ERF Policy Brief

Supporting Sudan for Change:
New Concepts for Sudanese Health System Aligned with Sudan's 2019 Uprising Call: Freedom, Peace, and Justice

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About the authors

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In a nutshell

- *Sudan has been through a revolution that determined freedom, peace, and justice as its radical slogan of change. Literature has demonstrated health as a dynamic concept that has an evident link with social and economic systems .*
- *Health and well-being of the population is a foundational responsibility that the government should invest in.*
- *The perpetuated system failure calls for a radical comprehensive multisectoral reimagining of Sudan's health model in tandem with the broader political and economic reform and the agreed upon ruling ideology is indispensable. Hence, the health and its systems should not be read in isolation from the overall political , economic, development systems , and state building programme.*
- *The policy should be proactive and demand-driven, community-focused, and equity-focused rather than market and commodity driven.*
- *The policy should be synchronised with the overall governance system yet be able to demonstrate an effective governance model or an appropriate decentralisation model that caters for health and development in a unified and equitable manner. Any negligence of discussing the ongoing decentralised system as a possible impediment to achieving the utmost health outcome will hinder the radical move towards equity and justice in health.*
- *Having a multi-disciplinary dialogue that determines the best primary level approaches for health whether a modified primary care, primary health care, a hybrid, or both based on different state/region context. The human resource planning should be aligned with an in-depth demand-supply framework, and economic and fiscal solutions for medicine supply should be emplaced in a financing policy.*
- *Renewal of local manufacturing policy for essential medicines in an innovative way that incorporates multiple disciplines and technology to model for the development impact of local manufacturing and its effect on reducing the cost of supply chain aspects.*

ECONOMIC RESEARCH FORUM منتدى البحوث الاقتصادية

Health as a state foundation

Sudan has been through a revolution that determined freedom, peace, and justice as its radical slogan of change. Literature has demonstrated health as a dynamic concept that has an evident link with social and economic systems. Legitimacy and state-building cannot be reached in negligence of optimal provision of health services or investment in population health. Health is a central pillar for any structural change that aims for a reformist change of the prevailing kleptocracy, the oppressive political systems, and the dominant power relations in Sudan. The interlinkages between the revolution's manifesto and health, and the necessity of a state theory of change that caters to Sudan's unique class, social, geopolitical, and ethnic anatomy cannot be neglected. Literature has demonstrated that health and well-being are basic to human capital and to wholesome development and economic advantages. Certainly and in such a strive for radical transformation in Sudan, it's very important to call and recall that health, its jurisdiction, and related institutions exceed the prevention, promotion, curative, restoration, and rehabilitative role (Kruk, Freedman, Anglin, & Waldman, 2010). It can support social cohesion, participation in social institutions, and political participation. Investing in health and its systems usually has a yield that could be read as an incalculable advantage; that further impacts the building of the social contract between the community and the State, and the democracy, which is needed for this transition and beyond (Franco, Álvarez-Dardet, & Ruiz, 2004).

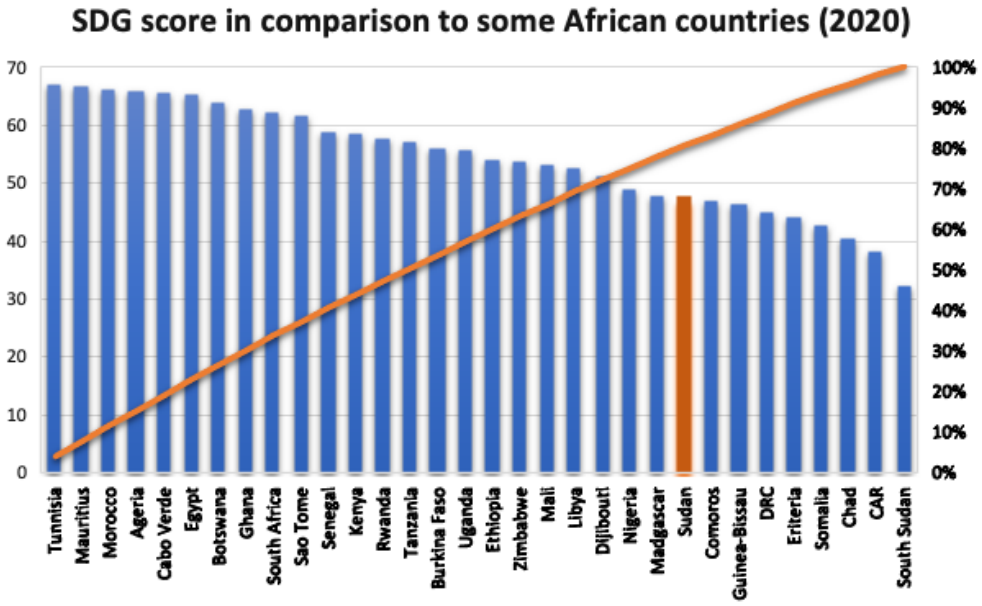
The fundamental structure and health in Sudan

