

## Universal health coverage gaps in Africa: A challenge for COVID-19 management

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**Abstract:** The objective of the analysis reported in this paper was to calculate the universal health coverage gaps in 54 African continent countries as a proxy indicator of vibrancy of underlying national health systems. The data analysed was extracted from the WHO Global Health Observatory. The UHC index gap varied widely from 22% in Algeria to 75% in Somalia. The UHC gaps were 30% and below in 4 countries; 31-40% in 8 countries; 41-50% in 6 countries; 51-60% in 23 countries; 61-70% in 10 countries; and 71% and above in 3 countries. The fact that UHC index gaps were more than 50% in 36 (66.7%) countries raise significant concern about those countries national health systems capacities to conduct laboratory testing of suspected cases, tracing of confirmed cases contacts, isolating, and safely managing positive COVID-19 cases.

**Keywords:** COVID-19, National health system, Universal health coverage, Universal health coverage gap

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### I. Letter to the Editor

To mitigate morbidity and mortality from COVID-19, WHO recommends to Member States following priority areas:

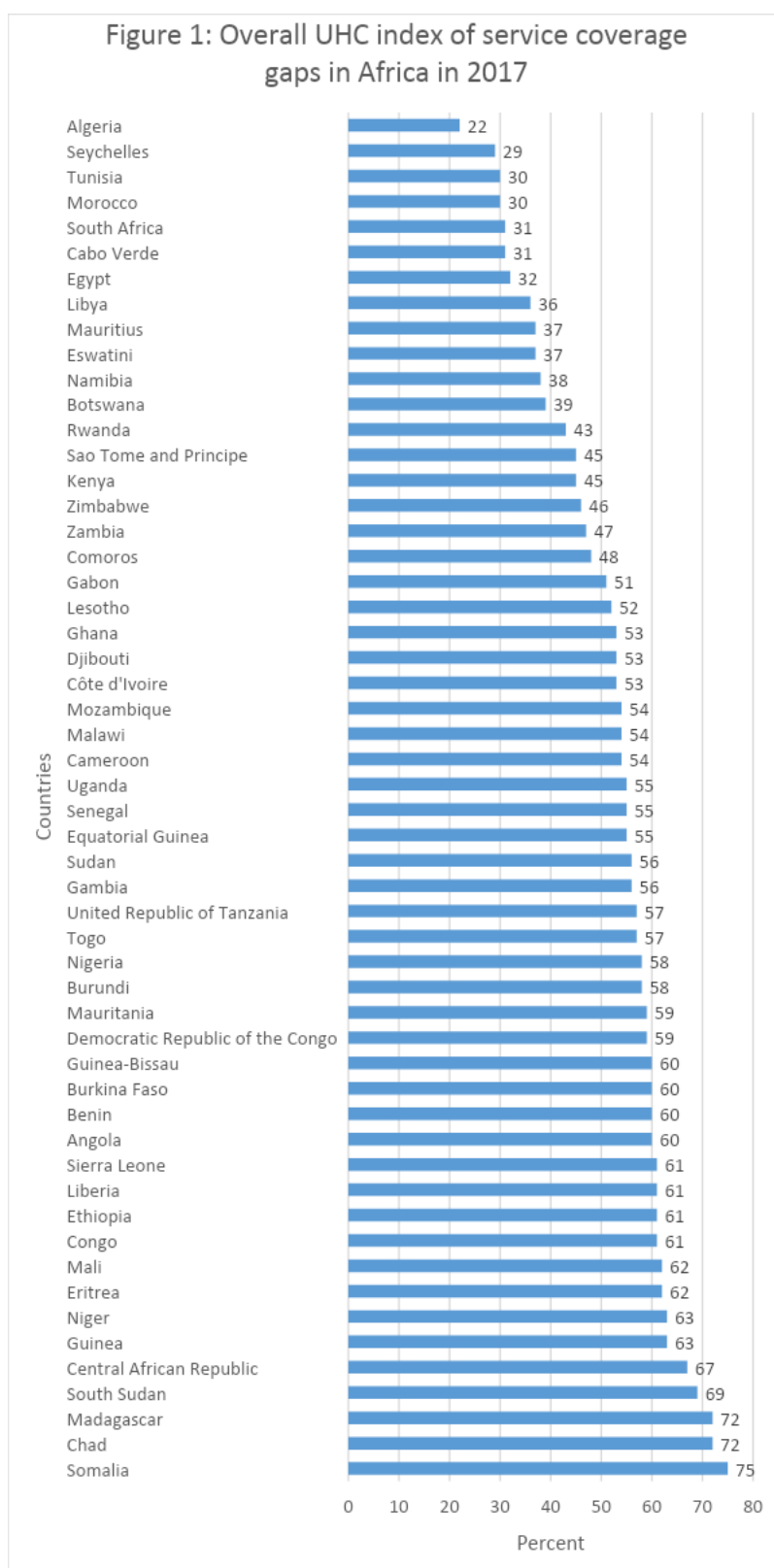
- laboratory testing of suspect cases, contacts of confirmed cases and patients identified through respiratory disease surveillance;
- (b) case management, which includes treatment of patients, readying hospitals for surge, enhancing triage procedures, and activating surge plans for health facilities; and
- (c) training staff in Infection Prevention and Control (IPC) and clinical management for COVID-19 [1,2].

