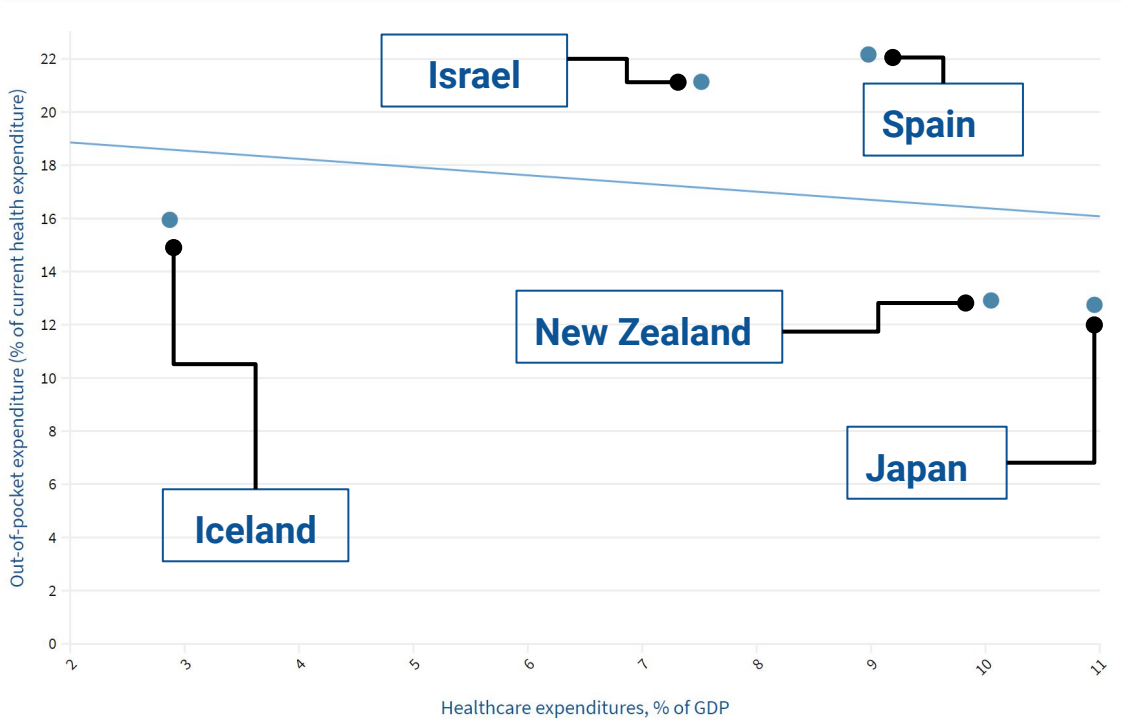


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.92
- E-Government Development Index, 2019:
0.9
- Corruption Perceptions Index, 2019:
74
- Global Gender Gap Index, 2019:
0.66
- Democracy Index, 2019:
7.99

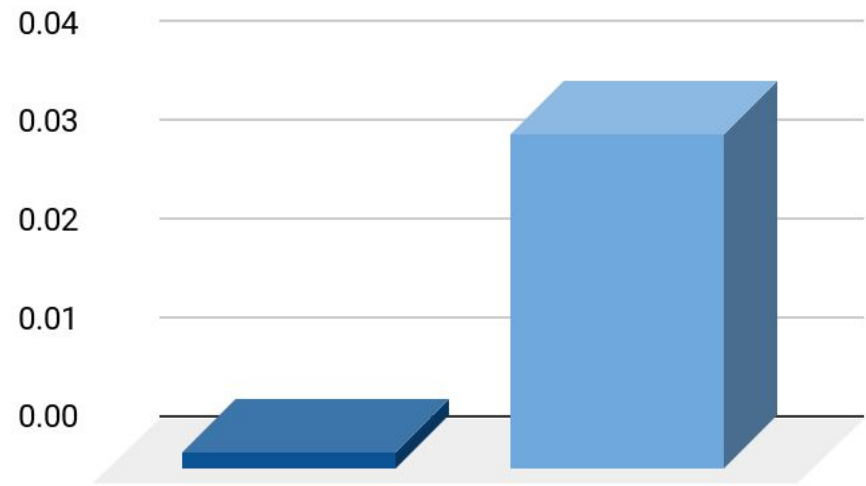
Current Healthcare Expenditure



Countries with high HALE and LE and medium GAP



Compound annual growth rate



Japan is facing a rising burden of chronic disease, and a rising number of frail and elderly persons. In addition, Japan faces some relatively unique public health risks, notably a significant exposure to natural hazards such as earthquakes, floods, typhoons, and tsunamis. So, improvement of public health emergencies systems are in priority.

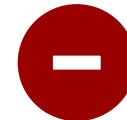


SWOT Analysis of Healthcare in Japan



STRENGTHS

- Japan has the highest life expectancy among the OECD countries. [Life expectancy at birth was 83.9 years in 2015.](#)
- Japan has the lowest obesity rates and low alcohol consumption if to compare with other OECD countries.
- Cancer survival remains to stay at good levels.
- Healthy life expectancy at birth, the average number of years that a newborn can expect to live in full health, rose from 70.4 years in 1990 to 73.9 years for both sexes in 2015.
- The burden of communicable diseases has decreased substantially over the past five decades.



WEAKNESSES

- [Japan has the highest dementia prevalence among the OECD countries at 2.7% of population in 2017.](#)
- There are high occupancy rates, especially, among elders for the long-term care.
- The suicide level is significantly above the EU average despite the significant efforts of the government putted to reduce the level starting from 2007.
- Like many other high-income countries, non-communicable diseases (NCDs) are now the leading cause of mortality and morbidity in Japan.



OPPORTUNITIES

- Japanese institutions are fully involved in the process of the of building of communities that can help people with chronic conditions and their families to withstand the illnesses.
- Japanese government have strong aims to improve the healthcare coordination for primary and long-term care sectors to address the challenge of the ageing population.
- Utilising AI opportunities in precision medicine, preventive health, drug discovery.
- There is an increasing demand on the healthcare services.



THREATS

- Ageing of the population is a rising issue for healthcare and pension systems stability.
- [There is a high level of smoking among men that is 30%.](#)
- Cancer causes 28.7% of deaths according to the data of 2015 and remains to be the main reason for mortality in Japan.
- Incidents of deaths from tuberculosis are slightly higher than the OECD average.
- There is a heavys salt consumption in Japan.
- Low back pain, headache disorders and diabetes are main reasons for DALY.

Analysis of Strengths and Weaknesses of Health Care System in Japan



- Health spending averages \$4 519 per person (adjusted for local costs), slightly higher than the OECD average.
- Alcohol consumption and transport accident deaths have decreased substantially over the past 50 years.
- Mortality from the cardiovascular diseases is among the lowest in the OECD countries.
- In the past five decades, Japan has achieved a large number of health successes. These include the full implementation of universal insurance coverage, cultivating the world's highest healthy life expectancy, and the control and even eradication of common infectious diseases.
- [Personal healthcare access and quality index is 94.1.](#)
- The healthcare system in Japan is comprehensive and consists of two levels: public and private that offer the universal coverage for medical services.



- Hospital admissions for diabetes are higher than the OECD average.
- [20% of population consumes 69% of alcohol and it is third highest concentration in OECD countries.](#)
- There are low screening rates for the breast cancer and mammography.
- [Mortality from acute myocardial infarction is 50% higher than the OECD average.](#)
- Negative population growth, an ageing population, low fertility, a shrinking economy, increasing unemployment, and an increasing NCD-related disease burden are considered to be major issues on the way to healthy Longevity improvements.
- Although the overall life expectancy and healthy life expectancy have been increasing in Japan, there are increasing disparities among prefectures, demonstrating a need for region-specific health policies.
- Japan has made limited progress in reducing tobacco consumption over the past few decades, and it remains a leading cause of premature death.

Recommendations for Japan

- **Introduce long term care insurance system.** Japan is facing super ageing problem; the number of elderly population is expected to grow from the current 16 million to 20 million by 2020, and the working population will be expected to decline from 109 million to 100 million during the same period. This demographic change will require drastic reform of healthcare and long-term care systems. Unless tackled, the rapid increase in aging population can impose a large burden on the health care system including universal health insurance system.
- **Support healthy and disease-free lifestyles with emphasis on health status of elderly.** Promoting healthy, disease-free aging must be a central priority for Japan, and attention must also be paid to the potential for rising rates of risky health behaviour, alcohol consumption and even rates of obesity.
- **Development of health information systems for better monitoring and evaluation.** A strong health information system has the potential to be the backbone for monitoring and evaluating different aspects of health check-ups and cancer screening and further developing its secondary prevention policies.
- **Shift from “sick care” to preventive medicine.** The government should focus on reduction of diseases burden through provision of initiatives aiming to deliver more years in good health and decrease the gap between life expectancy and health-adjusted life expectancy. The goal of healthcare policy is to build a sustainable health care system that delivers better health outcomes through care that is responsive and equitable to each member of the society and that contributes to prosperity in Japan and the world.
- **Utilise AI opportunities for precision health for cost-efficiency and improved health outcomes.** Japan should consider using innovative approaches taken in other countries in context of prevention. For example, within the national cancer screening programmes, a use of selected self-sampling tools for cancer screening were found effective in reaching out to non-participants for cervical and colorectal cancer.



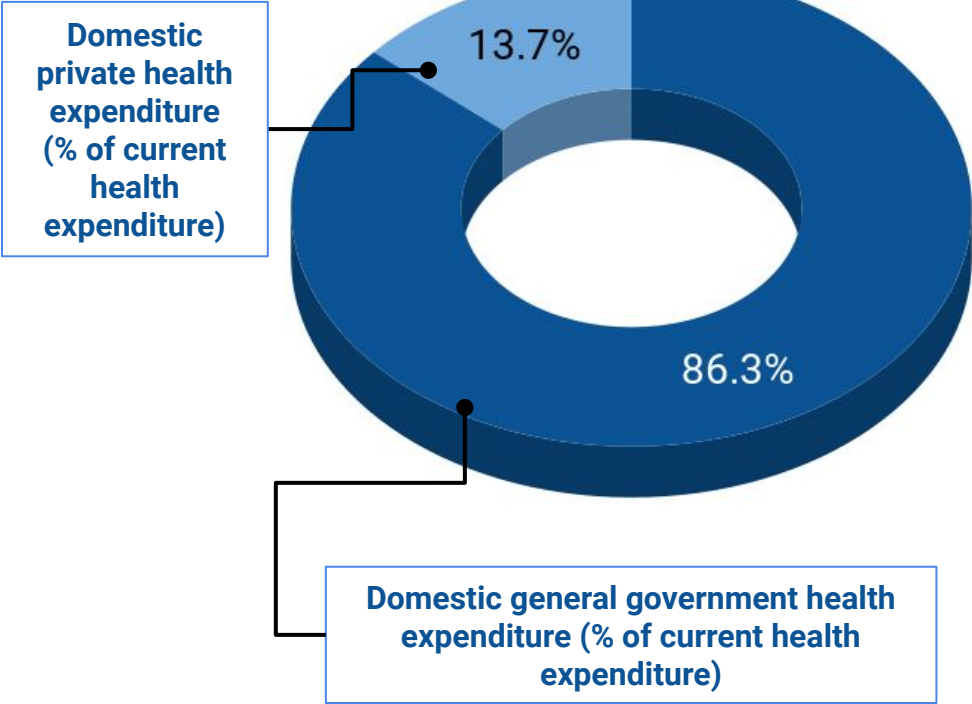
HALE	Both Sexes HALE, 2019	71.6 years
	HALE/Life Expectancy Difference, 2019	10.7
Economy	GDP per Capita, Current Prices, 2019	114.69 thousand (\$)
	Annual GDP Growth, 2019	2.3 %
Healthcare	Current Health Expenditure per Capita (2018)	6.23 thousand (\$)
	Public Health Care Expenditure, 2019	5.29 % of GDP
Retirement	Age Dependency Ratio, 2019	42.82
	Population over 65, 2019	14.27 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	12.94
	Annual Cigarette Consumption (Units per Capita), 2019	6330
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	22.6 % of adults

Longevity-Related Indices

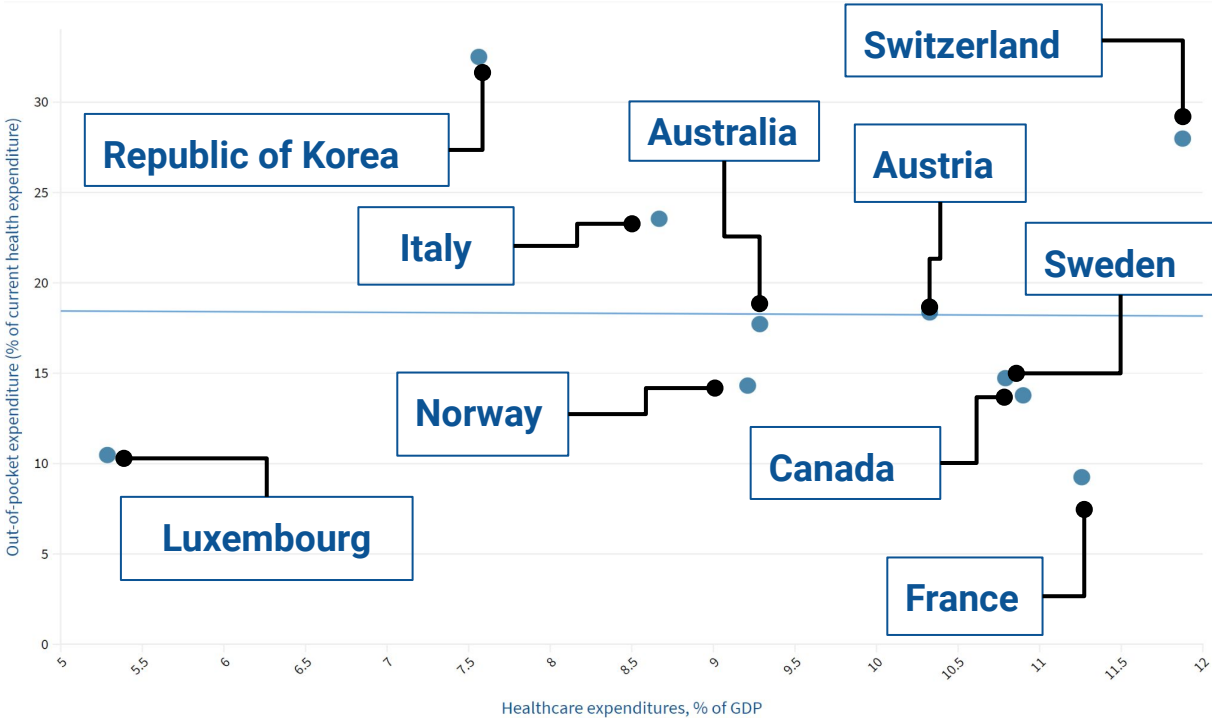


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.92
- E-Government Development Index, 2019:
0.83
- Corruption Perceptions Index, 2019:
80
- Global Gender Gap Index, 2019:
0.73
- Democracy Index, 2019:
8.81

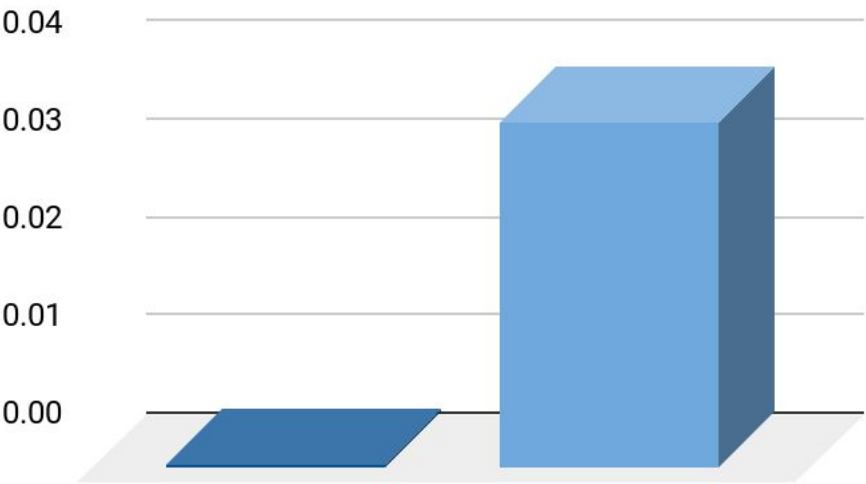
Current Healthcare Expenditure



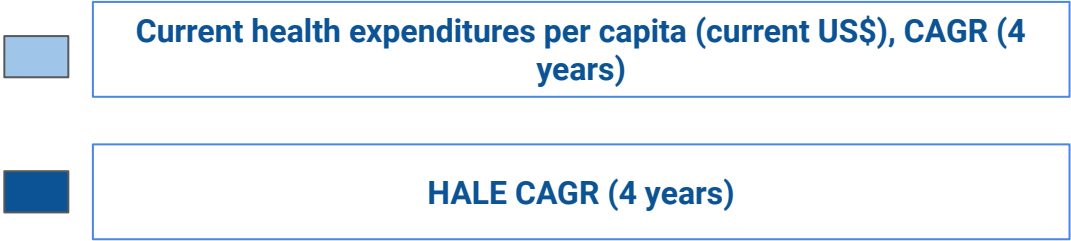
Countries with Low HALE and LE and High GAP



Compound annual growth rate



A set of health strategies, targeted health awareness promotion and prevention activities aims to address death risks and reduce level of chronic diseases.



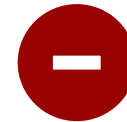
SWOT Analysis of Healthcare in Luxembourg

146



STRENGTHS

- Healthcare system in Luxembourg is comprehensive and based on compulsory social insurance.
- 95.2% of citizens were covered by the social insurance in, 2019.
- The primary care is comprehensive and relatively good coordinated.
- Amenable mortality is among the best in EU and is the evidence of the healthcare efficiency in Luxembourg.
- There is a good quality of healthcare services and products and high level of self-reported health.
- There was a good rate for vaccinations for children.



WEAKNESSES

- Number of elders that receive long-term care at home is lower than the OECD average.
- Fruit and vegetable consumption is below the EU average.
- Healthcare in Luxembourg is the most expensive in Europe.
- The healthcare providers are critically dependent on foreign nurses and foreign-trained doctors.
- There is a low number of physicians in country.
- The primary care governance is weak.
- 23% of adults in Luxembourg are obese.
- Heavy episodic drinking is higher than in Europe.



OPPORTUNITIES

- Special Acts are accepted to improve the living conditions for people with dementia and diagnose this disease in early stages to reduce the mortality rate caused by it.
- Reducing cancer mortality through early detection and greater prevention.
- Improve hospital efficiency.
- Generate additional databases on health through voluntary patients' contributions.
- The health system's cost-effectiveness could be improved, particularly with greater use of generics.



THREATS

- Shifting demographics, resulting in ageing population.
- Increase in public health spending and changes in finance and reimbursement policies.
- There is a great amount of prescriptions of antibiotics in Luxembourg. This country has the 6th highest antibiotic consumption in Europe that can lead to rising bacterial resistance.
- There are concerns over growing healthcare costs.
- Growing mortality from pancreatic cancer and diabetes give cause for concern

Analysis of Strengths and Weaknesses of Health Care System in Luxembourg



- Life expectancy is high and was 82.4 years in 2015, and this indicator is above the EU average.
- Free choice of providers by the patient and direct access to specialists. Global supervision and planning of hospital and pharmaceutical sectors
- 82% of spending on health is publicly funded and it is among the highest spending per capita in the world..
- Per capita health care spending in Luxembourg is the highest among EU countries. This allows for a very generous benefits package with low cost-sharing and high quality of health care services.
- The population benefits from good financial and geographic access to services, which is reflected in the low level of unmet needs and out-of-pocket expenditure



- Mortality due to the diabetes continues to increase.
- There was an increase in the smoking rates through the past decades and led to the rises in mortality rates for lung cancer among women.
- Alcohol is the second leading cause for the road accidents caused 30% of fatalities in 2015.
- Excessive alcohol consumption among adults and young adults remains a concern. 15% of adults in Luxemburg were smoking tobacco every day according to the data of 2015 year.
- There is room for making prevention and treatment of diseases such as diabetes more effective.
- There are difficulties in attracting and retaining skilled workforces.
- Availability of health care services seems to be very good, although many complex treatments and diagnostic procedures are routinely provided in neighbouring countries because the size of Luxembourg's population makes it inefficient to offer services domestically.

Recommendations for Luxembourg

- **Support healthy and disease-free lifestyles with emphasis on health status of elderly and health awareness.** Behavioural risk factors – smoking, drinking and obesity – are important challenges for the health system and reveal substantial inequalities according to education and income status. A comprehensive set of health strategies, targeted health promotion and prevention activities should to address these risks.
- **Facilitate government initiatives related to behavioral risk factors caused by income and education inequality:** improve health and medical care that more actively promotes good health, promote good eating habits and safe food to decrease obesity and overweight, reduced the use of tobacco and alcohol, eliminate avoidable health status gaps between population groups within one generation.
- **International collaboration on ageing.** Strategic partnership between countries would provide access to world's most successful practices for the maintenance the optimal state of health and best forms of AgeTech, WealthTech and other technologies, products, services and social policies.
- **Utilising advanced technologies and implementation social policies to improve efficiency of healthcare.** Setting up appropriate information systems will be key in this effort. AI will enable healthcare professionals to understand diseases faster and make better clinical decisions, and it will help researchers innovate quickly by failing fast en route.
- **Provide incentives for development of patient-centered treatments.** Strengthen prevention and health promotion across all areas of life including day-care centres, schools and nursing homes, strengthen workplace health promotion and better integrate it with occupational safety and health.
- **Improve engagement of high-qualified staff in healthcare.** The government should provide financial incentives for medical staff in public sector and funding to state healthcare services.

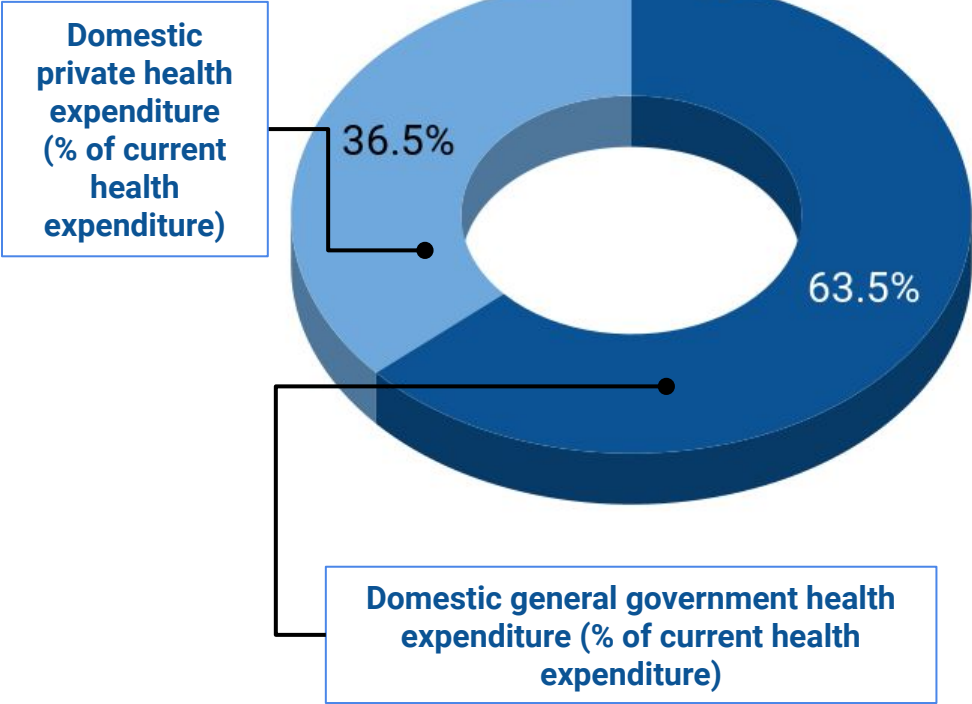


HALE	Both Sexes HALE, 2019	71.5 years
	HALE/Life Expectancy Difference, 2019	10.95
Economy	GDP per Capita, Current Prices, 2019	29.74 thousand (\$)
	Annual GDP Growth, 2019	4.92 %
Healthcare	Current Health Expenditure per Capita (2018)	2.75 thousand (\$)
	Public Health Care Expenditure, 2019	5.37 % of GDP
Retirement	Age Dependency Ratio, 2019	54.19
	Population over 65, 2019	20.82 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.99
	Annual Cigarette Consumption (Units per Capita), 2019	1527
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	28.9 % of adults

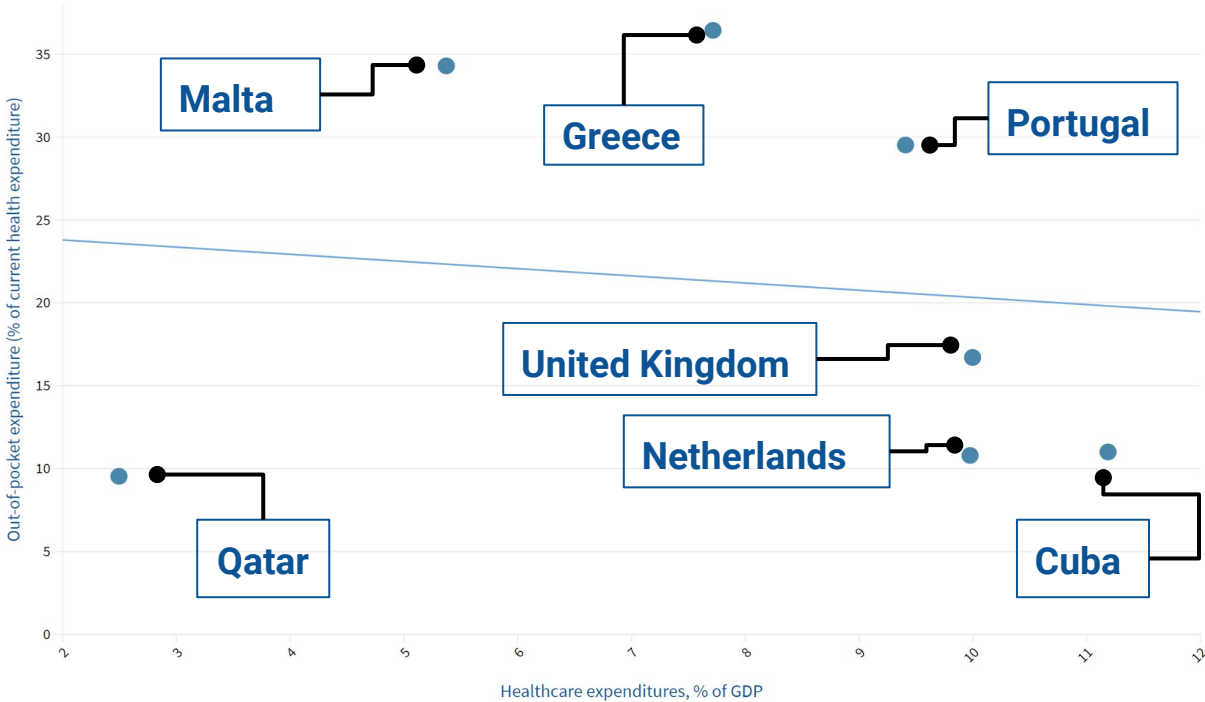
Longevity-Related Indices

- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.9
- E-Government Development Index, 2019:
0.85
- Corruption Perceptions Index, 2019:
53
- Global Gender Gap Index, 2019:
0.7
- Democracy Index, 2019:
7.95

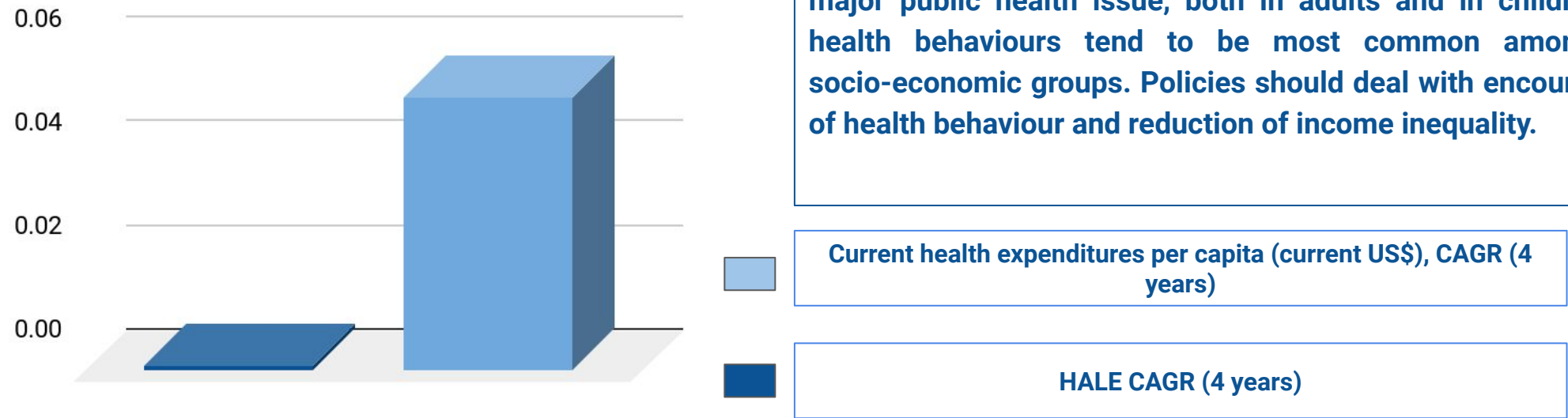
Current Healthcare Expenditure



Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate

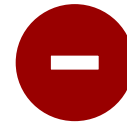


Malta has the highest obesity rate in the EU, and this remains the major public health issue, both in adults and in children. Poor health behaviours tend to be most common among lower socio-economic groups. Policies should deal with encouragement of health behaviour and reduction of income inequality.



STRENGTHS

- Life expectancy at birth is 81.9 years which is higher EU average.
- There was a significant reduction in premature deaths from cardiovascular diseases.
- Amenable mortality in Malta has fallen rapidly for the few past decades.
- There is a good access to the healthcare in Malta with low number of unmet needs.
- [Maltese people enjoy 90% of their lives in good health.](#)
- Malta has successfully tackled long waiting times for surgical interventions and diagnostics.



WEAKNESSES

- Health expenditure is lower than EU average and reaches 8.4% of GDP.
- [There is a high level of out-of-pocket that is about 30% of total expenditures.](#)
- [There is at least a three-year gap in life expectancy between people with lower and higher education qualifications.](#)
- In 2015 Malta recorded the third highest rate of newly reported HIV cases in the EU/EEA.
- Health inequality is caused by socioeconomic disparities in Malta: a third of those in the lowest income quintile are obese compared to only one fifth in the highest.



OPPORTUNITIES

- There is a great room for the capacity building and increasing the number of doctors, nurses and facilities.
- Develop government-led plan and specific programmes that aim to decrease probability of premature deaths with particular focus on behavioral risk factors.
- Expand acute hospital capacity and geriatric care.
- Well-composed primary care based on the reimbursement model including transparency, quality control and equal distribution of the resources among the facilities.



THREATS

- [20% of adults smoked tobacco every day.](#)
- Increasing alcohol consumption among adults.
- [Obesity rates are highest in the EU as the quarter of the adult population and 30% of adolescents are obese.](#)
- Shifting demographics, resulting in ageing population.
- Increase in public health spending and changes in finance and reimbursement policies.
- Death rates from the ischemic heart disease are above the EU average.
- [27% of deaths in Malta are caused by cancer.](#)

Analysis of Strengths and Weaknesses of Health Care System in Malta



- Maltese men and women aged 65 and over can expect to live 13.4 years and 14.0 years respectively of their remaining life free of disability, the second highest among EU countries.
- There was a significant decline in mortality rates from treatable cancers and respiratory diseases.
- More than 70% of people in Malta report being in good health.
- Healthcare system in Malta is comprehensive and characterised by predominantly public providers in the hospital sector and a pluralism of providers in the primary care and ambulatory care specialist sectors.
- Waiting lists for hospital interventions have been successfully reduced by increasing the number of procedures performed in public hospitals.
- Essential medicines are free of charge for low income households



- Ischemic heart disease, musculoskeletal disorders and diabetes are the main reasons for the disability-adjusted years.
- There was an increase of the cases of Alzheimer diseases since 2000 due to the lack of the effective treatments.
- More than one in five people in Malta lives with hypertension, one in twelve lives with diabetes, and one in seventeen lives with asthma.
- There are low level of physical activities among adults and 15-year-olds in Malta.
- Malta records relatively high levels of deaths within 30 days of admission to hospital for acute myocardial infarction.
- Malta faces important fiscal challenges, in part due to the expected costs of caring for its ageing population and associated increases in chronic conditions.

Recommendations for Malta

- **Enhance eHealth infrastructure.** To achieve higher efficiency of healthcare system and better health outcomes in context of ageing and life expectancy improvements the government should modernise health centres by providing the latest technological equipment. The government also should give particular attention to development of eHealth systems, include the creation of electronic patient records in primary health care, e-prescription services and patient registries.
- **Shift from “sick care” to preventive medicine.** Enhancement of primary care through incorporation of advanced preventive medicine is an important step on the way to Healthy Longevity. Strengthening public primary and community care would also result in fewer self-referrals to hospital emergency departments for minor ailments and conditions where treatment costs are much higher.
- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioral factors such as insufficient physical ability, overweight, alcohol abuse, smoking. This will stimulate policy initiatives that supplement income and improve educational opportunities, housing prospects, and social mobility as income is strongly associated with morbidity and mortality.
- **Introduce long term care insurance system.** Malta faces important fiscal challenges, in part due to the expected costs of caring for its ageing population and associated increases in chronic conditions. Current demographic trends pose threats on fiscal sustainability. The government should provide incentives for longevity financial industry development to minimise future risks exposure.
- **Enhance physical healthcare infrastructure and extend its network.** Increased immigration from workers and pensioners, tourists using the health system and changing population risk behaviours stretch healthcare system capacity.

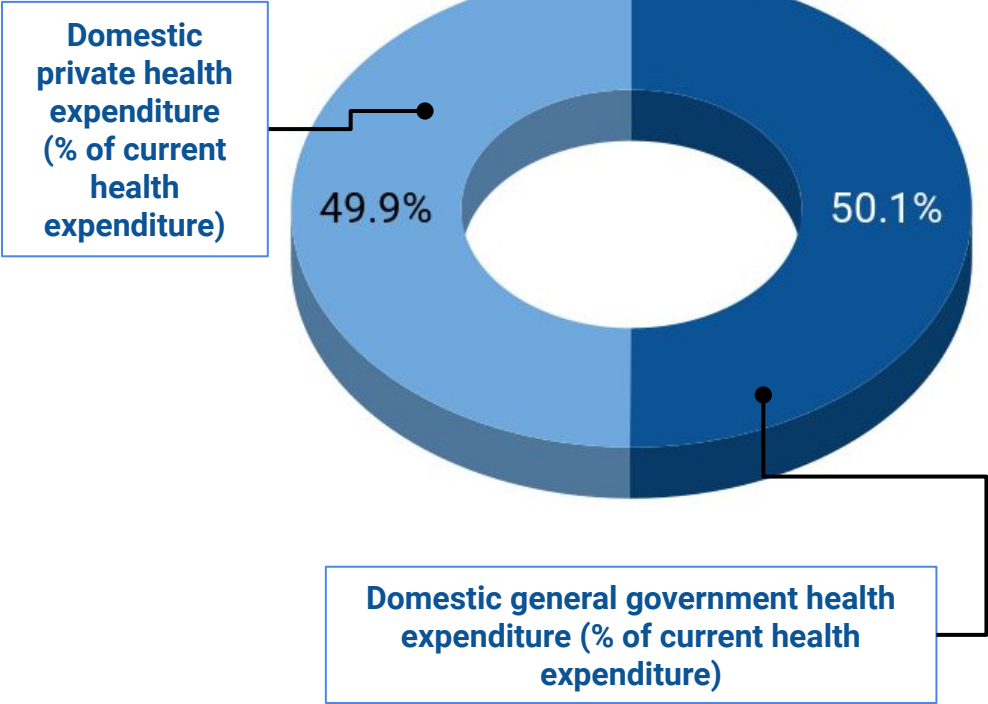
HALE	Both Sexes HALE, 2019	65.8 years
	HALE/Life Expectancy Difference, 2019	9.19
Economy	GDP per Capita, Current Prices, 2019	9.95 thousand (\$)
	Annual GDP Growth, 2019	-0.05 %
Healthcare	Current Health Expenditure per Capita (2018)	0.52 thousand (\$)
	Public Health Care Expenditure, 2019	8.96 % of GDP
Retirement	Age Dependency Ratio, 2019	50.61
	Population over 65, 2019	7.42 %
	Number of WHO Age Friendly Cities and Communities	2
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	5
	Annual Cigarette Consumption (Units per Capita), 2019	327
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	28.9 % of adults

Longevity-Related Indices

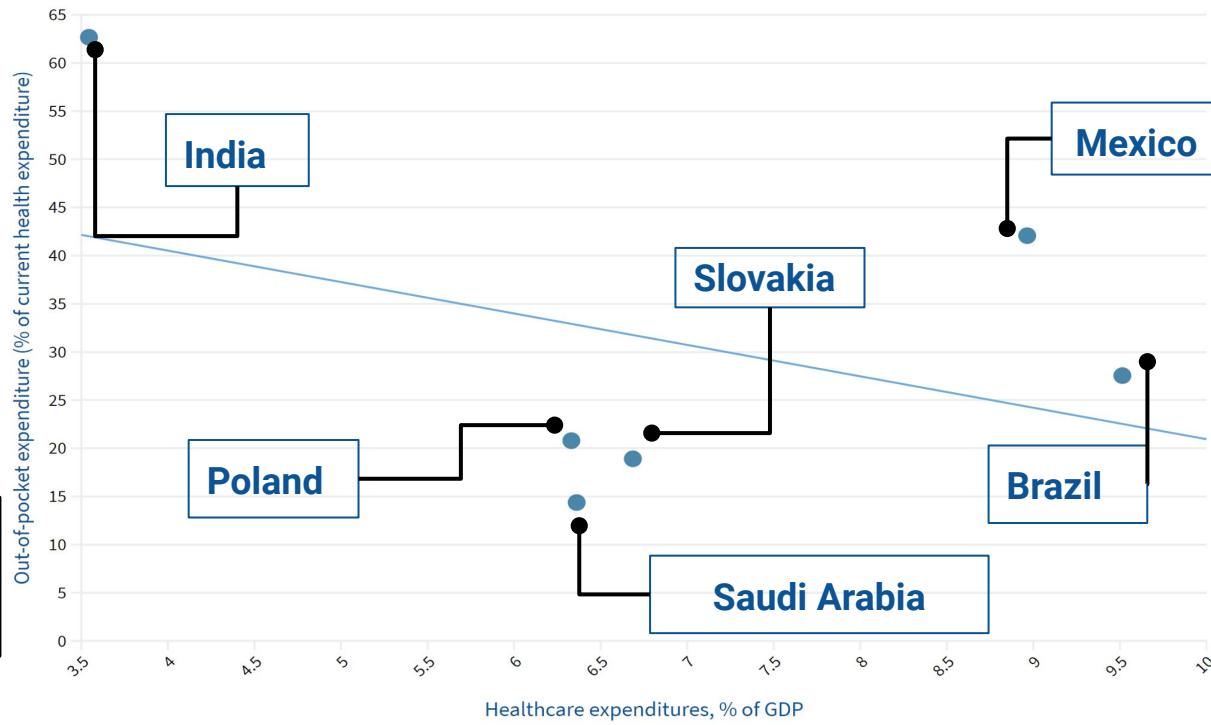


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.78
- E-Government Development Index, 2019:
0.73
- Corruption Perceptions Index, 2019:
31
- Global Gender Gap Index, 2019:
0.76
- Democracy Index, 2019:
6.09

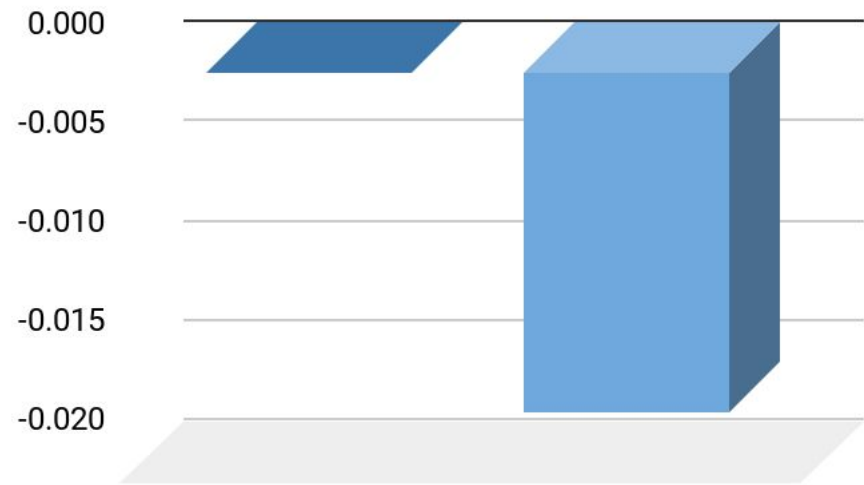
Current Healthcare Expenditure



Countries with Low HALE and LE and Medium GAP



Compound annual growth rate



In Mexico the main challenge is to reduce inequality in healthcare and ensure that an important proportion of the population gain access to wide health coverage, including, access, quality, and costs. Mexico, due to its high prevalence of obesity, faces serious public health consequences, especially cardiovascular diseases and diabetes, that should also be addressed.

