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Research Article

Who Needs Big Health Sector Reforms Anyway? Seychelles' Road to UHC Provides Lessons for Sub-Saharan Africa and Island Nations

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Abstract—The road to universal health coverage (UHC) needs not be driven by big reforms that include the initiation of health insurance, provider–funder separation, results-based financing, or other large health sector reforms advocated in many countries in sub-Saharan Africa and elsewhere. The Seychelles experience, documented through a series of analytical products like public expenditure reviews and supporting surveys with assistance from the World Bank and World Health Organization (WHO), shows an alternative, more incremental reform road to UHC, with important lessons to the region and other small-population or island nations. Done well, in some countries, a basic supply-side funded, publicly owned and operated, and integrated health system can produce excellent health outcomes in a cost-effective and sustainable way. The article traces some of the factors that facilitated this success in the Seychelles, including high political commitment, strong voice and a downward accountability culture, strong public health functions, and an impressive investment in primary health care. These factors help explain past successes and also provide a good basis for adaptation of health systems to dramatic shifts in the epidemiological and demographic transitions, disease outbreaks, and rising public expectation and demand for high quality of care. Once again, how the Seychelles responds can show the way for other countries in the region and elsewhere regardless of the types of reforms countries engage in.

Keywords: access to services, political commitment, primary health care, public health, Seychelles, universal health coverage, voice and accountability

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INTRODUCTION

In recent years, the universal health coverage (UHC)¹ agenda developed and promoted by the World Health Organization (WHO) has galvanized the global health community^{2–4} and features prominently in the Sustainable Development Goals,⁵ specifically in Sustainable Development Goal 3—achieve

	Fiji	Cabo Verde	Barbados	Seychelles	Mauritius	Maldives	Malta
Population ('000)	898.8	539.6	285.0	94.7	1,263.5	427.8	437.4
GNI per capita, Atlas method (current USD)	4,780	2,970	15,210	15,410	9,770	10,380	24,190
Current health expenditure (% of GDP)	3.6	4.8	7.5	3.4	5.5	11.5	9.6
Life expectancy at birth, total (years)	70.3	72.8	75.9	74.3	74.4	77.3	81.8
Mortality rate, infant (per 1,000 live births)	18.7	18.2	1147	12.3	12.2	7.3	5.9
MMR (per 100,000 live births)	30	42	27	0 ^a	53	68	9

^aThree maternal deaths were reported in the national statistics for Seychelles in 2015. For most years prior to and after 2015, maternal mortality was reported as zero in the national statistics.

Source: WDC¹¹. Health expenditure data are for the year 2015.
GNI: Gross National Income; MMR: Maternal Mortality Ratio

TABLE 1. Selected Health Indicators, 2016

universal health coverage, including: financial risk protection; access to quality essential health care services; and access to safe, effective, quality, and affordable essential medicines and vaccines for all. The goal of UHC provides countries with a clear objective for health system strengthening and reforms. But the health sector reform agenda has been around for a longer time, going back to the Declaration of Alma-Ata in 1978⁶ and more explicitly with the publication of the World Bank's *World Development Report 1993: Investing in Health*.⁷ What UHC does differently is identify and articulate a universal objective, which is the universal coverage of critical health services. UHC then serves as an overarching theme for all country-specific objectives that have motivated reforms in the past, including access, quality, and efficiency of health services in decreasing mortality and morbidity; the decrease of inequalities in both health outcomes and use of health services; lowering of the financial risks faced by vulnerable populations due to the cost of health care services; as well as the responsiveness of health system to population needs and preferences. UHC therefore provides an excellent entry point for a health system reform agenda.

Over the years, reforms have taken many forms and covered a range of topics and approaches. In terms of financing health care, efforts included changing funding sources such as user fees and related exemptions or different forms of insurance structures and models. How health care providers are paid for delivering care has also figured prominently in reforms, including output-, performance-, and results-based financing. In terms of service delivery and organization, health system reform efforts have included public-private partnerships, decentralization, new public-sector management, and facility autonomy, among others. Most of these efforts have focused on large structural changes to how health is either financed or delivered and, in some cases, both.