In addition to the aforementioned importance of health and its system for the state and the fulfilments of the revolution slogan, it is also almost impossible to decouple health from the overall country's political, economic, and development ideology. Unsurprisingly that reaching an optimal outcome in health, needs sustained progress in development aspects especially those linked to health as a public good, common goods for health, preventative, and public health components. The intersects between health and other sectors of the social environment, are anatomical and detrimental to health, with multitiered effects on individuals and communities. Furthermore, the environmental and developmental factors, the intersects of health as contribute to a huge toll of disease burden namely with the prevailing climate changes, and what the political scheme would set for all sectors. As exemplary are the structures and policies that identify the non-communicable disease' risk factors of air quality and sugar consumption, artisanal mining and occupational health. The ideology of the country illustrates the state structure, the financing motive, the state dominance, and of course the short and long-term economic and development reforms. The decentralisation and the adjustments of the governance system are a reflection of organic changes that follows the state ideology. The international monetary fund's (IMF) policies that were preserved since the late seventies and its austerity measures had directed the national interest. The socio-political environment of Sudan is complex, it is a post-colonial soft state that was set for the benefit of safeguarding the profit of certain members and parties. It has been through long authoritarian rules and protracted failures and conflicts. People's December revolution succeeded in ousting the longest one, in 2019, and the transition period faced the perpetuated fragility of state institutions, the distorted apparatus, impoverishment, and inequity. Some scholars have linked the perpetuated gaps not just to the lengthy unexamined capitalist structural adjustment reforms, but also to the shifted resources to non-productive and harmful segments (El Amin.K, Working Paper 0337 Poverty Causes in Sudan . 2000). In the absence of a unified "Nation or State Building Programme", the prevalence of political polarization, and geopolitical interference, the instability has been augmented, which should have challenged the transition and the systemized state and democracy-building.

Upon comprehensively examining the status of sustainable development goals (SDGs), health system building blocks, and determinants, we can see the country is lagging on many aspects, which is a genuine medium for social upheaval and a call for a different paradigm and radical changes. As per the 2020 report on the Africa progress, the Sudan's SDG index score was delineated at 47.84, and showing a low ranking among countries from different regions of Africa ranging from 67.1 to 32.36 (Figure 1) (Africa SDG index and dashboard report, 2020).

The gap in reaching 2030 targets will be challenging as the COVID-19 and its containment measures were impactful on an already recessed system where its annual gross national income (GNI) is diminishing by 48.7% over the past ten years. The country is facing an 8.5% shrink in gross domestic products (GDP). Sudan's Inflation surged to an approximation of 163.3% in 2020 and the fiscal deficit reached 12.4% in 2020 as COVID-19 had minimised the public revenue by around 35% while increased the expenditure (Africa Development Bank,2020). Financially Sudan is also crippled with a heavy debt that exceeds 200% of its GDP as the enforced austerity measures had accumulated it. An increment in the humanitarian assistance needs was reported reaching

Figure1. The Score of the Sustainable Development Goals (SDG's) in Sudan in Comparison to some other African Countries