Current health expenditures per capita (current US\$), CAGR (4 years)

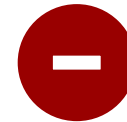
HALE CAGR (4 years)

SWOT Analysis of Healthcare in Mexico



STRENGTHS

- Life expectancy has increased substantially since 1970.
- The burden of behavioral risk factors, including smoking, alcohol consumption, is lower compared to OECD average.
- Mexico shows good performance in reduction of admissions caused by treated conditions such as asthma and COPD.
- Significant reduction in out-of-pocket expenditure with introduction of extended publicly-funded health insurance.
- Mexican population is young, with around nine people of working age for every adult aged over 65.



WEAKNESSES

- Life expectancy in Mexico is one of the lowest in the OECD. [It was just 75 years in 2015.](#)
- The access to the healthcare in Mexico is lower than the OECD average.
- Consumption of fruit is also among the lowest in the OECD.
- Personal healthcare access and quality index stands for 66.3 that is the evidence for low quality of services.
- A particularly worrying concern is Mexico's high rates of overweight and obesity.
- 15.9% of adults have diabetes, more than double the OECD average of 6.9%.



OPPORTUNITIES

- Successful reforms give the opportunity to 50 millions Mexican people to receive access to the healthcare and revealed them from the risk of the unaffordable health care bills.
- Mexican government has launched several programmes to effectively tackle increasing obesity that include taxation on sugar-sweetened beverages, nutritional labelling on food products, and better regulation of food advertising for children.
- Utilize AI opportunities in healthcare improve the delivery of the healthcare services..



THREATS

- There are high mortality rates from acute myocardial infarction and they stand for 28% of hospital admissions that is significantly higher than in the OECD.
- Health and prosperity continue to be unequally distributed, with people in southern states, women, children and indigenous groups leading notably disadvantaged lives.
- Despite major redistributive reforms, poverty remains endemic.
- High fasting plasma glucose, high body mass index and dietary risks are the main reasons for the disability years.
- Out-of-pocket spending in Mexico constitutes 45% of health system revenue and 4.0% of household expenditure.

Analysis of Strengths and Weaknesses of Health Care System in Mexico



- The share of the population exposed to unaffordable or impoverishing health care costs has fallen from 3.3% to 0.8% of the population in the past decade.
- Public spending on health care increased from 2.4% to 3.2% of GDP between 2003 and 2013.
- The private sector of Mexican healthcare system offers a wide range of services with an outcome-related approach though it is very expensive.
- There is a steady decline in the mortality rates in Mexico starting from 27 deaths per 1000 inhabitants in 1930 to 4.9 deaths per 1000 inhabitants in 2008.



- Health spending is four times lower than the OECD average and is 1080 per capita that is extremely bad for Mexican healthcare.
- Mexico has 2.4 doctors per 1000 population relative to 3.4 on average across the OECD, and less than one-third the number of nurses and hospital beds per 1000 population than the OECD average.
- Mexican health care is provided through a cluster of disconnected sub-systems. Each sub-system offers different levels of care, at different prices, with different outcomes. Individuals effectively have neither choice of insurance plan nor of provider network, since affiliation is determined by their job.
- There is high financial burden on households in Mexico because of lack of public spending on health and out-of-pocket spending is 41%.
- Mexican population is now ageing more rapidly than any other OECD country, there is little reason to hope that these adverse trends can be reversed without a substantial strengthening of the health system.
- Health and prosperity continue to be unequally distributed, with people in southern states, women, children and indigenous groups leading notably disadvantaged lives.

Recommendations for Mexico

- **Focus on care delivery and particular people needs.** Resourcing is unequal across sub-systems, out-of-pocket payments remain high and deep-rooted inefficiencies persist. Poor performance of healthcare system and ineffective allocation of healthcare resources underlines the urgency of reforms. The government should provide incentives to invest in prevention services, making healthcare good for patients and for taxpayers.
- **Utilise AI for collection and analysis of healthcare system information.** Voluntary data contributions from patients via mobile phone applications or from wearable devices can be used to help clarify relationships between diseases on the one hand, and environmental, behavioral, and genetic factors on the other.
- **Strengthen primary and preventive care.** A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. The government should devise comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy.
- **Increase productivity and quality of healthcare workforce.** The government should provide initiative concerning smart management of healthcare workforce. Hiring and working conditions of health personnel should be more flexible. Remuneration mechanisms for physicians should reduce their dependence.
- **Provide more accessible and comprehensive healthcare coverage.** Accessible healthcare treatment may help to meet patients needs. Diversified portfolio of basic healthcare services with great emphasis on prevention may help to mitigate financial burden and improve health status.
- **Tackle rising “slow-motion” disaster of non-communicable diseases (NCDs).** Management of NCDs includes detecting, screening and treating these diseases, and providing access to palliative care for people in need. High impact essential NCD interventions can be delivered through a primary health care approach to strengthen early detection and timely treatment.



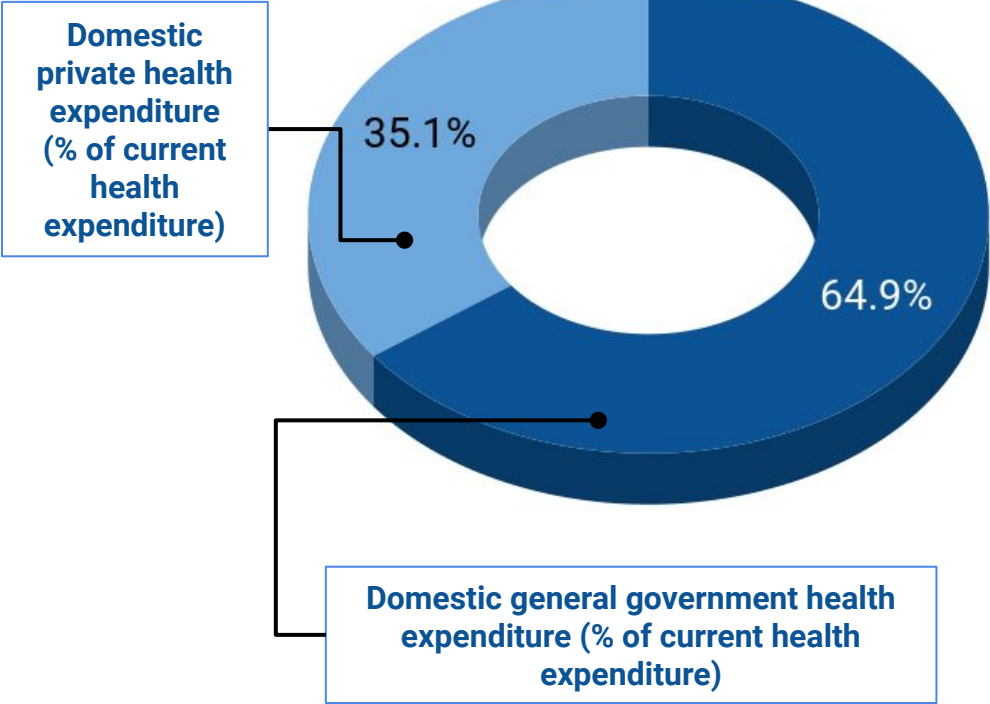
HALE	Both Sexes HALE, 2019	71.44 years
	HALE/Life Expectancy Difference, 2019	10.41
Economy	GDP per Capita, Current Prices, 2019	52.3 thousand (\$)
	Annual GDP Growth, 2019	1.68 %
Healthcare	Current Health Expenditure per Capita (2018)	5.31 thousand (\$)
	Public Health Care Expenditure, 2019	9.97 % of GDP
Retirement	Age Dependency Ratio, 2019	55.01
	Population over 65, 2019	19.61 %
	Number of WHO Age Friendly Cities and Communities	2
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.61
	Annual Cigarette Consumption (Units per Capita), 2019	1459
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	20.4 % of adults

Longevity-Related Indices

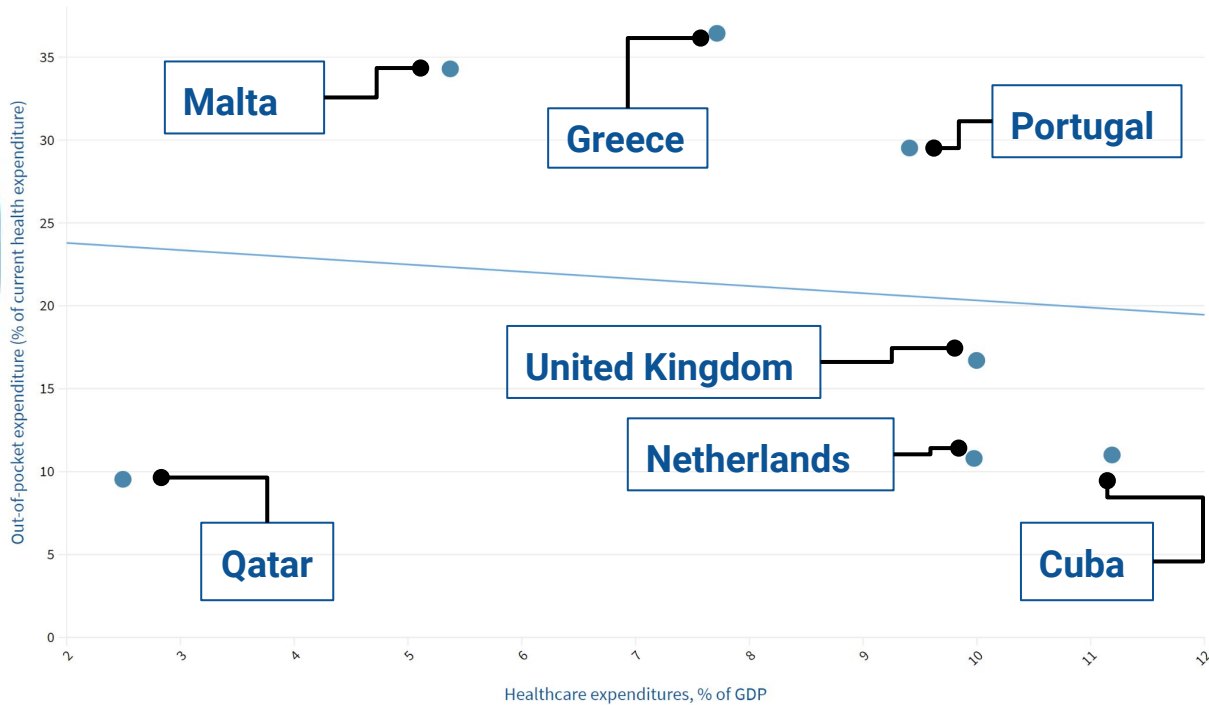


- The Healthcare Access and Quality Index,, 2019:
90
- Human Development Index, 2019:
0.94
- E-Government Development Index, 2019:
0.92
- Corruption Perceptions Index, 2019:
82
- Global Gender Gap Index, 2019:
0.76
- Democracy Index, 2019:
9.01

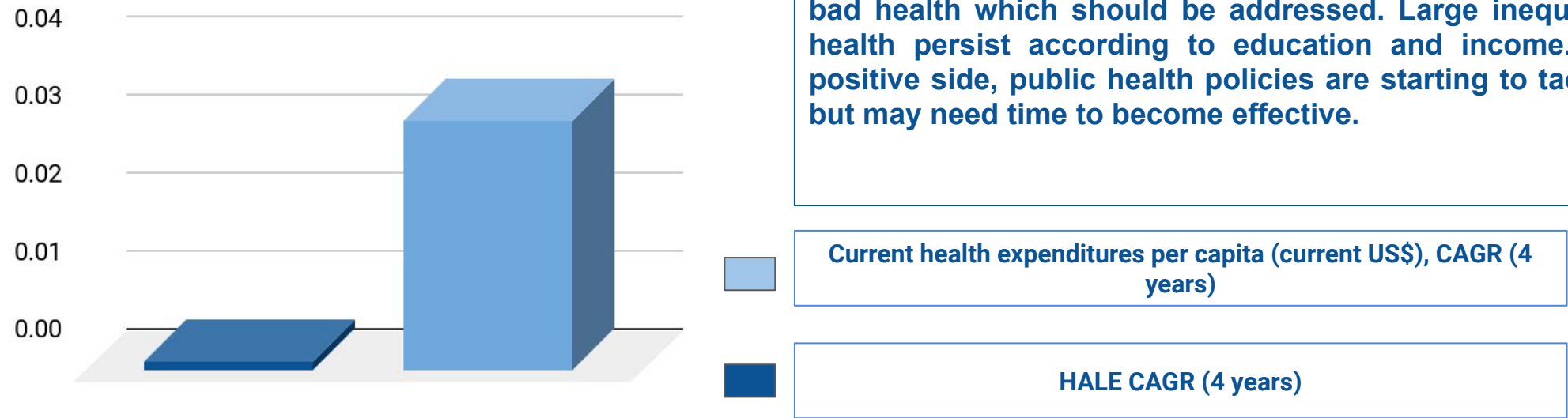
Current Healthcare Expenditure



Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate

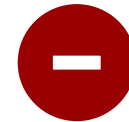


Smoking, drinking and obesity are main behavioral factors of bad health which should be addressed. Large inequalities in health persist according to education and income. On the positive side, public health policies are starting to tackle this, but may need time to become effective.



STRENGTHS

- There was a considerable decrease in the mortality rate from cardiovascular diseases for the past years.
- People enjoy good access to a dense network of effective primary and secondary care providers and generous long-term care.
- Amenable mortality in the Netherlands is very low, indicating (together with other relevant indicators) that the health care system is effective.
- Access to healthcare is good as number of unmet needs is low



WEAKNESSES

- General practitioners may not be supported sufficiently to identify mental disorders and treat patients with less severe mental health problems.
- Health system is one of the most expensive in the EU.
- More than a quarter of overall diseases burden is linked to is linked to behavioural risk factors – including smoking, poor diet, low physical activity, and alcohol use.
- Health inequality persist according to income status and education.
- There is the disagreement on proper role of market mechanisms in regulation of the healthcare system.



OPPORTUNITIES

- There is little room to improve cancer care to boost the survival.
- Comprehensive government-led policies policy addressing mental health promotion and prevention.
- Implement policies to ease the costs of population ageing.
- Generating of additional funds to finance advanced technologies and approaches in health.
- Increase the availability of intermediate care, to improve hospital transitions.



THREATS

- High healthcare spending in Netherlands generates additional pressure on the budget.
- Obesity rates are on the rise as there were only 11% of obese adults in 2011 compared to 13% of obese adults in 2015 with the increase by 20%.
- Illicit stimulants are commonly used without now sign of stabilisation.
- 1 in 6 people in Netherlands live with hypertension, 1 in 18 with asthma and 1 in 12 with chronic depression.
- Ageing of the population is a rising issue for healthcare and pension systems stability.

Analysis of Strengths and Weaknesses of Health Care System in Netherlands



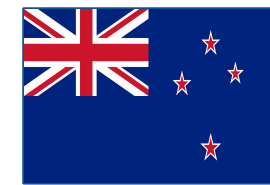
- Over 80% of overall healthcare spending are publicly funded and health spending per capita is also higher than the EU average.
- Amenable mortality in Netherlands is very low that is the evidence for the effectiveness of the medical system in treating life-threatening conditions.
- Primary care is strong. Diversified public healthcare services portfolio include services such as health promotion, screening and vaccination, and youth health care.
- The number of acute beds and outpatient clinics continue to grow steadily.
- Healthcare system is characterized with good geographical accessibility, developed both eHealth and physical infrastructure.



- There is a decline in healthy years of life for the additional time that older people have to live: only 57% of additionally expected years to have than can spend without disability for men and 45% for women.
- There is a significant incidents of deaths for elders from cancer and CDVs that could be avoided through the improvements of treatments and preventive care.
- There are certain disparities for the people from different income groups and with different level of education. Only 2% of representatives from low income group report to have poor health while 10% of low income quintile report to have weak health.
- 26% of burden of diseases are linked to the behaviour risk factors such as smoking, bad diet, low physical activity and drinking.
- The shortage of nurses is emerging that becomes a great concern for the healthcare system in Netherlands.
- There are growing concerns of long-term care quality and its sustainability in terms of rising costs and large focus on direct treatment of disabilities.

Recommendations for Netherlands

- **Bridge the gap between health professionals and data scientist by utilising AI for Healthy Longevity.** AI offers a range of effective and innovative solutions to medical problems, revolutionizing medical domain. Machine learning makes diagnosing more efficient. It processes information with less time and provide generated data with the right context.
- **Reduce socioeconomic inequalities in health at individual and population level.** Behavioural risk factors tend to be more common among people at a disadvantage because of a lesser education or lower income.
- **Address rising burden of non-communicable disease.** Lifestyle risk behaviours are responsible for a large proportion of disease burden and premature mortality worldwide. Risk behaviours tend to cluster in populations. Non-communicable disease are caused by the set of emerging risk factors (sleep, sitting time, and social participation) and unique risk combinations and their associations with all-cause and cardio-metabolic mortality.
- **Utilize AI for financial wellness.** Ageing of the population is a rising issue for healthcare and pension systems stability in Netherlands. The utilization of novel forms of financial data to enable AI-empowered AgeTech and WealthTech services may help to maintain complemeted balance between advances in “wealthspan” and “healthspan”.
- **Enable patient-centered care with information technology systems.** Embracement of technology in health care will lead to personalization and improvement of the quality of medical care through close coordination between patients, caregivers, and professionals.
- **Accelerate the paradigm shift from disease treatment and sick care to preventive medicine, and from preventive medicine to precision health.**



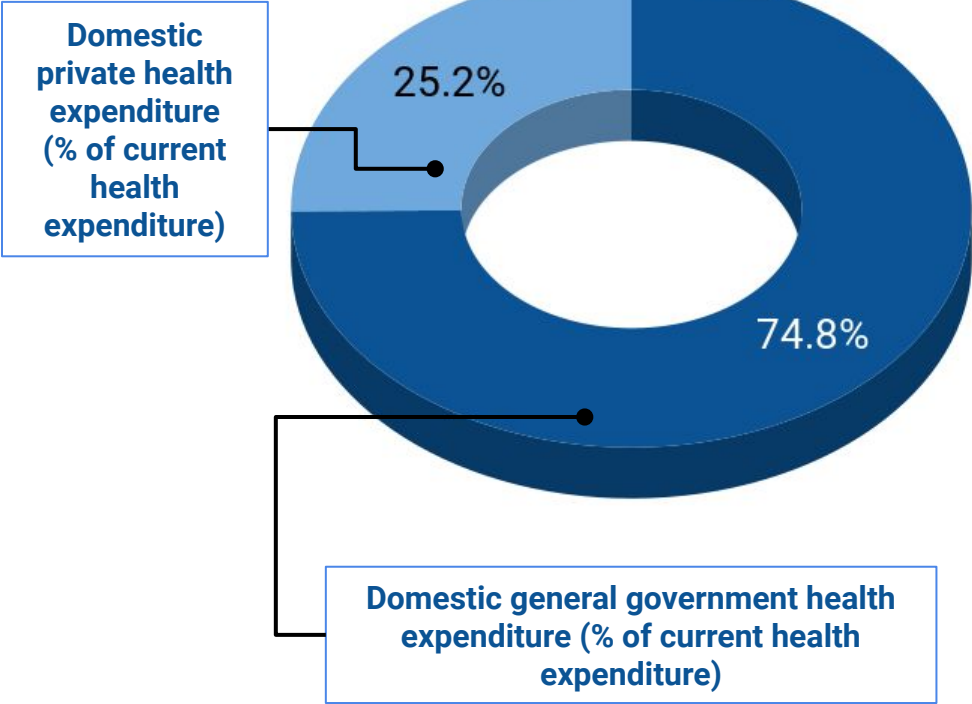
HALE	Both Sexes HALE, 2019	70.2 years
	HALE/Life Expectancy Difference, 2019	11.66
Economy	GDP per Capita, Current Prices, 2019	41.56 thousand (\$)
	Annual GDP Growth, 2019	2.81 %
Healthcare	Current Health Expenditure per Capita (2018)	4.04 thousand (\$)
	Public Health Care Expenditure, 2019	10.05 % of GDP
Retirement	Age Dependency Ratio, 2019	55.18
	Population over 65, 2019	15.99 %
	Number of WHO Age Friendly Cities and Communities	2
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	10.63
	Annual Cigarette Consumption (Units per Capita), 2019	685
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	30.8 % of adults

Longevity-Related Indices

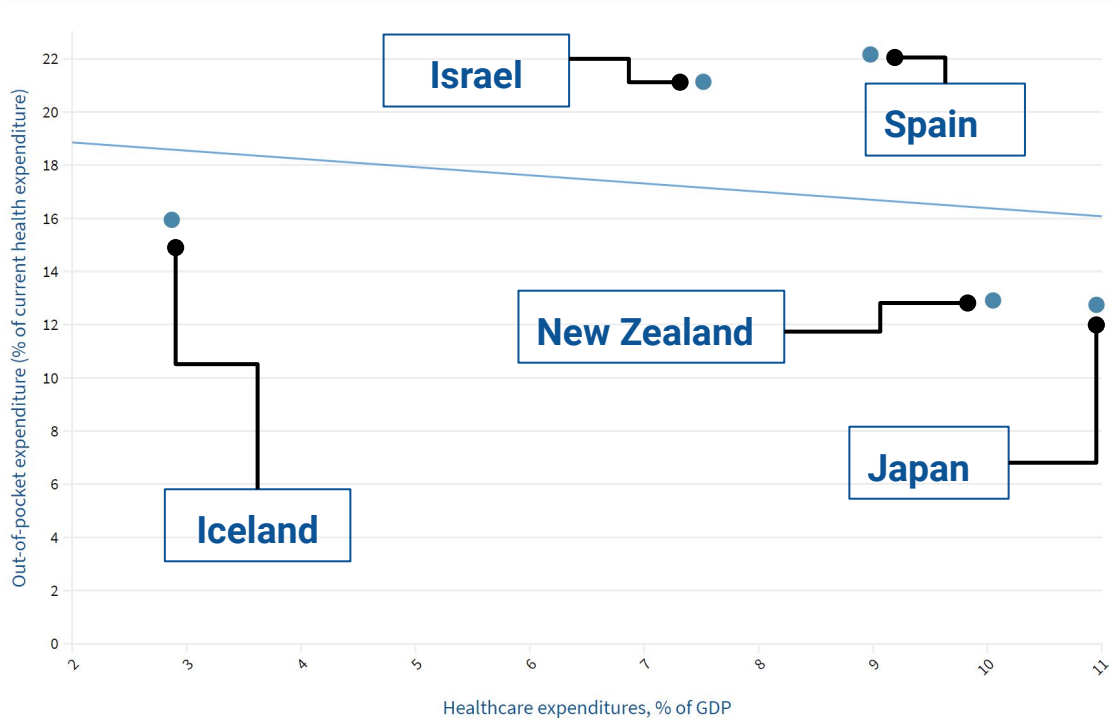


- The Healthcare Access and Quality Index,, 2019:
92
- Human Development Index, 2019:
0.93
- E-Government Development Index, 2019:
0.93
- Corruption Perceptions Index, 2019:
88
- Global Gender Gap Index, 2019:
0.84
- Democracy Index, 2019:
9.26

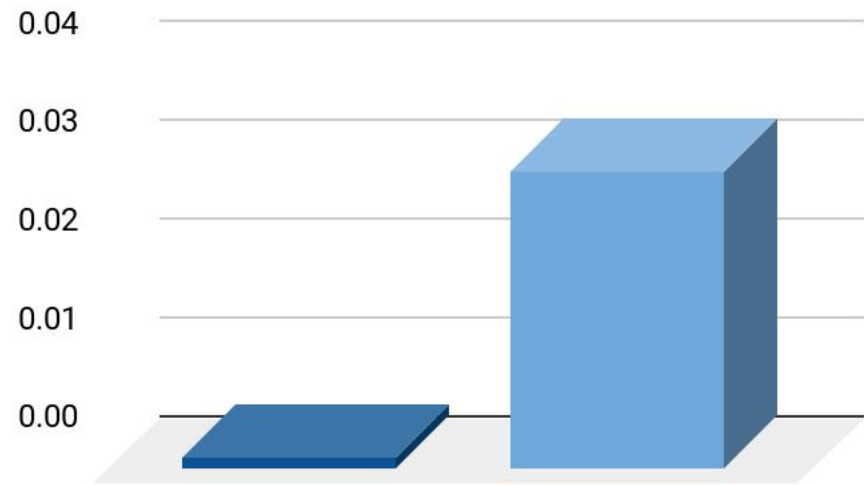
Current Healthcare Expenditure



Countries with high HALE and LE and medium GAP



Compound annual growth rate



The government should commit to reduce smoking rates, the overall negative impact of alcohol, prevent and manage obesity, and to support and encourage healthy eating and physical activity, provide better access to primary health care.

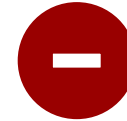


SWOT Analysis of Healthcare in New Zealand



STRENGTHS

- New Zealand has a generally high performing health system, which provides universal coverage and publicly funded access to a large set of core health services.
- Public care is funded through general taxation. This means residents receive free or subsidised medical care.
- Health insurance in New Zealand isn't overly expensive. Some employers offer medical cover.
- Well-developed medical infrastructure. There is a wide range of clinics and private hospitals. Private testing laboratories and radiology clinics are also available.



WEAKNESSES

- The level of hospital admissions for COPD and asthma in New Zealand is one of the highest in the world.
- There are great disparities in the life expectancy and DALYs between New Zealand and Maori with Pacifica tribes.
- Maori health status is poorer because of notably lower socioeconomic status, reduced access to health services and professionals, and health risk factors.
- There is the third highest rate of prevalence of obesity in New Zealand that stands for 30.6% of adults that is the great risk factor for most of chronic diseases.



OPPORTUNITIES

- Encourage a more active lifestyles through health promotion media campaigns and make physical activity an easier choice in the workplace.
- Improve the flow and quality of clinical information utilizing AI opportunities in life science and data generation.
- Enhance physical and eHealth infrastructure to widen the access to qualified healthcare treatment.
- Improve access to care for disadvantaged or underserved populations.



THREATS

- Breast and colorectal cancers are above the OECD average though there were slight improvements in the rates.
- Prevalence of health inequalities between different socio-economic groups.
- Poor diet and lack of physical activity remain key risk factors for the future.
- Ageing of the population is a rising issue for healthcare and pension systems stability.
- Growing burden of non-communicable and chronic diseases as a result of rising concern on behavioral risk factors.

Analysis of Strengths and Weaknesses of Health Care System in New Zealand



- The Human Development Index in New Zealand is 0.908 that is the reason for placement of the country in 'very high human development' category.
- Perinatal, neonatal, post-neonatal mortality rates are all low and have continued to decline.
- Personal healthcare access and quality index is high and is 92.4 that is the evidence for the well-functioning healthcare system in New Zealand.
- New Zealand has universal coverage health system with services provided by public, private and non-governmental sectors. 83.2% of expenditures funded through public sources in 2009–2010 while out-of-pocket expenditures 16.8% of expenditure and private health insurance contributed only 4.9% of expenditures in 2009–2010.
- Relatively young population slightly mitigate the pressure on pension system.



- The main causes of death are circulatory diseases, malignancies, ischaemic heart disease, cerebrovascular disease and chronic respiratory disease.
- There was an increase in the rates of termination of pregnancy: from 14 per 1000 in 1990 to 19.2 in 2009.
- There was an increase in incidence of a range of diseases in the Māori population compared to the non-Māori population.
- Maori smoking rates are 46% overall, compared with 31% for Pacific, 23% for European/other and 13% for Asian peoples.
- Cancer remains to be the key factor for deaths for the Maori population and the major reason for disability-adjusted years.
- There is unequal distribution of key specialists and other resources among the population and it causes lots of unmet needs in some districts with long waiting lists.

Recommendations for New Zealand

- **Reduce socioeconomic inequalities in health at individual and population level.** Behavioural risk factors tend to be more common among people at a disadvantage because of a lesser education or lower income.
- **Strengthen primary and preventive care.** A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. The government should devise comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy.
- **Utilize AI opportunities for future of Healthy Longevity.** Artificial Intelligence may help to improve productivity and efficiency of healthcare system, processes information with less time and provide generated data with the right context for decision making process. Subsequently, AI will enable organisations to complete some complex tasks at scale, at a fraction of the cost of human labour and often with superior results. AI will also supplement and amplify human capability so that people and organisations can achieve even more.
- **Engage healthy lifestyle.** There is rising concern on prevalence of overweight and obesity among adolescents and adults. One of the top priorities for government on the way to Healthy Longevity is to encourage a more active lifestyles through health promotion media campaigns and make physical activity an easier choice in the workplace; tighten regulations of food advertising to better protect children.
- **Introduce long term care insurance system.** New Zealand also faces the rising issue of “silver tsunami”. Challenges related to population ageing should be transformed into plenty of market opportunities. First of all, this demographic change will require drastic reform of healthcare and long-term care systems. Unless tackled, the rapid increase in aging population can impose a large burden on the health care system including universal health insurance system.



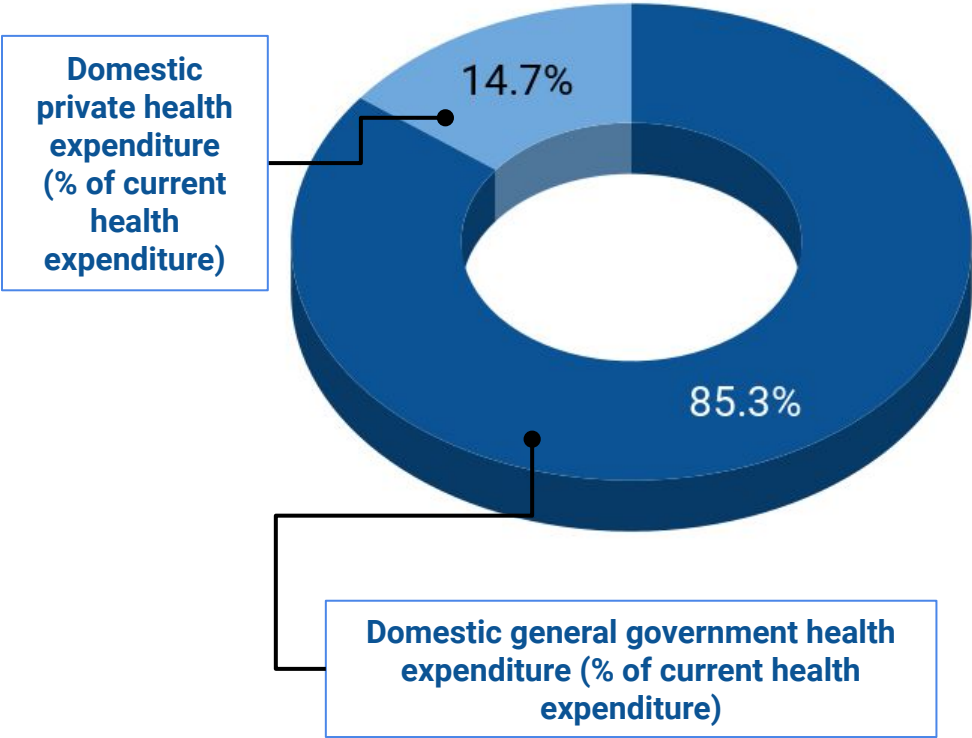
HALE	Both Sexes HALE, 2019	71.4 years
	HALE/Life Expectancy Difference, 2019	11.36
Economy	GDP per Capita, Current Prices, 2019	75.42 thousand (\$)
	Annual GDP Growth, 2019	1.15 %
Healthcare	Current Health Expenditure per Capita (2018)	8.24 thousand (\$)
	Public Health Care Expenditure, 2019	9.21 % of GDP
Retirement	Age Dependency Ratio, 2019	53.11
	Population over 65, 2019	17.27 %
	Number of WHO Age Friendly Cities and Communities	3
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.41
	Annual Cigarette Consumption (Units per Capita), 2019	552
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	23.1 % of adults

Longevity-Related Indices

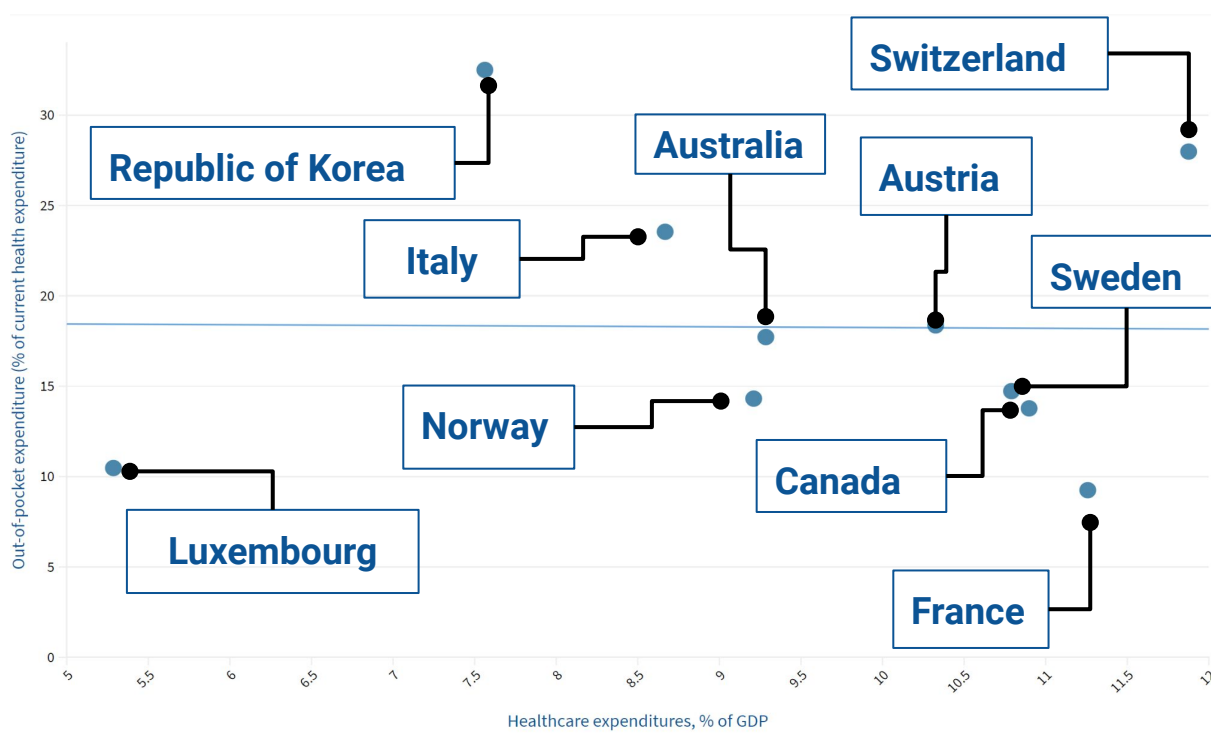


- The Healthcare Access and Quality Index,, 2019:
97
- Human Development Index, 2019:
0.96
- E-Government Development Index, 2019:
0.91
- Corruption Perceptions Index, 2019:
84
- Global Gender Gap Index, 2019:
0.85
- Democracy Index, 2019:
9.87

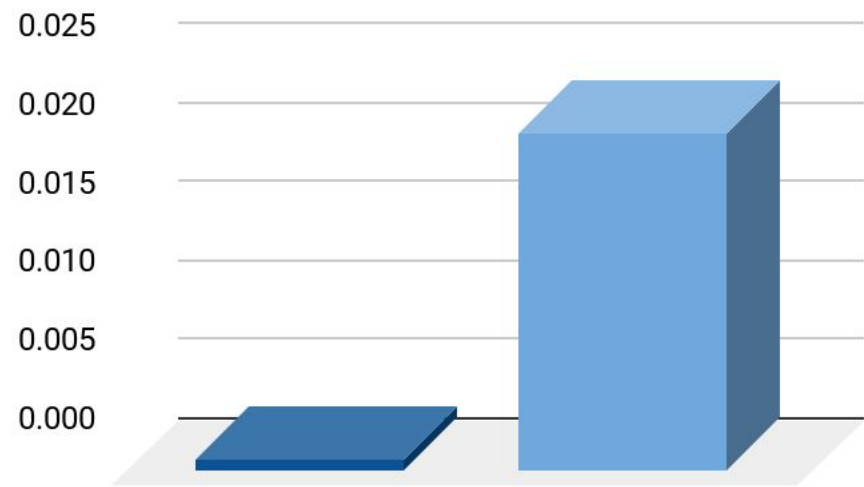
Current Healthcare Expenditure



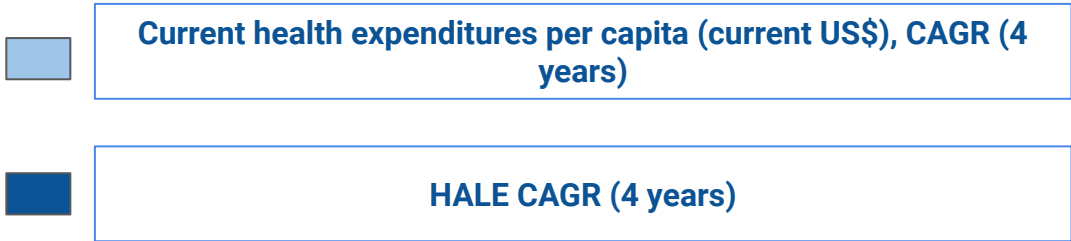
Countries with Low HALE and LE and High GAP



Compound annual growth rate



The main causes of disability and reduced health are lack of physical activity, mental disorders, cardiovascular disease and cancer. The government should focus on providing effective care and primary care settings.