What is interesting about the Seychelles health system is that the country has one of the most effective health systems in Africa and among comparable small population countries (Table 1) and has achieved this without major reforms along the lines described above. This is achieved through continued investment in the public health system with little to no distraction by complex health reform interventions such as a health insurance program and results-based financing. That is not to say that Seychelles did not constantly improve the health sector or that it cannot improve the sector further. The point is that Seychelles offers an alternative approach for achieving UHC—showing that with common sense and sensible incremental improvements, much progress can be achieved at a relatively low cost. This article does not argue that only common sense and incremental improvements should be how every country strengthens the health sector but rather that these changes are critical regardless of the health sector and the reform journey a country undertakes. This article also does not argue that a publicly funded, organized, and owned health system is appropriate for every country. Lessons from Seychelles will add to the few global examples of well-functioning dominantly publicly owned and run public health systems, including the examples of Cuba,⁸ Costa Rica,⁹ and the Indian state of Kerala.¹⁰ It will also provide insights for other countries in the African continent.

METHODOLOGY

The article presents Seychelles' experience with health reform documented through a series of analytical products like public expenditure reviews and supporting surveys¹²⁻¹⁴ carried out by the Ministry of Health with the support from the World Bank and WHO. Over the last decade, the World Bank has conducted three analytical products—public expenditure reviews (2009 and 2014) and health services reviews in Seychelles: availability, quality of care, and efficiency in health spending (forthcoming).¹⁴ In

drawing conclusions and lessons, findings from these analytical products are complemented by the authors' longstanding engagement in Seychelles and extensive discussions with a wide range of national experts and policy makers in multiple ministries.

The public expenditure reviews, using audited financial statements from the Ministry of Finance, applied a standard approach to analyze how public funds are spent in the health sector and what was achieved as a result. The public expenditure analysis is further complemented by the detailed analysis of private spending and donor funds channeled to non-state sectors as documented in the national health accounts. Seychelles has conducted four rounds of national health accounts (2009, 2013, 2014, and 2015)^{15–17} with support from WHO and the World Bank. The last three were conducted using the *System of Health Accounts 2011*¹⁸ methodology, whereas the 2009 round used the national health accounts 2003.¹⁹ As part of the 2017 efficiency and value for money in health spending study, a benchmarking of quality and efficiency of care in Seychelles against Organization for Economic Cooperation and Development (OECD) countries was conducted.

In addition, several facility and patient exit surveys generated primary data sets that facilitated further triangulations of the Seychelles' experience: (1) *Service Availability and Readiness Assessment* (SARA 2017)—a health facility survey using WHO standard questionnaires and methodology²⁰ that covered almost all health facilities and generated reliable information on general service availability, general service readiness, and specific service availability and readiness for 18 selected services; (2) patient safety situational analysis (2017)—a health facility survey using WHO standard questionnaires²¹ that assessed all health facilities in 12 key action areas of patient safety; (3) patient exit surveys (2013, 2017)—two rounds of patient exit surveys on their choices of, access to, and satisfaction with the care they received using the same questionnaires to maintain comparability; and (4) a health worker survey (2013)—a survey administered to all health professionals that covered critical themes including health worker density, transfer and attrition, working conditions, and ability and willingness to perform.

SEYCHELLES' HEALTH SECTOR STRUCTURE AND OUTCOMES

The detailed analytical work described in the previous section allows for the presentation of the main characteristics of the health sector in Seychelles and the successes achieved over the years. Over the last 15 years, the health sector has undergone several structural changes in accountability and organization, but the main elements of how the sector is financed,

how providers are paid, and how services are delivered have remained stable. It could be argued that the general stability of the sector may reflect success in achievements but, regardless the reason, Seychelles has consistently invested to improve access to and availability of services. The constitution of the country grants all citizens free access to primary health care.^{22,23} In reality, free access is implemented at higher levels of care as well. Citizens therefore do not pay for care at point of use in public facilities. A largely equitable mechanism exists for supporting overseas medical treatment for services not available in country for the population. Globally, this is a unique case in which the free benefit package is more generous de facto than de jure. Seychelles' health system is, for all practical purposes, supply-side focused, financed through general government revenues, and dominantly publicly owned and managed.