13.4M in 2021, and children and women constitute 55% and 57% of that magnitude respectively. The health sector needs bear the highest toll of 9.2M people (OCHA, 2021). The skewed development and disparities among regions of Sudan are apparent, around 30% of the population has no access to safe drinking water. The political construct of the underlying factors of vulnerability such as the failure of infrastructure, and the diminished public sectors and institutions beyond the ministry of health is predominant, causing recurrent outbreaks. Sudan has faced around 17 cholera and or acute watery diarrhoea outbreaks in the past 50 years and has been overburdened by Haemorrhagic fever outbreaks namely Dengue, Yellow, Crimean–Congo, Chikungunya, and Rift Valley fever before and between 2003-2020. Climate crisis, environmental hazards, and forced movements added another layer, as almost 78% of the states are at risk of four or more of the hazards of floods, droughts, waterborne diseases, vector-borne diseases, vaccine-preventable diseases, or mass casualties (The Sudan Multiple hazard preparedness and response plan, 2020). This is a vicious cycle that precipitates system shocks and political instabilities, for which the ministry of health is solely accountable, despite the fact that it is merely a development issue that lay at mega levels and among other ministries . It is worth noting that humanitarian and emergency assistance, particularly in conflict-affected areas, should be an area of overstretching and replication, rather than a source of loss and inefficiency. (Kruk et al., 2010).

The country is in a dual epidemiological phase of the communicable and non-communicable (NCDs) diseases, and according to the FMOH statistical report Malaria, Pneumonia, diarrheal diseases and gastroenteritis, diseases of the respiratory system, and essential hypertension are on top of the ten leading diseases treated in out-patients of health facilities as per 1000 population (The FMOH Statistical Report,2020). Nonetheless, NCDs are escalating, having asthma was reported at around 15% of respondents of a wide survey , the chronic obstructive pulmonary disease is of a higher magnitude in urban areas, diabetes was reported among 5.9%, and cardiovascular diseases risk factors are prevailing among the stepwise surveyed population (Pengpid & Peltzer, 2020). This represents a greater need for preventative and promotional measures, infrastructure, tackling of common good for health; legislative changes to reduce sugar and processed fatty food consumption, and enforcement of occupational and environmental safety laws. Defining the liabilities of individuals and the community as primary partners in the "health processing" is of paramount importance in halting risk factors and in adopting healthy behaviour. However, defining the individuals and the community as sole responsible of health promotion and adoption of health behaviour is debatable as it also needs a benchmark of development interventions. There should be a set of state contribution and provision of the bare minimum infrastructure and level of commitment towards the community especially the vulnerable and those who were delineated as marginalised by the state apparatus. Moreover, the observations and review of progress against standards reflected that Sudan health system building blocks are deficient and need rigorous questioning around a "State building Programme" aiming

at having multi-disciplinary structured interventions that tackle the whole perpetuated apparatus.

The governance and health financing existing arrangement

As mentioned above the decentralised devolved health system, the structural adjustments and the liberalisation have taken place and without empirical involvement at the health system level. The austerity measures have affected the country abilities in setting State and Nation' building programme including for health as a central element. Despite the FMOH abilities in setting health policies and the excreted efforts by the revolutionary bodies, yet the enforcement of the policies backed with law is a challenge. The three tiers of the health system are facing fragmentations with no imposed well defined roles and responsibilities at vertical and horizontal levels. The coordination and accountability is poor, and the communities and civil societies were not well engaged. There is a miscellany of financing stemmed from the long standing IMF policies' austerity and cuts in public spending. Health financing is mainly driven by the out of pocket constituting more than 70% which hinders the attested progress of the universal health coverage (UHC) in Sudan. Access to quality assured services hence the UHC has diminished due to the effect of the structural and stabilisation programmes on several aspects but mainly the human resources and the medicine supply sustainability. Several FMOH reviews had stated that there is no clarity in the federal-state allocation of funds. (The FMOH Joint Annual Review Report, 2017). The direction of finance is more or less curative model-driven, which is the most expensive, and around 70% of public financing is directed towards hospitals while PHC receives only 6% (System of Health Account, 2018). Revenues from health facility user fees are paid to the Ministry of Finance (MOF), the health account stated an approximate annual revenue of around 3 billion USD that comes from user fee but there is no clear return on investment in health facility maintenance and processing (The FMOH Joint Annual Review Report, 2017).

The enforcement of user fee can hinder the utilisation and can expose poor population to catastrophic payments, delay in seeking care, and informal health seeking behaviours. A review of Sub-Saharan African financing approaches had reported that removal of user fees, has caused interim increase in healthcare utilisation, primarily for curative care; Kenya, Uganda, and South Africa, showed a 30% to 50% increase in utilisation of curative services (McIntyre, Obse, Barasa, & Ataguba, 2018). Depending on how the user fee revenue were utilised in Sudan its elimination is expected to have minimal effect on components of service quality provision like health workers payments. However the elimination and phasing out of user fees to serve for equity, should be well planned and aligned with social communication and promotion plan to avoid any demoralisation or a direction towards inflated private sector or informal payment such as what has been reported in Senegal and Ghana (McIntyre et al., 2018).

