



Investigating the Impact of the Transition to Universal Health Insurance Coverage on the Utilization of Healthcare in Sudan, 2016 – 2021: A Descriptive Study

Ashwag Abdulrahim¹, Michael O'Reilly², Wael Ahmed³

¹ Humphrey Fellow, Virginia Commonwealth University, U.S.; , ²Senior Advisor, Field Epidemiology Training Program, Papua New Guinea, Atlanta, GA, USA, ³Health Systems Specialist, Khartoum, Sudan



Background and objectives

Since 2016, Sudan has been transitioning from limited healthcare subsidization to universal health coverage (UHC). Increasing healthcare access was widely considered beneficial, but some worried that UHC would overwhelm clinical services. In 2020 and 2021 UHC faced the challenge of Covid-19. We undertook a review of national healthcare utilization and enrolment data in order to better understand the impact of UHC in Sudan.

Methods

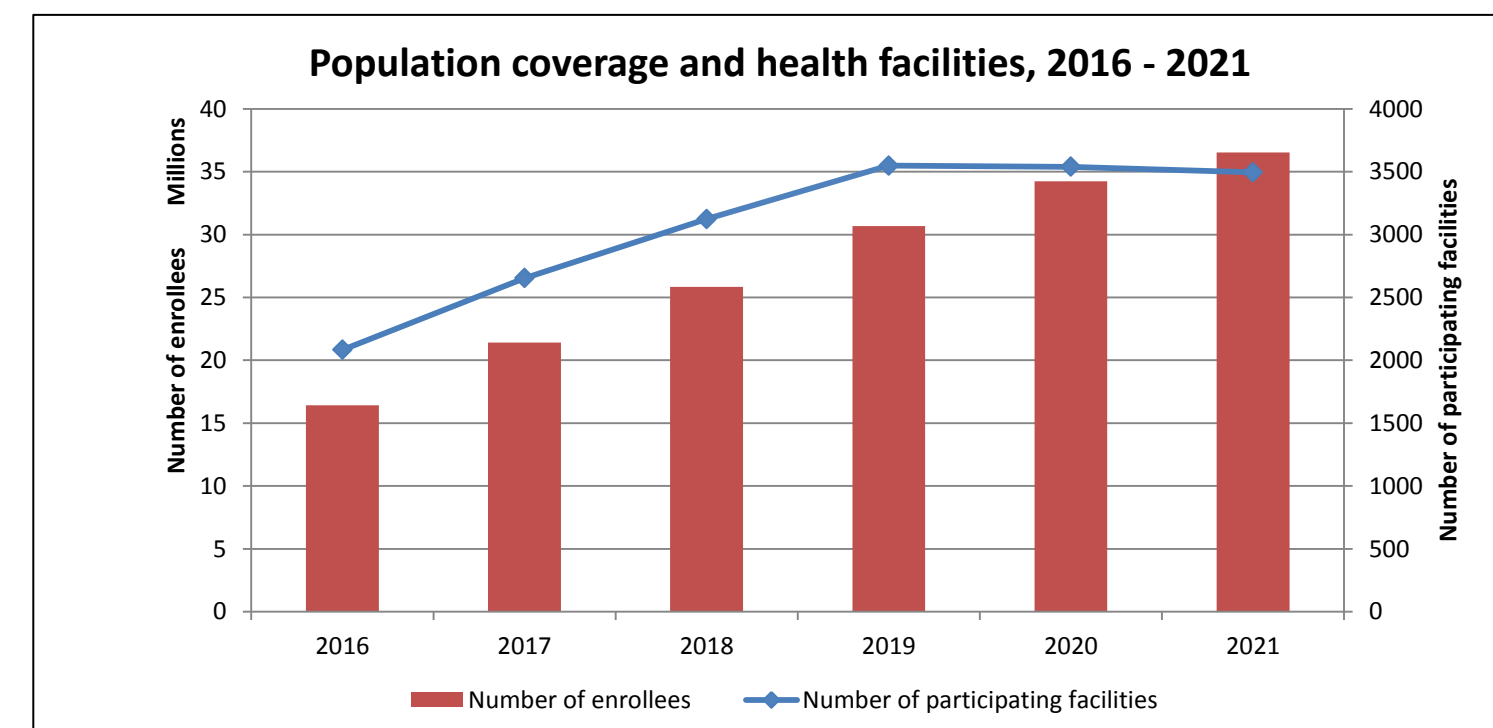
We conducted a descriptive study using National Health Insurance Fund databases. We analyzed annual enrolment, participating facilities, prescription volume and utilization from 2016 to 2021. Enrolment was stratified by employment status (government, informal sector, private sector, pensioner, impoverished). Utilization was assessed by type of care: primary, specialty, chronic disease and other; we calculated the ratio of primary to specialty care visits. We used the Mann-Kendall test for evaluating trends.