The health sector serves a small population of 94,677 people (mid-population in 2016)²⁴ spread across 115 tropical islands. Over 85% of the population lives on the main island, Mahe, and this is where health facilities are concentrated. As a result, access to services is high: travel time to a health facility is less than 30 minutes for more than 75% of patients, and waiting time is less than 30 minutes for 70% of the patients. Consultation remains the main purpose of visit to a health facility, and 70% of patients are seen by a doctor/medical officer during a visit.¹⁴ Health care facilities are overwhelmingly publicly owned. As a result, most providers (for instance, 83% of doctors and dentists in 2016) are practicing in the public sector. Private providers are part of the health sector landscape, particularly pharmacists, dentists, and some general practice providers.²⁴

Seychelles has developed an extensive network of health infrastructure that in some respects exceeds WHO-recommended norms. Due to this extensive network of facilities relative to the population and the tradition of free access to

	Seychelles	WHO proposed benchmark
Health infrastructure		
Number of facilities per 10,000	2.6	2.0
Number of inpatient beds per 10,000 population	29.7	25
Number of maternity beds per 1,000 population	23.8	10
Health utilization		
Annual hospital discharge per 100 population	12	10
Annual outpatient visits per capita	6	5

TABLE 2. Health Infrastructure and Utilization in Seychelles, 2017. Republished with permission from World Bank¹³

care, Seychelles boasts impressive utilization statistics that also exceed average benchmarks and norms set by WHO (Table 2).¹⁴ Seychellois thus have very good access to both inpatient and outpatient services. All age cohorts—from pregnant mothers to the elderly—have specific services tailored for their health and well-being. In addition, Seychelles has a network of community-based adolescent centers and homes for the elderly where these populations can interact with each other and access preventive and promotive services to improve their health-seeking behaviors. This is unique in the African region, where services are primarily focused on mothers and children, with less attention to adolescents, adults, and elderly persons.

One way to gauge access to services is to survey tracer elements in selected domains. WHO's SARA survey approach assesses general service readiness based on the capacities (inputs) of health facilities to provide general services in five domains: basic amenities, basic equipment, infection prevention, diagnostic capacity, and essential medicine and commodities. Seychelles performed very well in the areas of basic amenities, basic equipment, and infection prevention, with mean scores of 88% and above, whereas the scores for diagnostic capacity and essential medicines are lower, at 41% and 61%, respectively (Figure 1). The low scores for diagnostics and essential medicines are partly because of the Seychelles context and service delivery setup and do not necessarily signify shortage. For instance, all diagnostic tests are centralized at Seychelles hospital; stocks of all essential medicines are kept at Seychelles hospital and the smaller health facilities do not stock certain essential medicines that should be used only in hospital setting. Seychelles remains a top performer in general service readiness and domain scores for health facilities in comparison to other sub-Saharan Africa countries (Uganda, Kenya, and Sierra Leone, to name a few) that have conducted a SARA survey.²⁵

Detailed assessment of readiness of each facility was also conducted for 18 specific services covering both communicable and noncommunicable conditions. Facility readiness for each specific service is measured through assessing tracer items across the six domains: trained staff, guidelines, equipment, diagnostic capacity, medicines, and commodities. The results present a mixed picture. For about two thirds of the specific services, availability of tracer items is higher than 50%. However, very few services scored more than an 80% mean score of availability. Noncommunicable disease (NCD) services have higher scores, which is commendable given the burden of NCDs in Seychelles.¹⁴

Total current health expenditure, in per capita USD, has increased from 298 in 2009 to 450 in 2015 (a 65% increase). However, total current health expenditure as a share of gross domestic product (GDP) has remained relatively flat, with only a slight increase from 3.1% in 2009 to 3.4% in 2015. Government funding from general tax revenue accounts for the bulk of total current health expenditure: 87% in 2009 and 97% in 2015 (Figure 2). The share of health in general government expenditure increased from 8% in 2009 to 10% in 2015 (a 24% increase). Private health expenditure, 75% of which is household out-of-pocket payment, accounts for a small fraction of total current health expenditure (7% in 2009 and 2.5% in 2015). External funding has been very small and declining over the years, from 6% in 2009 to 0.5% in 2015 of total current health expenditure.^{15–17}

Seychelles' spending on health, 3.4% of total GDP in 2015, is low in comparison to OECD countries (Figure 3) and other income peers, including Mauritius (4.8%), Maldives (13.7%), and Cabo Verde (4.8%). However, the return for its investment measured in health outputs and outcomes is reasonably high and comparable to that of its peers, suggesting an efficient health system that is better able to