Within the decentralised system of Sudan, the asymmetries in revenue making among states, their development status and capacities, have augmented the disparities and inequity. The national insurance fund as a prepayment method covers less than 40 percent of the population and the overall expenditure on health as public service is low which also uncovers a layer of hardship that might face the population while seeking for care. However, many researches studying large-scale initiatives for expanding health insurance coverage in Latin America, Africa, and Asia, particularly among rural, informal, and marginalised populations, have identified federal government ownership and explicit priority setting of key health policies within the overall national development agenda as critical success factors. Sudan is progressing in setting its basic benefit packages, at this stage the country is in line with other countries from the Easter Mediterranean region namely Egypt, Jordon and Syria. But despite the political upheaval several countries of the region have managed to delineate its benefit packages, and countries like Morocco, Yemen, Somalia, Afghanistan, and Pakistan had explicit sets. However this is still a minimalistic operational view that is not looking to other alternatives that tackles the causation and the overall diminished apparatus. It is also important to underline the need of applying a hybrid of sociological, pragmatic, positivist and realism analysis. Beside applying a pro-poor lens and context specificity as critical elements for improving and selecting Sudan health financing in ways that benefit and cater for rural, post-conflict, and women as part of the state building programme. The universality is determined by the financing pool, its increment and sustainability which should be sought of within the overall economic programme mainly that increase domestic space and taxation reforms. The wider transformation of the governance and financial policies with in the state building should be coupled with a radical ratification at the microoperation level. The weakness of financial and procurement systems at ministry of health and the related institutions, the poor engagement of social and economic disciplines like health economics , the isolation of financial aspects from the strategic planning and budget allocation exercises, as well as the poor absorption capacities were real structural gaps. Building the capacities of risk based management and preventative audit is a crucial aspect in accountability, transparency,

& trust building .Consideration of all of these elements with strong alignment with evidence generation , serves as the foundation for large-scale policy formulation and implementation.

Human resource for health and availability of quality assured affordable medicines-where are we

The two components; human resource and sustainability of medicines are linked to other health system building blocks, and essential for the provision of accessible services that are of quality and they are both stressed due to the gap in governance structure and financial austerity. The related exodus factors of human resources for health (HRH) are also structural barriers to reaching UHC. A research that looked in the effect of budget cuts had reported a 35%, 10%, & 4% decline in physicians, medical assistants, & nurses respectively between 1978-1997 (Elbasheer & Bagi, 2000; Suliman, 1999). A later research has reported a general advancement of human resource attainability in Sudan in the time between 2000-2012,which was governed by policies aiming at amplifying the supply. The higher education revolution was one of those policies that lead to around eight times increment in numbers of medical schools and it was then followed by the Allied health professional act of 2004, and the devolved academies at State levels in 2005 to increase the number of midwives, nurses & other allied skills in context specific tailored forms (Sousa et al., 2014). Another research has quantified the change in density of physicians in Sudan at 2.6% (1.7 to 3.6/10,000 of population) and nurses and midwives at 3.1% (a change from 5.7 to 14.0/10,000 of population) from the period of 1990 to 2019 (Haakenstad et al., 2022). Nonetheless the scarcity and skew in distribution still exists due to several push and pull factors that are linked to social and economic environment (Sousa et al., 2014) .The Khartoum state as a capital is served by 70% of the total workforce. The inequity of workforce distribution and asymmetries in capacities between and in states is apparent. The resource concentration index for physicians, nurses, medical assistances of 2016 showed skewed distribution in relation to population, with more concentration in River Nile, Khartoum and Gezira and the lowest in Darfur, Kordofan , and Blue Nile (Ismail, 2020). A study in Sudan have demonstrated that the more density of physicians and nurses in the State the lower it's under 5 mortality and maternal mortality rates. In Sudan Gezira state, context-specific family medicine scheme (FMS) with in-service modules was launched and evaluated collaboratively . It reported that the approach with the technological facilitation could be scaled up to meet indigenous needs as it was capable in reaching out to more than 53% of the primary facilities for the first time (Mohamed, Hunskaar, Abdelrahman, & Malik, 2014). The FMS has been expanded through the FMOH and other universities however the governance and coordination within the three tiers of the decentralised system is not well structured. Building on a well-structured FMS and promoting for it could be a mean of reaching coverage universality and improving health outcomes like in Cuba (Dresang, Brebrick, Murray, Shallue, & Sullivan-Vedder, 2005) . Several projects of producing and utilising community health workers and village midwives were generated, however there was no structured evaluation to support the nation-wide institutionalisation that can bridge for the state presence specially in deprived and conflict affected settings . Brazil has deployed community health workers as part of the formal health team of the primary health setting. Many African countries employ health officers who are not doctors but can perform diagnostic and some clinical tasks. Officers served the majority of primary facilities in Kenya, they also run surgeries in Malawi, and the total cost of the capacity building course ranges from 1000-2000 USD in Ethiopia, Tanzania, Ghana, & Zambia (Mullan & Frehywot, 2007). A study in Ghana has shown that when midwives are integrated into health systems, they can provide basic healthcare in rural areas; however, collaboration with district hospitals and health centres, a strong referral, monitoring, and evaluation system is a necessary. In Ethiopia the deployment of around 30,000 health extension workers has increased the rate of contraceptive use by around 13% from 2005 to the year 2011 (Stevens, Finucane, & Paciorek, 2016). South Africa has also utilised community workers in a formal way during the COVID-19 response (Brundtland, 2022).