Any country requires a functional national health system to implement the three actions effectively. WHO [3] defines a health system as “.. all organizations, people and actions whose primary intent is to promote, restore or maintain health” (p.14). Six pillars underpin a national health system: leadership and governance; health service delivery; health workforce; health products, vaccines and technologies (including infrastructure and medical devices); health financing; and information (and research) [4]. In a situation where a health system is performing optimally, all persons who need health services would have access without being exposed to catastrophic and impoverishing costs.

In other words, an optimally performing health system would lead to universal health coverage (UHC), and ultimately, to the attainment of the United Nations Sustainable Development Goal 3 (SDG3) [4]. The SDG3 is about ensuring all people of all ages lead healthy lives and have their well-being promoted. The SDG3 target 3.8 concerns the achievement of UHC. In this paper, we use the UHC index as an indicator of the vibrancy and resilience of African countries national health systems. The index was developed by the WHO jointly with the World Bank, to assesses the coverage of essential health services, which include reproductive, maternal, newborn and child health (RMNCH); infectious diseases (IFD); non-communicable diseases (NCD); and service capacity and access (SCA) [5].

The index is a geometric average of essential health services and has a scale of 0 (totally ineffective) to 100% (optimal). To obtain the UHC gap, we subtracted an individual country's UHC index from 100%. The closer to 100% a country is, the smaller the gap in national health system capacity to deliver the needed health services, among them, the measures recommended to identify, diagnose (test), isolate and manage COVID-19 cases [5]. Our UHC gap calculations were based on data from the WHO Global Health Observatory [6].

Figure 1 presents the overall UHC index and gaps in health service coverage for countries in Africa.



The UHC index gap varied widely from 22% in Algeria to 75% in Somalia. The UHC gaps were 30% and below in 4 countries; 31-40% in 8 countries; 41-50% in 6 countries; 51-60% in 23 countries; 61-70% in 10 countries; and 71% and above in 3 countries.

The UHC index RMNCH component gap varied from 19% in Egypt to 85% in Somalia. The RMNCH services gap was 30% and below in 14 countries; 31-40% in 13 countries; 41-50% in 12 countries; 51-60% in 10 countries; 61-70% in 2 countries; and 71% and above in 3 countries. Fifteen (27.8%) countries had gaps in the UHC index RMNCH component of over 50%.

The UHC index IFD component gap varied from 22% in Algeria to 89% in Madagascar. The IFD gap was 30% and below in 4 countries; 31-40% in 4 countries; 41-50% in 9 countries; 51-60% in 16 countries; 61-70% in 13 countries; and 71% and above in 8 countries.

The UHC index NCD component gap ranged from 19% in Ethiopia to 48% in Mauritius. The NCD services gap was 30% and below in 13 countries; 31-40% in 36 countries; and 41-50% in 5 countries.

The UHC index SCA component gap varied from 5% in Algeria to 88% in Chad. The SCA gap was 30 and below in 9 (16.7%) of countries; 31-40 in 0 (0.0%) countries; 41-50 in 2 (3.7%) countries; 51-60 in 3 (5.6%) countries; 61-70 in 11 (20.4%) countries; and 70 and above in 29 (53.7%) countries.

The percentages presented above clearly indicate that there are glaring gaps in the national health systems that will hamper African countries effectiveness in combatting the transmission of COVID-19. The fact that UHC index gaps were more than 50% in 36 (66.7%) countries raise significant concern about those countries national health systems capacities to conduct laboratory testing of suspected cases, tracing of confirmed cases contacts, isolating, and safely managing COVID-19 patients. Conversely, with or without the coronavirus pandemic, respective countries in Africa should endeavour to close these UHC gaps by implementing sustainable actions to strengthen the national health systems pillars.

### **Competing interests**

The authors declare no competing interest.

### **Authors' contributions**

All authors contributed equally in the design, data analysis, and writing of the letter. All the authors approved the final version of the manuscript.

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### **References**

- [1]. WHO. Critical preparedness, readiness and response actions for COVID-19: Interim guidance (7 March 2020). Document WHO/COVID-19/Actions/v1. Geneva: WHO; 2020.
- [2]. WHO. 2019 Novel Coronavirus (2019- nCoV): strategic preparedness and response plan. Geneva: WHO; 2020.
- [3]. WHO. Everybody business: strengthening health systems to improve health outcomes: WHO's framework for action. Geneva: WHO; 2007.
- [4]. United Nations (UN). Transforming our world: the 2030 Agenda for Sustainable Development. UN General Assembly Resolution A/RES/70/1. New York: UN; 2015.
- [5]. WHO, The World Bank. Tracking universal health coverage: 2017 global monitoring report. WHO and The World Bank: Geneva/Washington, DC: WHO and World Bank; 2017.
- [6]. WHO. Global Health Observatory. UHC Service Coverage Index. <http://apps.who.int/gho/portal/uhc-overview.jsp>. Accessed 30 March 2020.