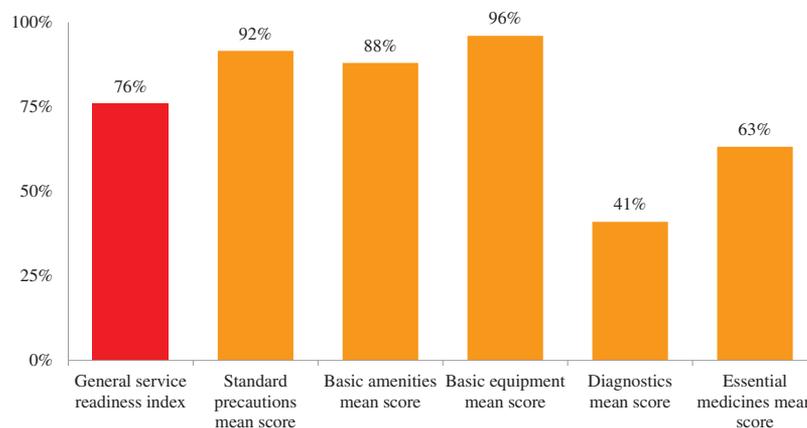


FIGURE 1. General Service Readiness in Seychelles, 2017. Republished with permission from World Bank¹³

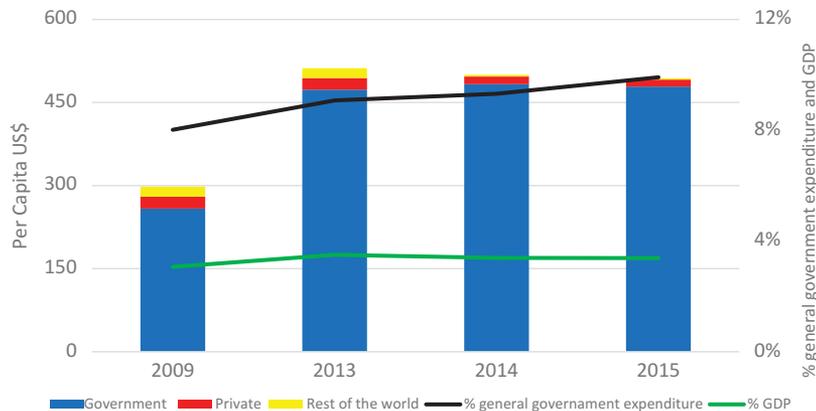


FIGURE 2. Trends in Health Expenditures in Seychelles Authors computation. 14, 15, 16, 29

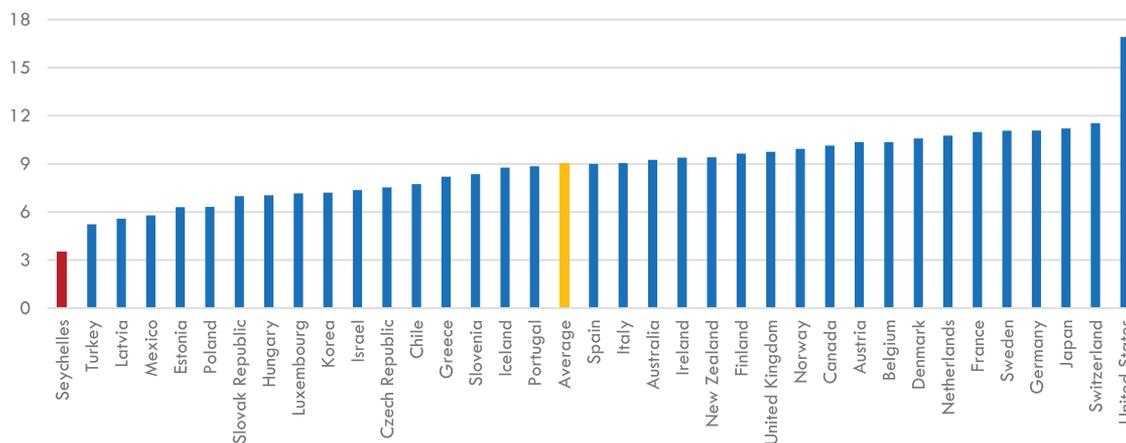


FIGURE 3. Current Health Expenditure as a Share of GDP, 2015 Authors computation. 29

translate investments into good health outcomes. An important measure of a health system’s effectiveness is the extent to which the sector produces good health outcomes. Mortality and life expectancy at birth are common health outcome measures. Seychelles’ infant mortality, under-five mortality, and life expectancy at birth compare favorably to its income peers (Figures 4, 5, and 6), which is indicative of an effective and efficient health system. Of course, in addition to the important roles of a health system, it is important to acknowledge the contribution of socioeconomic development to improved health outcomes. For example, Seychelles has achieved 92% literacy level, leading in Information Communication Technology (ICT) in Africa, and in 2015 became a high-income country.