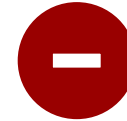


SWOT Analysis of Healthcare in Norway



STRENGTHS

- Norway is one of the countries that spends a lot on healthcare - 9.9% of GDP that is higher than the OECD average.
- Financial protection of the healthcare system is good.
- Norway has a comprehensive healthcare system that provides the universal healthcare coverage.
- High life expectancy at birth for male 79 years and for female 83.5.
- The number of new cases of myocardial infarction (heart attack) per 100,000 inhabitants per year is declining. Mortality is also falling.
- Low level of corruption.



WEAKNESSES

- There are strong disparities in the access to the healthcare across urban and rural areas.
- Significant part of the population applies for the disability pension (about 10%).
- Income inequality has increased in Norway as a result of changes to the country's tax system.
- The Council has not been sufficiently engaged in primary health care or the caregiving sector, or issues related to coordination between the healthcare sectors in Norway.
- Huge amount of different acts that hard to record and use.



OPPORTUNITIES

- Norway has the 4th highest per capita income in the world. The country maintains a Nordic welfare model with universal health care, subsidised higher education, and a comprehensive social security system.
- Norway is in the forefront worldwide when it comes to healthcare. It is one of the leading countries in the world on new technologies, skills and knowledge.
- Use the increasing opportunities offered by digitalization and eHealth. Integration of technologies to the healthcare system makes it easier for people to achieve good and equal health and welfare.



THREATS

- Prevalence of mortality from mental disorders.
- Ageing population: the proportion of the population aged 65 and over is projected to increase from around 30% of the population aged 20-64 in 2011 to around 60% by 2050.
- The prevalence of hypercholesterolemia and hypertension is the higher than OECD average.
- The obesity and overweight rates have grown rapidly in recent years.
- The level of alcohol consumption has increased by 36% for past decades despite the governmental activities.
- Malignant neoplasms remain the second risk factor of deaths.

Analysis of Strengths and Weaknesses of Health Care System in Norway



- Decline in the infectious diseases due to the vaccinations, hygiene and improved sanitation facilities.
- The healthcare system is generally accessible and the HAQ index is 96.6.
- There is a relatively low amount of people that suffer from alcohol addiction - only 5% of total population.
- The well composed comprehensive healthcare system with the acute distribution of responsibilities and authorities among them that provides equal access to services.
- Governmental attention to the patient safety and cost-effectiveness of the treatments and its quality.
- Norway is more equal, with wealth inequality exceeding Japan but lower than France, Germany, UK and US. Nonetheless, the Nordic countries score very highly in terms of major welfare and development indicators.



- There was a decrease in death from cardiovascular diseases that is one of the main causes of premature death.
- The share of people ill with mental disorders has grown by 8 points through the past years.
- Ischemic heart disease, Alzheimer and stroke are the major causes for deaths and still have a bad impact on longevity.
- The prevalence of obesity and 2 types diabetes has increased among the adults.
- The levels of obesity among adults has increased significantly: 32% among men and 23% among women.
- Only 20% of the population meets the current physical activity guidelines of 60 minutes per day.
- Behavioral, dietary and metabolic risks including tobacco, high fasting plasma glucose and high blood pressure are still the key reasons for the disability years. Low back and neck pain along with headache and anxiety disorders can significantly decrease DALE.

Recommendations for Norway

- **Address rising burden of non-communicable disease.** Lifestyle risk behaviours are responsible for a large proportion of disease burden and premature mortality worldwide. Risk behaviours tend to cluster in populations. Non-communicable disease are caused by the set of emerging risk factors (sleep, sitting time, and social participation) and unique risk combinations and their associations with all-cause and cardio-metabolic mortality.
- **Utilizing strength in artificial intelligence industry leads to meaningful improvements in medical care.** Translating the tremendous growth in data into clinical insights falls into the hands of AI (artificial intelligence)/ML (machine learning) platforms. The rapid growth in investment in AI and cloud computing are beginning to create the foundations for the precision health market of the future. But apart from advanced research it is important to provide effective, low-cost treatments that work, triggering unnecessary treatments and higher costs down the line.
- **Shift from the primary care to the preventive medicine.** Lots of death in Norway can be prevented by the regular check-ups through the preventive care that provides the early diagnostics of the problems for their further elimination by various ways through the effective treatments.
- **Devise government-led Longevity development plan (focused on health status of elderly).** In the next few years several technologically advanced smart states will emerge as global competitors in the development of integrated Longevity Industry ecosystem. Norway, having great potential in terms of funding and innovation, can be in the forefront of Longevity Industry, developing AgeTech, WealthTech and P4 Medicine subsectors.
- **Health records and linkage to survey data should be used more extensively** to refine disease prevalence estimates, and provide more reliable data to guide policy and programmes to address these causes of ill health.

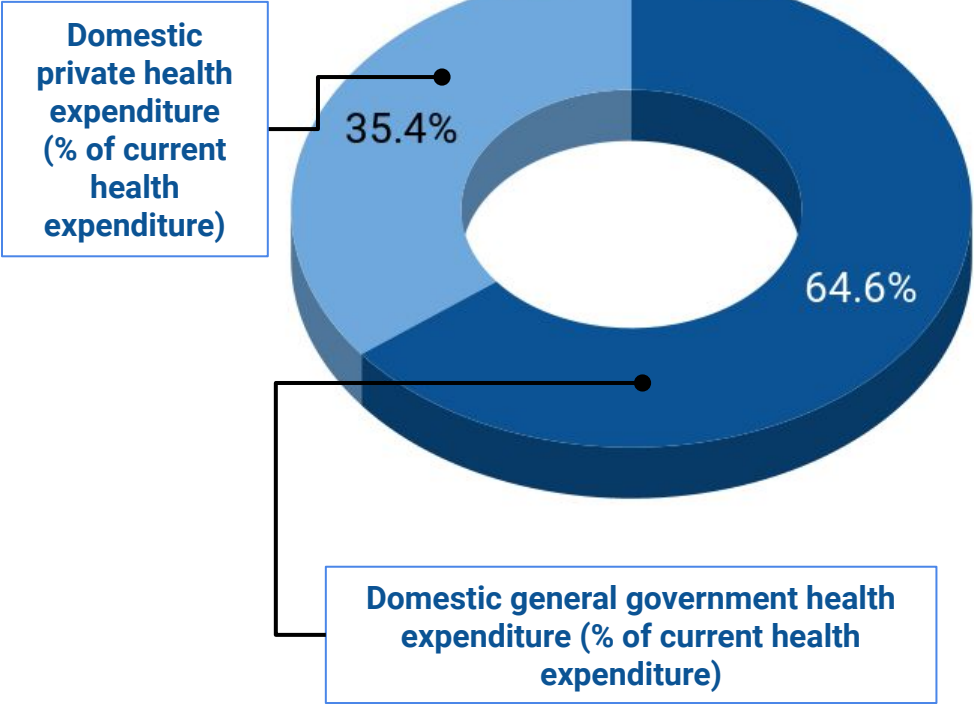


HALE	Both Sexes HALE, 2019	68.7 years
	HALE/Life Expectancy Difference, 2019	9.63
Economy	GDP per Capita, Current Prices, 2019	15.73 thousand (\$)
	Annual GDP Growth, 2019	3.01 %
Healthcare	Current Health Expenditure per Capita (2018)	1.13 thousand (\$)
	Public Health Care Expenditure, 2019	7.27 % of GDP
Retirement	Age Dependency Ratio, 2019	54.07
	Population over 65, 2019	8.31 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	7.98
	Annual Cigarette Consumption (Units per Capita), 2019	219
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	22.7 % of adults

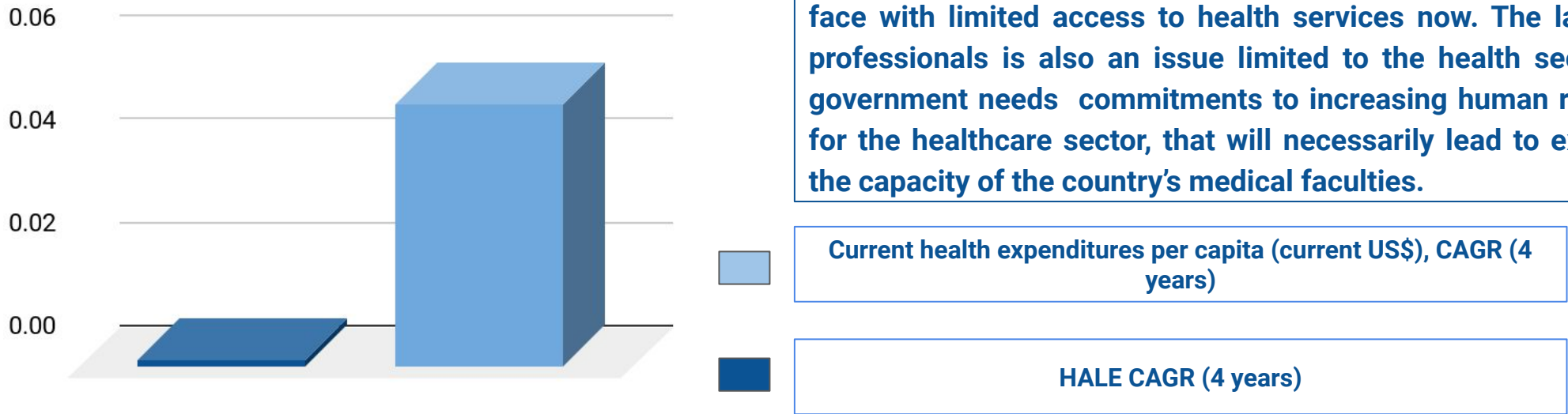
Longevity-Related Indices

- The Healthcare Access and Quality Index,, 2019: **68**
- Human Development Index, 2019: **0.82**
- E-Government Development Index, 2019: **0.67**
- Corruption Perceptions Index, 2019: **35**
- Global Gender Gap Index, 2019: **0.74**
- Democracy Index, 2019: **7.05**

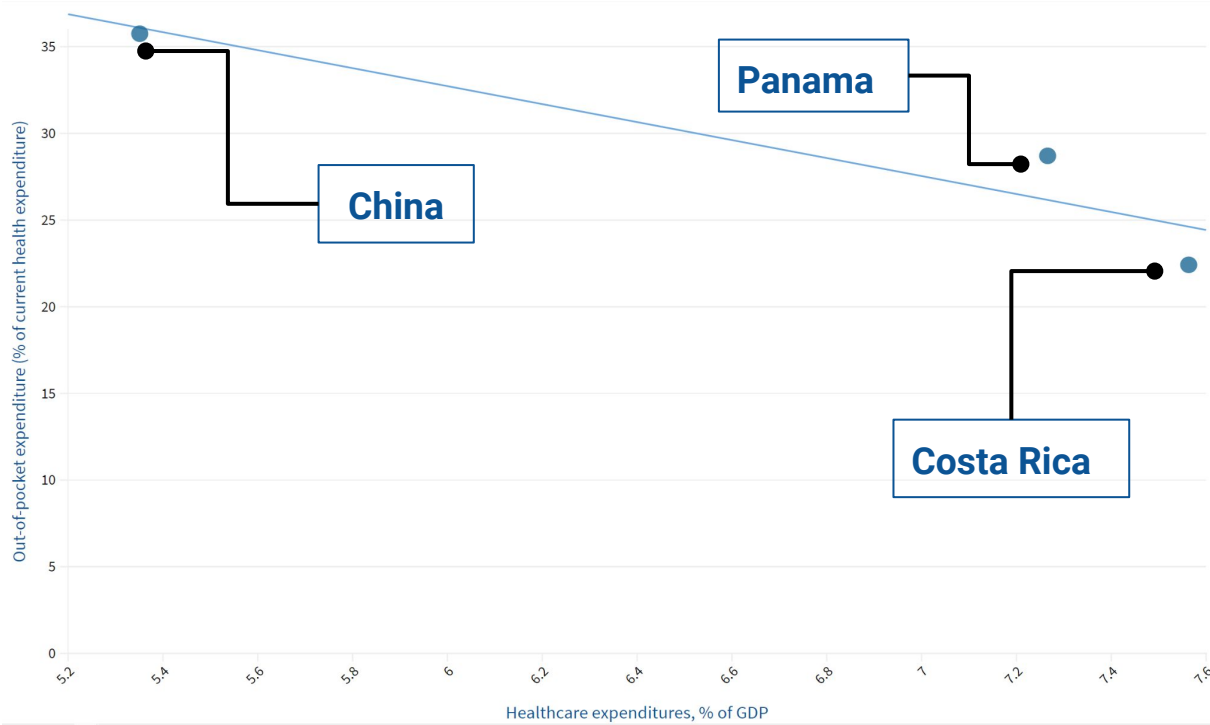
Current Healthcare Expenditure



Compound annual growth rate



Countries with Medium HALE and LE and Low GAP



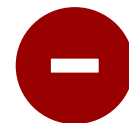
Health infrastructure should be developed more evenly, including availability of health workers, medicine and technological equipment, both urban centres and rural areas where populations face with limited access to health services now. The lack of professionals is also an issue limited to the health sector. The government needs commitments to increasing human resources for the healthcare sector, that will necessarily lead to expanding the capacity of the country's medical faculties.

SWOT Analysis of Healthcare in Panama



STRENGTHS

- Panama's healthcare system consists predominantly of large public sector with small but expanding private sector.
- The entire population is entitled to the healthcare system through the employee contributions to the social fund aimed to finance their medical needs and their family's.
- Significant increase in healthcare coverage and affordability of healthcare treatment as a result of reduced level of unemployment.
- The life expectancy in Panama has significantly improved for the past decade.



WEAKNESSES

- Services in Panama provided by public sector, especially, by MISA are relatively expensive.
- Access to health services remains unequal, a fact readily visible in the marked discrepancy between health outcomes in urban and rural areas.
- In 2014 there was a nine-year gap between the region with the highest life expectancy (Panama at 79 years) and the lowest (the indigenous reservation Comarca Ngobé Buglé at 70 years).
- The infant mortality is relatively high and was 13.4 in 2017 that is several times higher than in OECD countries.



OPPORTUNITIES

- The public sector is currently undergoing unprecedented expansion, as the government seeks to increase and renovate existing health infrastructure.
- The country embarked on an ambitious infrastructure expansion plan, which included the construction of five regional hospitals, a medical city in the capital, and a network of smaller health care facilities and ambulatory services.
- The 2015 budget allocates nearly \$2bn to MINSA (an increase from \$1.84bn in 2014), of which \$590.5m is earmarked for investment.



THREATS

- Population growth and rising family incomes are two factors driving up demand for health services, and putting additional pressure on the care system, which is characterised by crowded facilities and long waiting periods for surgery.
- Ischemic heart diseases, stroke and Alzheimer's diseases are the main causes of deaths for elders in Panama and there is a bad tendency in the increasing of their bad impact on the health status of the population.
- Headache disorders, low back pain and blindness along with diabetes are the main reasons for the disability-adjusted years in Panama.

Analysis of Strengths and Weaknesses of Health Care System in Panama



- There were significant decreases in the infant mortality rates starting from 1990s.
- There is a significant amount of doctors in Panama. *The country's average was 15.9 doctors per 10,000 inhabitants in 2012, according to MINSA.*
- More than a decade of stable economic growth has resulted in demand for private health services increase significantly.
- MiniMed is Panama's first medical franchise specialising in primary care that has a good expansion.
- There was a significant decrease in the bad impact of the malnutrition for the health status and mortality rates.
- Smoking and alcohol consumption rates are relatively low in Panama.



- Health infrastructure, including availability of health workers, medicine and technological equipment, is concentrated in urban centres, leaving indigenous and rural populations with limited access to health services.
- There is a lack of transparency for the governmental regulation of the projects in the healthcare system.
- The care offered by the public sector is less progressive and outcome-oriented.
- *Private expenditure represented 31.4% of total health spending in 2012, with the majority of that total (79%) being out-of-pocket expenditure (down from 85.1% in 2010) and its share is relatively high.*
- There is a significant lack of professionals in the healthcare system of Panama that represents a skill shortage in the country and generates a challenge for the operation's dimension of hospitals. *The country faces a shortage of some 190 general practitioners, 700 nurses and another 700 medical technicians.*
- Panama's government is facing the challenge of increasing capacity for the public sector in the healthcare system.

Recommendations for Panama

- **Provide incentives for development of patient-centered treatments.** Strengthen prevention and health promotion across all areas of life including day-care centres, schools and nursing homes, strengthen workplace health promotion and better integrate it with occupational safety and health.
- **Improve engagement of high-qualified staff in healthcare.** Shortage of staff is the additional burden on the healthcare system as it is the reason for the unmet needs and worse patient outcomes that lead to premature deaths. The government should provide financial incentives for medical staff in public sector and funding to state healthcare services.
- **Bridge the gap between health professionals and data scientist by utilising AI for Healthy Longevity.** AI offers a range of effective and innovative solutions to medical problems, revolutionizing medical domain. Machine learning makes diagnosing more efficient. It processes information with less time and provide generated data with the right context.
- **Reduce socioeconomic inequalities in health at individual and population level.** Behavioural risk factors tend to be more common among people at a disadvantage because of a lesser education or lower income.
- **Focus on care delivery and particular people needs.** Resourcing is unequal across sub-systems, out-of-pocket payments remain high. Ineffective allocation of healthcare resources underlines the urgency of reforms. The government should provide incentives to invest in prevention services, treatment of mental diseases, making healthcare good for patients and for taxpayers.
- **International collaboration on ageing.** Strategic partnership between countries would provide access to world's most successful practices for the maintenance the optimal state of health and technologies, products, services and social policies.



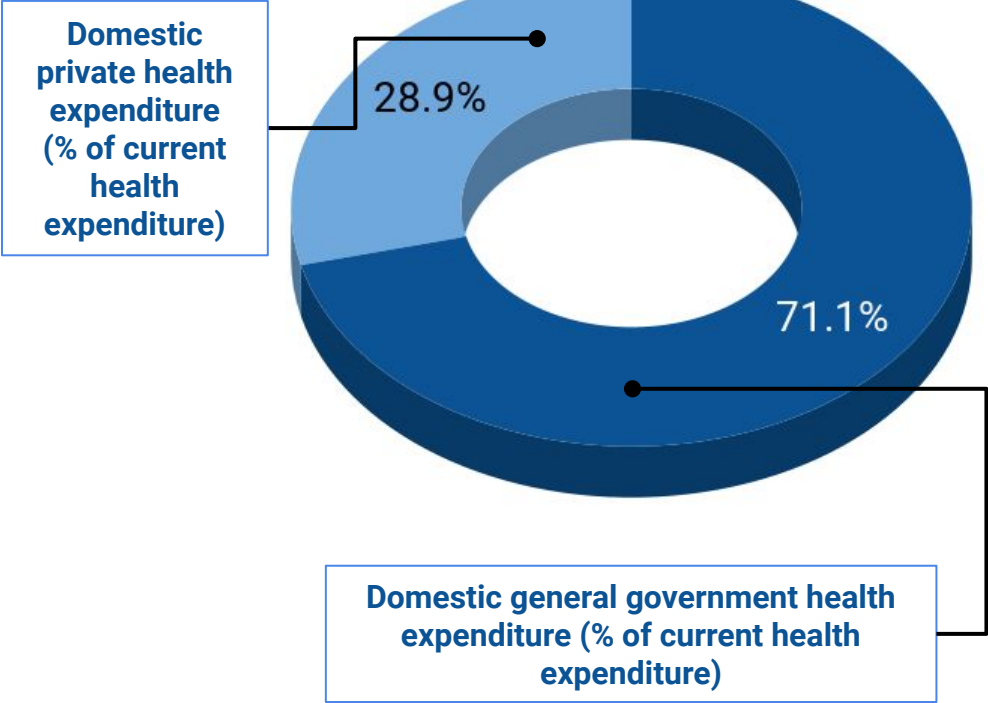
HALE	Both Sexes HALE, 2019	68.7 years
	HALE/Life Expectancy Difference, 2019	8.9
Economy	GDP per Capita, Current Prices, 2019	15.69 thousand (\$)
	Annual GDP Growth, 2019	4.54 %
Healthcare	Current Health Expenditure per Capita (2018)	0.98 thousand (\$)
	Public Health Care Expenditure, 2019	6.33 % of GDP
Retirement	Age Dependency Ratio, 2019	49.93
	Population over 65, 2019	18.12 %
	Number of WHO Age Friendly Cities and Communities	6
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.71
	Annual Cigarette Consumption (Units per Capita), 2019	1363
	Prevalence of Overweight among Adults, 2020 (Age-Standardized Estimate)	23.1 % of adults

Longevity-Related Indices

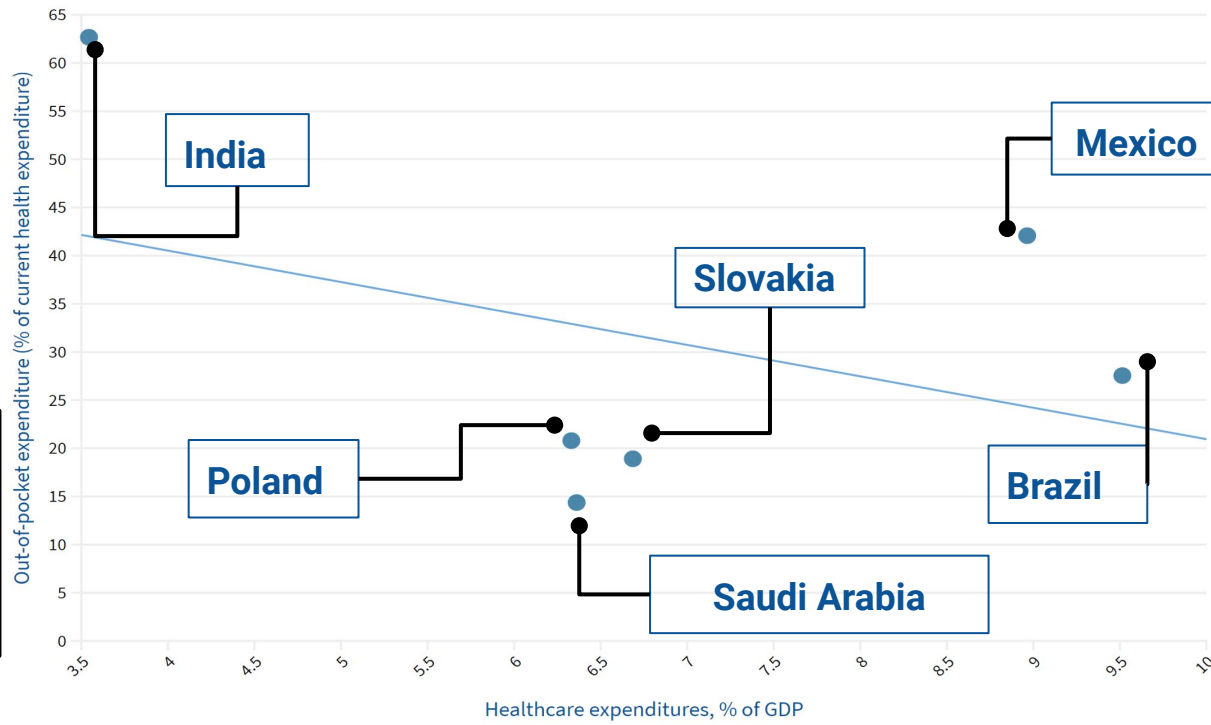


- The Healthcare Access and Quality Index,, 2019:
82
- Human Development Index, 2019:
0.88
- E-Government Development Index, 2019:
0.85
- Corruption Perceptions Index, 2019:
56
- Global Gender Gap Index, 2019:
0.71
- Democracy Index, 2019:
6.62

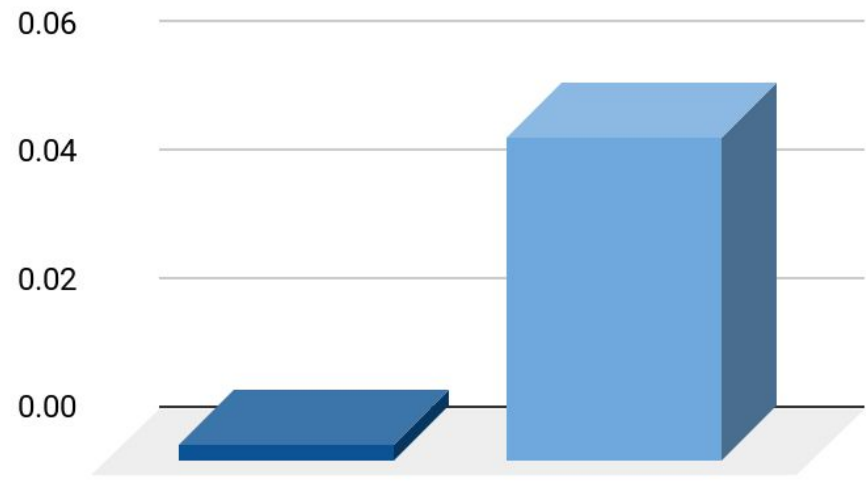
Current Healthcare Expenditure



Countries with Low HALE and LE and Medium GAP



Compound annual growth rate



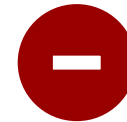
To improve public health it is needed to focus on health education, prevention programmes and purchasing of new equipment.





STRENGTHS

- The healthcare system in Poland is strongly decentralized with the social insurance provided to cover population's needs. This insurance is executed by the 16 autonomous funds.
- The organisation of the healthcare system's regulation is comprehensive and consists of several entities that are responsible for particular functions starting from the national level and ending with local governments.
- There was a slight increase in the healthcare spending in Poland.
- Compulsory health insurance covers 91% of the population.
- 70% of healthcare system is publicly funded.



WEAKNESSES

- The share of GDP devoted to the healthcare is significantly lower than the EU average and was 6.3% in 2015.
- The healthcare coverage is lower than the EU average. The 9% of the population not covered is mainly the result of casual or typical work contracts.
- The supply of services is limited and it results long waiting times.
- In 2015, private out-of-pocket payments made up more than one-fifth of health expenditure (23%), versus the EU average of 15%.
- There is low coverage for the pharmaceutical spending.



OPPORTUNITIES

- Poland will receive \$3 billion of earmarked funding for emergency medical infrastructure, prevention programmes, long-term care and eHealth solutions.
- Utilize advanced technologies in healthcare, including modern equipment, data analytics and advanced concepts of treatment.
- A better balance between disease prevention and care may help to improve population health status and reduce health inequalities, while at the same time reducing pressures on the health and long-term care systems.



THREATS

- Recruiting and retaining doctors to work in family medicine is a particular challenge in Poland that current reforms are attempting to address.
- Alcohol consumption has increased substantially since 2000 and one in six adults report heavy drinking on a regular basis.
- Obesity rates also increased and are now above the EU average.
- Around 50% of all deaths among women and 40% of all deaths among men were from cardiovascular diseases.
- Population ageing and lifestyle factors caused the increase in the deaths from different forms of cancer and diabetes.

Analysis of Strengths and Weaknesses of Health Care System in Poland



- There is a big number of hospital beds per population in Poland and its level is above the EU average.
- Hospitals in Poland generally provide effective treatment for people requiring acute care, most notably in the area of cardiology.
- The smoking rates are relatively small in the Poland and a better balance between disease prevention and care may help to improve population health status and reduce health inequalities, while at the same time reducing pressures on the health and long-term care systems.
- Life expectancy growth represents a slight narrowing of the gap between Poland and EU average indicator compared to 2000.
- There was a remarkable reduce in the mortality rates after 65 years.



- Access to care is limited as a result of uneven geographical distribution of hospitals, with some areas remaining underserved.
- Shortages of health workers are reflected in the low numbers of practising nurses and physicians, which at 5.2 and 2.3 per 1 000 population, respectively, are among the lowest in the EU.
- There is a poor primary care coordination in Poland that has implications for the care of people with chronic conditions in primary care and the level of avoidable hospitalisations.
- Long waiting periods for the elective surgery introduce the challenge for the government of Poland that is the additional burden for the healthcare system worsening patients' outcomes.
- There is a substantial pressure on the delivery of the long-term care for people with chronic conditions caused by the shortage of nurses that basically provide such services.
- Amenable mortality rates are higher in Poland than the EU average.

Recommendations for Poland

- **Initiate certain reforms to enhance the healthcare system of Poland** to create a room for the issues of the long-livers in the strategical onset on the risky factors that slack the longevity expansion in the country. The reason for the low focus on the problems of elders is grounded in the weak performance of the fundamental healthcare system. That's why there is no acute strategic plan on how Poland will withstand the impending silver wave that will create the burden on the overall economic growth of the country and will put a pressure on the long-term care sector of medical system.
- **Increase spending on the healthcare needs to resolve the question of the medical services accessibility.** Narrow set of services offered by the public sector opens an issue for the effectiveness of the Poland's medical system in struggling with the life-threatening conditions that predominantly occur with aged population. These situation inputs additional risk for the premature deaths and arises the tendency for plateauing of the lifespan.
- **Develop novel financial systems.** It will be necessary for novel financial systems to be developed which monetize Healthy Longevity, and repeatedly reinvest in the technologically-reinvigorated working population, if they are to survive the silver tsunami.
- **Modifying the behaviour risk factors including smoking, alcohol consumption and obesity rates.** The risk factors for non-communicable diseases – tobacco use, the harmful use of alcohol, unhealthy diets, and physical inactivity – lie in non-health sectors. They should be addressed by creation advanced health care ecosystem with sophisticated private insurance, WealthTech, AgeTech available.
- **Strengthen primary and preventive care.** A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. The government should devise comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy.



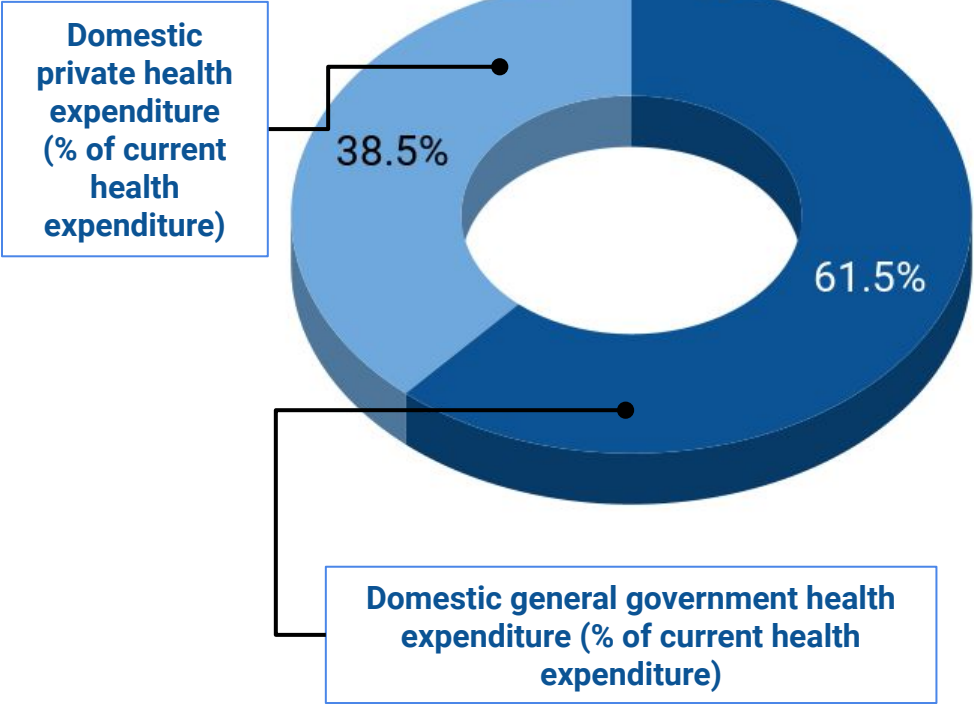
HALE	Both Sexes HALE, 2019	71 years
	HALE/Life Expectancy Difference, 2019	10.3
Economy	GDP per Capita, Current Prices, 2019	23.21 thousand (\$)
	Annual GDP Growth, 2019	2.2 %
Healthcare	Current Health Expenditure per Capita, 2019	2.21 thousand (\$)
	Public Health Care Expenditure, 2019	9.41 % of GDP
Retirement	Age Dependency Ratio, 2019	55.3
	Population over 65,, 2019	22.36 %
	Number of WHO Age Friendly Cities and Communities	13
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	12.03
	Annual Cigarette Consumption (Units per Capita), 2019	1133
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	20.8 % of adults

Longevity-Related Indices

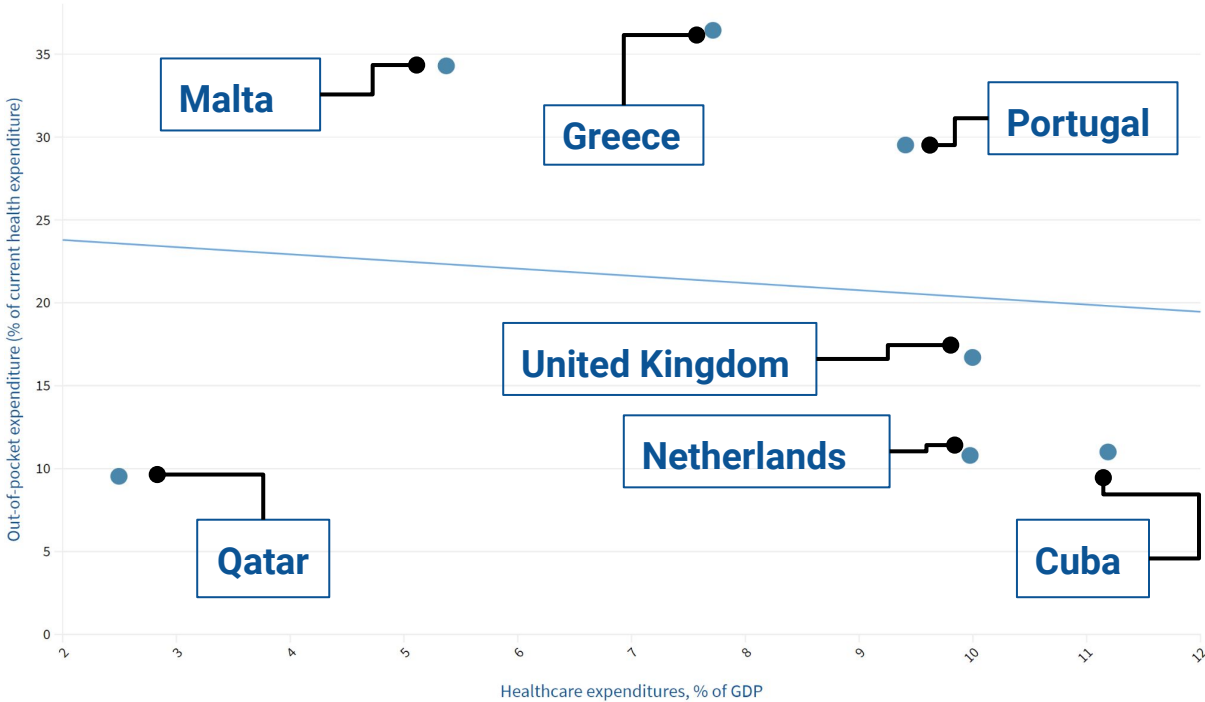


- The Healthcare Access and Quality Index -2016:
86
- Human Development Index, 2019:
0.86
- E-Government Development Index, 2019:
0.83
- Corruption Perceptions Index, 2019:
61
- Global Gender Gap Index, 2019:
0.78
- Democracy Index, 2019:
8.03

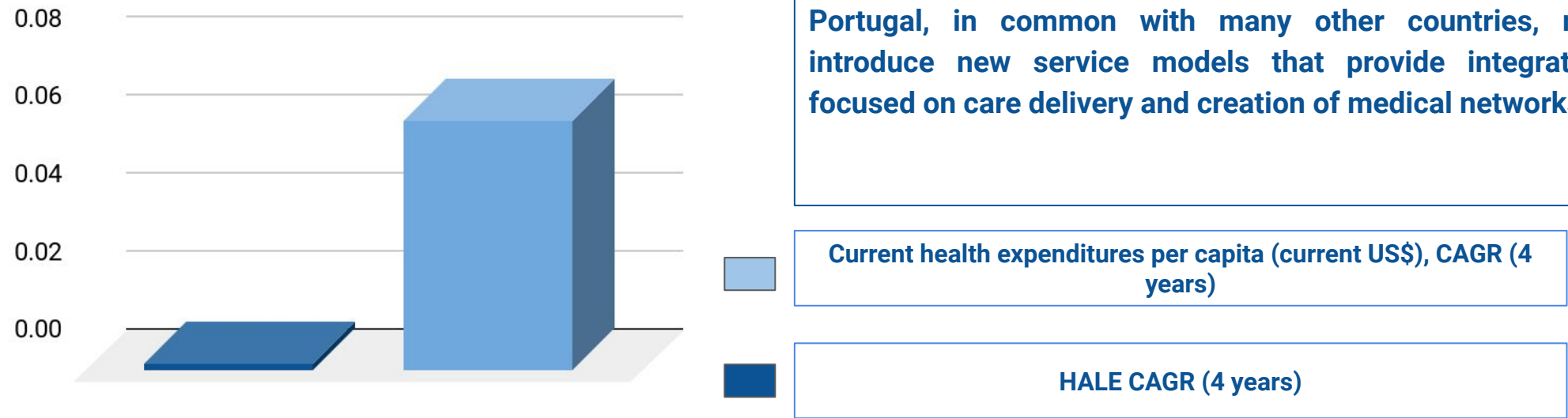
Current Healthcare Expenditure



Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate



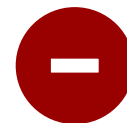
The prevalence of chronic diseases in the population means that Portugal, in common with many other countries, needs to introduce new service models that provide integrated care, focused on care delivery and creation of medical networks.