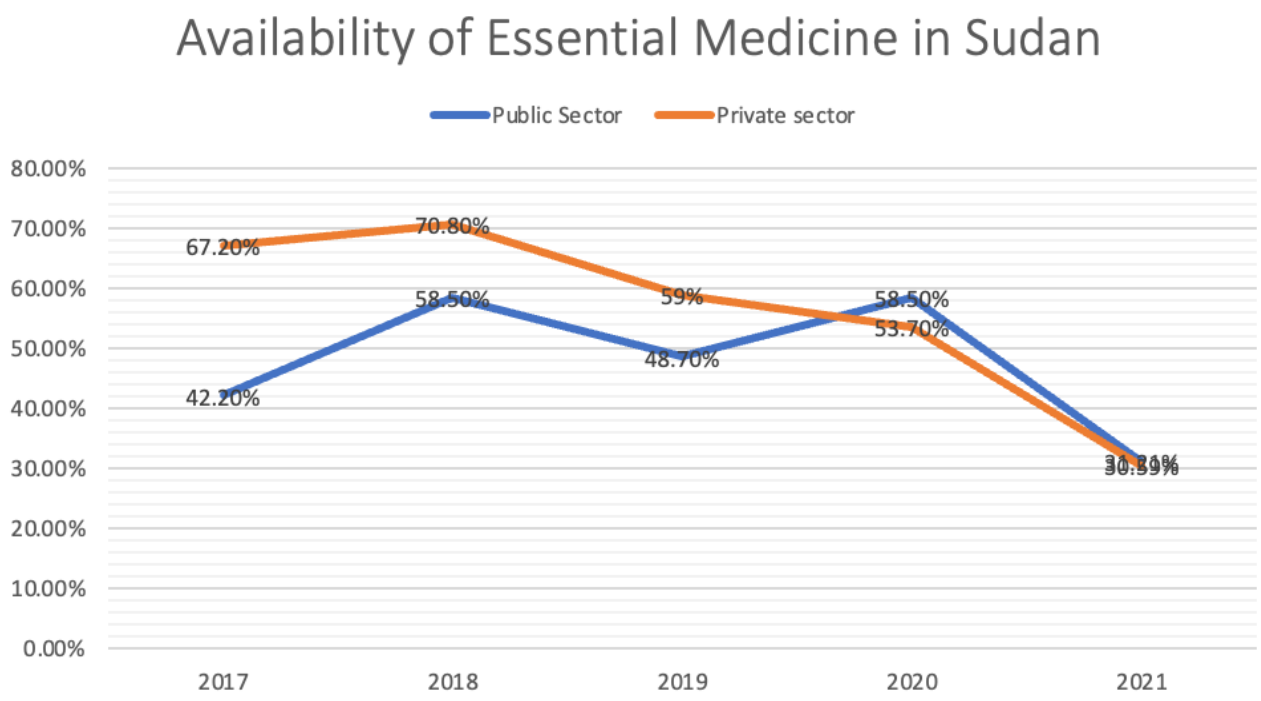
Nonetheless, the complexity of the demand-supply labour market forces in Sudan cannot be neglected, and the contribution of economic aspects like the generation of vacancies, and the public spending in the HRH wages in relation to the GDP, and in the training and in improving the working environment is central. The role of ministry of health and higher education in ratifying the skills and capacities, and ensuring the fit of the human resources in meeting population needs is also a central layer. Setting innovative models and information systems that build on the WHO code of practise is also an important exercise in order to mobilise the critical mass of the health workforce in diaspora to feed in the health capital of Sudan in a more institutionalised and sustained manner.