Results

Facilities and Enrolment

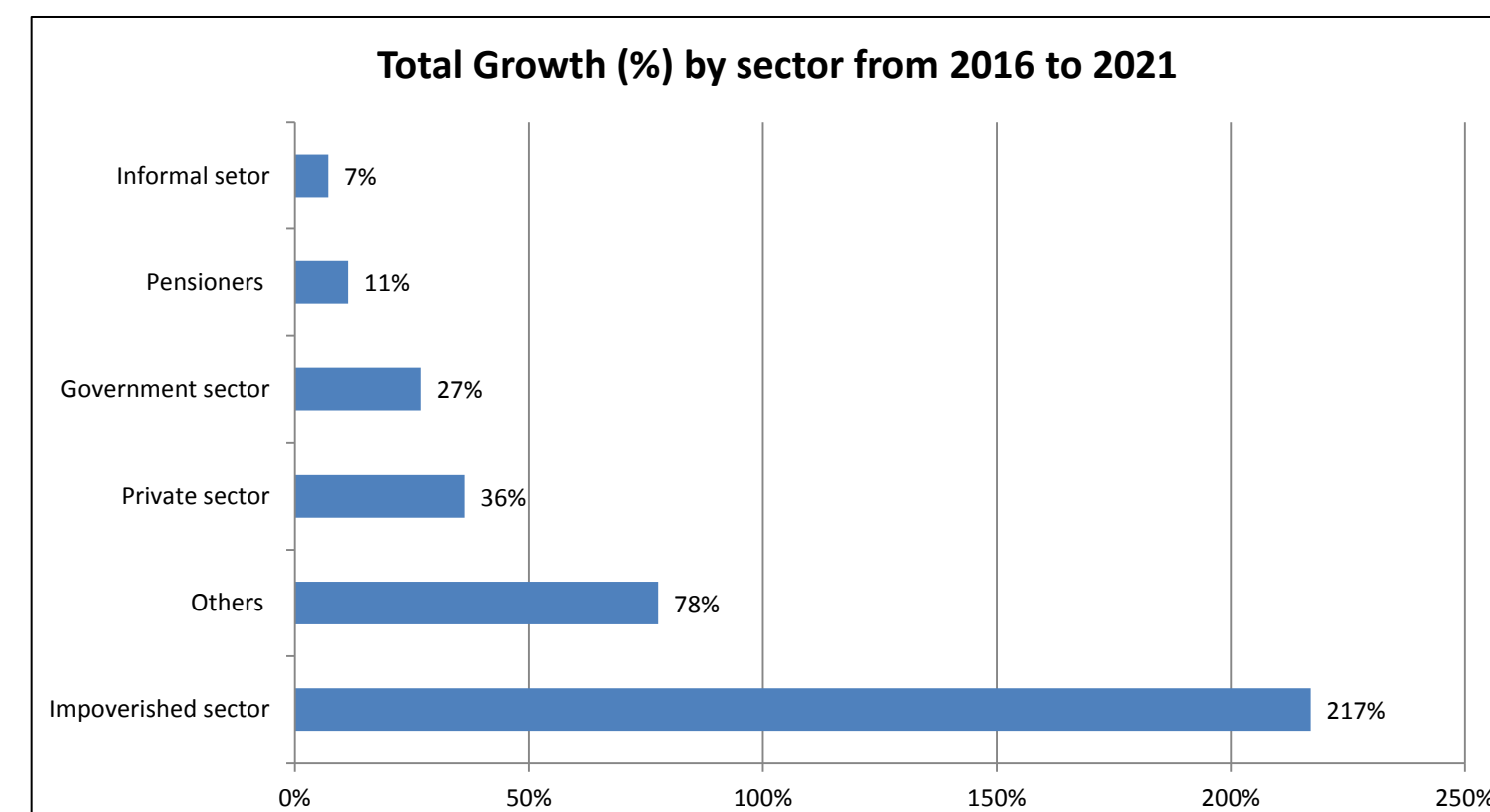
Annual enrolment increased significantly, from 16.4 million in 2016 to 36.5 million in 2021 ($p < 0.01$).