SWOT Analysis of Healthcare in Portugal



STRENGTHS

- Portuguese government is concentrated on the cost-effective regulation of the healthcare system.
- The rate of obesity among adults in Portugal is relatively low compared with other OECD countries.
- Portugal has made progress in improving care coordination for the elderly through the development of the National Network of Integrated Continuous Care.
- The National Health Service is universal, comprehensive and almost free at point of delivery, and all residents are covered despite their status.



WEAKNESSES

- Out-of-pocket spending on healthcare system is relatively high compared to other OECD countries.
- Unmet care needs are significant, particularly for dental care, second highest compared with most OECD countries.
- Case-fatality of patients after heart attack and stroke is higher than many OECD countries.
- Public spending on long-term care is still small, and the number of psychiatrists, nurses, other long-term care workers is low.
- Many elderly who should be discharged from hospital continue to stay in hospitals due to an underdeveloped long-term care sector.



OPPORTUNITIES

- Prescribing in primary care suggest room for improvement.
- There is a little room in the enhancing the preventive care of the population through the regular check-ups, advanced monitoring, diagnostics and screening and promotion of the healthy lifestyles.
- Utilization of Artificial intelligence opportunities in healthcare through the up-to-date equipment aimed to provide progressive treatments.



THREATS

- The prevalence of risk factors in Portugal is growing, with obesity rates among children above OECD average.
- The share of total expenditure dedicated to prevention activities in Portugal (1.8%) is almost half of that spent on average by 27 OECD countries (2.8%).
- The Portuguese population is ageing rapidly, with about half of the elderly encountering limitations for daily activities.
- 17% of adults in Portugal smoked tobacco every day.
- Adults obesity rates has increased over the past few years and pretend to be the risk for the CDVs burden.
- CDVs and cancer are the main contributors to mortality.

Analysis of Strengths and Weaknesses of Health Care System in Portugal



- The number of physicians is above the EU average that contributes to the effective coverage of the growing healthcare needs caused by the ageing of population.
- There were progressive gains in the infrastructural renovation of the healthcare infrastructure as the new hospitals were opened to replace old ones.
- The number of the psychiatric beds also decreased in the arising shifting to the ambulatory treatments due to the intensive progress in the mental health medication.
- Survival rates from the treatable cancer are relatively high that is strengthen by the better screening and diagnostics in early stages.
- The life expectancy in Portugal is high and has reached 81.3 years in 2015 that is above the EU average.



- There was a decline on spending for healthcare in Portugal in a wake of the economic crisis that damaged badly the healthcare system. Portugal spent 1989 per capita on healthcare that is 30% below OECD average.
- There was a significant decrease in the public spending on health, and now it accounts 66% that is lower than in other OECD countries.
- The nurses to doctors ratio is relatively low, and this shortage creates pressure while the slow-motion disaster of an increased number of elders demanding professional care is approaching.
- Portugal suffers from the lower supply of the acute beds in hospital per 100000 population and it is lower than the EU average.
- Portugal faces the decrease in initiatives focused on prevention of the non-communicable diseases.
- Less than half of the Portuguese population reports to be in good health that is significantly lower than in other countries.

Recommendations for Portugal

- **Promotion of the healthy lifestyles.** Portuguese government faces severe problems connected with avoidable mortality in hospitals. Some deaths from most common diseases can be generally prevented through the popularisation of the healthy lifestyle.
- **Reinforcement of the primary care system.** Unmet needs and relatively high amenable mortality are the evidence of the weak performance of the primary care in some aspects of its functioning. Though Portugal has considerable gains in the increasing of survival from common diseases that cause deaths. There is a certain room for the improvement of the medical services delivery with the cost-effective approach that will allow to keep people healthy and productive for long years.
- **Struggling the regional and socioeconomic disparities.** Uneven distribution of resources is the reason why some region face great amount of unmet needs and lower amenable mortality. The other point that government should consider is unequal access to the healthcare system and well-being among different socioeconomic quintiles.
- **Accumulate affords to improve care delivery.** Care coordination is closely connected with the primary care that is not fully accessible for all layers of the population. Some people need to go to specialists or emergency to receive treatments that are not needed and should be provided by the primary doctors. The government should solve this problem to reduce out-pocket expenditure and minimise risks exposure.
- **There is a need to develop this focus into longer-term strategic reforms that enhance efficiency while guaranteeing the delivery of health services and improving the overall quality of care.**
- **Create mechanisms that allow adequate planning and allocation of physical and human resources.** Generally speaking, resources are unevenly distributed across the country, with a much higher concentration of health services and medical equipment in large cities compared with rural areas; private facilities are also largely located in urban centres.



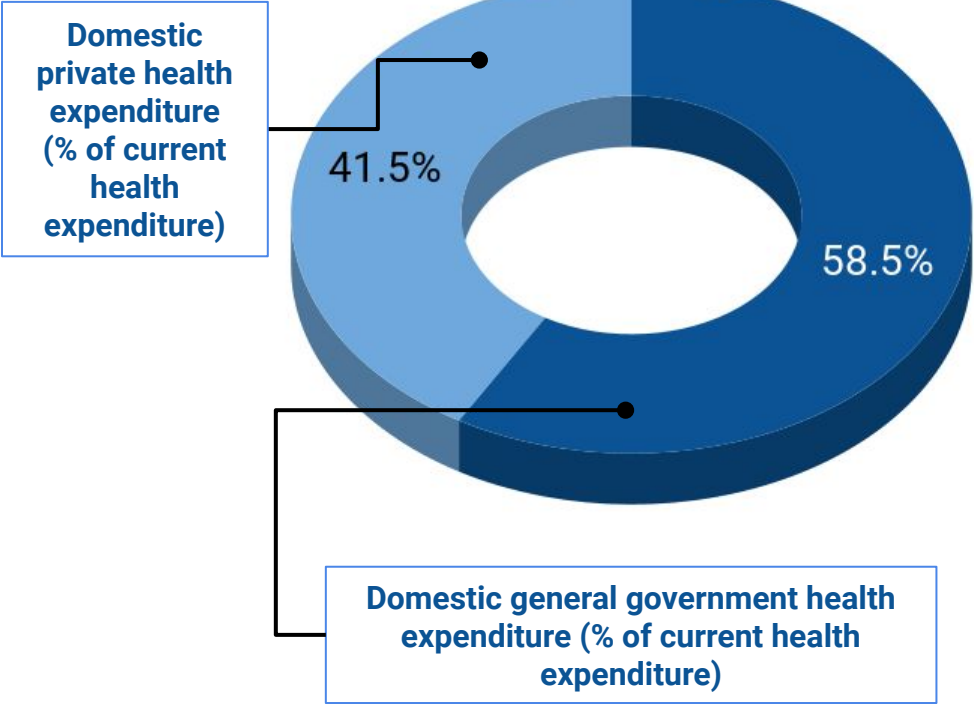
HALE	Both Sexes HALE, 2019	67.1 years
	HALE/Life Expectancy Difference, 2019	13
Economy	GDP per Capita, Current Prices, 2019	62.08 thousand (\$)
	Annual GDP Growth, 2019	0.77 %
Healthcare	Current Health Expenditure per Capita, 2019	1.71 thousand (\$)
	Public Health Care Expenditure, 2019	2.49 % of GDP
Retirement	Age Dependency Ratio, 2019	17.8
	Population over 65,, 2019	1.52 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	1.59
	Annual Cigarette Consumption (Units per Capita), 2019	1020
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	35.1 % of adults

Longevity-Related Indices

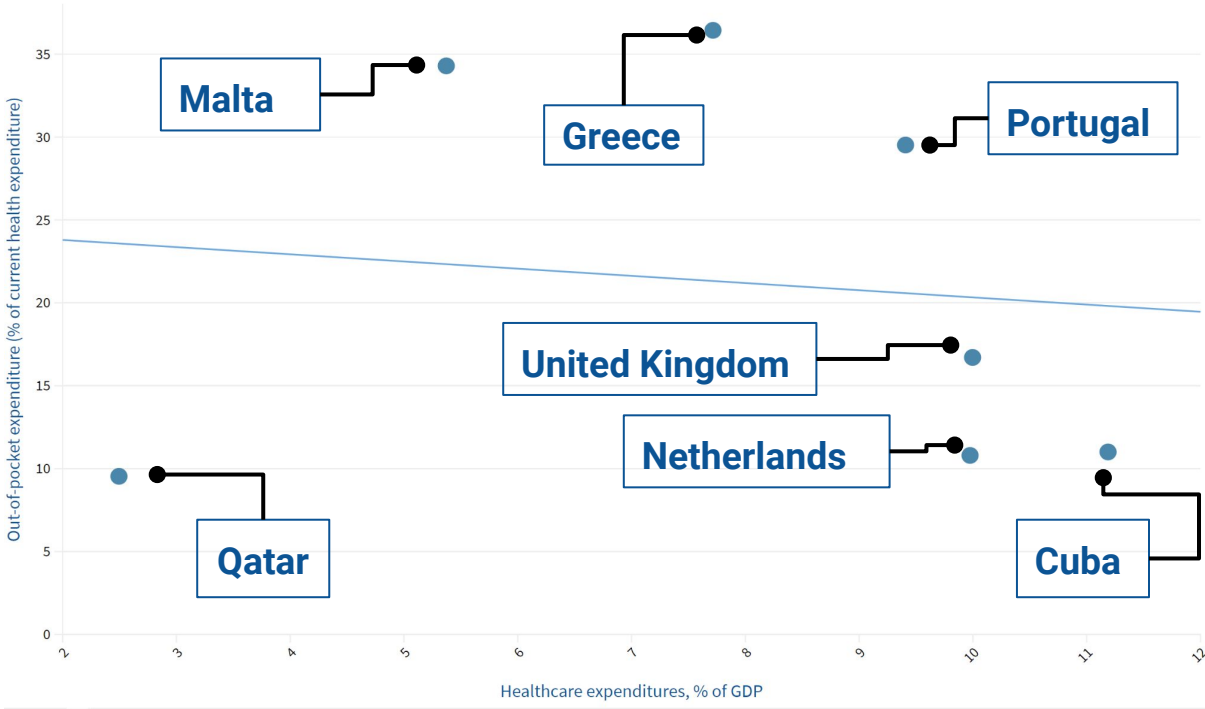


- The Healthcare Access and Quality Index -2016:
82
- Human Development Index, 2019:
0.85
- E-Government Development Index, 2019:
0.72
- Corruption Perceptions Index, 2019:
63
- Global Gender Gap Index, 2019:
0.62
- Democracy Index, 2019:
3.19

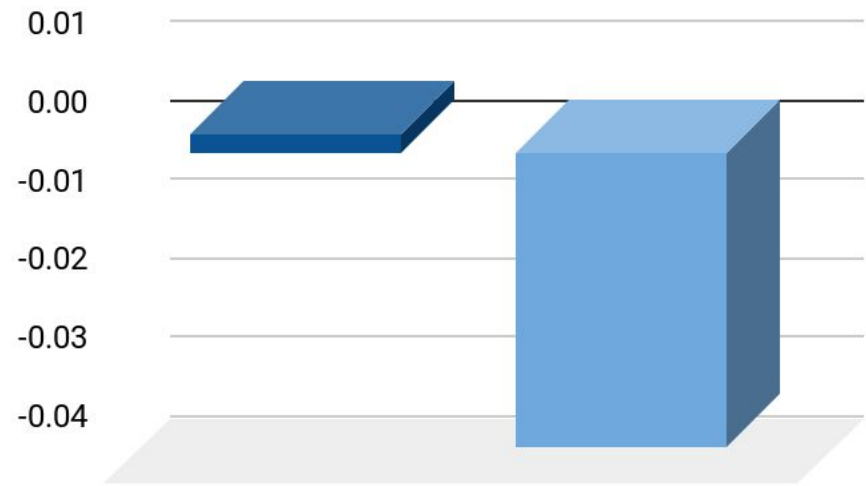
Current Healthcare Expenditure



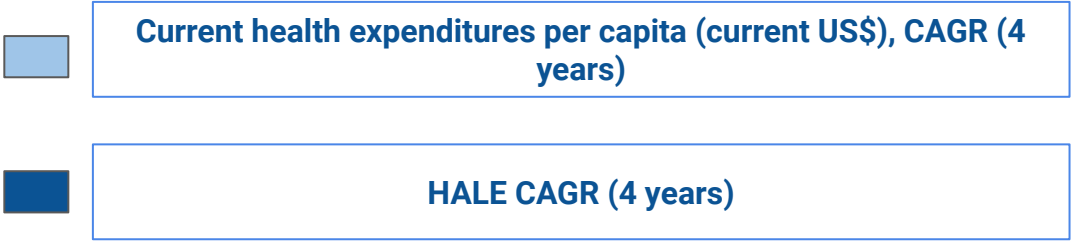
Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate



The government should focus on improvement of nutritions and promotion of healthy lifestyle, also pay attention to improvement of healthcare services and their accessibility to all income groups.

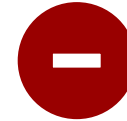


SWOT Analysis of Healthcare in Qatar



STRENGTHS

- The healthcare system is available to both Qataris and expatriates. Qatar has a public health service that provides free or highly subsidized healthcare.
- 19 million USD has been dedicated to biotechnology research with the creation of Qatar Science and Technology Park (QSTP).
- The World Health Organization (WHO) recently ranked Qatar at the top of the per capita health expenditure list among the Gulf Cooperative Council.
- There are now currently 36 hospitals and numerous clinics in Doha, the capital city. Health centers have also been set-up along the highways for ease of access.



WEAKNESSES

- The proportion of healthcare spending by the private sector has been steadily rising since 2003 from 17% to 22.55% in 2010.
- Medicine is heavily subsidized. For instance, a course of antibiotics for a government pharmacy costs 1.5 US dollar.
- There is need for more medical workers in primary health care.
- 69% of mortalities occur from chronic conditions, particularly cardiovascular diseases (24%), cancer (18%) and diabetes (7%).
- 70.1% of Qatari adults are overweight that is the additional burden of cardiovascular diseases on the health status of the population.



OPPORTUNITIES

- The Qatari government is aimed to improve the healthcare through developing state of the art medical facilities and medical education.
- The Supreme Council is focusing on health reform by the development of medical insurance, electronic record keeping and data collection, and improvements in quality assurance and evidence based medicine at its various hospitals.
- Complex reformation of the healthcare system to receive the outcomes that will allow to meet needs of the existing and future generations.



THREATS

- 43.9% of Qatari adults have low levels of physical activity that creates the challenge for the effective engagement of population in sports.
- 88% of Qatari children have dental caries that is the problem of weak preventive care in this healthcare's sector.
- Air pollution in Qatar vastly exceeds safe limits and is damaging the health of the population. Qatar has the second highest levels of PM2.5 particles in the world, behind Saudi Arabia.

Analysis of Strengths and Weaknesses of Health Care System in Qatar



- Seventy-seven percent of current healthcare expenditures are in the public sector.
- eHealth is currently widely used by the Qatari healthcare as the government hopes to develop a system that allows good data collection, quick processing and generation of useful insight.
- Qatari government uses the healthcare system vision that assumes the building of the patient-centered healthcare system whose main focus is population's health and well-being.
- Life expectancy for Qataris is 80.4 years and as of July 2017 less than 2% of the population are 65 years or older.
- At 65 years, women are expected to live a further 20.3 years, 14.3 of which are healthy. At 65 years, men are expected to live a further 18.7 years, of which 13.5 are healthy.



- There are relatively high levels of tobacco use among men that are 31.9% and children that are 13-15 years old (15.7%).
- Approximately 16% of patients with more than one chronic disease were readmitted at the emergency department within 28 days of discharge.
- Approximately 6% of total emergency admissions were patients with more than one chronic condition.
- Cardiovascular disease, diabetes, and cancer are the three top causes of mortality, accounting for 24%, 17%, and 9% respectively.
- Qatar is experiencing trends in aging similar to that of other developed countries and the proportion of older people is expected to grow.
- Qatar's polluted air is harmful for residents' health. Doha had the 12th highest average levels (93 ug/m³) of PM_{2.5} of all world cities. The town of Al Wakrah to the south ranked 25th on the same list (85 ug/m³).

Recommendations for Qatar

- **Creation of the patient-centered model of service delivery.** Patients health should be the most valuable asset for the government.
- **Utilizing the Artificial intelligence and Machine learning for simplifying the healthcare experience.** Artificial intelligence is the advanced technology that can reduce time and money spent on treatments through the intensive processing of the medication for patients with even more outstanding results. Machine learning is the additional tool for simplifying treatments with the help of progressive equipment supplied to the net of hospitals and clinics throughout Qatar.
- **Modifying the behavioural risk factors that sharpen most common non-communicable diseases.** If to look through the analyses of the health status and medical systems of developed countries the strong correlation between the wrong lifestyles and arising of the CDVs can be pointed out. Practically quarter of burden of chronic conditions is caused by the tobacco and alcohol use, bad dietary habits and low physical activity, so there is a crucial task for government to initiate campaigns aimed to reduce the negative impact of these risks on the health status of the population.
- **Adoption of the P4 clinics for the on time delivery of the preventive care.** Most deaths in Qatar generally can be avoided and are caused by diseases that are treatable in case of early diagnostics and efficient medications. This points out the need in P4 medicine when every person can receive individual healthcare.
- **Reduce socioeconomic inequalities in health at individual and population level.** Behavioural risk factors tend to be more common among people at a disadvantage because of a lesser education or lower income.
- **Tackle environmental problems.** It is known that air pollution has adverse effects on health and human life in general. The most Qatari GHG emissions is caused by energy consumption, it is very important to examine how one can reduce the GHG emissions to better improve the air quality without harming economic growth.



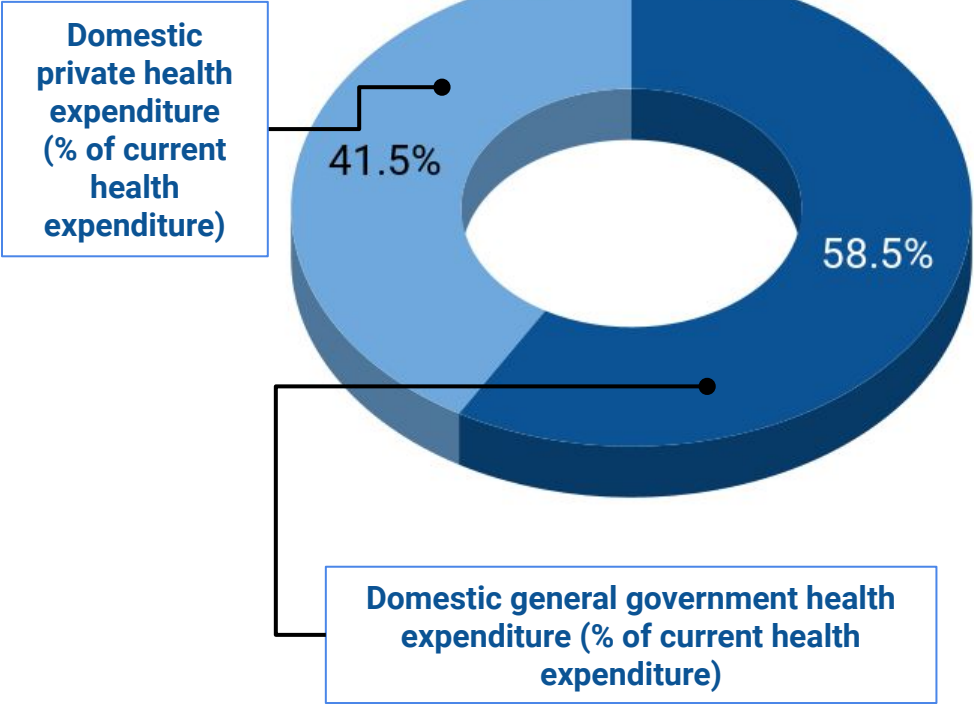
HALE	Both Sexes HALE, 2019	73.1 years
	HALE/Life Expectancy Difference, 2019	9.53
Economy	GDP per Capita, Current Prices, 2019	31.8 thousand (\$)
	Annual GDP Growth, 2019	2.04 %
Healthcare	Current Health Expenditure per Capita, 2019	2.5 thousand (\$)
	Public Health Care Expenditure, 2019	7.56 % of GDP
Retirement	Age Dependency Ratio, 2019	38.5
	Population over 65,, 2019	15.06 %
	Number of WHO Age Friendly Cities and Communities	11
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.7
	Annual Cigarette Consumption (Units per Capita), 2019	1667
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	4.7 % of adults

Longevity-Related Indices

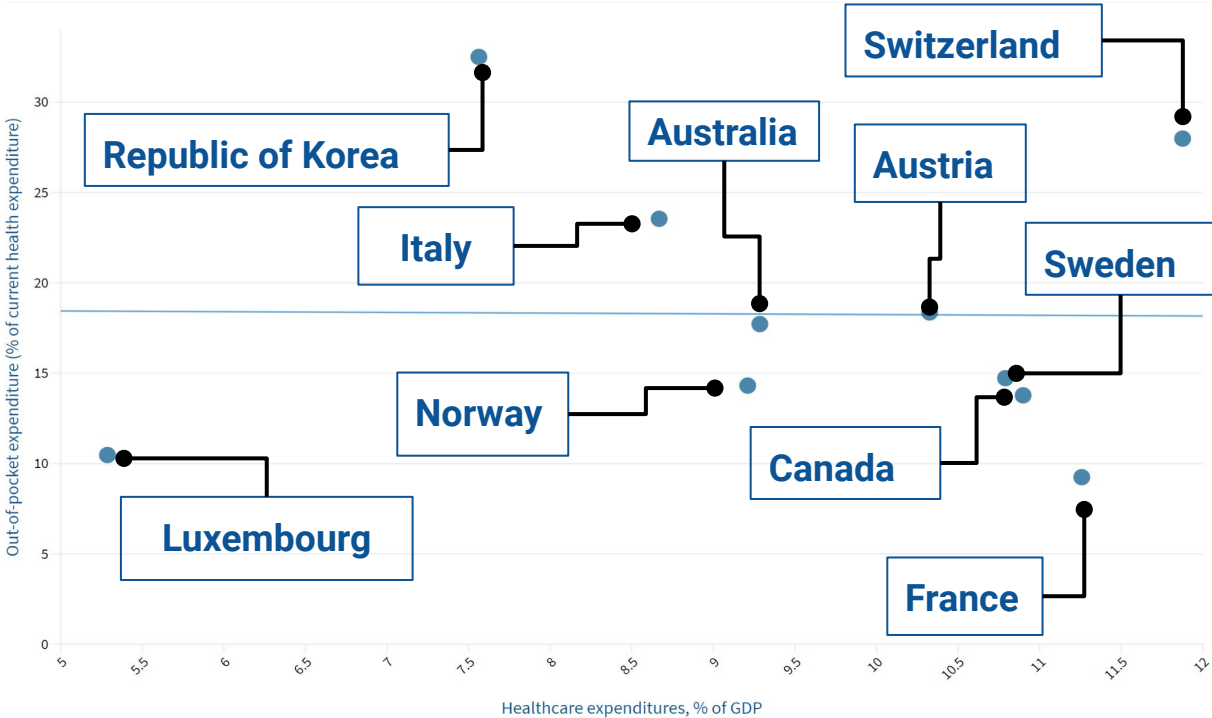


- The Healthcare Access and Quality Index -2016:
90
- Human Development Index, 2019:
0.92
- E-Government Development Index, 2019:
0.96
- Corruption Perceptions Index, 2019:
61
- Global Gender Gap Index, 2019:
0.69
- Democracy Index, 2019:
8

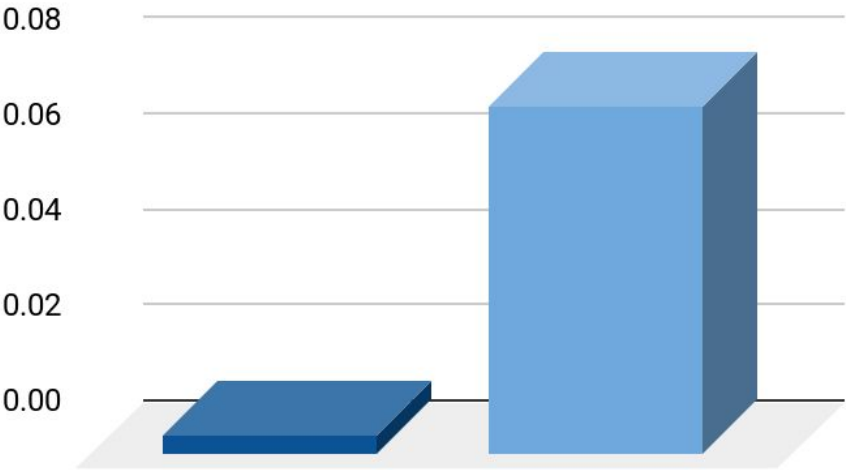
Current Healthcare Expenditure



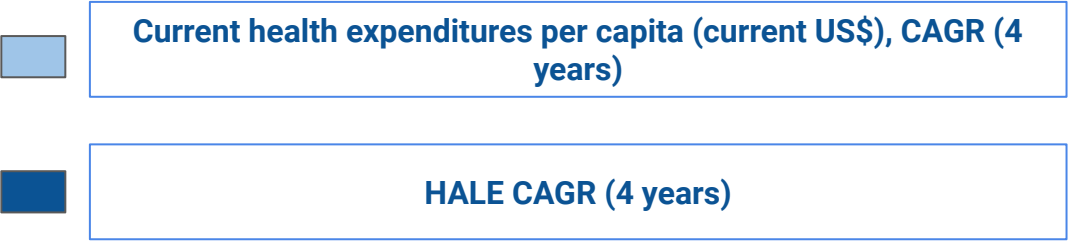
Countries with Low HALE and LE and High GAP



Compound annual growth rate



The government should address the following challenges to improve public health and increase average life expectancy: reduce inequality in health coverage outcomes, improve primary health care and coordination between hospitals and long-term care facilities, meet the needs of the aged population.

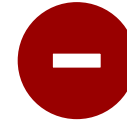


SWOT Analysis of Healthcare in Republic of Korea



STRENGTHS

- The South Korean health care system has developed quite successfully in several dimensions. Achieving universal health insurance coverage within a very short period was an unprecedented outcome.
- Average life expectancy has increased consistently: while women's life expectancy at birth was 66.7 years in 1970, it grew to 82.4 in 2006, much higher than the world average.
- The infant mortality rate, which is frequently quoted as an index of health care conditions in a country, was 23 per 1000 live births in 1985, but dramatically decreased to 4.7 in 2005.
- The crude death rate decreased to 5 persons per 1000 in 2006.



WEAKNESSES

- In 2013, the share of OOP spending allocated to medical care is 1.7 times higher in Korea than the OECD average and it is the additional burden on the access to the healthcare system.
- 37% of health spending in Korea is financed directly by households.
- Korea has some of the highest levels of supply of hospital services amongst OECD countries and this overcapacity is the major quality issue for the Korean medical system.
- Avoidable admissions for chronic conditions are significantly above the OECD average.



OPPORTUNITIES

- The system of health and welfare for the elderly with age-related disabilities has developed significantly since the launch of the long-term care insurance scheme in July 2008.
- Utilization of complementary and alternative medicine (CAM) is a traditional and important part of South Korea's health services framework.
- South Korea has one of the highest rates of computer and Internet access in the world that opens great opportunities for eHealth.



THREATS

- The suicide rate is the highest in the OECD.
- Tobacco is a major risk factor for at least two of the leading causes of premature mortality: cardiovascular diseases and cancer. One in five deaths among adults aged 30 years and over are attributable to tobacco in Korea.
- Diseases of the circulatory system explain 23.1% of total deaths, while neoplasms explain 27.3%.
- Tuberculosis is one of the most frequently appearing diseases. The incident rates of scrub typhus, mumps and malaria are also quite high.

Analysis of Strengths and Weaknesses of Health Care System in Republic of Korea



- The incidence of communicable diseases is declining in general, largely due to the development of health care technologies, enhanced knowledge about disease and improvements in living conditions.
- Incentives for customer-oriented providers are available. Providers who treat patients in the evenings and at weekends are entitled to claim higher fees than the fees charged during regular working hours.
- There were a total of 593 long-term care hospitals in 2007, a 54% increase from the previous year.
- Government encourages facilities to utilize the advanced technologies and equipment in health effectively and intensively through the limit for their supply. Though the number of big-ticket technologies has increased continuously over the past 15 years.
- The number of all categories of health care personnel has grown continuously.

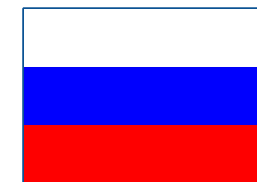


- Korea reports the third highest excess mortality rates from schizophrenia and bipolar disorder across OECD countries.
- The distribution of alcohol drinking is heavily concentrated. In Korea, the heaviest-drinking 20% of the population drink 66% of all alcohol.
- The share of GDP allocated to health spending (excluding capital expenditure) in Korea was 6.9% in 2013, compared with an OECD average of 8.9%
- Reduced fertility rates led to an increasing aging population. As a result, increasing health costs require additional measures to improve health equity and strengthen health promotion.
- Public sources accounted for 56% of overall health spending, well below the OECD average.
- Services are mainly delivered by the private sector. Nearly 90% of doctors were involved in private facilities that is the additional limitation for the access to the healthcare system.

Recommendations for Republic of Korea

- **Continuously generate the patient-centred medical system to provide universal coverage to achieve outstanding patients' outcomes.** Personalized health care is an integral part of a dynamic new trend that takes into account a person's environment, lifestyle, diet, values and lifelong medical data. With this approach, citizens themselves are called upon to play a more active role. Personalized medicine is suited to meet challenges of chronic diseases and ageing.
- **Focus on health status of elderly.** Appropriate health interventions are necessary to address different healthcare issues of ageing population, including specialized treatment programs, regenerative medicine and care support initiatives. Great attention should be paid to supply of advanced gerontological services.
- **Utilizing Artificial intelligence and Machine learning for simplifying the healthcare experience.** Artificial intelligence is the advanced technology that can reduce time and money spent on treatments through the intensive processing of the medication for patients with even more outstanding results.
- **Modifying the behavioural risk factors including obesity, smoking and alcohol consumption.** If to look through the analyses of the health status and medical systems of developed countries the strong correlation between the wrong lifestyles and arising of the CDVs can be pointed out. Practically quarter of the burden of chronic conditions is caused by the tobacco and alcohol use, bad dietary habits and low physical activity, so there is a crucial task for the government to initiate campaigns aimed to reduce the negative impact of these risks on the health status of the population.
- **A smooth shift from the "sick care" to the preventive one** that lies in the broaden utilization of "precision medicine" aimed to tackle symptoms of the most common communicable diseases and their consequences reflected on the mortality rates of the population. Precision medicine alls offers advanced onset on the early biomarkers of ageing to slow down their negative impact on patient's organism and to elongate his lifespan.

Russian Federation



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General metrics

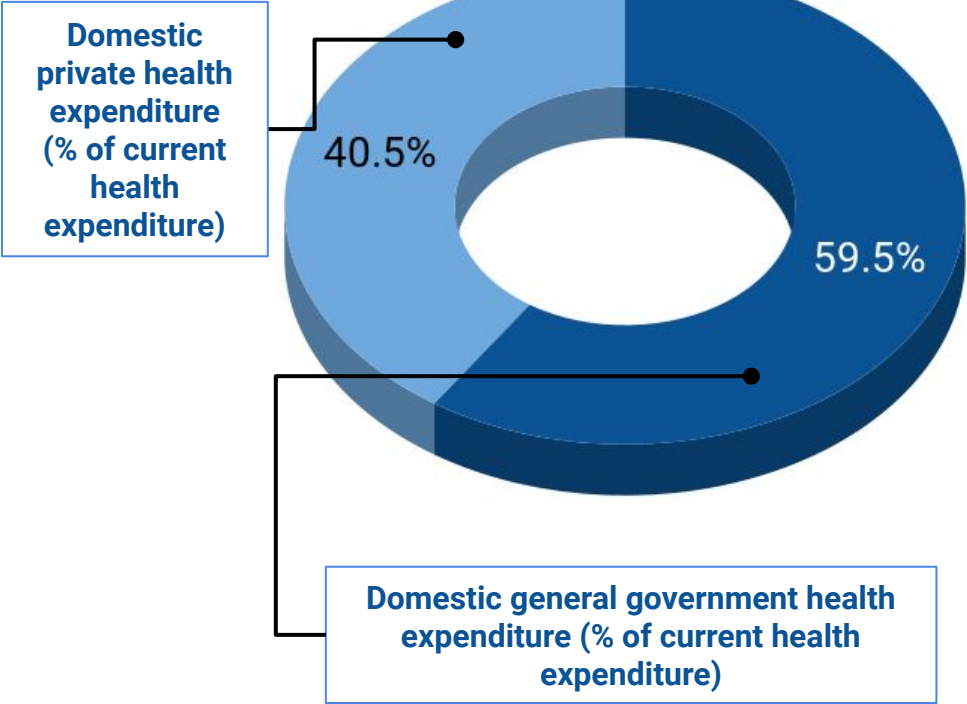
HALE	Both Sexes HALE, 2019	64.2 years
	HALE/Life Expectancy Difference, 2019	8.46
Economy	GDP per Capita, Current Prices, 2019	11.5 thousand (\$)
	Annual GDP Growth, 2019	1.34%
Healthcare	Current Health Expenditure per Capita, 2019	0.609 thousand (\$)
	Public Health Care Expenditure, 2019	5.32 % of GDP
Retirement	Age Dependency Ratio, 2019	49.8
	Population over 65,, 2019	15.09 %
	Number of WHO Age Friendly Cities and Communities	8
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.9
	Annual Cigarette Consumption (Units per Capita), 2019	2295
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	23.1 % of adults

Longevity-Related Indices

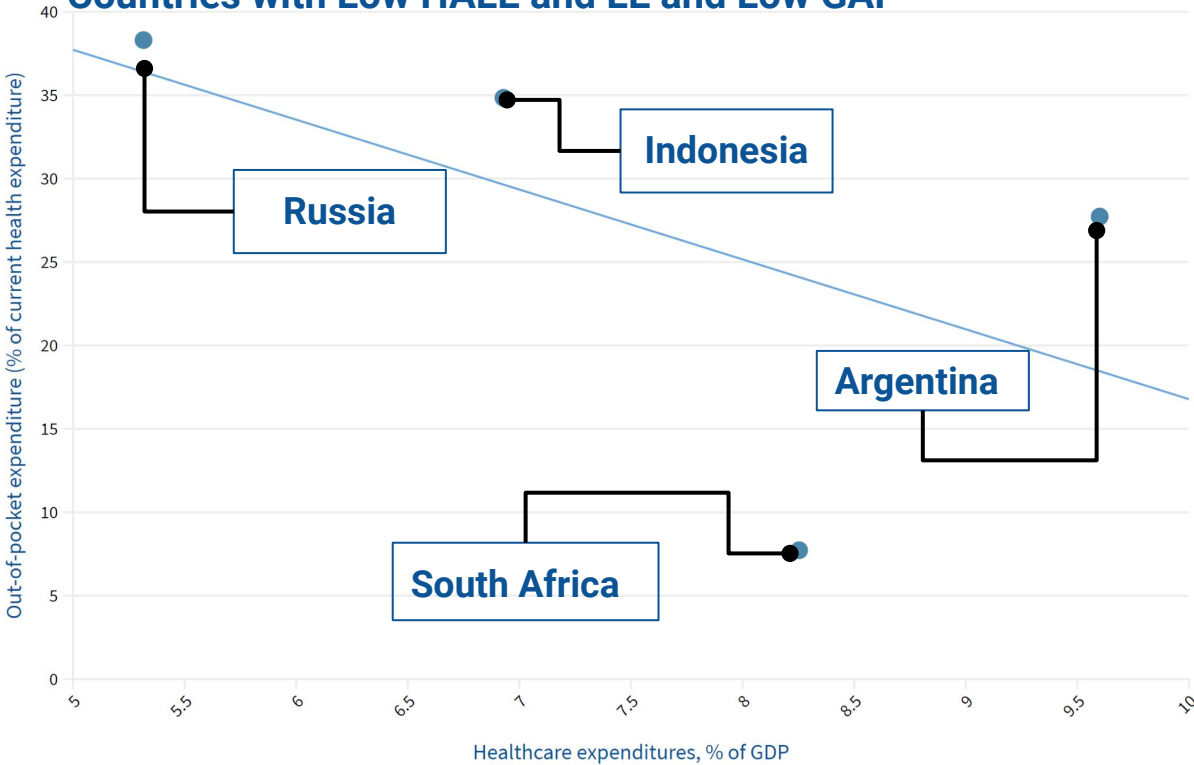


- The Healthcare Access and Quality Index -2016:
75
- Human Development Index, 2019:
0.82
- E-Government Development Index, 2019:
0.82
- Corruption Perceptions Index, 2019:
30
- Global Gender Gap Index, 2019:
0.71
- Democracy Index, 2019:
3.11

Current Healthcare Expenditure



Countries with Low HALE and LE and Low GAP



Compound annual growth rate



The general health of the Russian population has declined significantly since the collapse of the Soviet Union, as a result of several social, economic, and lifestyle changes. One of the problem that should be dealt with is poor quality of healthcare delivery. There is outdated and often non-functioning equipment, a lack of medicines and hospital beds, and a shortage of medical specialists.

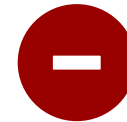
SWOT Analysis of Healthcare in Russian Federation

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STRENGTHS

- Over the past years mortality trends in the Russian Federation have been decreasing including for diseases of the circulatory system, tuberculosis, external causes of injury and poisoning.
- The country also made good progress in decreasing infant mortality.
- A number of social measures have been undertaken to support birth rate, including improvement in reproductive and maternal health.
- TB incidence and TB mortality decreased by 60% over the last 8 years.



WEAKNESSES

- Non-communicable diseases (NCDs), cardiovascular diseases (CVDs), cancer, pulmonary disease, and diabetes are the main causes (more than 75%) of death in Russia.
- Cardiovascular diseases are a leading cause of a premature death both in men and in women.
- Poor primary health care and universal health coverage.
- Lack of use of health information systems.
- Weak health workforce capacity.
- Alcohol consumption as one of the main factors contributing to variation in the gender gap in life expectancy in the Russian regions.



OPPORTUNITIES

- The Russian Federation became a donor country and plays a growing role in international health cooperation.
- Accumulate efforts and undertake initiatives to reduce alcohol consumption. Reduction in alcohol abuse could also bring other social benefits. Social policy aimed at reducing alcohol consumption should be vigorously reinforced during an economic recovery.
- Launch of modernisation of equipment in public hospitals.
- Utilize opportunities of AI and other advanced technologies to make the treatments cost- and outcome-effective.



THREATS

- Macroeconomic instability, high unemployment rate, socioeconomic inequality contribute to rising prevalence of unhealthy behaviours.
- Tendencies to the ageing of population, dramatic ecological situation and lack of medical infrastructure have a bad impact on longevity.
- High level of corruption in healthcare
- Inefficiency of healthcare financing.
- Lack of medical facilities in remote areas contributes to health status disparities across regions.