Available data also point to an efficient health system. Various measures of efficiency, such as bed occupancy rate, average length of stay, number of magnetic resonance imaging and computed tomography scans, and allocation to

prevention, compare favorably to OECD countries.⁹ Considering the level of spending relative to national income, the country provides good quality services to the population, which has high levels of utilization. As noted in the financing data, out-of-pocket spending on health care services is very low despite high levels of service utilization. In other words, the health system succeeds at providing financial protection and ensures no financial barriers to use.

Seychellois are also highly satisfied with health services. The 2013 and 2017 patient exit surveys (Figure 7) present improvements in satisfaction for most areas, except for adequate opening hours, cleanliness of the facility, and travel convenience from home or work to a health facility.¹⁴ It is important to note that the 2017 exit survey also recorded that 70% of patients reached a health facility in less than 30 minutes.

We therefore see evidence of a predominantly supply-side, publicly owned, publicly financed, and publicly managed

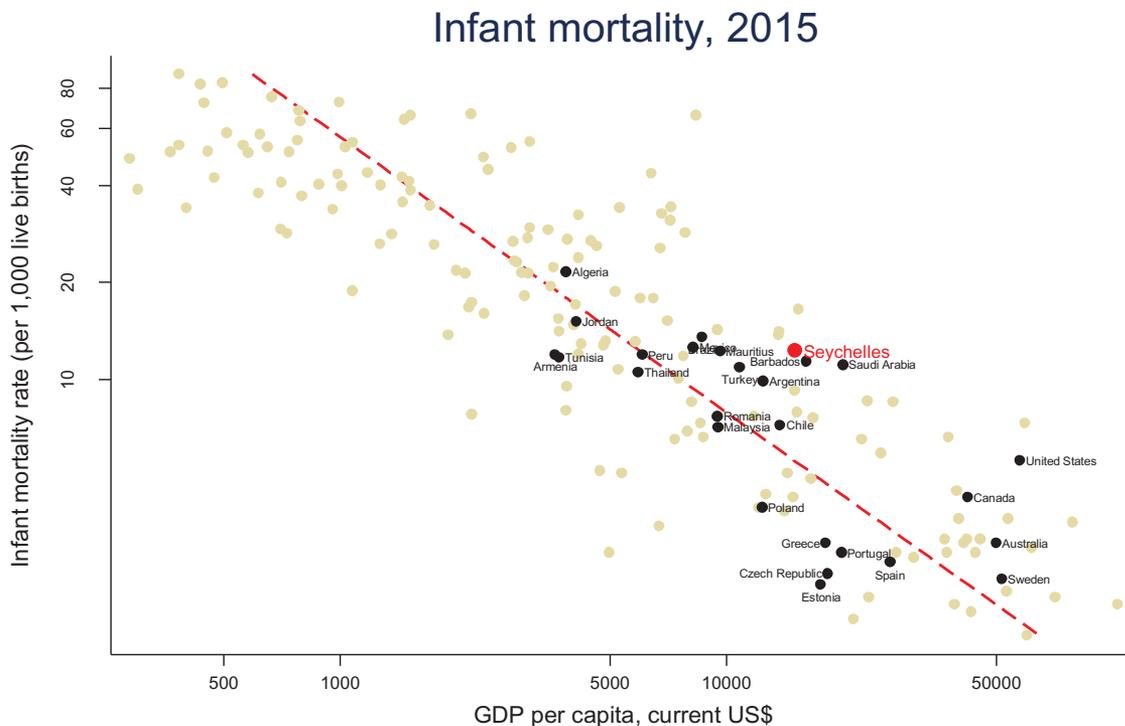


FIGURE 4. Infant Mortality versus GDP per Capita. Authors computation. ²⁹

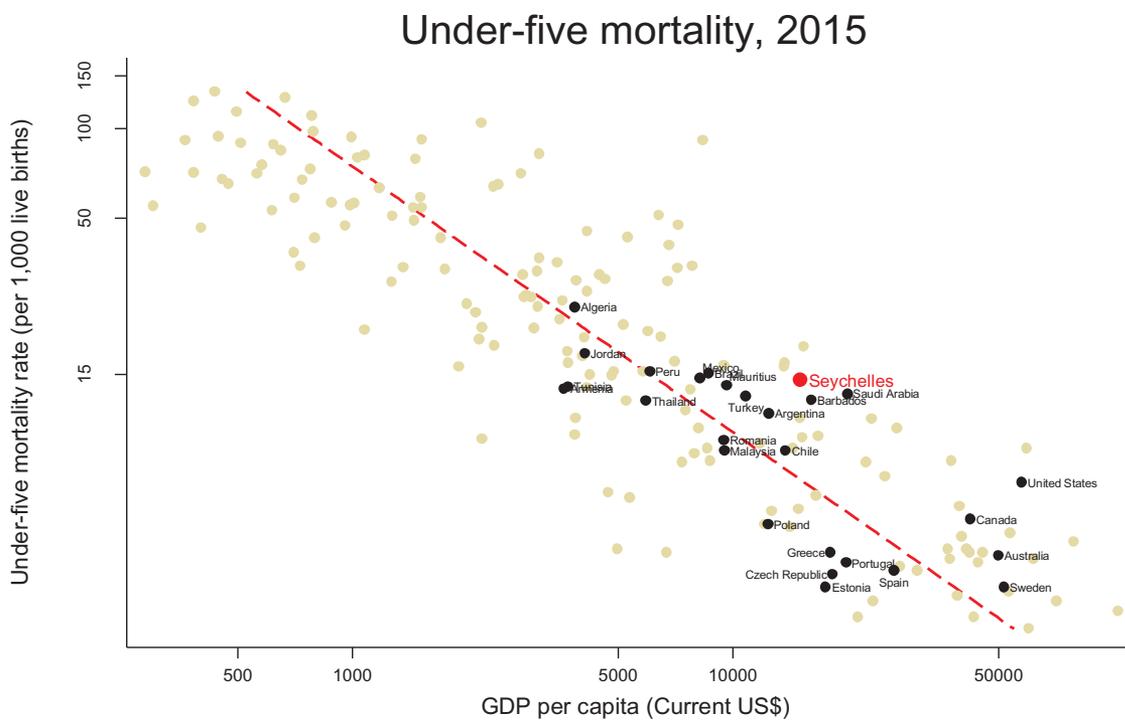


FIGURE 5. Under-Five Mortality versus GDP per Capita. Authors computation. ²⁹

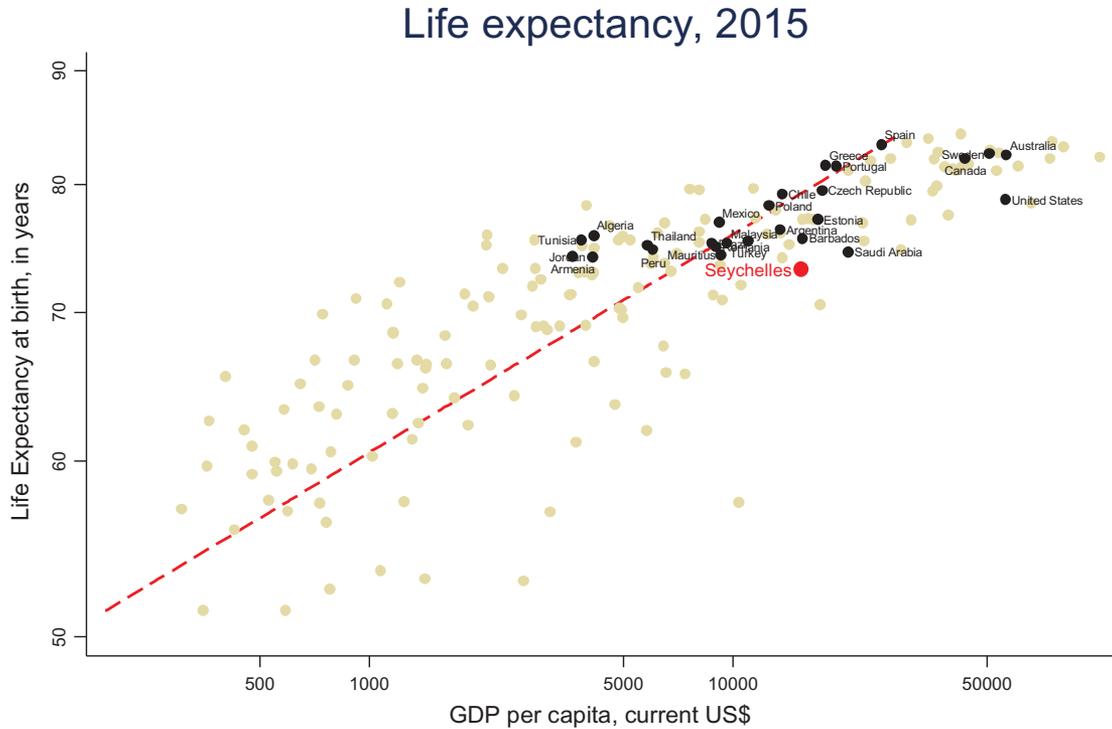