COVID-19 has impacted the HRH through high rates of infection and the huge work load. It highlighted needs for strong infection prevention and occupational health measure, and also the need of strong information systems,

projection of needs, and renumeration strategies. However, any disruption in the working environment can foster distrust between the health workforce and the system, acting as a push factor for HRH. One example is the lack of quality assured medicines to complete the curative cycle. As per the directorate pf pharmacy surveys, maintaining a supply of medicines in the last mile of the health system was an actual dearth that the transition government also faced, that should have been given more weight and priority in a way that builds trust between communities and state authorities (The FOMH Essential Medicine Survey Report,2020) (Figure2).

In 2019, the total pharmaceutical market (TFM) was around US 650 million, while some neighbouring countries like Ethiopia and Egypt reach at (US 787 million) and (4.84 billion), and the Sudan medicine bill generally accounts for around 33% of the annual health budget (The FMOH Pharmaceutical Statistical Report,2019). In 2019, essential medicines accounted for roughly 57% of all imported medicines. The cost rate is comparatively in the highest in the North African region, and the country's strain in medicine sustainability and affordability is correlated with many external factors such as trade policies and oligopolist manufacturing. Other internal economic factors that contributed to this distress encompass cuts to the health budget, currency devaluation, and a lack of foreign exchange currency as a result of the country's lack of foreign reserves and reduced fiscal space, all of which impede competitive procurement. The cost of medicine' imports increased, and as a consequence, the cost to patients increased. The fiscal shortage has also had an impact on the imposed self-sufficiency policy, but imported raw materials totalled US129 million, 118 million, and 142 million in 2017, 2018, and 2019, respectively. The lack of oversight on the ten percent subsidy from exports return of investment caused fragmentation and corruption, but the total proscription of this percentage during the transition period, combined with the unmet foreign currency expenditure on the medicine bill, caused serious challenges which is a clear move forward on a more rigorous liberalisation of health care. During the transition period, the FMOH enforced a national forecasting and quantification committee to project scientific needs, and also imposed a unified essential list of medicines as a platform for stabilising investments toward the needs of the population rather than market forces. The liberalisation of private community pharmacy provision, the liberalisation of ownership, and the dispensing of over the counter medicine beyond the pharmacies is applied in Sudan at the aim of increasing access however there is also more of a concentration in urban settings with higher access capacities. The market force related to promotion influence the turn over, the sale volume, and the demand of certain medicine' brands over others specially at urban settings , while the price in rural

Figure 2. The availability of the Essential Medicine in Sudan 2017-2021 based on the General Directorate of Pharmacy Survey



and peripheral area could be a demand determinant. The COVID-19 crisis has had its impact on access to essential medicine as a study in Nigeria outlined the hindered access to chronic disease medicine, and in Sudan a study reported stock outs and absence of health workers as reasons behind the inability of surveyed households to purchase medicines during the COVID-19 lockdown-mitigation measures (Awucha et al., 2020 & Satti,2021). All this necessitate a forage through realism lens into the particularities of a national and sub-national levels of systems to determine the needs of communities, the national financing policy, how health facilities obtain medicines, the health and care seeking behaviour, how and where patients usually get medicines from formal and informal outlets , and what gaps exist between drug policy and practise in the specific context (Jitta, Whyte, & Nshakira, 2003).