Analysis of Strengths and Weaknesses of Health Care System in Russian Federation



- The government is seriously committed to control of infectious diseases through public health measures, and has brought down rates substantially from the 1990s.
- Access to free emergency medical care appears to be universal.
- The system has prioritized the needs of newborns, mothers and young children.
- The recent initiation of “healthy lifestyle” programmes represents a progressive move toward a preventive rather than a curative approach to health care.



- Lack of financial resources in the health care system, which in turn, generates a number of negative consequences: the low salaries of medical personnel, problems of providing the population with free medicines, absence of the possibility of compliance with treatment standards and providing hospitals with modern equipment.
- Deficit and suboptimal quality of medical personnel. A shortage of medical personnel, first of all, is associated with low payment for their work, it is 22% lower than the average salary in the Russian Federation and almost 10 times lower than in developed countries.
- Inequalities in distribution and access to health services contribute to the Russian system’s poor performance and inefficiency. These inequalities are inter-regional, urban–rural, income-based, and social inclusion/exclusion.
- The demographic problem is still urgent due to the projected reduction in the number of women of active reproductive age and growth of the elderly population.
- Low level of information technologies in health care.

Recommendations for Russian Federation

- **Initiate certain reforms to enhance the healthcare system of Russian Federation** to create a room for the issues of the long-livers in the strategical onset on the risky factors that slack the longevity expansion in the country. The reason for the low focus on the problems of elders is grounded in the weak performance of the fundamental healthcare system. That's why there is no acute strategic plan on how Russian Federation will withstand the impending silver wave that will create the burden on the overall economic growth of the country and will put a pressure on the long-term care sector of medical system.
- **Launch of modernisation of equipment in public hospitals.** Most of public sectors' establishments have not up-to-date equipment that reflects on quality of treatment. Basically only surgery provided by private clinics is on top position in Russian Federation but other types are not so progressive especially if to speak about public hospitals. This is also the question about additional investments and economic reform.
- **Increase spending on the healthcare needs to resolve the question of the medical services accessibility.** Narrow set of services offered by the public sector opens an issue for the effectiveness of the Russian Federation's medical system in struggling with the life-threatening conditions that predominantly occur with aged population. These situation inputs additional risk for the premature deaths and arises the tendency for plateauing of the lifespan.
- **Combat with corruption and bureaucracy in healthcare.** Corruption is a major reason of high administrative costs and wasteful healthcare expenditures in clinical care, operational activities and governance. It results in long waiting periods, unmet needs of population and high level of satisfaction of healthcare system performance in general.
- **Develop and implement quality standards for long-term care** (LTC) by working with providers and local governments since a lack of indicators holds back efforts to improve services.



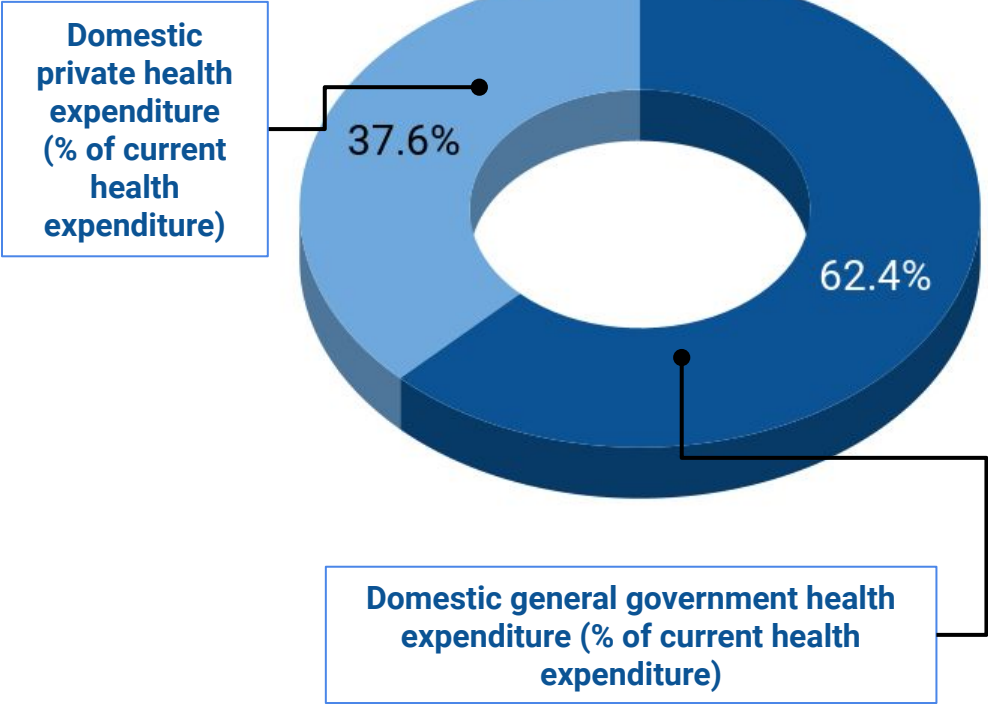
HALE	Both Sexes HALE, 2019	64 years
	HALE/Life Expectancy Difference, 2019	11
Economy	GDP per Capita, Current Prices, 2019	21.12 thousand (\$)
	Annual GDP Growth, 2019	0.33 %
Healthcare	Current Health Expenditure per Capita, 2019	1.48 thousand (\$)
	Public Health Care Expenditure, 2019	6.36 % of GDP
Retirement	Age Dependency Ratio, 2019	39.43
	Population over 65,, 2019	3.41 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	0.19
	Annual Cigarette Consumption (Units per Capita), 2019	1341
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	35.4 % of adults

Longevity-Related Indices

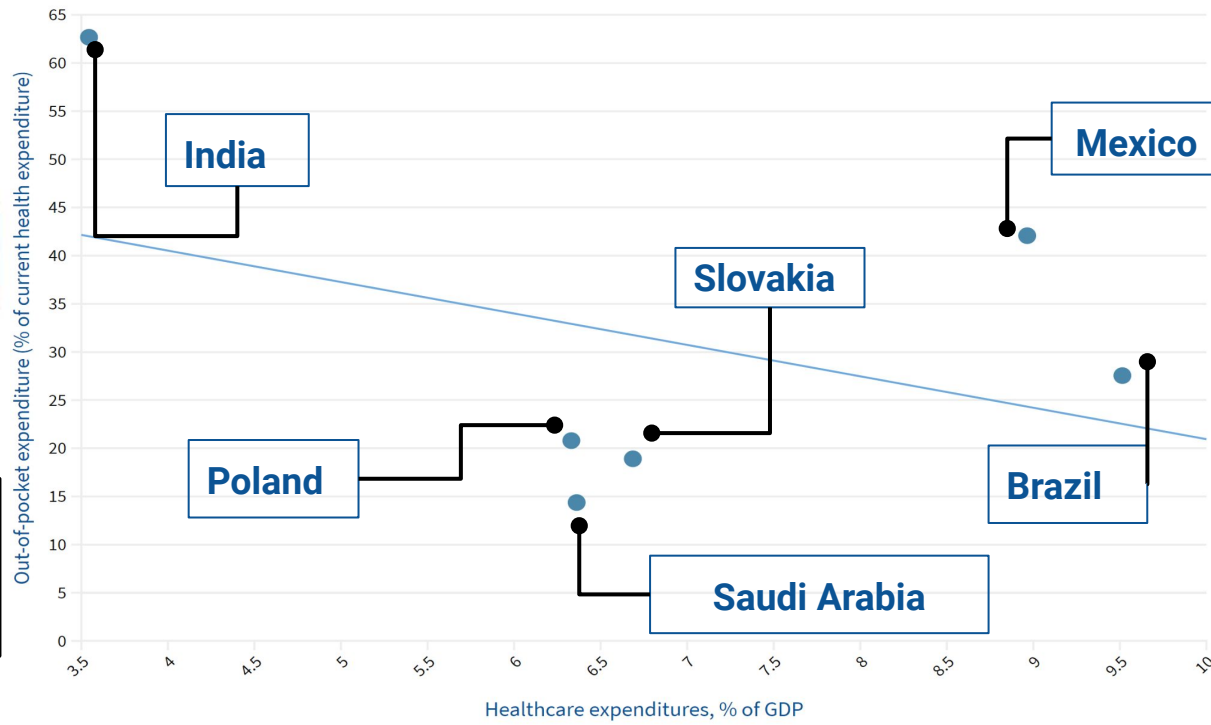


- The Healthcare Access and Quality Index -2016:
77
- Human Development Index, 2019:
0.85
- E-Government Development Index, 2019:
0.80
- Corruption Perceptions Index, 2019:
53
- Global Gender Gap Index, 2019:
0.6
- Democracy Index, 2019:
1.93

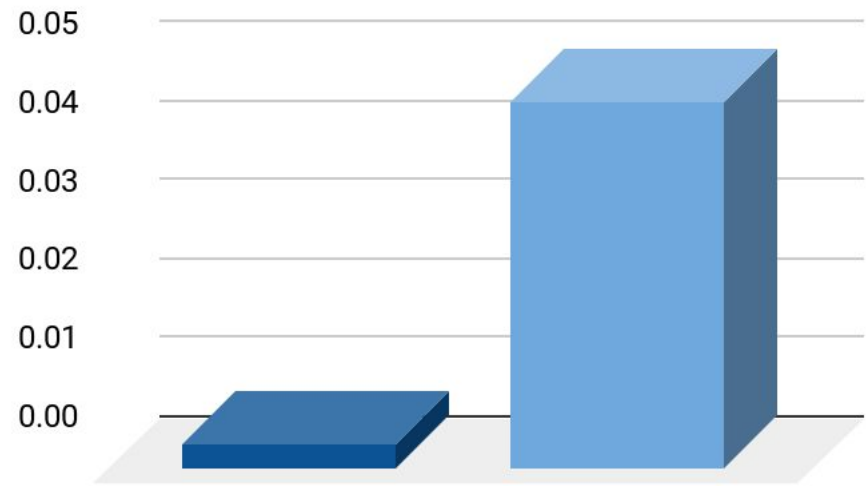
Current Healthcare Expenditure



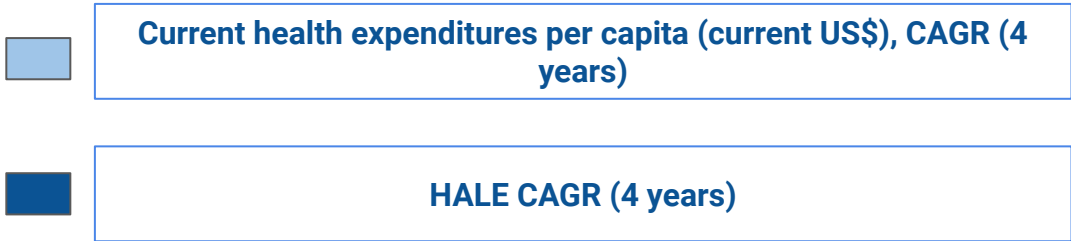
Countries with Low HALE and LE and Medium GAP



Compound annual growth rate



The country need to reduce disparities in health and health care systems between poorer and richer families and underfunded health care systems that in many cases are inefficiently run and underregulated.

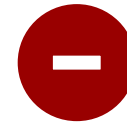


SWOT Analysis of Healthcare in Saudi Arabia



STRENGTHS

- Between 2010 and, 2019 the number of doctors per 1,000 population increased from 2.4 in 2010 to 2.8. The ratio of nurses improved from 4.8 to 5.7 and number of beds per 1,000 population increased from 2.1 to 2.2.
- The overall decline in communicable diseases can be explained by the improvement in sanitation systems, nutrition, hygiene awareness and invention of more effective medicine.
- The creation of the Saudi Center for Health Information Exchange.



WEAKNESSES

- Overall, the three risk factors that account for the most disease burden in Saudi Arabia are high body-mass index, dietary risks, and high fasting plasma glucose.
- Non-communicable diseases are estimated to account for 73% of all deaths.
- Prevalence of overweight and obesity among adults is on the rise.
- Cardiovascular diseases are the leading causes of death and accounts for 37% of total deaths in, 2019.
- Inequality in health outcomes across different socioeconomic groups.



OPPORTUNITIES

- Government continues its efforts in developing various medical cities with the private sector investment using various Public Private Partnership (PPP) models.
- Increasing the availability of a skilled workforce in healthcare is also emerging as a significant focus for country.
- Utilizing information technology to offer management solutions related to cost, quality, access and resources.
- Owing to the large population in the KSA and high occupancy rates of the hospitals, the country requires more primary care clinics and medical centers to meet the demand of the rising population.



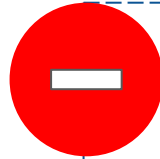
THREATS

- Air pollution in Saudi Arabia vastly exceeds safe limits and is damaging the health of the population. Qatar has the first highest levels of PM2.5 particles in the world.
- SEcurity issues relation to patients' information.
- Lack of regional experience and references in the field of eHealth.
- Shortage of Saudi health professionals, effective partnership between patients and their healthcare providers, changing patterns of disease, high demand resulting from free healthcare services for all citizens

Analysis of Strengths and Weaknesses of Health Care System in Saudi Arabia



- The Saudi Arabian government provides free access to a number of health care services to all community members and also to the emigrants working in the country.
- The government is diverting the funds towards creating a robust healthcare infrastructure by building new hospitals.
- Good access and effective care are for certain services including: immunization, maternal health care, and control of epidemic diseases.
- Creation e-health record.



- The health care system still experiences certain challenges in terms of lack of coordination and cohesion among the various health enterprises. These challenges often lead to wastage of resources and duplication of data and effort.
- Because of the enormous changes in the lifestyle of Saudis in the last three decades, the risk factors of coronary heart disease (CHD), including physical inactivity, are increasingly becoming prevalent in the society.
- There is the need for further improvement in the quality of healthcare in university hospitals.
- Poor access and effectiveness are for chronic disease management programs, prescribing patterns, health education, referral patterns, and some aspects of interpersonal care including those caused by language barriers.
- Saudi Arabia is experiencing trends in aging similar to that of other developed countries and the proportion of older people is expected to grow.
- Inequality in health outcomes, and access to health services and their utilisation due to socioeconomic status (SES) is a common theme in health research and policy intervention.
- Social norms and conservative religious beliefs have a powerful effect on women's lives and health in Saudi Arabian society.

Recommendations for Saudi Arabia

- **Prioritise the dealing with a number of healthcare burdens** . Some the same as in many other parts of the world – like rising incidence of heart disease and cancer – and coping with them with innovative use of technology, partnerships and initiatives.
- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** Saudi Arabia is tackling more unusual challenges, such as a high incidence of congenital diseases due the large number of consanguineous marriages, as well as an explosion in the prevalence of obesity and metabolic syndrome due to a rapidly changing lifestyle to one that is more affluent and sedentary.
- **Consideration of age and sex distribution when planning and implementing health services.** The United Arab Emirates has a rapidly growing population with a unique age and sex distribution. There is an unusually high proportion of young people and expatriates of working age, small numbers of older persons and rapid year on year growth due to high net in-migration.
- **Combat gender inequity.** The traditional Arab family affects women’s health in multiple ways. Finances are strictly the man’s obligation. Young women are assigned the toughest household tasks. Marriage and motherhood are highly valued, but the pressure to produce sons is strong. Poor relationships with fathers and history of abuse during adolescence can lead to depressive symptoms in girls. There is an inverse relationship between the number of children a woman has and her education, income and age at marriage.
- **Improve the service quality and prevention care.** The paradigm shift from sick care to preventive medicine is focused both on longevity and quality of life. The government should establish an effective referral system to ensure equity and access to the population irrespective of their location of residence, income, education, and social status and age.



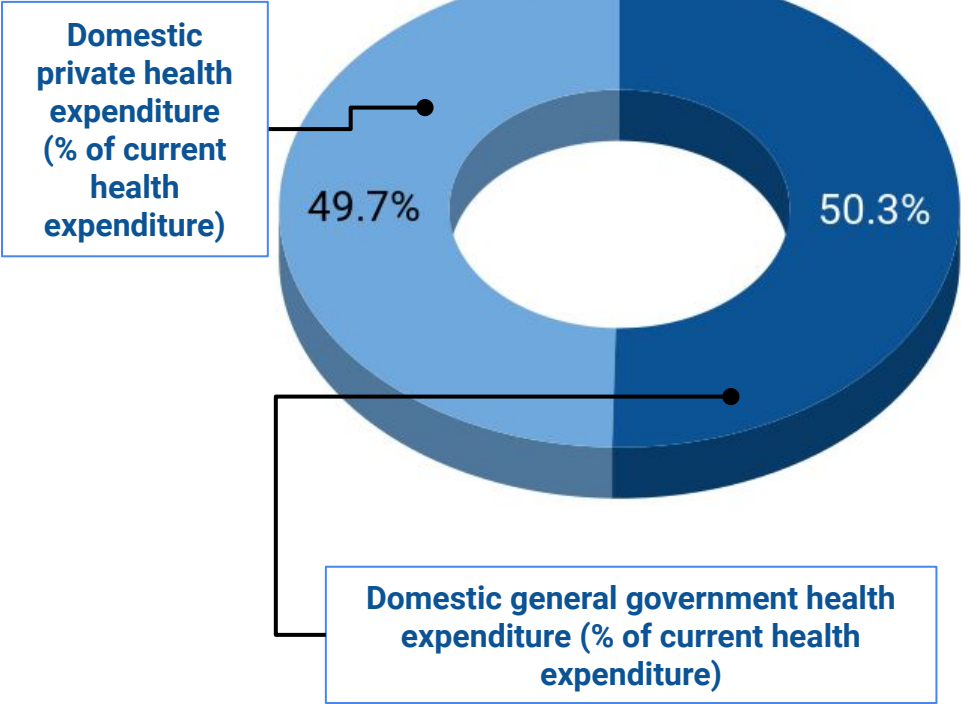
HALE	Both Sexes HALE, 2019	73.6 years
	HALE/Life Expectancy Difference, 2019	9.5
Economy	GDP per Capita, Current Prices, 2019	65.23 thousand (\$)
	Annual GDP Growth, 2019	0.73 %
Healthcare	Current Health Expenditure per Capita, 2019	2.82 thousand (\$)
	Public Health Care Expenditure, 2019	4.46 % of GDP
Retirement	Age Dependency Ratio, 2019	32.85
	Population over 65,, 2019	12.39 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	2
	Annual Cigarette Consumption (Units per Capita), 2019	851
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	6.1 % of adults

Longevity-Related Indices

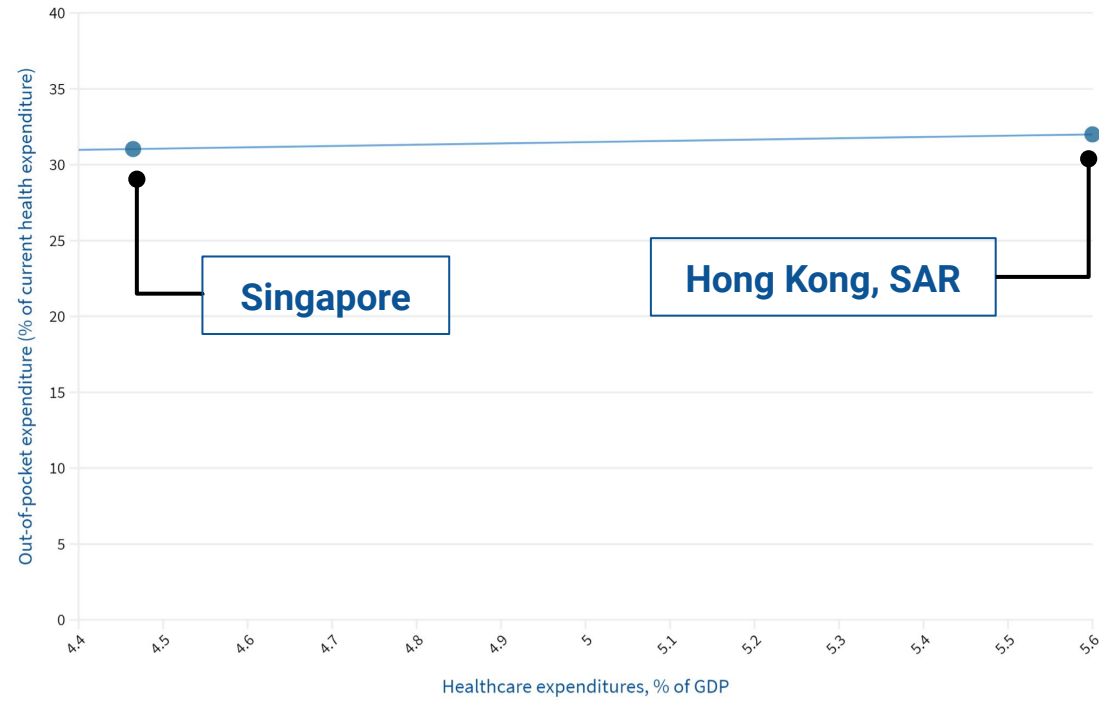


- The Healthcare Access and Quality Index -2016:
91
- Human Development Index, 2019:
0.94
- E-Government Development Index, 2019:
0.92
- Corruption Perceptions Index, 2019:
85
- Global Gender Gap Index, 2019:
0.73
- Democracy Index, 2019:
6.02

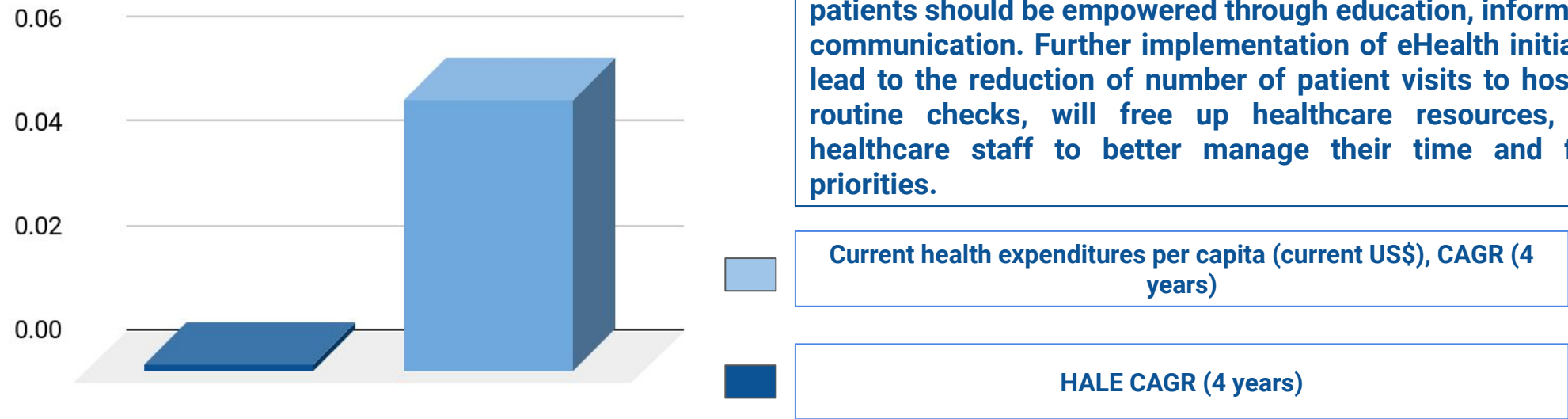
Current Healthcare Expenditure



Countries with high HALE and LE and small GAP



Compound annual growth rate



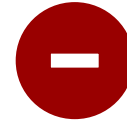
Chronic disease care is a critical part of a people's health. The patient should be persuaded about exercise, diet and lifestyle change: all important for chronic disease control. Caregivers and patients should be empowered through education, information and communication. Further implementation of eHealth initiatives will lead to the reduction of number of patient visits to hospitals for routine checks, will free up healthcare resources, enabling healthcare staff to better manage their time and focus on priorities.

SWOT Analysis of Healthcare in Singapore



STRENGTHS

- There is a single electronic health record (EHR) in use across the whole country, which makes everything very well-tuned.
- Developed healthcare infrastructure comprises a combination of public 'polyclinics' and hospitals and private medical clinics and hospitals to provide high quality treatment.
- Deliver care to people, focusing on quality, efficiency and cost.
- Developed universal healthcare coverage. Coverage is funded through a combination of government subsidies and private individual savings.



WEAKNESSES

- Healthcare system relies heavily on institutions.
- Certain life-saving procedures result in some of the highest hospital bills that even insurance protection can not fully alleviate.
- Small population size that limits healthcare system potential.
- Despite subsidies long-term care is expensive.
- Out-of-pocket costs make up almost 37% of total healthcare expenditure in Singapore. This figure is almost 3 times as high as the high-income country average and 1.4x higher than the East Asia & Pacific average.



OPPORTUNITIES

- Favorable managing regulations and business environment
- Provision of subsidies to Singaporeans to reduce disparities and obtain treatment at private primary care providers.
- Building a sophisticated national electronic health record system, that collects, reports, and analyzes information to aid in formulation of policy, monitoring of implementation, and sharing of patient records.
- Utilizing their strength in the artificial intelligence industry for meaningful improvements in medical care.



THREATS

- The challenge of funding Singapore's escalating healthcare needs.
- Increasing competition for talent and labor.
- Increasing complexity and costs associated with advancing technology, equipment, treatment and training.
- The trend towards smaller nuclear families.
- Ageing places a great burden on many fronts including health infrastructure, insurance premiums, caregiving professionals and private finances.
- Environmental pollution problems.

Analysis of Strengths and Weaknesses of Health Care System in Singapore



- Singapore gets a lot of attention because of the way it pays for its health care system. What's less noticed is its delivery system. Primary care, which is mostly at low cost, is provided mostly by the private sector.
- Government control applies to public health initiatives. Officials began to worry about diabetes, so they acted. School lunches have been improved. Regulations have been passed to make meals on government properties and events healthier. In Singapore, campaigns have encouraged drinking water, and healthier food choice labels have been mandated.
- Singapore is in forefront of Longevity industry, applying advanced AI opportunities for healthcare and wellness.
- Relatively low level of obesity and decreasing level of overweight among adults. In 2017, 36.2% of Singaporeans aged 18 to 69 are overweight. This is a drop from 2010, when a national survey found 40.1% of adults were overweight.
- The polyclinics is focused on efficiency. They have been designed to process as many patients as quickly as possible.



- There is need to face illnesses that are more typical of this region. In Singapore, about one in five children suffer from asthma. While Singapore itself is not a significant producer of air pollution, neighbouring countries Malaysia and Indonesia still practice slash-and-burn agriculture, as well as intensive logging and heavy industrial manufacturing. This air pollution causes "smog cough", difficulty breathing, respiratory irritation and even asthma.
- Environmental conditions cause negative impact on health-adjusted life expectancy and life expectancy at birth itself. Singapore has high UV levels all year round due to its proximity to the equator, with the UV index (ranging from 0 to extreme levels of 11 and beyond) soaring as high as 9 in some months.
- Singapore has the second-highest proportion of diabetics among developed nations, with one out of nine Singaporeans between 18 and 69 years old being affected by the disease.
- Due to more sedentary lifestyles among Singaporeans, childhood obesity is on the rise.

Recommendations for Singapore

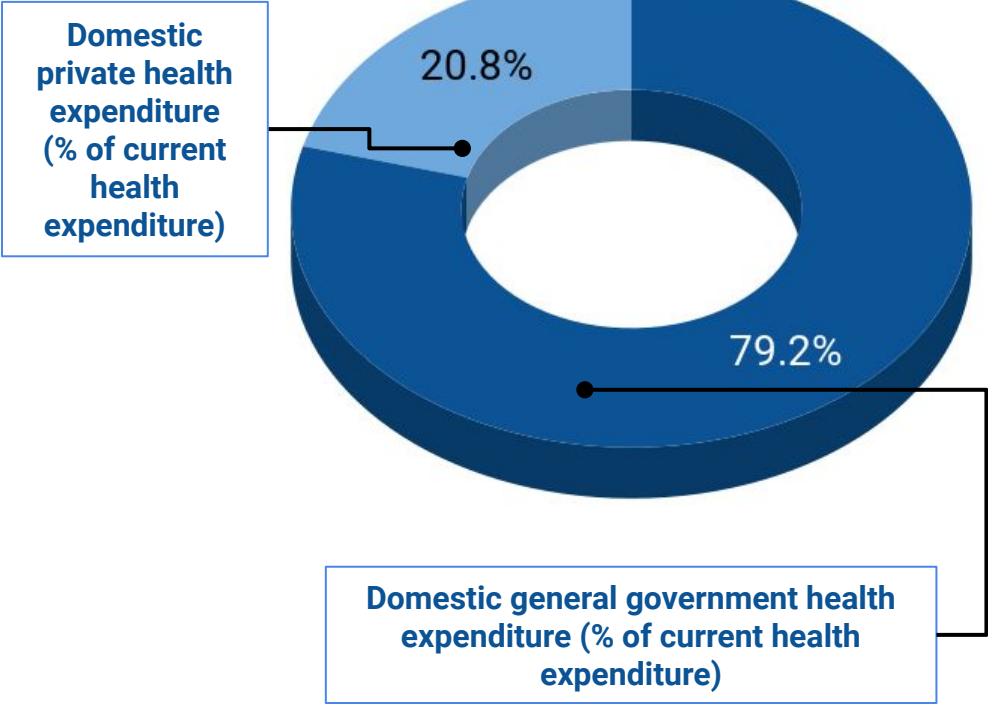
- **Minimising out-of-pocket medical costs.** Medisave forms only a very small part of total expenditures. The should ensure that basic services remain affordable for everybody.
- **Plan and implement developmentally appropriate programs in school-aged environments, encourage social media responsibility to maintain social network and develop inclusive society for elderly.**
- **Focus on health status of elderly.** Health status is one of the most important indicators of well-being, and it predicts a large proportion of societal expenditures on health and social services for the elderly. It depends on individual lifestyle factors, social and community networks, general socioeconomic. Health status is also reciprocally affected by social and political policies and programs.
- **There is a need to do a better job educating medical students and medical residents on how to adapt to an era of technology-enabled healthcare.**
- **Promote research and initiate a wider utilization of Artificial Intelligence for preventive medicine.** Research is vital in providing the knowledge needed to improve health outcomes and reduce inequalities.
- **Identifying and modifying or avoiding key risk factors for diseases, including diabetes, cardiovascular diseases and respiratory conditions.** It can be caused by lack of exercise, ageing, an unhealthy diet and environmental pollution. If left untreated, it may lead to more serious conditions such as kidney failure, coronary heart disease, blindness and even the need for amputations. Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of mortality factors.
- **Manage to maintain modest overall spending.** Singapore has to calibrate a developed portfolio of targeted tools to address specific problems to respond to aging in the coming years. The coordinated use of these tools ensures that healthcare providers compete on affordability and quality, and that total costs remain relatively low.

HALE	Both Sexes HALE, 2019	68.5 years
	HALE/Life Expectancy Difference, 2019	8.77
Economy	GDP per Capita, Current Prices, 2019	19.26 thousand (\$)
	Annual GDP Growth, 2019	2.32 %
Healthcare	Current Health Expenditure per Capita, 2019	1.299 thousand (\$)
	Public Health Care Expenditure, 2019	6.69 % of GDP
Retirement	Age Dependency Ratio, 2019	46.4
	Population over 65,, 2019	16.17 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.4
	Annual Cigarette Consumption (Units per Capita), 2019	1500
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	20.5 % of adults

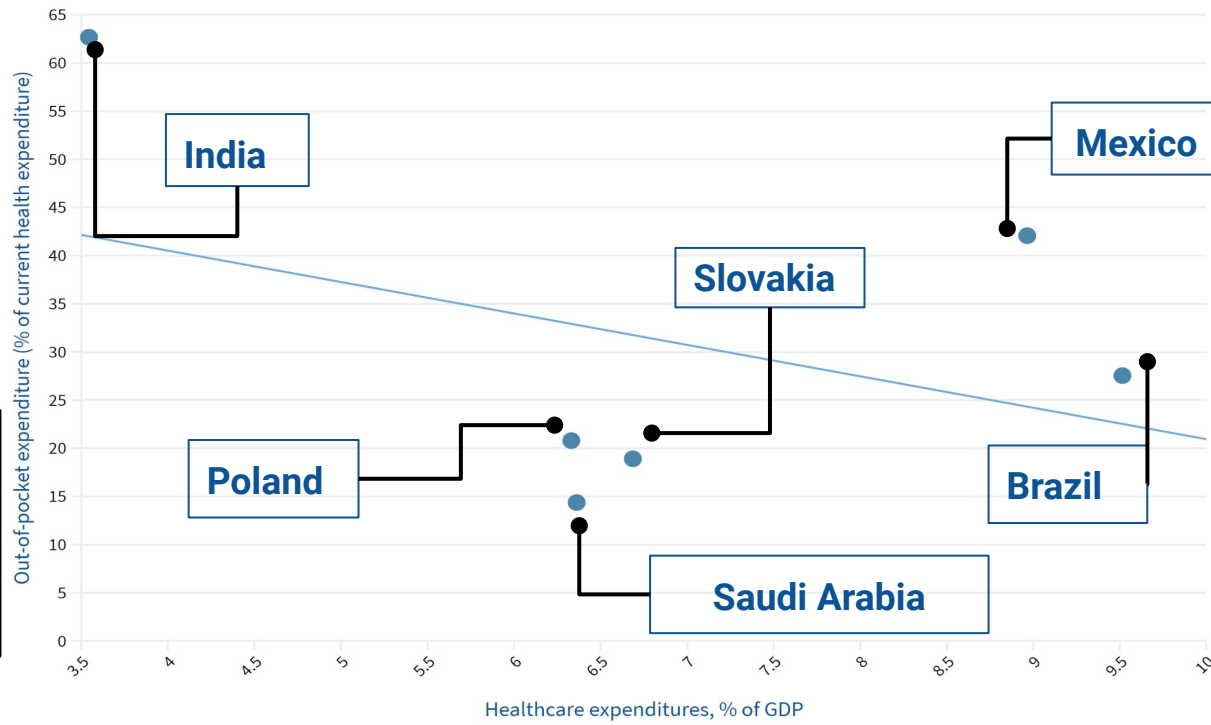
Longevity-Related Indices

- The Healthcare Access and Quality Index -2016:
83
- Human Development Index, 2019:
0.86
- E-Government Development Index, 2019:
0.78
- Corruption Perceptions Index, 2019:
49
- Global Gender Gap Index, 2019:
0.71
- Democracy Index, 2019:
7.17

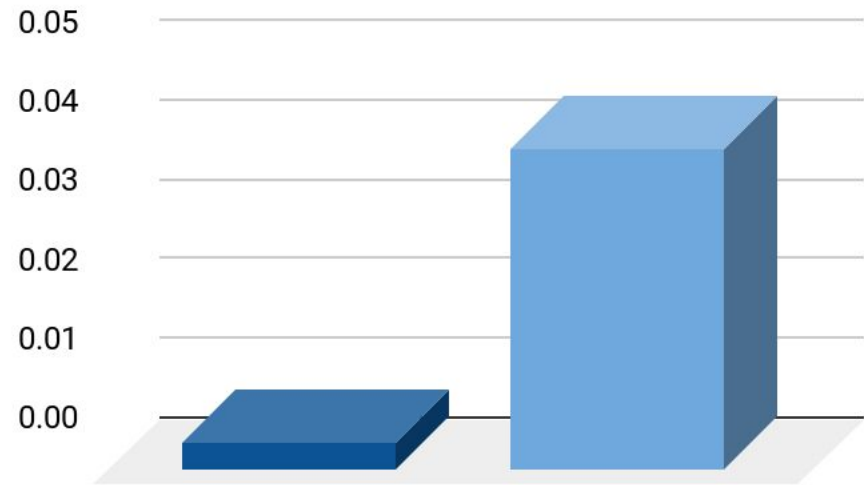
Current Healthcare Expenditure



Countries with Low HALE and LE and Medium GAP



Compound annual growth rate



The most pressing issues to be addressed are enhancing the efficiency and quality of primary care, modernising hospital infrastructure and management, promoting better care access for the poor population and improving lifestyles through well-designed public health and disease-prevention policies.

Current health expenditures per capita (current US\$), CAGR (4 years)

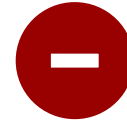
HALE CAGR (4 years)

SWOT Analysis of Healthcare in Slovakia



STRENGTHS

- Comprehensive healthcare legislation and institutional framework.
- National immunization plan in line with WHO recommendations, vaccination rate up to 95%
- Regular monitoring of health status, risk factors and recent surveys on social and economic health determinants; systematically published data and their accessibility.
- Risk factors for non-communicable diseases such as alcohol, tobacco consumption and overweight are comparable or below the EU average.



WEAKNESSES

- Lack of modern technologies in laboratories and IT equipment
- Gradual reduction of specialized PH employees, mainly physicians, due to poor financial remuneration and administrative changes, lack of experts in epidemiology (especially NCD), for health statistics and scientific health analyses
- Lack of directly allocated financial resources, coordination and synergic effect of implementation the existing health promotion and disease prevention programmes.
- A large gap in healthcare status exists by socioeconomic status.



OPPORTUNITIES

- There remains a substantial number of vacant physician job openings in the system.
- Start proper monitoring of population health and develop health policies based on actual population needs.
- Establishing information systems that collect meaningful data and holding health actors accountable.
- Improve diagnostic, prevention and treatment procedures.
- Strengthening primary care.
- Improving the cost-effectiveness of Slovakia's healthcare.



THREATS

- Intensive ageing of the population, which is manifested by the increase of the number of people of post-productive age and a reduction in the share of the population in childhood.
- There is inequity in the distribution of health providers, resulting in lengthy travelling distances and waiting times for patients.
- Outdated hospital infrastructure remains a challenge.
- There is an increasing outflow of (young) health personnel out of the Slovak health system due to migration, although exact data are lacking.
- Rising rates of overweight and obesity in children

Analysis of Strengths and Weaknesses of Health Care System in Slovakia



- Thanks to sustained economic growth, at almost 4% on average over the last two decades, living standards have been catching up with higher-income countries.
- While life satisfaction in the Slovak Republic is around the OECD average, work-life balance and social connections indicators are on average better than in other OECD countries. Inequality is comparatively low, and the relative poverty rate at 8.5% is below the OECD average of 11.7%.
- The government-defined benefit package is broad.
- Measures are in place to protect vulnerable groups, including payment ceilings for prescribed pharmaceuticals and tightened rules for extra charges by providers.



- Slovakia also struggles to improve prevention and public health efforts.
- Child immunisations rates are falling from previously high levels and Slovakia has very low cancer screening rates.
- Health outcomes in the Slovak Republic are unequally distributed across the country, both geographically and between population groups.
- The Slovak Republic has one of the highest hospital admission rates for asthma among OECD countries with **110 admission per 100 000 population**, more than twice the OECD average of 44 admissions. Hospital admission rates for diabetes and hypertension, as well as congestive heart failure are also high by international comparison.
- The Slovak Republic shows some of the highest mortality rates among OECD countries. Mortality from cardiovascular diseases is exceptionally troublesome. Rates for both ischemic heart and cerebrovascular diseases are the bottom end in OECD.