FIGURE 6. Life Expectancy versus GDP per Capita. Authors computation. ²⁹

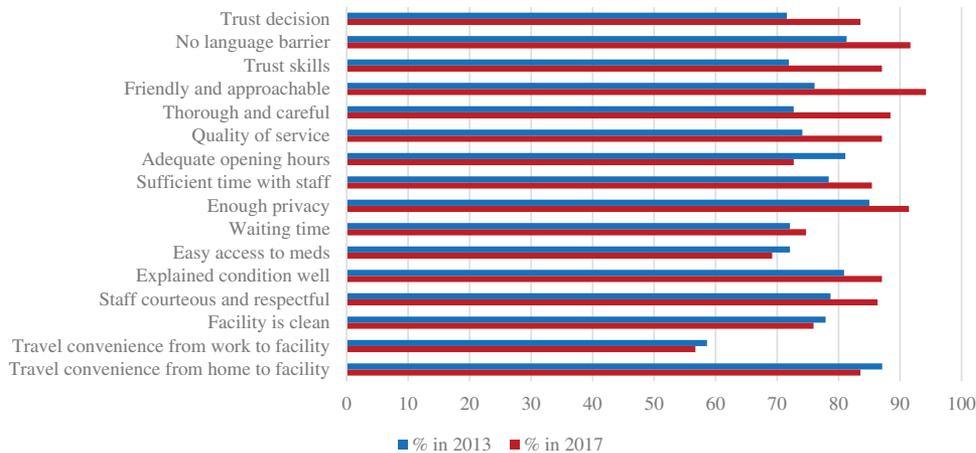


FIGURE 7. Patient Satisfaction. Republished with permission from World Bank¹³

health system that has produced excellent utilization and quality results at a relatively low expenditure level. The different measures of universal health coverage show that the country has largely assured for its population a wide range of available services and a high level of utilization of relatively good quality services, with high levels of user satisfaction and financial risk protection. In the next two sections, we trace the success factors, extract lessons for other countries, and describe the remaining challenges of the health sector in Seychelles.

KEY FACTORS THAT FACILITATED SUCCESS

Some of the factors that facilitated this success of the health sector in Seychelles include high political commitment, a strong voice and downward accountability culture, a clear separation of functions between service delivery and public health and policy, and an impressive investment in primary health care.

At independence, in 1976, Seychelles had a very rudimentary health system for its population, which was served by a

total of eight public health facilities^a(five on Mahe, one on Praslin, one on La Digue, and one on Silhouette islands), two private practices, 15 doctors, and five dentists. Of the eight public facilities, two catered to patients with specific conditions only, namely, mental health and leprosy. With the exception of Seychelles hospital, which had four wards, all other facilities had small capacities. The predominant causes of ill health were communicable diseases, although the previously high incidence of tuberculosis had by then been brought under control.²⁶

In the ensuing years, Seychelles embraced the primary health care approach promoted by WHO and defined its vision and principles for equitable and accessible primary health care for all. It invested incrementally to expand the primary care network and health infrastructure in general, to equip and stock facilities, to train and deploy health professionals, and to promote and educate individuals with regard to responsibility for their own health. The investment paid off handsomely. Two decades later, in 2000, the number of health centers more than doubled to 17; the number of doctors and dentists increased more than fivefold to 119; coverage of essential child, maternal, and reproductive health pushed to the upper 90%; the infant mortality rate dropped by over three quarters from 43.2 per 1,000 live births in 1977 to 9.9 per 1,000 live births in the year 2000; and average life expectancy for both sexes increased from 69.5 in 1980 to 72.7 years in 2000.²⁶ In addition, by early 2000, most communicable conditions were under control and the burden of disease started to shift to NCDs. During this same time period, the economy has prospered and living condition have also improved.