Participating facilities increased from 2,083 in 2016 to 3,549 in 2019, with slight contraction to 3,495 during 2020-21.



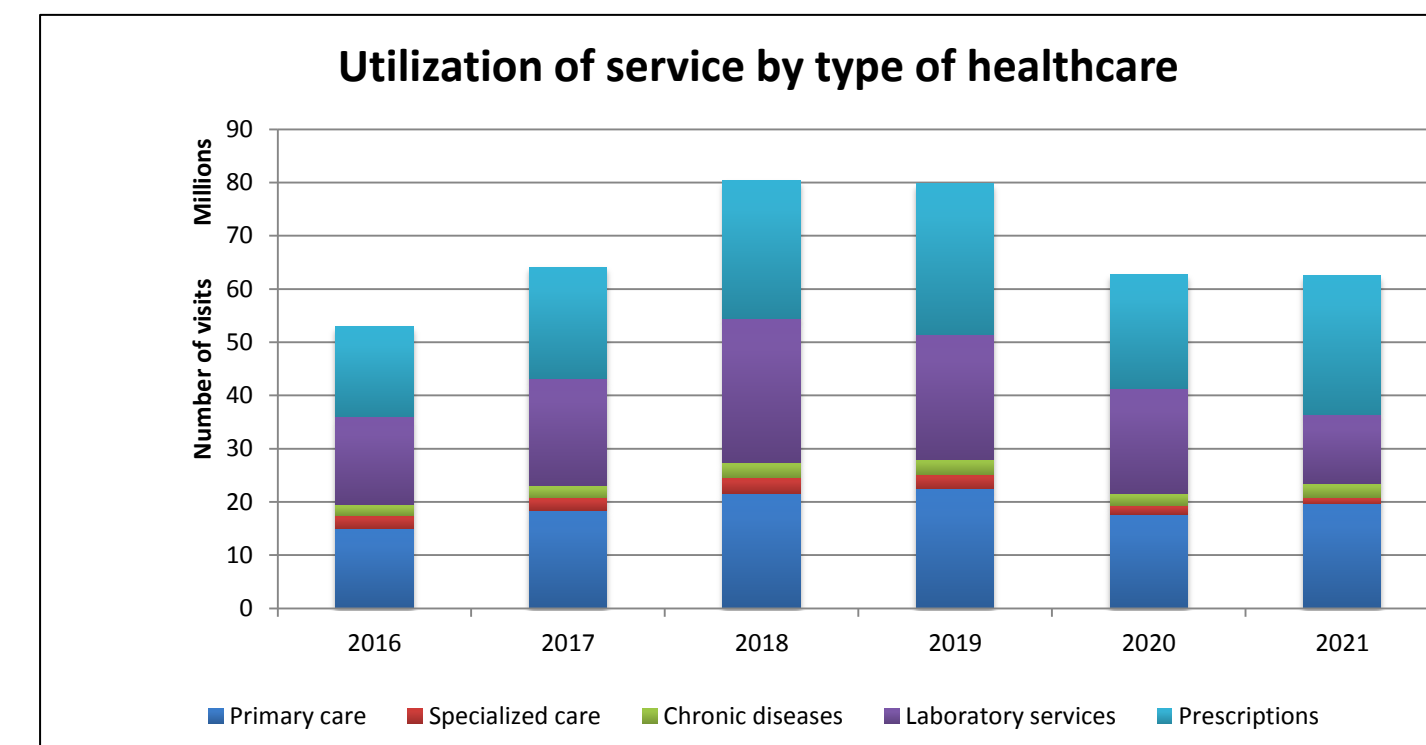
Enrolment Growth by Sector

The impoverished sector had the largest increase in enrolment (217%); the informal sector had the lowest enrolment growth rate (7%).