Recommendations for Slovakia

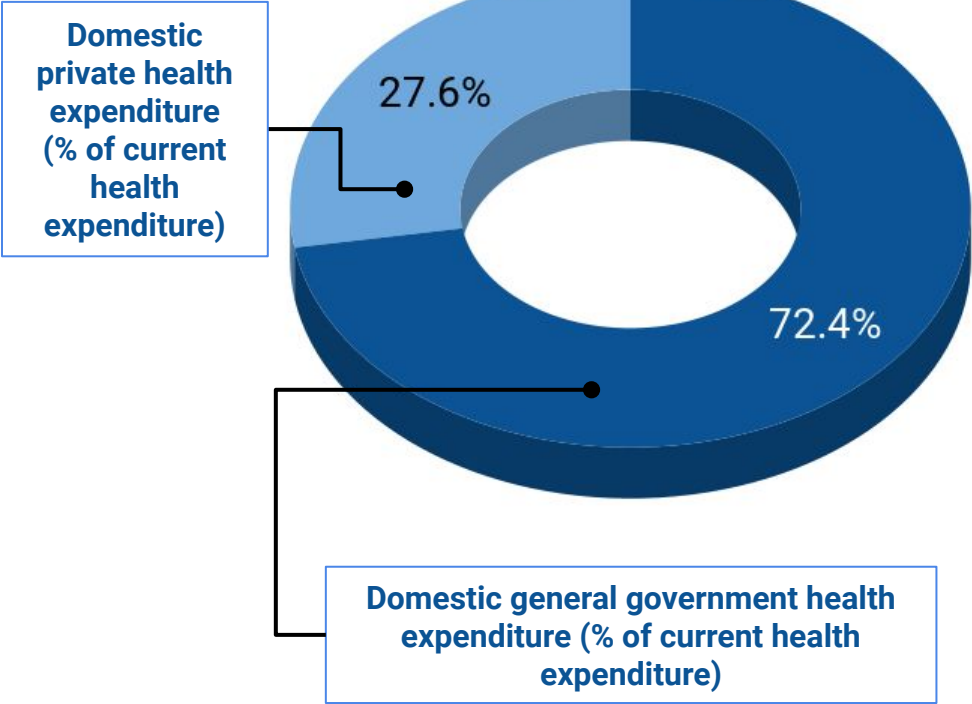
- **Expand its primary health care sector.** A core function of a strengthened primary care sector must be the effective management of patients with multiple, complex health care needs, including long-term conditions such as diabetes. The government should devise comprehensive approach to tackling diabetes, high blood pressure and other chronic diseases through public health programmes and public policy.
- **Modernise health promotion and disease prevention, and continue to reform hospital services.** Move from a hospital-centred system to providing more and better preventive services and primary care.
- **Reduce inequality in health outcomes across different socio-economic groups and large discrepancies across regions.** Address the poor health outcomes and their regional differences by implementing policies for more equitably distributed services. Health resources can become more available to underserved population groups and geographical areas.
- **Make medical professions more attractive.** The employment and remuneration conditions need to be improved to raise the attractiveness to work as a general practitioners, especially in rural areas. Adopt more and stronger policies to attract medical staff to regions outside the capital. This requires a broad set of actions, such as allocation of resources and incentives to retain old staff and attract new.
- **Strengthen the capacity to innovate and adopt new technologies in health care.** This includes better adapting the skills of the workforce to the changing needs of the labour market, enhancing the business environment, improving the transport infrastructure, stimulating firms' innovation capacities and addressing regional disparities in physical and information infrastructure.
- **Provide incentives for investments in home care services and private providers.** Due to the increasing population of the elderly and the abundance of chronic diseases, long-term care facilities are being continuously demanded by the market

HALE	Both Sexes HALE, 2019	70.7 years
	HALE/Life Expectancy Difference, 2019	10.68
Economy	GDP per Capita, Current Prices, 2019	25.9 thousand (\$)
	Annual GDP Growth, 2019	3.18 %
Healthcare	Current Health Expenditure per Capita, 2019	2.69 thousand (\$)
	Public Health Care Expenditure, 2019	8.3 % of GDP
Retirement	Age Dependency Ratio, 2019	54.5
	Population over 65,, 2019	20.19 %
	Number of WHO Age Friendly Cities and Communities	10
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.9
	Annual Cigarette Consumption (Units per Capita), 2019	2236
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	20.2 % of adults

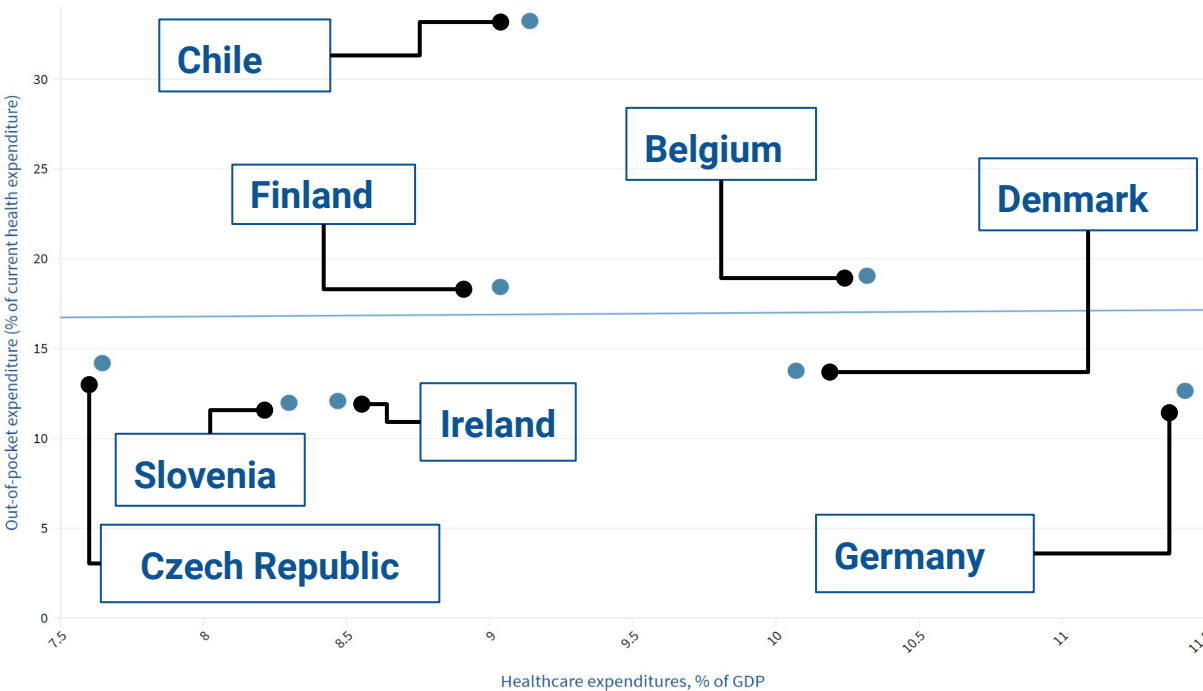
Longevity-Related Indices

- The Healthcare Access and Quality Index -2016: **91**
- Human Development Index, 2019: **0.92**
- E-Government Development Index, 2019: **0.85**
- Corruption Perceptions Index, 2019: **60**
- Global Gender Gap Index, 2019: **0.74**
- Democracy Index, 2019: **7.5**

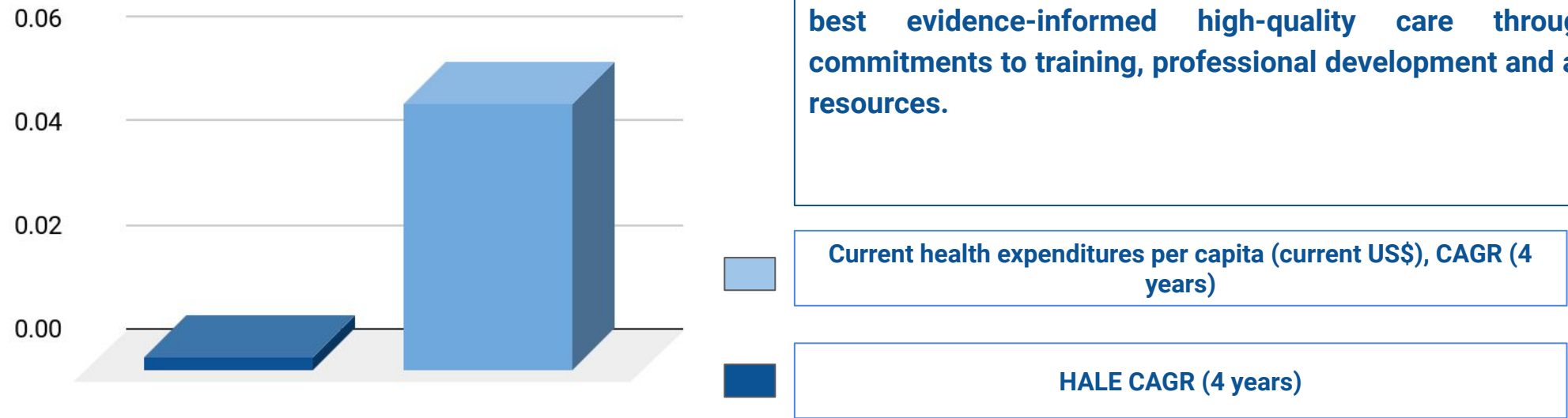
Current Healthcare Expenditure



Countries with medium HALE and LE and High GAP



Compound annual growth rate



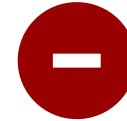
Medical workers must continue to be supported in delivering the best evidence-informed high-quality care through firm commitments to training, professional development and access to resources.

SWOT Analysis of Healthcare in Slovenia



STRENGTHS

- Slovenia's average life expectancy is above that of the EU and experienced one of its largest gains over the last two decades.
- Access to health services is good, with very low numbers reporting unmet needs for medical care and almost no variation between income groups.
- The Slovenian health system provides near universal coverage but there are extensive co-payments. To cover these, 87% of the population have voluntary health insurance and there is help for those who cannot afford it.



WEAKNESSES

- Waiting lists for specialised care remain a challenge.
- There continues to be a considerable gender gap with life expectancy at birth for women exceeding that of men by more than six years and inequalities across socioeconomic groups and between western and eastern Slovenia.
- The obesity rate among adults in Slovenia is higher than in most other EU countries despite reporting above average levels of physical activity.
- Slovenia has one of the lowest physician densities in the EU.
- There is a lack of coordination and integration across levels and sectors, causing discontinuity of care.



OPPORTUNITIES

- The digital transformation of the health and social care system. It is part of the ongoing commitment to introducing new technologies into the national healthcare system in order to reduce the burden on clinicians and to enable staff to provide enhanced levels of care.
- Shift from treatment to prevention will have a major impact on reducing both average length of stay in hospital and the number of hospital beds for acute care.
- Reforming healthcare system with focus on care delivery and extended access for effective prevention and advanced treatment.



THREATS

- The economic crisis revealed issues with the fiscal sustainability of the health system.
- There is a longstanding need to redesign the composition of health financing to ensure fiscal sustainability.
- Ageing of the population is a rising issue for healthcare and pension systems stability.
- Growing burden of non-communicable and chronic diseases as a result of rising concern on behavioral risk factors.
- Access to healthcare in Slovenia depends on an individual's status in the country.

Analysis of Strengths and Weaknesses of Health Care System in Slovenia



- In recent years several incentives were introduced to strengthen the provision of preventive services.
- The insured population enjoys a broad range of benefits. Compulsory health insurance does not define a comprehensive list of all benefits, nor does it explicitly exclude services from public coverage.
- Out-of-pocket spending is below the EU average. It has remained stable throughout the last decade and during the economic crisis.
- Slovenian healthcare has not been based on hospital treatment in the past, but has ever since established a good network at the primary level.



- Slovenia experienced moderate shortages within the health professional workforce, in particular regarding physicians and registered nurses but also, to a lesser degree, dentists and pharmacists.
- Lack of reliable data on health status and medical treatment.
- Less developed long-term care, which aim to develop an affordable, effective and sustainable response to the needs of a rapidly ageing population.
- Large majority of households using out-of-pocket payments are still not at risk of impoverishment
- Lack of healthcare system efficiency and sustainability of health system funding.
- Fragmentation of equal access as well as balanced coverage and provision of services across the country.
- Key problem of the healthcare system in Slovenia remains the dispersion of the organization and the provision of health services, which is an even greater challenge in terms of demographic changes and the health status of the population.
- In 2014, Slovenia ranked fourth in terms of mortality from suicide in the EU, with particularly high levels among men and large regional disparities between western and eastern Slovenia.

Recommendations for Slovenia

- **Engage healthy lifestyle.** There is rising concern on prevalence of overweight and obesity among adolescents and adults. One of the top priorities for government on the way to Healthy Longevity is to encourage a more active lifestyles through health promotion media campaigns and make physical activity an easier choice in the workplace; tighten regulations of food advertising to better protect children. The Slovenian government should aim of improving nutrition and physical activity for the whole population and from early life.
- **Solve the issues of inequalities across socioeconomic groups and regions.** Key problem of the healthcare system in Slovenia remains the dispersion of the organization and the provision of health services, which is an even greater challenge in terms of demographic changes and the health status of the population. The government should develop strategic plan to tackle health inequalities in terms of health outcomes, accessibility, affordability and distribution of healthcare resources.
- **Health records and linkage to survey data should be used more extensively** to refine disease prevalence estimates, and provide more reliable data to guide policy and programmes to address these causes of ill health.
- **Enhance long-term care.** Healthcare authorities should to strengthen primary care and provide greater access to comprehensive and quality treatment through better care integration and a more adequate professional skill-mix across care levels. These reforms should also help Slovenia to respond to the changing needs of an ageing population.
- **Enhance physical and information infrastructure.** The government should increase financing health infrastructure for hospitals and other facilities to deliver healthcare programs on a national level to all citizens in Slovenia. Such step may help to minimize number of unmet needs and increase accessibility of healthcare services for population.



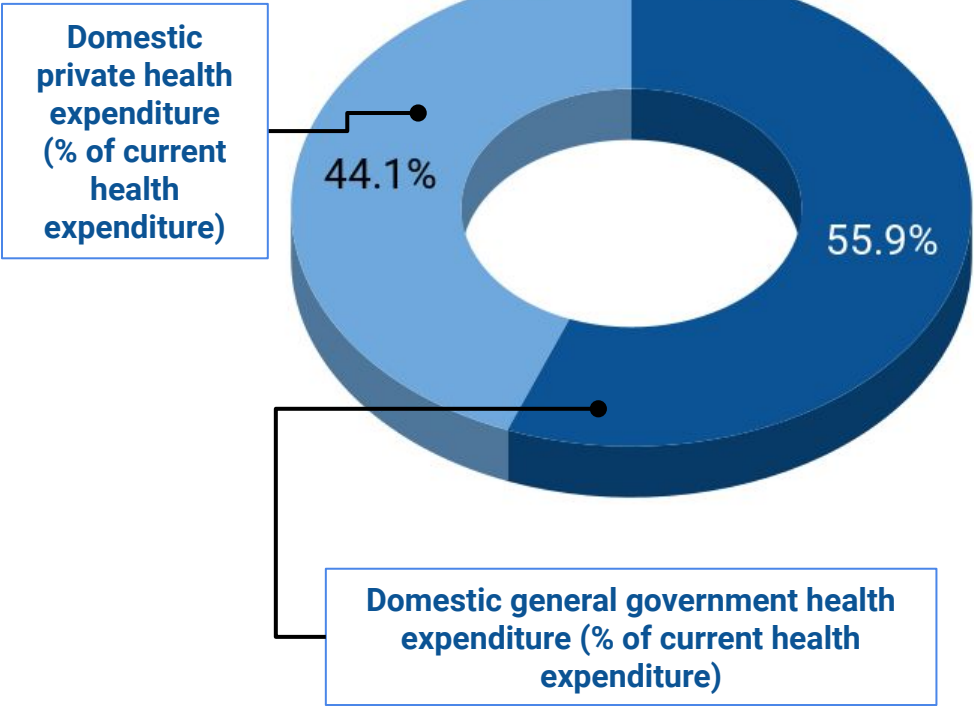
HALE	Both Sexes HALE, 2019	56.2 years
	HALE/Life Expectancy Difference, 2019	7.66
Economy	GDP per Capita, Current Prices, 2019	6.001 thousand (\$)
	Annual GDP Growth, 2019	0.15 %
Healthcare	Current Health Expenditure per Capita, 2019	0.52 thousand (\$)
	Public Health Care Expenditure, 2019	8.25 % of GDP
Retirement	Age Dependency Ratio, 2019	52.4
	Population over 65,, 2019	5.42 %
	Number of WHO Age Friendly Cities and Communities	0
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.52
	Annual Cigarette Consumption (Units per Capita), 2019	510
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	28.3 % of adults

Longevity-Related Indices

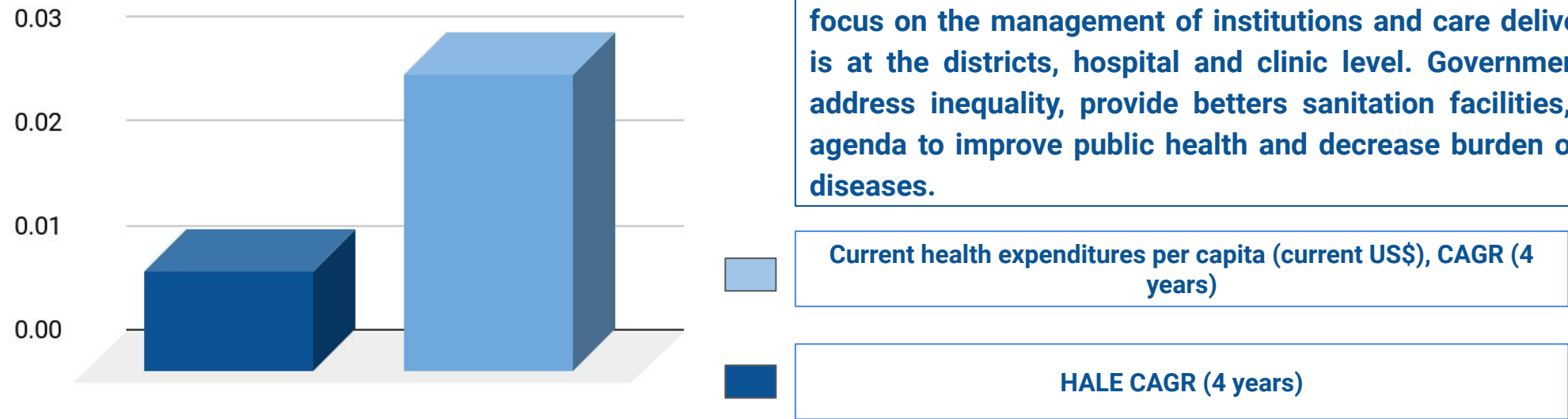


- The Healthcare Access and Quality Index -2016:
50
- Human Development Index, 2019:
0.71
- E-Government Development Index, 2019:
0.69
- Corruption Perceptions Index, 2019:
44
- Global Gender Gap Index, 2019:
0.78
- Democracy Index, 2019:
7.24

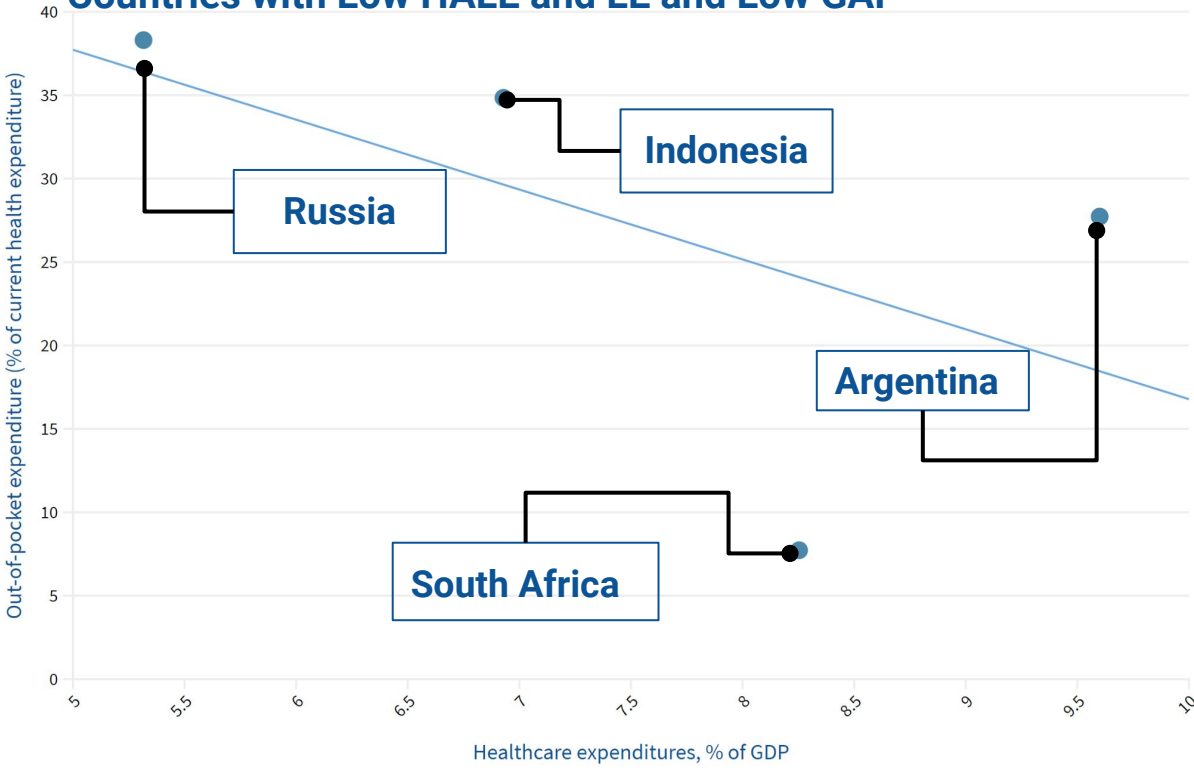
Current Healthcare Expenditure



Compound annual growth rate



Countries with Low HALE and LE and Low GAP



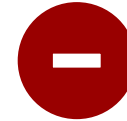
South Africa must focus on making sure all healthcare workers have the right knowledge, skills and resources, for example by training the next generation of scientific leaders. It is needed to focus on the management of institutions and care delivery which is at the districts, hospital and clinic level. Government should address inequality, provide better sanitation facilities, develop agenda to improve public health and decrease burden of chronic diseases.

SWOT Analysis of Healthcare in South Africa



STRENGTHS

- Major urban areas of South Africa have many excellent private hospitals and practitioners to choose from.
- There are two major pharmacy chains in South Africa, which are complemented by many independent pharmacies. Pharmacists are well-trained and can offer medical advice on minor ailments and injuries.
- Life expectancy continues to rise in South Africa and morbidity is down.



WEAKNESSES

- Poor hygiene and poor infection control measures. Most facilities have problems with access to improved water sources and adequate sanitation facilities are the reasons, poor waste management, lack of cleanliness and poor maintenance of grounds and equipment.
- The impact of HIV and AIDS has devastated healthcare systems to the extent that they are unable to cope with the demands of high-quality delivery.
- South Africa has very high private health care costs, putting it out of reach for most people in the country.



OPPORTUNITIES

- Institutionalisation of a co-ordinated, comprehensive health workforce planning process in South Africa
- Develop community-oriented primary care
- Improve data use and community engagement. There is a desire for new forms of health information and new forms of engagement (if effectively facilitated). People are willing to break out of conventional ways of thinking and doing when given the opportunity.
- To improve healthcare outcomes there is a room for improvement the quality of care and achieve financial risk protection.



THREATS

- Despite major redistributive reforms, poverty remains endemic.
- Health inequality persist according to income status and education.
- Public hospitals tend to be overcrowded, under-resourced and understaffed, with long waiting times.
- Increasing prevalence of obesity and rising problem with undernourishment.
- Burden of behavioral risk factors, including alcohol consumption and smoking

Analysis of Strengths and Weaknesses of Health Care System in South Africa



- Well-established nurse-based system of public primary healthcare.
- Doubling of public healthcare per capita expenditure on primary healthcare from 2005 to 2015 due to investments in access to HIV and TB services.
- Life expectancy in South Africa has increased dramatically (9.6 years) over a relatively short period of time, rising on average from 51.6 years in 2005 to 62.9 years in 2015. This increase stems from the introduction of antiretroviral treatment for people living with HIV, and other major health initiatives.
- The National Development Plan 2030 seeks to implement a national health insurance system, reduction in the relative cost of private medical care and bolstered by greater human capacity and better systems in the public health sector.



- There is a major gap between private and public healthcare in South Africa.
- Public healthcare has many disadvantages such as long wait times, poor quality of care, rushed appointments, old facilities, and poor disease control and prevention practices.
- Private healthcare is expensive, not funded by the government, and there are fewer facilities.
- Low level of use and interpretation of data at the point of service delivery at district level.
- South Africa has the highest level of HIV prevalence in the world, TB remains the leading cause of death and lifestyle diseases are on the rise. South Africa faces a quadruple burden of disease resulting from communicable diseases such as HIV/AIDS and TB; maternal and child mortality; NCDs such as hypertension and cardiovascular diseases, diabetes, cancer, mental illnesses and chronic lung diseases like asthma; as well as injury and trauma
- Some of the water-borne diseases that pose a high risk to South Africans include gastroenteritis, cholera, viral hepatitis, typhoid fever, bilharziasis and dysentery.

Recommendations for South Africa

- **Provide wider immunization coverage.** The lack of appropriate vaccinations among children can cause severe problems and spread the broaden epidemics that can lead to the young deaths.
- **Expand population coverage.** In response to the high levels of out-of-pocket expenditure and its impact on access to health services by the poor, the Government developed the National Health Strategic Plan 2015-2020, aimed at achieving a long and healthy life for all South Africans.
- **Tackle environmental problems.** Bad environmental conditions contribute to poor health and inequality in healthcare status. Indonesia's large cities are prone to pollution, and this can exacerbate existing respiratory conditions like asthma. One of the most significant problems is the fact that tap water in Indonesia is not generally safe to drink.
- **Contribute towards reduction of the burden of communicable diseases.** The government should provide initiatives to Strengthen the prevention and treatment of TB.
- **Combat with undernourishment, poverty and socioeconomic inequality.** Results of our study shows an evident linkage of health and wealth. Healthy longevity in India should be started from the provision of basic services for all population, including adequate sanitation facilities, improved water sources, effective prevention and treatment. The focus also should be made on both healthcare status of adults and children to create favorable conditions for growth of future generations.
- **Support the prevention and control of non-communicable diseases, mental health disorders, violence and injuries.** Support the development and implementation of policies, strategies and regulations to combat tobacco use, harmful use of alcohol, unhealthy diets, physical inactivity, violence and injuries, and other risk factors. Guide and support the preparation and implementation of multi-sectoral, population-wide programmes to promote mental health and prevent mental and behavioural disorders.

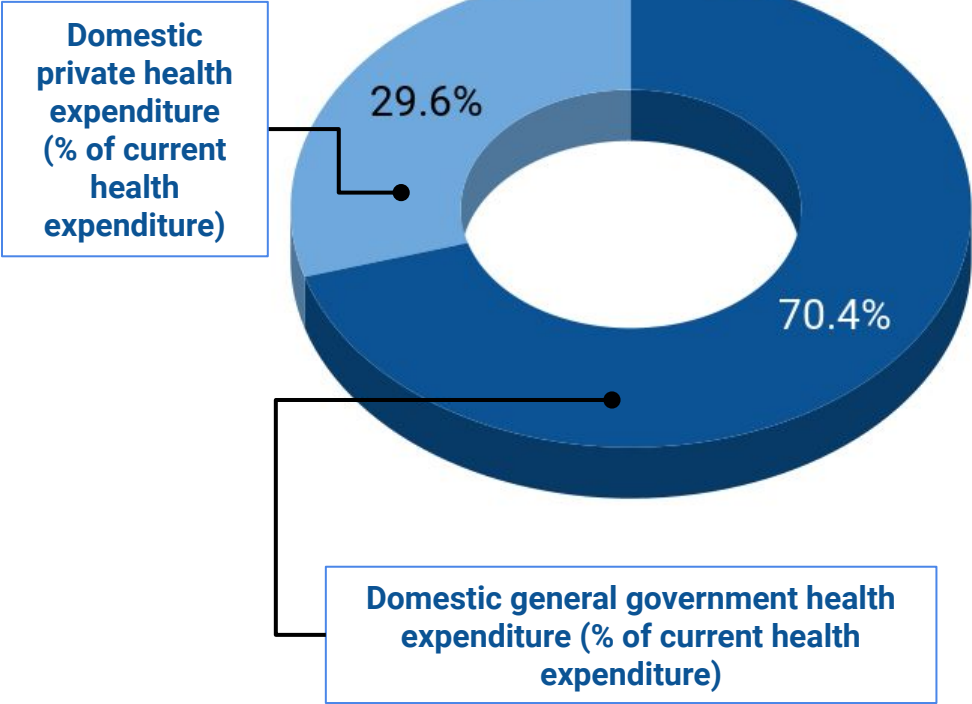
HALE	Both Sexes HALE, 2019	72.1 years
	HALE/Life Expectancy Difference, 2019	11.33
Economy	GDP per Capita, Current Prices, 2019	29.56 thousand (\$)
	Annual GDP Growth, 2019	1.95 %
Healthcare	Current Health Expenditure per Capita, 2019	2.74 thousand (\$)
	Public Health Care Expenditure, 2019	8.98 % of GDP
Retirement	Age Dependency Ratio, 2019	52
	Population over 65,, 2019	19.65 %
	Number of WHO Age Friendly Cities and Communities	164
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	12.72
	Annual Cigarette Consumption (Units per Capita), 2019	1498
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	23.8 % of adults

Longevity-Related Indices

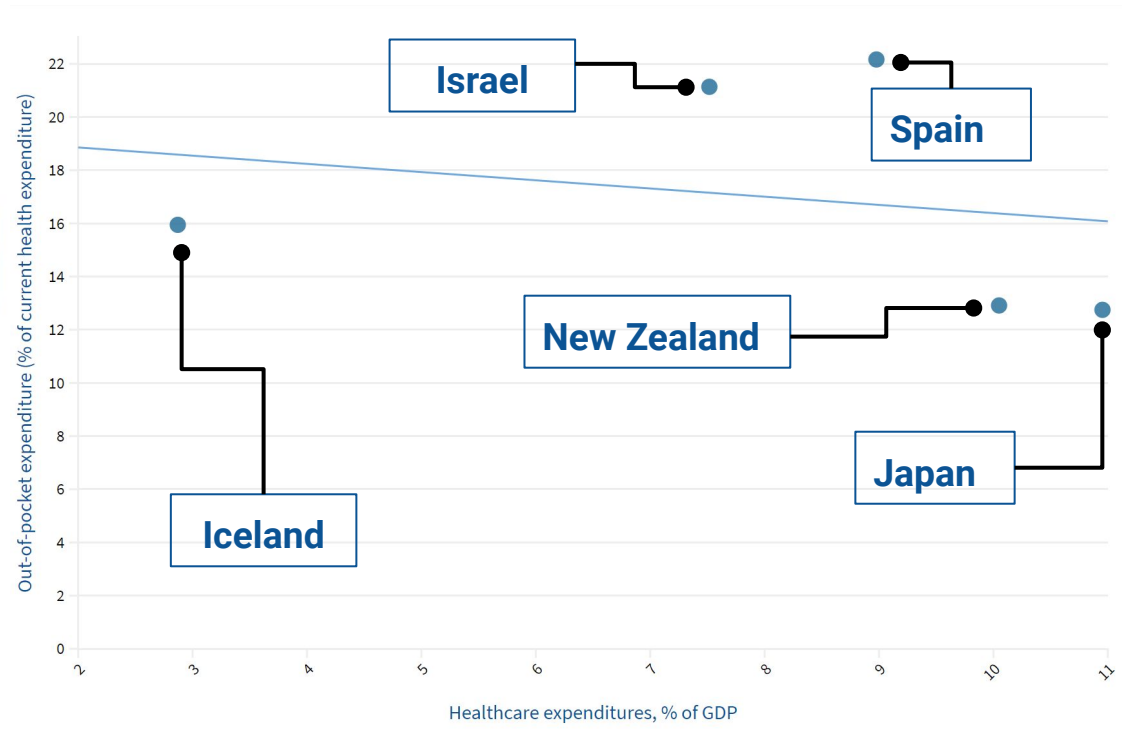


- The Healthcare Access and Quality Index -2016:
92
- Human Development Index, 2019:
0.90
- E-Government Development Index, 2019:
0.88
- Corruption Perceptions Index, 2019:
62
- Global Gender Gap Index, 2019:
0.79
- Democracy Index, 2019:
8.2

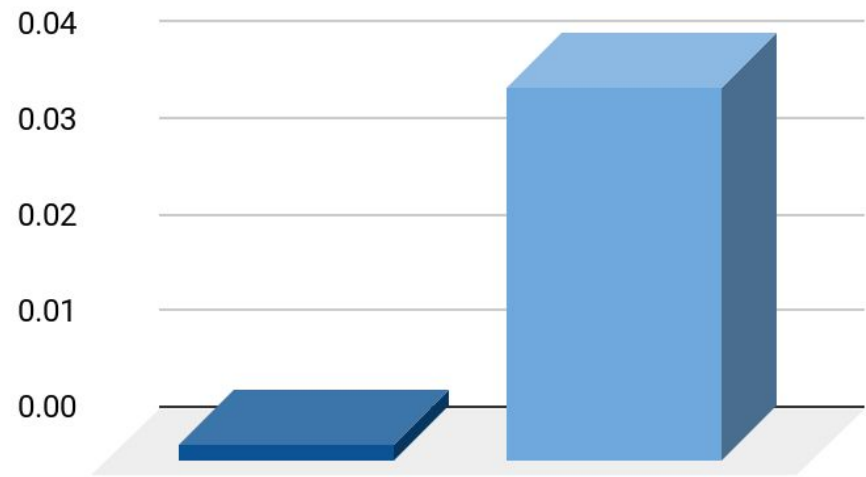
Current Healthcare Expenditure



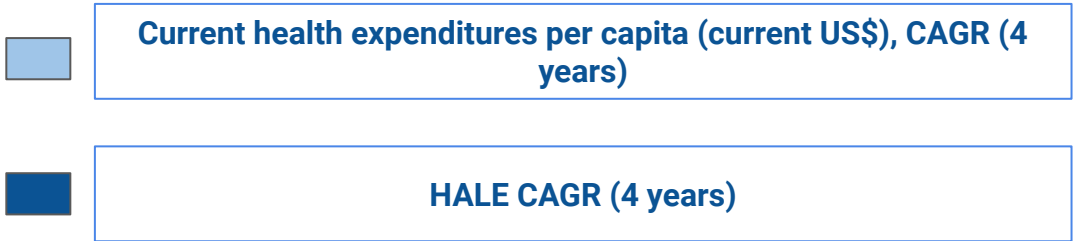
Countries with high HALE and LE and medium GAP



Compound annual growth rate



There are several ways to improve public health and decrease gap between life expectancy and HALE at birth: increase the efficiency and effectiveness of the health provision system, support and encourage healthy eating and physical activity, address aging, customize healthcare services to meet needs of aged population.

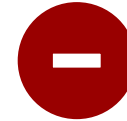


SWOT Analysis of Healthcare in Spain



STRENGTHS

- Spain has a high quality healthcare system, offering universal coverage for all residents. It is funded from taxes and predominantly operates through its public network of providers. The total population coverage is 99.9 %.
- The healthcare system is decentralized and service delivery is organized by 17 regional health ministries.
- More than 70% of the Spanish population reports being in good health, a slightly higher proportion than the EU average of 68%.
- Maintaining the high quality of the healthcare system, [health expenditures per capita in Spain remains below the EU average](#).



WEAKNESSES

- The Spanish healthcare system is criticized for poor accessibility and overdependence on private sector.
- [Out-of-pocket expenditure accounts for 24 % of total health spending, a much higher share than the EU average of 15 %](#).
- Since the healthcare system is decentralized, healthcare spending per capita varies across regions.
- Deaths due to Alzheimer's disease and other dementias became the third leading cause of death, reflecting the effect of population ageing, better diagnosis, lack of effective treatments as well as more precise coding.



OPPORTUNITIES

- The 2014 - 2020 European Structural and Investments Funds provided EUR 500 million to Spain to invest in its health system, including in medical research and development and eHealth.
- Spanish government have strong aims to improve the healthcare coordination for primary and long-term care sectors to address the challenge of the ageing population.
- Utilising AI opportunities in precision medicine, preventive health, drug discovery.
- Accelerate the paradigm shift to precision health.



THREATS

- Arising variation in healthcare spending across the country could lead to a violation of the principle of equal accessibility.
- Overweight and obesity rates among adolescents and adults increased over the past decade and partly linked to low levels of physical activity. This fact puts pressure on the Spanish National Healthcare System.
- With a rapidly ageing population, one of the main challenges for the Spanish health system will be to achieve further efficiency gains in health and long-term care delivery.

Analysis of Strengths and Weaknesses of Health Care System in Spain



- Life expectancy at birth in Spain reached 83.1 years in, 2019, up from 79.3 years in 2000. [At 65 age Spanish men and women live on average an additional 21 years, of which less than half are lived free of disability.](#)
- Primary care delivery is entirely public. The centers are run by multidisciplinary teams of General Practitioners (GPs), paediatricians, nurses and social workers.
- The Spanish benefit basket is defined by a common package and complementary package. [The common package includes](#) basic services (prevention diagnostic, treatment, rehabilitation and emergency transport which are publicly financed at 100 %), supplementary services and ancillary services.
- Public health policies effectively tackle behavioral risk factors: reduction in smoking.
- Primary care services are offered by multidisciplinary teams. Spain has a high number of doctors, although it does not include nurses assistance.



- The relatively high obesity rate among adults in Spain is partly linked to low levels of physical activity. The share of children who are overweight is also significant.
- Although a declining trend, smoking remains a common habit among the Spanish adult population.
- Long waiting time for surgery remains very high. Long waiting times can be detrimental to health outcomes, hence health systems should warrant timely access to necessary treatment and surgery.
- The increase in the amount and share of direct out-of-pocket spending resulted partially from the reduced coverage for certain services and goods.
- Qualitative improvement of long-term care is a challenge in terms of rising particular needs of aged people.
- Promoting better geographic distribution and retention of health workers is a challenge.