Evidence based quality service provision the ongoing scheme and the way forward

Implementing and scaling an integrated information system that is capable of supporting an ethical oriented timely decision making is still a challenge in Sudan. Financial support, infrastructure (such as housing, roads, water and sanitation, electricity, and connectivity), and health professional education and training are all required to provide high-quality services. A health system must also function at multiple levels, along with individual, community, national, and subnational, as well as in collaboration with the private sector, including civil society organisations. In order to be effective the information system should mirror the whole organisation of the health system. The service provision is a point of trust and legitimacy building, the Sudan model is medicalised and there is a perception of scarcity of resources which direct the thinking away from demand and people oriented systems into cuts of funding, cost-effective and rationing approaches. Rigorous dialogue that is based on evidences is the first point of revealing the real challenges and in meeting the revolutionary demand.

Nonetheless, as part of the transition period in 2019-2020, the FMOH and the national health insurance fund (NHIF) conducted a nationwide costing of services and began developing a benefit packages that can be used as a step towards UHC. The concept was to develop a platform of setting health interventions that can be covered through domestic funds . Anticipation and evidence based projection of the availability of funds is essential. The health benefit packages (HBP) need to cover a clearly stated spectrum of services that mirrors the patients logical conceptualisation of the need. According to literature from Chile, Colombia, Thailand, and Liberia, the HBP should be imposed through clearly stated guidelines and accountability frames that are aligned to well-designed actuarial studies. Chile had succeeded in defining its set of services for universal delivery that is fully stipend based on cost and effectiveness studies.

However a parallel strengthening of the information, monitoring and evaluation and learning systems should be emplaced to ratify any occurring deficiencies and to provide real time data that supports also the provision of unprioritized interventions whether through structured implicit rationing or any other criteria. Some countries that had not set availability of standardised costed pool to explicit packages had faced skewed funds and financial shortfalls like in Ghana, Uganda and Peru (Glassman, Giedion, Sakuma, & Smith, 2016). As an example of the health system modification to cope with the adjustments , the FMOH has shifted towards an integrated approach for the communicable and non-communicable disease prevention and control all through the vertical, and horizontal levels form the planning and up to service delivery.The malaria programme reviews have pointed many aspects that calls for a refrain on several aspects which also reflect an accumulated challenge and a burden specially with the vector change due to climate changes and other public services sector failure. Tackling childhood and maternal health indicators are intermediaries for health and development progress, and according to the literature; rigorously addressing the childhood febrile illnesses, immunising children against illnesses, and providing micronutrients are among the most cost-effective interventions. Those could be part of the short-term systems building that can be prioritised and occur concurrently until the radical nation' programme building is demonstrated through a multi-sectorial dialogue, and it can also feed the context specific aspects of the nation building programme. One of the possible short term synergy and state visibility opportunities are the addition of health in projects that are imposed by ministry of finance and other line ministries. The cash transfer that were implemented in transition period could have been a platform for further integration of health related components till the radical whole of state building programme takes place. Technically and in case of cost subsidy, literature has reflected the success of voucher use among marginalised group and how it can increase access to certain reproductive health services. In Brazil conditional cash payments programme for school attendance, utilisation of vaccination, and use of prenatal care, had succeeded in a 9.3 percent decrease in infant mortality rate and 24.3 reduction in postnatal mortality rate (Shei, 2013). As briefly mentioned the pathway to service provision

and the referral system are essential components that should be built and strengthened. Either are reflection of the trust in the state building and the contract between the community and the health system. WHO and as part of the COVID-19 recovery and resilience building recommends a diversion towards primary health (PHC) strengthening. Before that the FMOH has generated and followed a plan of PHC strengthening as part of the COVID-19 early response plan in 2020 which was aligned with the maternal health and PHC expansion projects . The primary health care (PHC) expansion project has been implemented since 2012 through a huge investment from ministry of finance however the optimization of the PHC requires a well-planned investment to ensure the centres' and standards' functionality. Standards and guidelines serve as a foundation for capacity and accountability building. Nonetheless, for the context of Sudan and to facilitate the demonstration of investments and alignment to health and non-health outcomes, a clear selection and outlining based on evidence between primary care as a first point of contact between the individual and the system, and PHC where more active wider community-based interventions are provided to improve health and well-being, is required. The PHC can be an arm of serving diversity through local partnerships and need identification and it is also an area where health as a public good and the common good for health are most prominent. Nonetheless, the distorted system, particularly in at lower levels and the referral systems to higher level, requires more advocacy most likely, trust building, and other gatekeeping approaches. Joining a primary care and outreach activities or establishing a modality to actively reach out or visit the community, strengthen ties with it, understand local needs especially in areas of turbulence and conflicts, and implement preventative measures can be the best way forward. This was done in Cuba, where management teams are also used, and communities are assigned to specific PHC centres (Cooper, Kennelly, & Orduñez-Garcia, 2006). This should be comprehensively tackled capturing also the nutrition, food security, the water and sanitation, the healthy behaviour, the domestic NCD risk factors and tobacco use among other aspects to improve health outcomes (Cooper et al., 2006). The performance should also be measured using indicators, and the FMOH's capacity to use district health teams/locality management teams should be considered as a source of evidence on what works in Sudan. Knowing what exactly works for the local context, highlights the critical need of deployment of home visits and having multidisciplinary researchers aligned to ensuring data quality generation and system thinking.