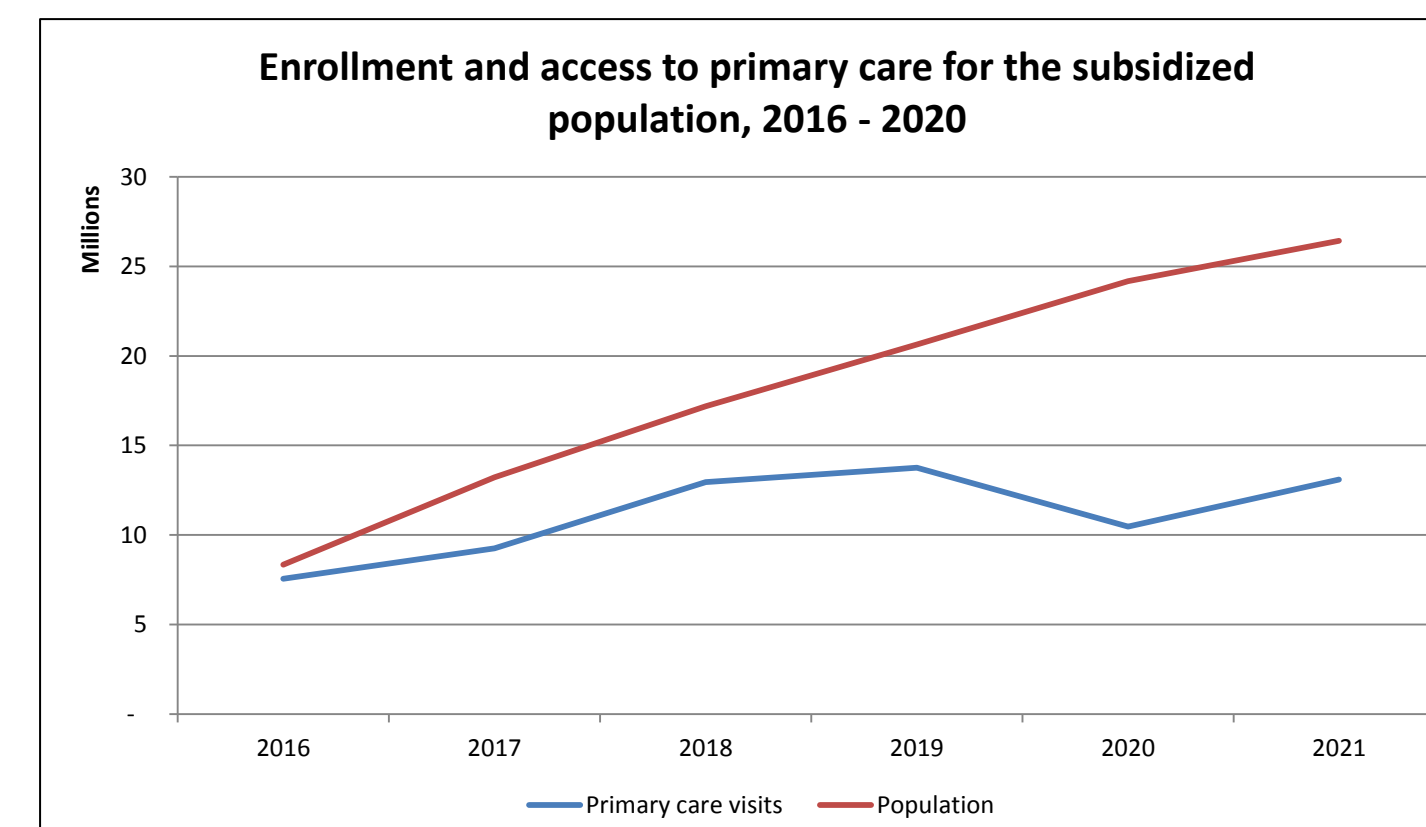
Healthcare Utilization

Volume of primary healthcare visits and prescriptions increased every year, except 2020. Specialty healthcare visits decreased over the same period, from 2,461,424 to 1,249,585 ($p < 0.01$).



The ratio of primary to specialty visits increased from 6.0 in 2016 to 15.7 in 2021 ($p < 0.001$).

Utilization of Impoverished sector



Conclusion

In Sudan, the transition to UHC increased utilization of primary care services, but at a slower rate than enrolment growth. The ratio of primary to specialty visits increased and specialty visits declined, suggesting that more primary care may have prevented specialist-requiring disease states and sequelae. Fears of overwhelming the health system were unfounded indicating that other barriers to healthcare might exist.

Implications

This study highlights the potential benefits of UHC in increasing utilization of primary care services and improving the efficiency of the healthcare system. However, it also emphasizes the need for ongoing efforts to address the existing barriers to healthcare access and utilization to ensure equitable and high-quality care for all.

Acknowledgment