Recommendations for Spain

- **There is a need to do a better job educating medical students and medical residents on how to adapt to an era of technology-enabled healthcare.** Expand the number of training places for nurses. Promote retention policies for nurses by creating secure and attractive pay and working conditions, including opportunities for continuing professional development.
- **Develop and implement quality standards for long-term care (LTC)** by working with providers and local governments since a lack of indicators holds back efforts to improve services.
- **Enable patient-centered care with information technology systems.** Embrace technology in health care will lead to personalization and improvement of the quality of medical care through close coordination between patients, caregivers, and professionals.
- **Utilize AI for financial wellness.** The provision of financial security in retirement is critical for both individuals and societies as countries grapple with the social and economic effects of aging populations in Spain. The utilization of novel forms of financial data to enable AI-empowered AgeTech and WealthTech services may help to maintain complemented balance between advances in “wealthspan” and “healthspan”.
- **Promote research and initiate a wider utilization of Artificial Intelligence for preventive medicine.** Research is vital in providing the knowledge needed to improve health outcomes and reduce inequalities.
- **Identifying and modifying or avoiding key risk factors for diseases, including diabetes, cardiovascular diseases and respiratory conditions.** It can be caused by lack of exercise, ageing, an unhealthy diet and environmental pollution. If left untreated, it may lead to more serious conditions such as kidney failure, coronary heart disease, blindness and even the need for amputations. Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of mortality factors.



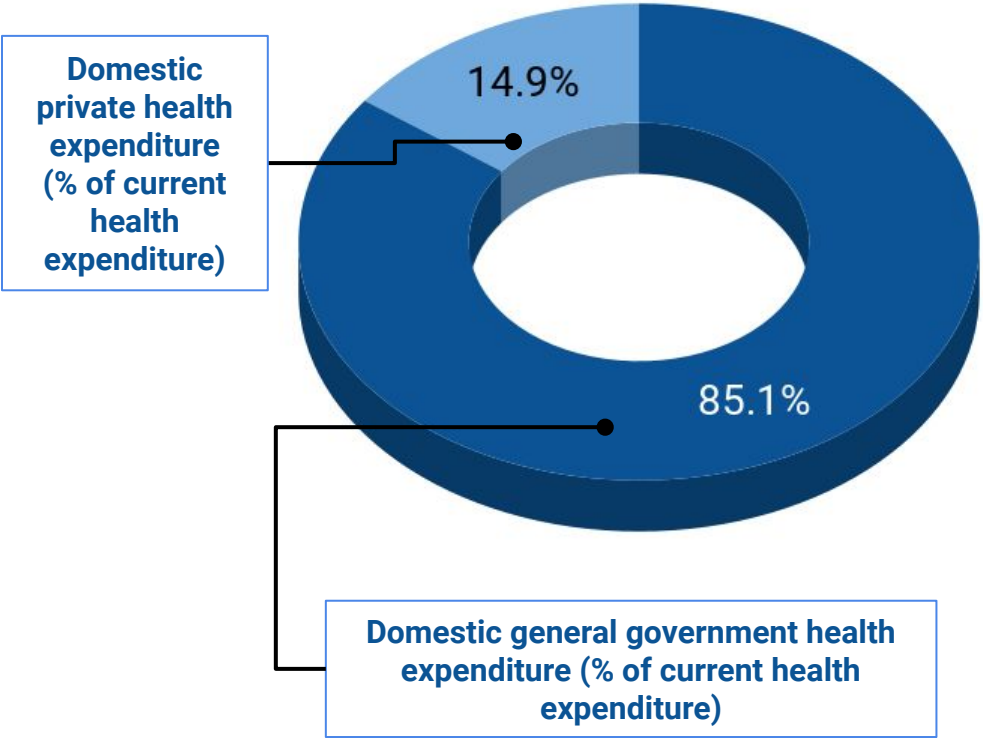
General metrics	HALE	Both Sexes HALE, 2019	71.9 years
		HALE/Life Expectancy Difference, 2019	10.6
	Economy	GDP per Capita, Current Prices, 2019	51.65 thousand (\$)
		Annual GDP Growth, 2019	1.26 %
	Healthcare	Current Health Expenditure per Capita, 2019	5.98 thousand (\$)
		Public Health Care Expenditure, 2019	10.9 % of GDP
	Retirement	Age Dependency Ratio, 2019	60.9
		Population over 65,, 2019	20.2 %
		Number of WHO Age Friendly Cities and Communities	5
	General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	8.93
		Annual Cigarette Consumption (Units per Capita), 2019	716
		Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	20.6 % of adults

Longevity-Related Indices

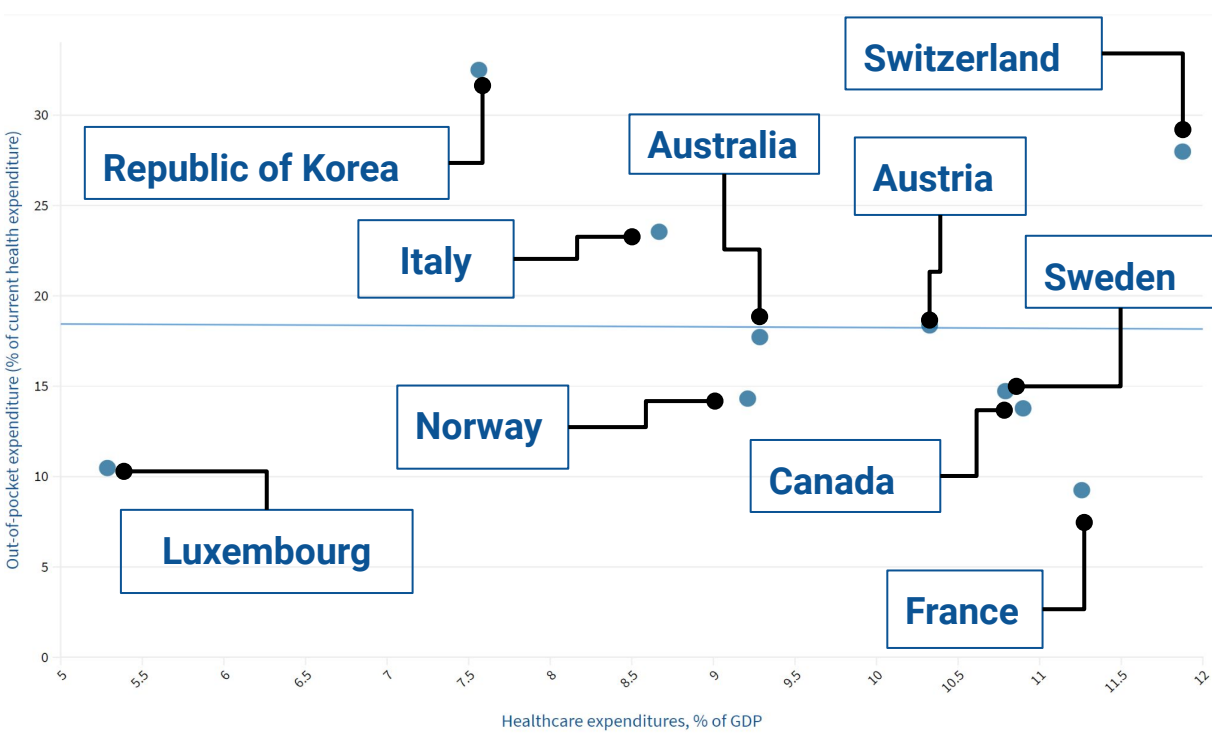


- The Healthcare Access and Quality Index -2016: **95**
- Human Development Index, 2019: **0.95**
- E-Government Development Index, 2019: **0.94**
- Corruption Perceptions Index, 2019: **85**
- Global Gender Gap Index, 2019: **0.82**
- Democracy Index, 2019: **9.39**

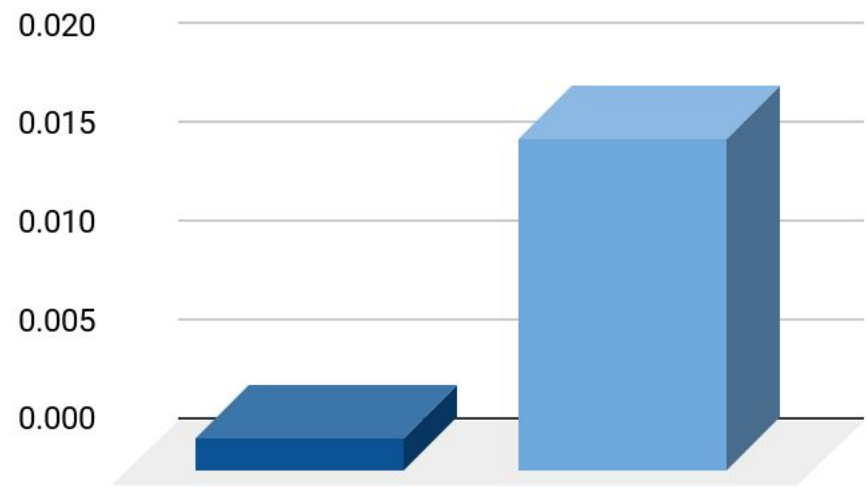
Current Healthcare Expenditure



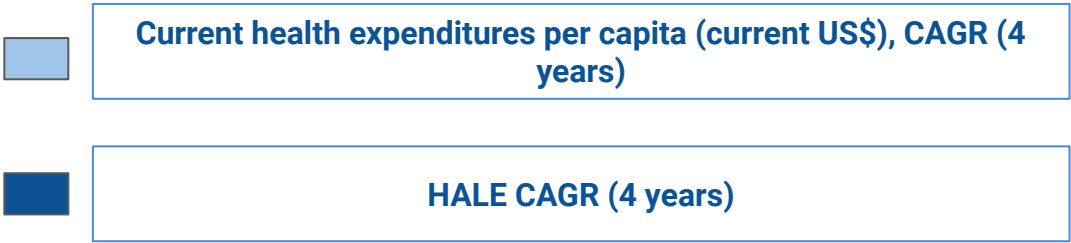
Countries with Low HALE and LE and High GAP



Compound annual growth rate



The government should further develop following initiatives: improve health and medical care that more actively promotes good health, promote good eating habits and safe food to decrease obesity and overweight, reduced use of tobacco and alcohol.

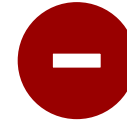


SWOT Analysis of Healthcare in Sweden



STRENGTHS

- The healthcare system in Sweden is financed primarily through taxes raised by county councils and municipalities.
- Sweden's healthcare system is decentralized and managed on three levels: national, regional and local.
- The central government establishes principles and guidelines and sets the agenda for medical and health care.
- The National Patient Survey conducts an annual measurement of how patients perceived the quality of healthcare. The results are used to develop and improve care.
- The healthcare guarantee introduced in 2015 safeguards to population specialist care within 90 days.



WEAKNESSES

- Swedish healthcare challenges include issues of access, quality, efficiency and funding.
- There is a time gap between requests and treatment. The national guarantee of care aims to keep waiting times below 7 days for visiting a primary care physician.
- While healthcare coverage is extensive, there are small fees paid by patients. Public expenditure accounts for 84 % of the total, a share which has been fairly stable over the past decade and is above the EU average (79 %).
- In Sweden private healthcare isn't commonly used, but since 2010 it's available.



OPPORTUNITIES

- Encourage collaboration between county councils and private healthcare providers. The government covers the fraction of total expenditures but service carried out by private care providers only.
- Use the increasing opportunities offered by digitalization and eHealth. Integration of technologies to the healthcare system makes it easier for people to achieve good and equal health and welfare.



THREATS

- The ageing population, since about one in five people is 65 or older, and growing rates of obesity and physical inactivity among adolescents put pressure on Sweden's healthcare system.
- Swedish emergency units are below the minimum safe size.
- The decentralization of the healthcare system and lack of privatized health services could lead to inefficiency, because of the counties' extreme amount of flexibility and limitation of the private sector activities.

Analysis of Strengths and Weaknesses of Health Care System in Sweden



- Sweden has a universal healthcare system. Everyone who resides in Sweden should have easy access to it. Private insurance is available for those who want additional insurance support.
- Sweden's county councils provide care for the elderly in the home or in special accommodations. They also are responsible for care for people with physical disabilities or psychological disorders.
- The public maternal healthcare system is particularly strong in Sweden. Maternal mortality rates are some of the lowest in the world, fewer than 3/1,000 babies and 4/100,000 women die during childbirth in, 2019.
- Sweden has the fifth highest life expectancy in the EU. Life expectancy at birth was 82.4 years in, 2019, up almost 2.7 years from 2000. Healthy life expectancy at 65 is the highest among all EU countries for both men and women.
- The proportion of the Swedish population reporting to be in good health (80% in, 2019) is much higher than the EU average (67%).



- There is a time gap between requests and treatment. The national guarantee of care aims to keep waiting times below 7 days for visiting a primary care physician. Also to see a doctor, the patient should first visit the local public health center and then ensure that a doctor is contracted on this system.
- Private healthcare isn't widely spread in Sweden. Private insurance premiums and treatment are more expensive, but many citizens and expats prefer to pay in order to ensure that all of their medical needs are met and to avoid longer waits for the public service.
- Fragmented data systems in primary care prevent effective data sharing as these systems are not always interoperable.
- Sweden has reduced the number of acute care hospital beds and the ratio per population is the lowest of all EU countries (2.3 acute care beds per 1 000 population in, 2019). This fact suggests that resources are used fully, and hospital staff express growing concerns about patient safety and working conditions.

Recommendations for Sweden

- **Mitigate the regional differences in healthcare service access and outcomes** by ensuring more equitable distribution of resources and promoting regional collaborations.
- Work with the primary care sector and other providers by solving persistent problems with recruiting staff in rural areas and **define primary care's role** especially for elderly patients.
- **Implement a standardised primary care information infrastructure** to drive quality improvement for data sharing and coordination.
- **Develop and implement quality standards for long-term care** (LTC) by working with providers and local governments since a lack of indicators holds back efforts to improve services.
- **Enable patient-centered care with information technology systems.** Embrace of technology in health care will lead to personalization and improvement of the quality of medical care through close coordination between patients, caregivers, and professionals.
- **Encourage collaboration between county councils and private healthcare providers.** Effective partnerships are essential for advancing the healthcare system by making it a shared vision and value, enhancing services accessibility, quality and increasing its overall cost efficiency.
- **Use the increasing opportunities offered by digitalization and eHealth.** Integration of technologies to the healthcare system makes it easier for people to achieve good and equal health and welfare.
- **Facilitate government initiatives related to behavioral risk factors caused by income and education inequality:** improve health and medical care that more actively promotes good health, promote good eating habits and safe food to decrease obesity and overweight, reduced the use of tobacco and alcohol, eliminate avoidable health status gaps between population groups within one generation.



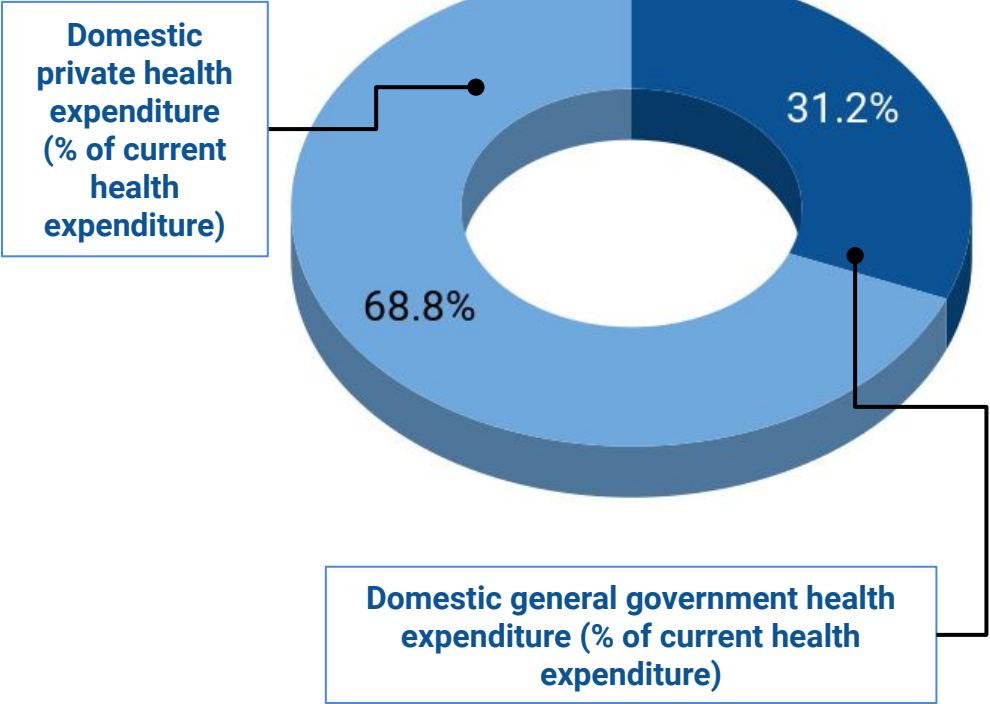
HALE	Both Sexes HALE, 2019	72.5 years
	HALE/Life Expectancy Difference, 2019	11.25
Economy	GDP per Capita, Current Prices, 2019	81.99 thousand (\$)
	Annual GDP Growth, 2019	0.9 %
Healthcare	Current Health Expenditure per Capita, 2019	9.87 thousand (\$)
	Public Health Care Expenditure, 2019	11.88 % of GDP
Retirement	Age Dependency Ratio, 2019	51
	Population over 65,, 2019	18.84 %
	Number of WHO Age Friendly Cities and Communities	3
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.5
	Annual Cigarette Consumption (Units per Capita), 2019	1489
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	19.5 % of adults

Longevity-Related Indices

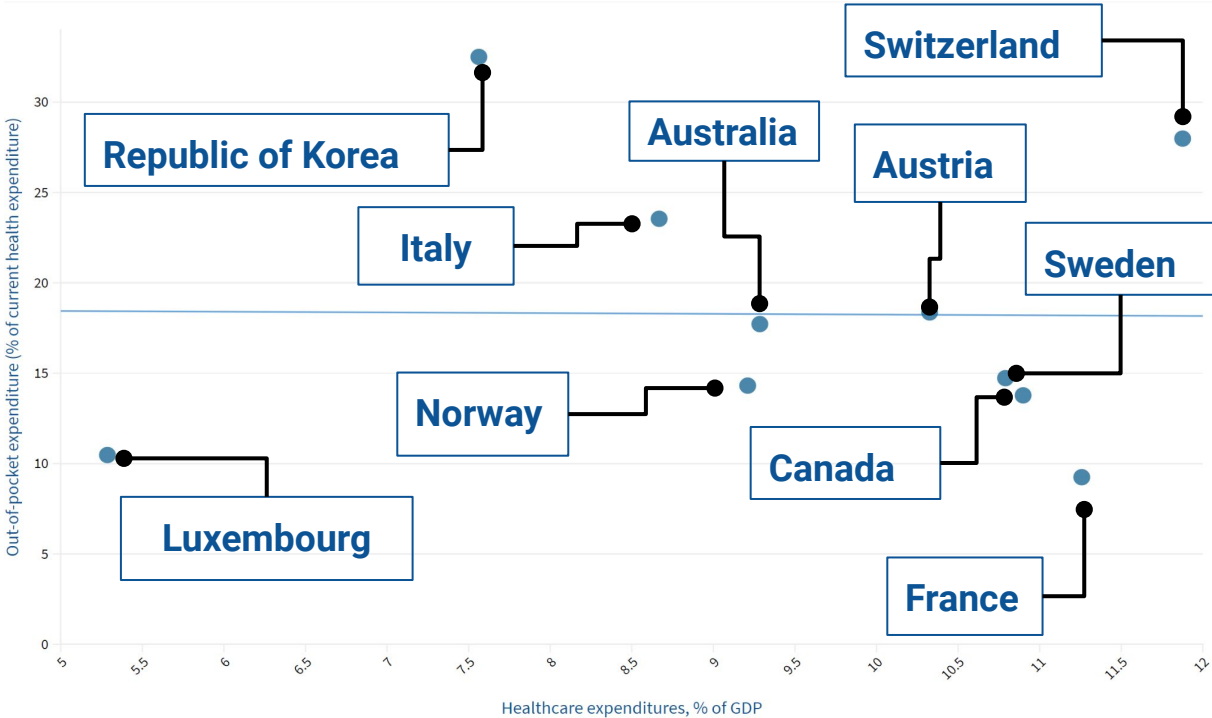


- The Healthcare Access and Quality Index -2016: **96**
- Human Development Index, 2019: **0.96**
- E-Government Development Index, 2019: **0.89**
- Corruption Perceptions Index, 2019: **85**
- Global Gender Gap Index, 2019: **0.8**
- Democracy Index, 2019: **9.03**

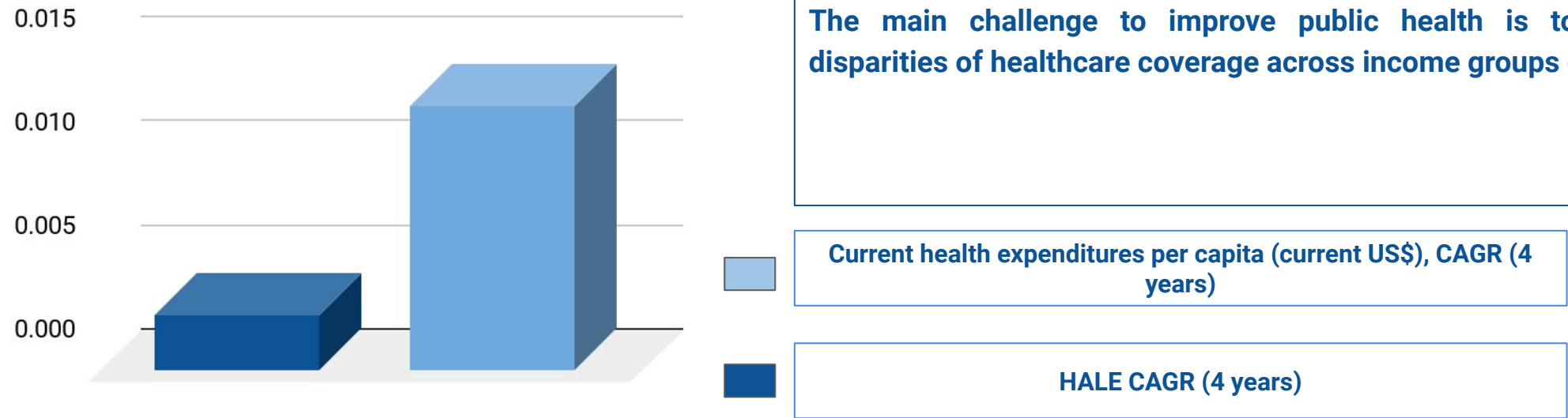
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate



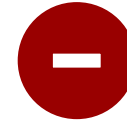
The main challenge to improve public health is to reduce disparities of healthcare coverage across income groups groups.

SWOT Analysis of Healthcare in Switzerland



STRENGTHS

- The Swiss healthcare system is universal and of high standard. Everyone living in Switzerland must have basic health and accident insurance to receive treatment.
- Switzerland has a large network of medical centers, polyclinics, and health spas that provide a range of secondary care and specialist out-patient treatment. What is available varies across the individual cantons and only a limited amount of treatment is covered by basic health insurance.
- High quality of healthcare services.
- Shift from preventive medicine to precision health.



WEAKNESSES

- Decentralized nature of the Swiss health system makes data collection difficult.
- The healthcare is expensive.
- Out-of-pocket spending on healthcare is high. In 2017 it accounted for 28.95% of all healthcare expenditure.
- One in twenty Swiss dies of lung cancer, according to the latest figures published by the Federal Statistical Office, while heart disease and dementia were among the other leading causes of death.



OPPORTUNITIES

- Digitisation and new technologies offer many opportunities to improve healthcare, both in terms of the way patients are treated and the way treatments are organised and enabled. They're also seen as a means of tackling major challenges in the healthcare system.
- Apply the customer-centric approach to enable a solid analysis of patient needs and pain points while at the same time allowing us to identify profound implications in terms of the relevance of these technologies for the healthcare industry.



THREATS

- The globalisation of lifestyles and changing environments due to industrialisation and urbanisation additionally contribute to an increase in NCDs.
- Ageing population.
- Pressure to reduce costs while meeting expectations of universal healthcare coverage.
- Increase in financial burden on the patient, leading to larger medical debt.

Analysis of Strengths and Weaknesses of Health Care System in Switzerland



- The Swiss health system is highly valued by patients.
- The Swiss healthcare system allows patients to see a specialist directly (free choice of doctor).
- Switzerland and the EU have signalled a mutual interest in intensified and institutionalised cooperation in the area of public health. The priorities are the fight against communicable diseases, general health concerns, food safety and production security in general.
- The health system performs very well with regard to a broad range of indicators. Life expectancy in Switzerland (82.8 years) is the highest in Europe after Iceland, and healthy life expectancy is several years above the European Union (EU) average. Coverage is ensured through mandatory health insurance (MHI), with subsidies for people on low incomes.
- Developed network of P4 clinics to make make medicine more Predictive, Preventive, Personalised and Participatory.



- Health insurance premiums are increasing more quickly than Swiss incomes, and low- and middle-income households end up contributing a greater share of their income to the financing of health care than high-income households.
- Switzerland's level of health spending is high compared to most European countries (most of which have single-payer systems).
- The system remains highly fragmented as regards both organization and planning as well as health care provision.
- Non-communicable diseases (NCDs) account for more than 85% of the burden of disease in Switzerland (measured by disability-adjusted life years, DALYs). They are also responsible for the major part of total health expenditure, with more than 50% related to seven NCDs (cardiovascular diseases, musculoskeletal diseases, cancers, psychological disorders, chronic respiratory diseases, dementia and diabetes).

Recommendations for Switzerland

- **Greater use of medical guidelines, investments in patient safety, and the reduction of waste** by improving coordination within and between different levels of care would further improve efficiency.
- **Follow trend towards greater transparency in healthcare**, extending the amount of healthcare data and rising consumer expectations of patients and the public.
- **Improving financial protection and fairness of financing** is becoming more important because rising premiums and OOP payments place an increasingly large financial burden on households with lower and middle incomes.
- **Enable patient-centered care with information technology systems.** Embrace of technology in health care will lead to personalization and improvement of the quality of medical care through close coordination between patients, caregivers, and professionals.
- **Strengthening disease prevention and health promotion with a focus on non-communicable diseases** remains an issue. Favourable living conditions in Switzerland, such as good housing conditions, a high-quality education system and low rates of unemployment contribute to healthy living conditions.
- **Utilising Artificial Intelligence in preventive medicine.** AI has great potential in terms of tackling the problem of bureaucracy and inefficient administration, relieving doctors from time-consuming administrative tasks and giving them more time to spend with their patients. By automating and improving processes, artificial intelligence can benefit both patients and medical staff. By optimising patient processing planning it can reduce the waiting time and length of stay for patients, and it can also help medical staff in their day-to-day work.
- **Promotion of healthy lifestyle and health education**, could potentially have a large impact on further improving the very good health status of the population, while avoiding the costs associated with the treatment of these diseases.



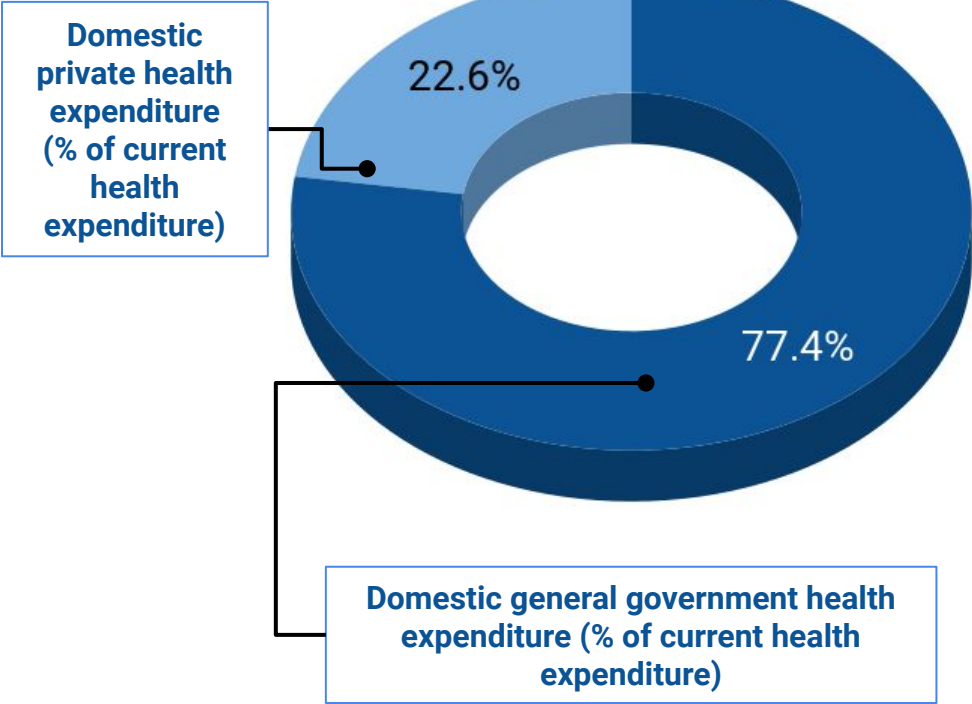
HALE	Both Sexes HALE, 2019	68.4 years
	HALE/Life Expectancy Difference, 2019	9.04
Economy	GDP per Capita, Current Prices, 2019	9.13 thousand (\$)
	Annual GDP Growth, 2019	0.92 %
Healthcare	Current Health Expenditure per Capita, 2019	0.39 thousand (\$)
	Public Health Care Expenditure, 2019	4.12 % of GDP
Retirement	Age Dependency Ratio, 2019	49.29
	Population over 65,, 2019	8.7 %
	Number of WHO Age Friendly Cities and Communities	4
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	2
	Annual Cigarette Consumption (Units per Capita), 2019	1771
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	32.1 % of adults

Longevity-Related Indices

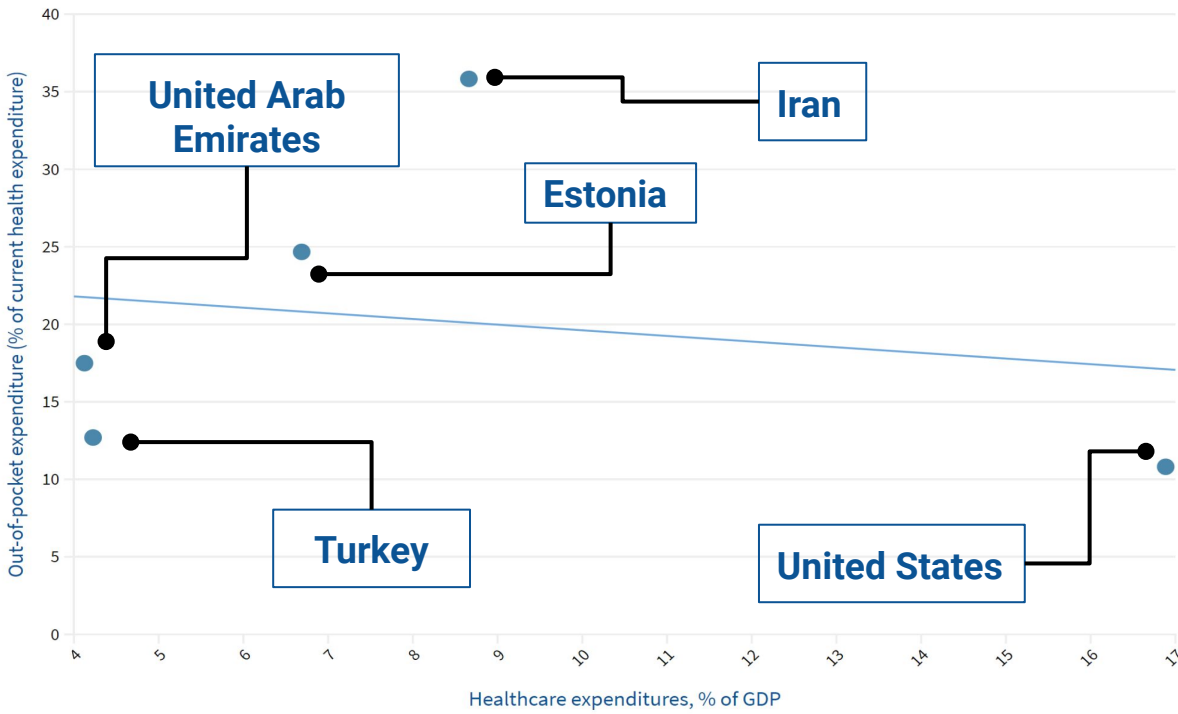


- The Healthcare Access and Quality Index -2016:
74
- Human Development Index, 2019:
0.82
- E-Government Development Index, 2019:
0.77
- Corruption Perceptions Index, 2019:
40
- Global Gender Gap Index, 2019:
0.64
- Democracy Index, 2019:
4.09

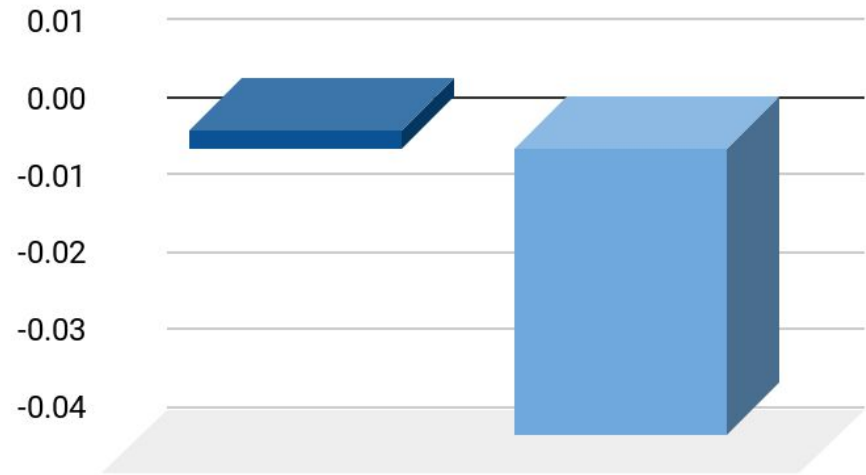
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate



Turkey faces a health care system inefficiencies. Infant mortality rate is relatively high and not all population had health insurance, resulting in unequal healthcare access among different population groups. It is need to improve access for high-quality healthcare services and target the main causes of death through government initiatives.

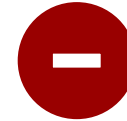


SWOT Analysis of Healthcare in Turkey



STRENGTHS

- Healthcare spending has shown a CAGR of 14% since 2013 driven by governmental policies that provide universal social security coverage allowing patients to choose which hospitals they want to go to.
- Turkey is the **16th largest** pharmaceutical market in the world and the sixth largest in Europe.
- Primary care is free of charge for all citizens and almost the entire population in Turkey (**98%**) is covered.
- Transforming its healthcare sector so that all citizens have access to quality services



WEAKNESSES

- Most of the hospitals and doctors are concentrated in the cities and large towns, where there are more people and economically more feasible to operate.
- **Cardiovascular or circulatory system diseases** killed 162000 people in Turkey in 2018, making them the leading cause of deaths.
- Inequalities in access to health care.
- Fragmentation in financing and delivery of health services, which contributes to inefficiency and undermines financial sustainability.
- Poor quality of care and limited patient responsiveness.



OPPORTUNITIES

- Healthcare market is underpenetrated.
- Pharmaceutical market presents significant growth opportunities driven by its population dynamics (rapidly growing, but ageing), urban migration, improved hospital infrastructure with increased access to healthcare services and the rising burden of chronic diseases.
- In 2010-2016, the medical tourism sector grew at a 15% CAGR in the number of visitors, which signaled promising growth for private providers.



THREATS

- Regulatory changes and economic slowdown.
- Air pollution and climate change.
- Ageing population.
- The increasing share of refugee population in the country can contribute to prolonged humanitarian crises, grappling with the challenges of drought, famine, conflict, and population displacement.
- Non-communicable diseases pose a great risk for the future of national healthcare system.

Analysis of Strengths and Weaknesses of Health Care System in Turkey



- The Health Transformation Program led by the Government of Turkey since 2003 has contributed to improved health, enhanced fairness in financing, better financial protection, and increased user satisfaction.
- As a result of the reforms, there were significant additions in terms of capacity in healthcare infrastructure as well as increased access to high quality healthcare services.
- Turkey experiences continuing economic expansion and rising incomes which, in turn, will create more demand for health services and products. These increases are reflected in healthcare spending projections.
- Turkey has been attracting many high profile multinational firms operating in different sub-sectors of the healthcare industry, especially since 2004. Many international companies have established a strong presence production bases in the country to benefit from Turkey's geographical position, highly skilled human resources in production and management and the unsaturated domestic market with a high growth potential.



- According to the latest data released by the Ministry of Health, the greatest increase in disease burden in 15 years was observed in Alzheimer's disease (68.4% increase) and in stroke (57.4% increase), while the most significant reduction was observed in lower respiratory tract infections (63.7% decrease).
- Non-communicable diseases contribute to 87.5% of deaths in Turkey. The probability of premature death due to four non-communicable diseases is likely one sixth (16.8%) for an individual in Turkey.
- According to the limits set by the WHO, 80 out of 81 provinces of Turkey are exposed to polluted air; furthermore, based on the national air quality limits, 67% of the cities have poor air quality.
- Turkey has a significant refugee problem because of these conditions at the country's borders. The refugee population that escaped the war in Syria exceeds 3.6 million, of which 380,000 are babies born in Turkey.
- Remote location of the city hospitals significant increases travel time, especially for outpatient or unplanned visits, may hinder demand as well.

Recommendations for Turkey

- **There is need of a particular planning to increase medical workforce**, including well-trained staffs for a specific area. An urgent need is to acquire more accurate and reliable data from hospital and PHC centers in Turkey. Additionally, some attempts should be made to assess quality of healthcare in relation to services and process.
- **Promote programs and create government incentives to address shortcomings of health facilities and improve infrastructure.**
- **Combat migration problem.** For preventing the problems faced by more than 3 million Syrians in the places where they currently live and to ensure that health services are easily accessible to them, Migrant Health Units have been established wherein primary health care services are provided. Currently, 152 Migrant Health Centers are in service. Although a large number of Migrant Health Centers have been set up, they merely strengthen health systems to combat war and hunger and constitute a temporary solution without fixing the main problem. Unfortunately, the main problem can only be solved by the initiatives of the international community.
- **Create incentives for development of national medical devices market** as Turkey strives to decrease its dependency on imports.
- **Improve legislation on regenerative medicine.** Turkey has both the resources and tools to harvest and transplant stem cells to treat those suffering with diseases such as leukemia. The stem cells transplanted to such patients are sourced from bone marrow or cord blood.
- **Move from cure to prevention to combat with non communicable diseases risk factors.** Prevention faces two main barriers. First, most doctors worldwide are trained to diagnose, treat, and cure diseases, but not to prevent them. Incentive schemes in many health care settings reflect that emphasis. Second, the risk factors for these diseases – tobacco use, the harmful use of alcohol, unhealthy diets, and physical inactivity – lie in non-health sectors and are strongly influenced by the behaviours of powerful economic operators.