In 1993, the government enshrined the right to health and respect to human dignity in its Constitution.^{22,23} It spells out a clear commitment and states that:

... the State recognizes the right of every citizen to protection of health and to the enjoyment of the highest attainable standards of physical and mental health and with a view to ensuring the effective exercise of this right, the State undertakes:

- to take steps to provide for free primary health care in state institutions for all its citizens,
- to take appropriate measures to prevent, treat and control epidemic, endemic and other diseases,
- to take steps to reduce infant mortality and promote the healthy development of the child,
- to promote individual responsibility in health matters, and
- to allow, subject to such supervision and conditions as are necessary in a democratic society, for the establishment of private medical service.

It is not uncommon to come across similar language in many constitutions of nations across the globe; however, in the Seychelles case, the pledge to provide free care has been achieved and maintained. Health is a priority sector and that shows in the annual budget appropriation, where allocation to health has continued to rise to respond to the changing needs and demands of the population.^{15–17}

Despite several reorganizations of the health sector, particularly in the last decade, the public health function has remained adequately staffed and funded. This is important considering the high burden of NCDs in the Seychelles and the potential return to investment in primary and secondary prevention of NCDs. Budget allocation and expenditure on prevention activities have steadily increased as shown by national health accounts, from 6.4% of general government expenditures in 2009 to 12.5% in 2015, which is higher than the OECD average. With the 2014 reorganization,^{23,27} which introduced a separation of functions (policy, service delivery, and public health), a public health authority was established as an independent entity to regulate public health matters and protect the population's health.

In addition, the country stands out with a culture of downward accountability, strong citizen voice, high transparency, and low corruption. In the Ibrahim Index of African Governance that considers a composite set of measures (i.e., safety and rule of law, participation and human rights, sustainable economic opportunity, and human development), Seychelles is a top performer with an overall governance score of 73.4/100 in 2017, second only to Mauritius.²⁸ Similarly, with a score of 60/100 in the 2017 Transparency International's Corruption Perceptions Index, Seychelles is the second least corrupt country in sub-Saharan Africa after Botswana and ranks 36/180 globally.²⁹ In the health sector, some of these governance characteristics might have more to do with the country's small population, the cohesion of the society, and the Seychellois culture than anything else. Nevertheless, they suggest that the essential ingredients of good governance are no less important than specific recipes of health reforms.

The story of Seychelles' health system is one of evolutionary development achieved through decades of consistent commitment to (1) investing in primary health care; (2) making health care free and accessible to all; (3) maintaining and strengthening public health functions regardless of structural changes in the sector; and (4) a high level of accountability to the population. In addition, there is keen interest in using evidence, generated through surveys and studies, to guide decision making. This

intelligence-driven stewardship has allowed the evolution of services that are attuned to the legitimate needs of the population, improve efficiency, and sustain high levels of satisfaction and utilization.

THE NEXT CHALLENGES

We have discussed above how Seychelles has improved its population's health and well-being through an approach that largely focused on supply-side investment in primary care, funded and managed by the public sector, with real commitment to making health care free, explicit emphasis on public health functions, and a high degree of transparency and accountability as well as use of evidence to inform decision making. It is natural that success brings a new set of challenges. For instance, the population is aging and the health burden has shifted to predominantly noncommunicable conditions that demand management of NCD risk factors and chronic and long-term care. There are concerns with infectious diseases such as HIV and hepatitis C resulting from intravenous drug misuse and vulnerability to outbreaks of dengue and vector-borne disease. Similarly, recent analyses and surveys brought to light important findings on quality of care and patient safety standards¹⁴ that require policy interventions and actions. Seychelles will have to continue to adapt and modernize its health system to meet these emerging challenges.

Improving a nation's health and well-being is a journey, not a destination. Seychelles' quest for better health continues. Though the country is small, it faces challenges that other countries face, with competing priorities and vested interests attempting to drive the health agenda.¹²⁻¹⁴ Such pressures are not size dependent for sovereign states. As such, there are lessons that many other countries could learn from the Seychelles story on how to move toward UHC through incremental changes and a focus on basic principles (funding primary care, focus on accessibility for care, attention to public health functions, and accountability) in a sustained manner. Health management does not have to be complicated. We believe that by building on its strong leadership and key factors for success as discussed above, Seychelles will be able to tackle the remaining and emerging health challenges and can show the way for other countries in the region and elsewhere.

NOTES

[a] The eight public health facilities in 1976 were Victoria, Anse Royale, Le Cannelle (mental patients only), Beoliere, Curieuse (leprosy patients only), Baie St. Anne, La Digue, and Silhouette.

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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