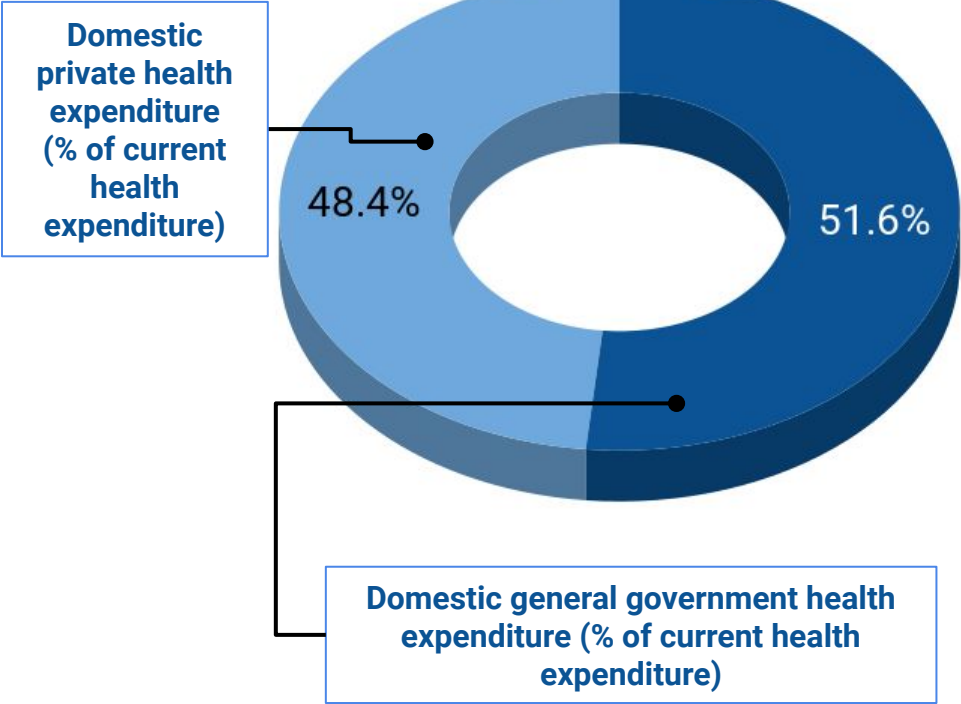


HALE	Both Sexes HALE, 2019	66 years
	HALE/Life Expectancy Difference, 2019	11.81
Economy	GDP per Capita, Current Prices, 2019	43.1 thousand (\$)
	Annual GDP Growth, 2019	1.68 %
Healthcare	Current Health Expenditure per Capita, 2019	1.82 thousand (\$)
	Public Health Care Expenditure, 2019	4.23 % of GDP
Retirement	Age Dependency Ratio, 2019	18.86
	Population over 65,, 2019	1.1 %
	Number of WHO Age Friendly Cities and Communities	1
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	3.9
	Annual Cigarette Consumption (Units per Capita), 2019	748
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	31.7 % of adults

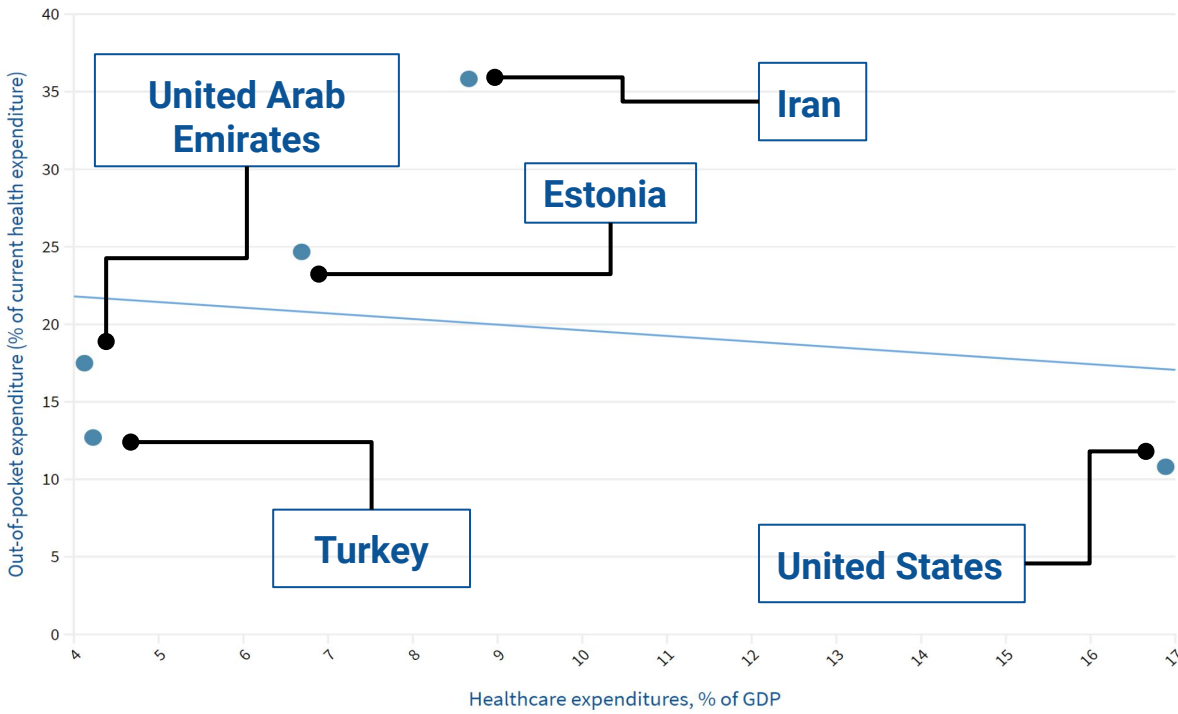
Longevity-Related Indices

- The Healthcare Access and Quality Index -2016: **70**
- Human Development Index, 2019: **0.89**
- E-Government Development Index, 2019: **0.86**
- Corruption Perceptions Index, 2019: **71**
- Global Gender Gap Index, 2019: **0.72**
- Democracy Index, 2019: **2.76**

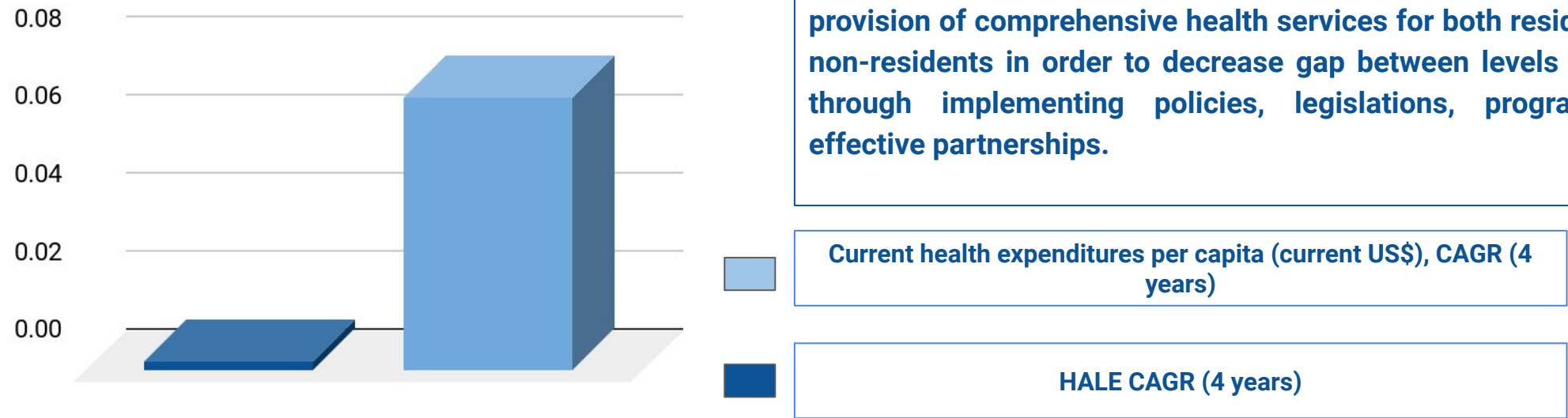
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate



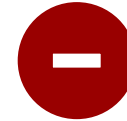
As residents have high HALE than non-residents in the country it is needed to enhance the health of individuals a through the provision of comprehensive health services for both residents and non-residents in order to decrease gap between levels of HALE, through implementing policies, legislations, programs and effective partnerships.

SWOT Analysis of Healthcare in the United Arab Emirates



STRENGTHS

- The UAE has a comprehensive, government-funded health service and a rapidly developing private health sector that delivers a high standard of health care to the population.
- Due to the success of this high standard of care across all stages of the health care system, life expectancy in the UAE is 76.8 years, reaching levels similar to those in Europe and North America.
- The UAE is renowned for its quality healthcare facilities, which has led to a rise in medical tourism over the past decade. Healthcare is so prevalent, there are an estimated **181 doctors per 100,000 residents**.



WEAKNESSES

- Health care is expensive. There are more private hospitals and healthcare facilities than public. As of 2018, **the UAE had 104 hospitals: 33 government and 71 private**.
- Public health facilities are less expensive, but wait times are long.
- The World Health Organization has determined that a third of the adults in the UAE are obese, and one out of five people live with diabetes.



OPPORTUNITIES

- Rapidly growing spa market.
- Private health care services are increasing at a rapid rate everywhere in the UAE through clinics, private hospitals and medical cities.
- Government wants to boost the number of medical tourists coming to the UAE in order to establish Dubai as a center of healthcare excellence in the region.
- Since the population aging, there is a high demand for healthcare.



THREATS

- Rapidly growing population and the concurrent increasing demand on the healthcare sector.
- Higher demand for healthcare will surge healthcare costs.
- Overconsumption of medical services, increasing costs of medical equipment and competition for qualified professionals, and increase of chronic diseases.
- Increasing burden of socioeconomic inequality would contribute to bigger discrepancy in health status and worsening demographic situation in general.

Analysis of Strengths and Weaknesses of Health Care System in the United Arab Emirates



- According to World Health Organization Ranking: The World Health System, Health care system of the United Arab Emirates is 27.
- United Arab Emirates has a strong healthcare infrastructure.
- Most infectious diseases like malaria, measles and poliomyelitis that were once prevalent in the UAE have been eradicated. New vaccination campaigns are taking place to protect against chicken pox, pertusis and the rotavirus.
- Access to clean water in urban and rural areas is assured for 100% of the population, and close to 100% use modern sanitation facilities. The new-born (neonate) mortality rate has been reduced to 5.54 per 1000 and infant mortality to 7 per 1000. Maternal mortality rates have dropped to 0.01 for every 100,000.

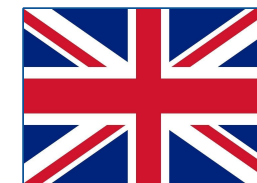


- The UAE's health expenditure reached a value of \$13.7 billion in 2018. This includes healthcare expenditure from the seven emirates in addition to their contribution to the federal budget. There is an expectation for this figure to reach \$14.4 billion in 2019, a 5.4 percent increase comparing to 2018. The forecast on spending is to rise to \$18.3 billion by 2023 (compound annual growth rate of 6%).
- The high number of expatriate workers have limited access to healthcare services, affecting demographics and healthcare situation in general.
- The fragmentation of the healthcare system led by Abu Dhabi and Dubai.
- The shortage of hospital beds in the country, lack of medical professional staff and the rise in the number of people suffering from chronic diseases. The number of people suffering from chronic diseases was especially startling. The UAE is ranked second world-wide in diabetes. Nearly 37 per cent of Emiratis suffer from hypertension that goes on to take a toll on the heart.
- The high cost of prescription medication makes healthcare unaffordable for population with relatively low income.

Recommendations for the United Arab Emirates

- **Consideration of age and sex distribution when planning and implementing health services.** The United Arab Emirates has a rapidly growing population with a unique age and sex distribution. There is an unusually high proportion of young people and expatriates of working age, small numbers of older persons and rapid year on year growth due to high net in-migration.
- **Prioritise the dealing with a number of healthcare burdens** . Some the same as in many other parts of the world – like rising incidence of heart disease and cancer – and coping with them with innovative use of technology, partnerships and initiatives.
- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** The United Arab Emirates is tackling more unusual challenges, such as a high incidence of congenital diseases due the large number of consanguineous marriages, as well as an explosion in the prevalence of obesity and metabolic syndrome due to a rapidly changing lifestyle to one that is more affluent and sedentary.
- **Move from sick care to preventive health.** Health screening program can enable rapidly extract data from the results of the screening for various whole population epidemiological studies. Providing individuals with opportunities to check their health status and get proper follow-up consultations can minimise the risk of developing cardiovascular disease and diabetes, for example.
- **The important role of implementation of new technology into healthcare systems.** Government should provide opportunities for wider technologically connected healthcare that empowers doctors and patients and reduces growing pressure on the healthcare system.
- **Provide incentives for investments in home care services and private providers.** Due to the increasing population of the elderly and the abundance of chronic diseases, long-term care facilities are being continuously demanded by the market.

United Kingdom of Great Britain and Northern Ireland



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General metrics

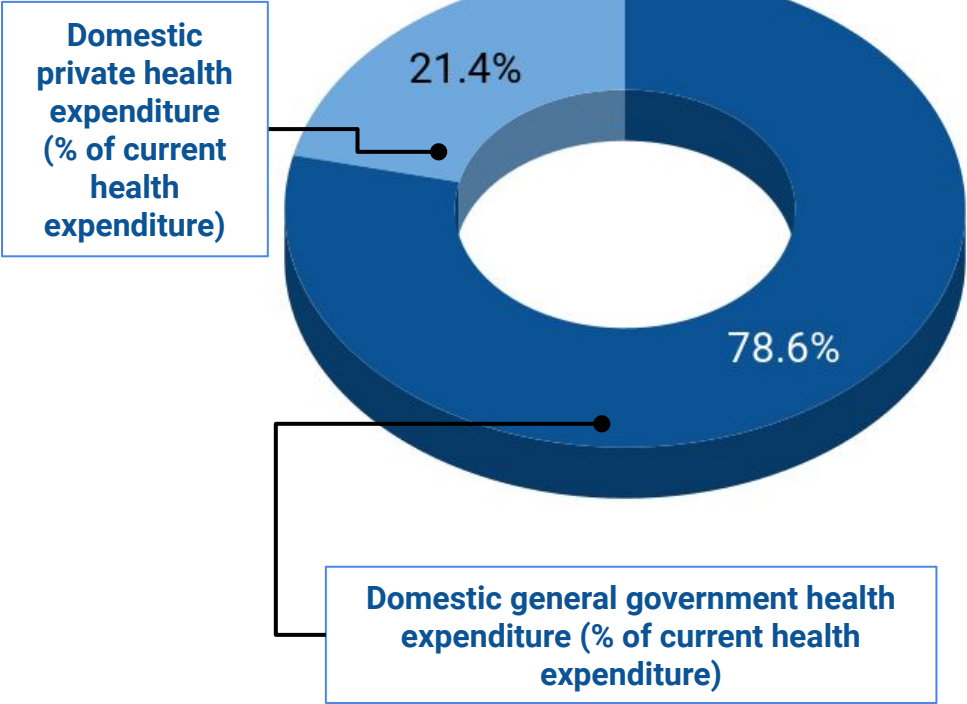
HALE	Both Sexes HALE, 2019	70.1 years
	HALE/Life Expectancy Difference, 2019	11.16
Economy	GDP per Capita, Current Prices, 2019	42.33 thousand (\$)
	Annual GDP Growth, 2019	1.4 %
Healthcare	Current Health Expenditure per Capita, 2019	4.32 thousand (\$)
	Public Health Care Expenditure, 2019	10 % of GDP
Retirement	Age Dependency Ratio, 2019	56.7
	Population over 65,, 2019	18.5 %
	Number of WHO Age Friendly Cities and Communities	24
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	11.45
	Annual Cigarette Consumption (Units per Capita), 2019	827
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	27.8 % of adults

Longevity-Related Indices

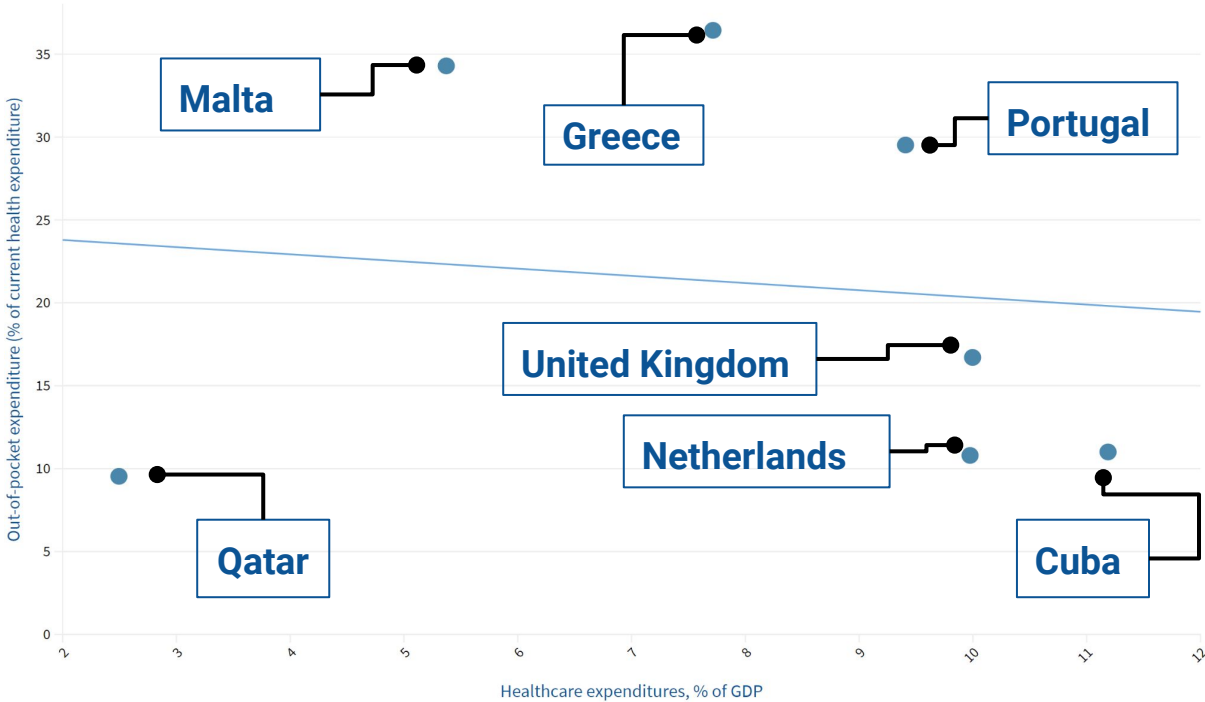


- The Healthcare Access and Quality Index -2016:
90
- Human Development Index, 2019:
0.93
- E-Government Development Index, 2019:
0.94
- Corruption Perceptions Index, 2019:
77
- Global Gender Gap Index, 2019:
0.78
- Democracy Index, 2019:
8.52

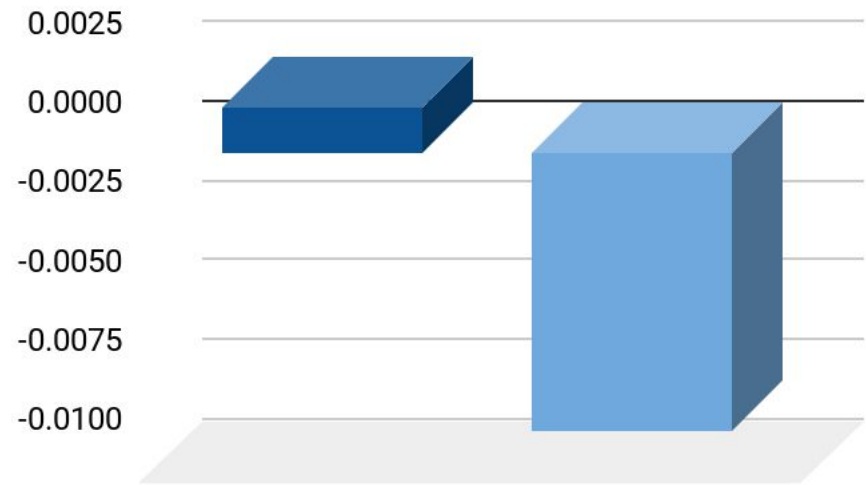
Current Healthcare Expenditure



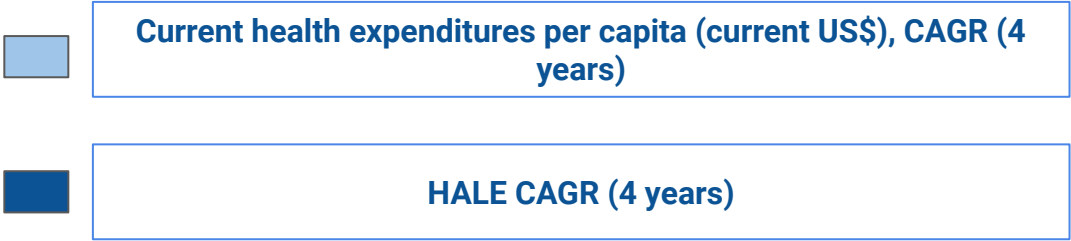
Countries with Medium HALE and LE and Medium GAP



Compound annual growth rate



The United Kingdom should address inequalities in health by socio-economic status as bad health is more prevalent among population with lower income and education

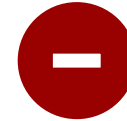


SWOT Analysis of Healthcare in the United Kingdom



STRENGTHS

- Healthcare in the United Kingdom is publicly funded, generally paid for by taxation. However, the UK also has a private healthcare sector, in which healthcare is acquired by means of private health insurance.
- Accessibility and affordability of healthcare services: everybody has access to exactly the same health care. Universal health care does not discriminate on any basis.
- Information on patients is shared between medical establishments in the form of electronic health care records.



WEAKNESSES

- The most common causes of premature death in, 2019 are similar the UK: heart disease; lung cancer; stroke. Deaths due to dementia and Alzheimer disease increased again in 2017 and it remained the leading cause of death in England and Wales, accounting for 12.7% of all deaths registered.
- High level of cancer incidence. UK incidence is ranked higher than 90% of the world.
- The long waiting times becomes the main problem in other universal health care.



OPPORTUNITIES

- The digital transformation of the health and social care system. It is part of the ongoing commitment to introducing new technologies into the NHS in order to reduce the burden on clinicians and to enable staff to provide enhanced levels of care.
- Growing longevity economy. The ageing market is increasingly significant. In the UK alone, consumers aged 50+ spend over £500bn each year. This market segment is also growing faster than any other – both in absolute terms, as the number of older people rises, and as a proportion of total consumer spending.



THREATS

- An ageing population: health inequality is growing, the population is ageing and the NHS will need to adapt.
- Evolving healthcare needs that lead to increase in healthcare costs, such as the increase in cases of obesity and diabetes, antibiotic resistance, high level of cancer incidence.
- Estimated costs of progress in medical technology equal at least an extra £10bn a year.

Analysis of Strengths and Weaknesses of Healthcare in the United Kingdom



- Health care system is government-sponsored, and it is dependent on need to be cured, not ability to pay. Government through legislation initiatives protects people from the heavy financial costs of healthcare.
- Access to care is generally good. The health service provision is with relatively low administrative costs using cheaper generic medicines.
- It performs well in managing certain long-term health problems such as diabetes.
- Out-of-pocket payments are low, and few people report skipping consultations due to the cost of care (4.2% compared to an average of 10.5% among 17 OECD countries with comparable data).
- More than half of the English population successfully met the government guideline of five portions of fruit and vegetables per day. As well as maintaining a healthy diet, the government recommends at least 150 minutes of moderate intensity physical activity per week.

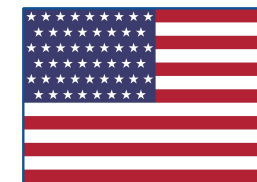


- Their active government's role in healthcare weakens the functionality of market mechanisms.
- The tight control undertaken by government in regards to medical expenses has resulted in a lack of medical resources, such as equipment, doctors and nurses in public hospitals.
- Although the gap has closed over the last decade for stroke and several forms of cancer, the mortality rate in the UK among people treated for some of the biggest causes of death, including cancer, heart attacks and stroke, is higher than average among comparable countries. The UK also has high rates of child mortality around birth.
- Unhealthy lifestyles are reducing the quality of life for many British adults and adolescents. Smoking and alcohol consumption among adults have declined over time, but drunkenness among adolescents remains an important concern. Among 15-year olds, 30.5% have been drunk at least twice in their life. Prevalence of obesity in the UK is 27%, the sixth highest in OECD countries and the highest in Western Europe. A further 36% of the population are overweight but not obese.

Recommendations for the United Kingdom

- **Implement more widely and deeply approaches to monitoring and improving health care quality.** OECD reports that many quality of care indicators are close to or just below the OECD average. Avoidable hospital admissions are also high.
- **Modifying or avoiding key risk factors, including tobacco use, unhealthy diet and physical activity.** Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioral factors.
- **Improving the quality of care and reducing waste elsewhere in the system.** From drugs and pharmaceutical waste to biological and radioactive materials, healthcare waste demands expert disposal.
- **Undertake sustained effort to reduce risk factors** such as high body mass index, high fasting glucose, high blood pressure and high cholesterol that increases with ageing population.
- **Initiate more education and training programmes to sustain improvements in health services.** The knowledge and skills of the health and public health workforce needs to be kept up to date and developed.
- **Promote research and initiate wider utilization of Artificial Intelligence for preventive medicine.** Research is vital in providing the knowledge needed to improve health outcomes and reduce inequalities.
- **Dealing with regional inequality.** The north of England generally suffers much poorer health than the rest of England, with lower life expectancy and earlier onset of chronic illness and disability. There is a need for economic development and regeneration of poorer parts of the country, and for high-quality health improvement programmes and care services in these areas.
- **Health records and linkage to survey data should be used more extensively** to refine disease prevalence estimates, and provide more reliable data to guide policy and programmes to address these causes of ill health.

United States of America



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General metrics

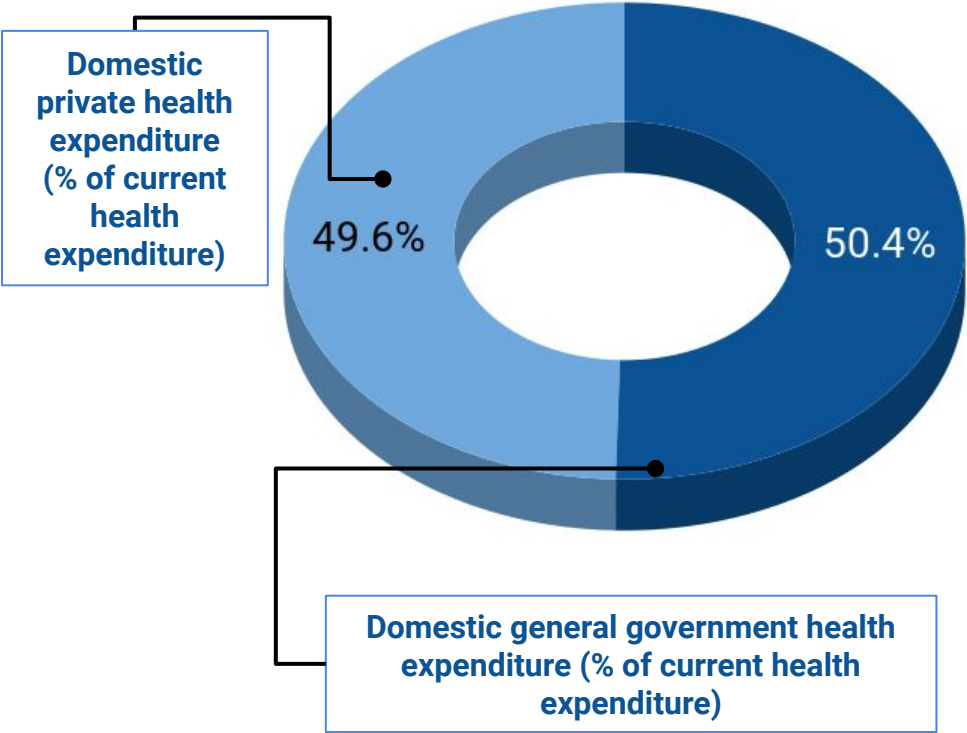
HALE	Both Sexes HALE, 2019	66.1 years
	HALE/Life Expectancy Difference, 2019	12.44
Economy	GDP per Capita, Current Prices, 2019	65.29 thousand (\$)
	Annual GDP Growth, 2019	2.6 %
Healthcare	Current Health Expenditure per Capita, 2019	10.62 thousand (\$)
	Public Health Care Expenditure, 2019	16.89 % of GDP
Retirement	Age Dependency Ratio, 2019	53.2
	Population over 65,, 2019	16.2 %
	Number of WHO Age Friendly Cities and Communities	357
General Health Status	Alcohol Consumption per Capita (Litres of Pure Alcohol), 2019	9.87
	Annual Cigarette Consumption (Units per Capita), 2019	1016
	Prevalence of Overweight among Adults, 2019 (Age-Standardized Estimate)	36.2 % of adults

Longevity-Related Indices

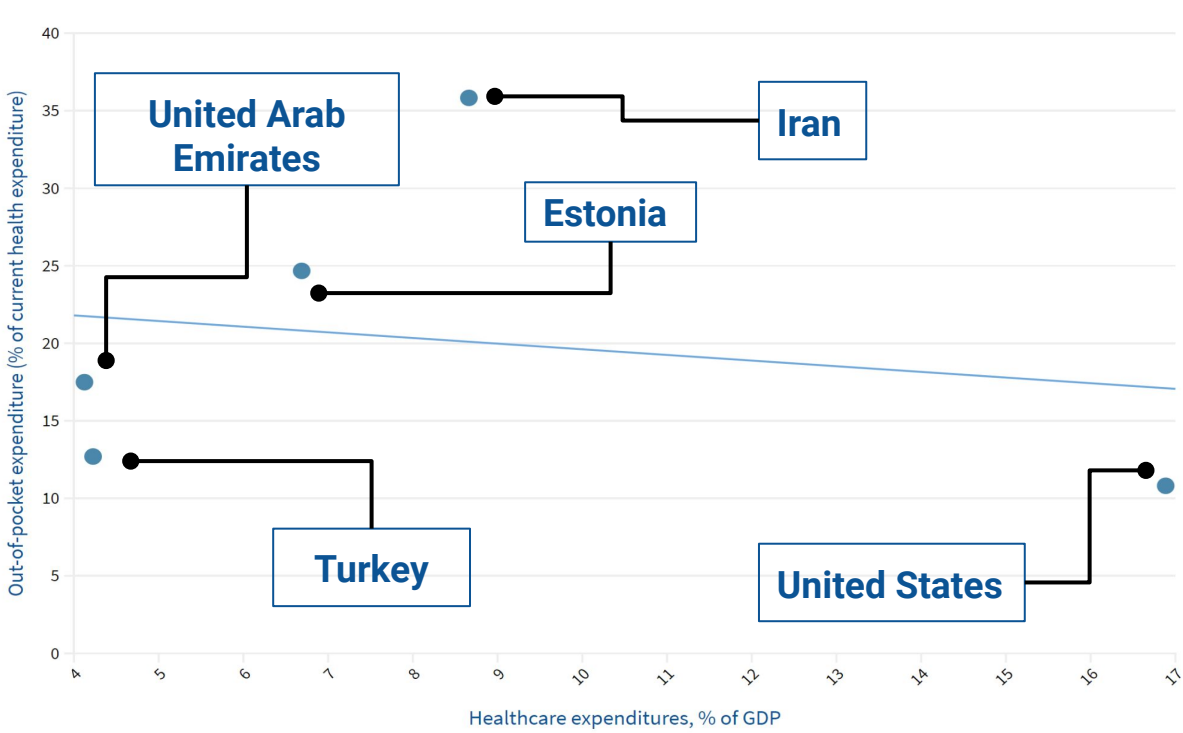


- The Healthcare Access and Quality Index -2016:
89
- Human Development Index, 2019:
0.93
- E-Government Development Index, 2019:
0.93
- Corruption Perceptions Index, 2019:
67
- Global Gender Gap Index, 2019:
0.76
- Democracy Index, 2019:
7.92

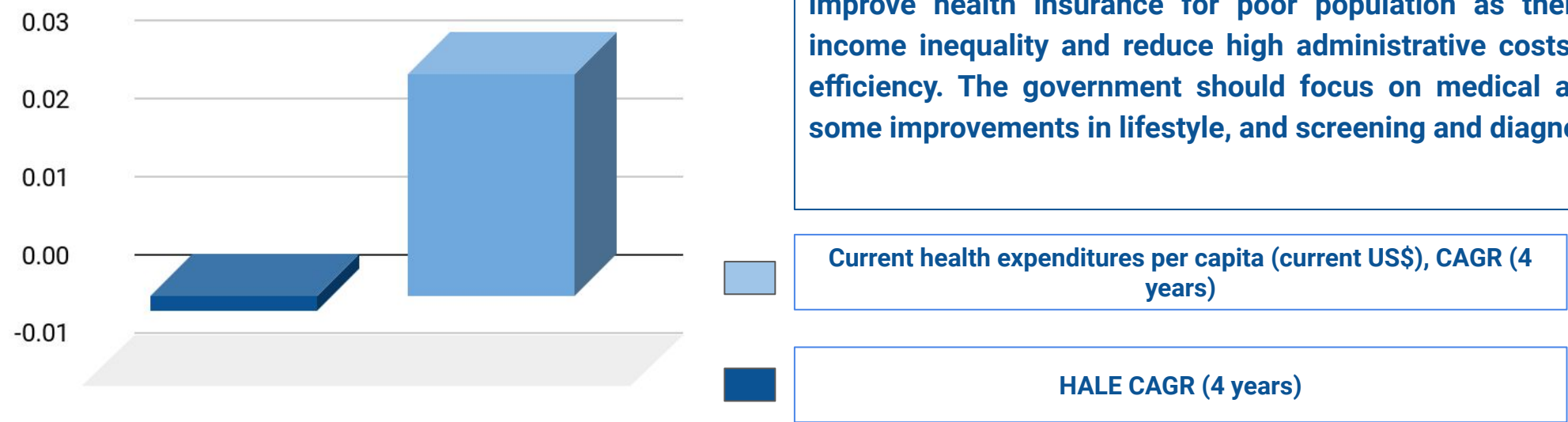
Current Healthcare Expenditure



Countries with Low HALE and LE and High GAP



Compound annual growth rate



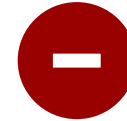
In order to improve HALE the government of United States should improve health insurance for poor population as there is big income inequality and reduce high administrative costs for cost efficiency. The government should focus on medical advances, some improvements in lifestyle, and screening and diagnosis.

SWOT Analysis of Healthcare in the United States



STRENGTHS

- Highly dedicated professional on all levels of health care system.
- Research, innovation and entrepreneurship.
- Healthcare system runs like a business system. Healthcare providers compete to get the most business to provide the best care, providing the choice for patients.
- In recent years the U.S. showed promise in the control of chronic conditions, smoking rates, the use of electronic files for record keeping, and in certain aspects of hospital and long-term care.



WEAKNESSES

- Roughly 20 to 25 % of American health care spending is wasteful.
- Poor access and affordability of healthcare insurance. People with lower incomes spend a significantly higher share of their family income towards premium contributions and out-of-pocket medical expenses.
- There are wide differences in the burden of disease at the state level. Specific diseases and risk factors, such as drug use disorders, high BMI, poor diet, high fasting plasma glucose level, and alcohol use disorders are increasing and warrant increased attention.



OPPORTUNITIES

- Prioritize and leverage the potential of specialty-specific analytics solutions to investigate drug utilization, treatment variability, clinical trial eligibility.
- Participatory medicine: empower individuals to be able to manage their own health.
- Utilization of Artificial Intelligence in longevity industry.
- Growth of regenerative medicine.
- Legislation to provide for comprehensive health insurance coverage for all United States residents and improved health care delivery.



THREATS

- Further increase in healthcare costs.
- Insolvency predictions for government-funded schemes
- Increase in financial burden on the patient, leading to larger medical debt
- Rise of systemic issues such as sick care. The health care delivery system reflects society's ills and reinforces them
- Income inequality continues to grow. In 2015, the top 1 percent of families in the United States made more than 25 times what families in the bottom 99 percent did.

Analysis of Strengths and Weaknesses of Health Care System in the United States



- The United States is renowned for its leadership in biomedical research, its cutting-edge medical technology, and its hospitals and specialists.
- The mortality rate for all cancers has fallen steadily, overall cancer death rate **fell by 26%** during 1991-2015.
- Dramatic progress in lowering mortality from diseases of the circulatory system. In the U.S., the mortality rate has fallen from 629 deaths per 100,000 population in 1980 to 257 in 2015.
- Strong private sector orientation facilitates ready access to all manner of services for those with stable coverage and strongly encourages on-going medical innovation by product manufacturers.
- High-quality services are available for those with good insurance.
- Major technological breakthroughs have occurred in treating numerous diseases.



- **According to World Health Organization Ranking: The World Health System**, Health care system of the United States is 37.
- The United States is one of the few developed nations that lacks universal healthcare.
- Problems with ensuring Americans' access to the system and providing quality care are a long-standing concern of policy makers and the public.
- High out-of-pocket expenses (**\$1,813 or 11%** of current healthcare expenditures in 2017) make health care services, pharmaceuticals, and medical supplies increasingly unaffordable.
- In the United States, health care delivery and financing are fragmented across thousands of health systems and payers and across government and the private sector, creating inefficiencies and coordination problems.
- Many Americans rely on emergency departments for acute, chronic, and even preventive care but not on preventive care itself. **According to a recent survey by the Commonwealth Fund**, patients in the U.S. visit the emergency department for conditions that could have been treated by a regular doctor or place of care nearby.

Recommendations for the United States

- **Move to a life-course perspective in tackling the rising epidemic of “metabesity.”** Initiate strategies to improve the health of the nation, promote the importance of focusing on socio-demographic factors to ensure delivery of healthy newborns and decrease the burden of behavioral factors such as insufficient physical ability, overweight, alcohol abuse, smoking. This will stimulate policy initiatives that supplement income and improve educational opportunities, housing prospects, and social mobility as income is strongly associated with morbidity and mortality.
- **This shift from treatment to prevention is ultimately leading to a coming age of precision health.** Health care leaders must shift the nation’s “sick care” approach to care that is preventive and comprehensive. “Precision health” denotes the continuous stabilization of health and the maximum-obtainable maintenance of a young biological age via the routine application of micro-interventions in response to ongoing fluctuations in biomarkers of aging and health.
- **Holding health insurers accountable.** By focusing on insurers’ payment strategies and quantitative goals and results, closer scrutiny of health insurers can drive systemic reforms to improve safety, increase care coordination, boost prevention, and bring down costs for consumers and small businesses.
- **Utilizing strength of the United States in artificial intelligence industry leads to meaningful improvements in medical care.** Translating the tremendous growth in data into clinical insights falls into the hands of AI (artificial intelligence)/ML (machine learning) platforms. The rapid growth in investment in AI and cloud computing are beginning to create the foundations for the precision health market of the future. But apart from advanced research it is important to provide effective, low-cost treatments that work, triggering unnecessary treatments and higher costs down the line.
- **A public option health plan.** Providing Americans under 65 with the option of buying into Medicare or Medicaid could provide consumers with a cheaper alternative to commercial health insurance and ensure that there are coverage options for consumers who lose their employer-based coverage.