Policy lessons and the way forward

Sudan's health system and jurisdiction do not comply with the terms of the community-state contract. It is curative in nature, and the fundamentals of health as a public good, the common goods for health, and the social determinants are poorly articulated or omitted. The change of vector patterns and emergence and re-emergence of viruses in relation to geography and climate change is a layer that also needs apprehension. As stated above, there are numerous deficiencies in the building components of the health system. All of these are indicators of a distorted system that exacerbates inequity, disparities, regression, and impoverishment.

The Dec Revolution slogan is based on long-held prejudices and dissatisfaction with state-enforced injustice, and this revolution manifesto should serve as a mobilizer for state building and a complete withdrawal from the existing status. Revolutions in countries such as Germany, France, Egypt, Turkey, Tunisia, Brazil, and Cuba have historically been followed by health sector change, primarily in health governance and financing modalities. Those changes were combined with the state economic school or ideology, whether welfare state, state hegemony, capitalism, social protection, or a hybrid of all yet with various outcomes (Saleh et al., 2014 ; Batniji et al., 2014). However, the first and most important step toward reform is the commitment to health as a right and the engagement of social partners. A reorganisation of the health structure can follow to ensure compatibility with the agreed upon direction and the existing challenges, like what have taken place in Thailand.

Since 2019, the FMOH has been developing a policy and strategy based on inclusive consultation, but primarily within the health sector. An immediate supply of human resources, as well as the sustainability of quality assured medicines, were set as priorities. A plan of improvement of the free medication project, the service provision, its infrastructure, and the improvement of the existing apparatus of care has been assigned. Nonetheless, the legitimacy for state building necessitates certain in-depth conception for a policy as below:

- Health and well-being of the population is a foundational responsibility that the government should invest in.
- A comprehensive multisectoral reimagining of Sudan's health model in tandem with the broader political and economic reform and the agreed upon ruling ideology is indispensable. Hence, the health and its systems should not be read in isolation from the overall political, economic, and development system.
- The policy should be proactive and demand-driven,

community-focused, and equity-focused rather than market and commodity driven.

- The policy should be synchronised with the overall governance system yet be able to demonstrate an effective governance model or an appropriate decentralisation model that caters for health and development in a unified and equitable manner. Any negligence of discussing the ongoing decentralised system as a possible impediment to achieving utmost health outcome will hinder the radical move towards equity and justice in health.
- The whole-state should decide on structural adjustment programmes and liberalisation directives as major influences on health, and consider below points:
    1. The ministry of finance should support the development of the nation financing policy that specifically consider poverty, living in the rural area , and the related inaccessibility . There should be a demonstration of the public financing and pooling to ensure sustainability and also demonstrate the drug financing.
    2. Cover the three levels of care with a clear commitment towards the primary level and the referral system.
    3. Identifying public financing policies that prevent out-of-pocket spending and catastrophic spending. A research to set context- specific possible alternative and improve the financing method/model for the case of Sudan is needed specially that many African countries has opted out from user fee and the proportion of OOP from the total health expenditure has been halted by more than 35% among many of them (Pourmohammadi, Shojaei, Rahimi, & Bastani, 2018) .
    4. Updating the drug policy that describes the costing , pricing, the procurement, and the whole supply management cycle, and capacity building is crucial. The human resource policy should be aligned with the overall change and the demand supply framework analysis .
    5. Revise the self-sufficency and local manufacturing policy for essential medicnes in an innovative way that incorporates mutiple discpline including but not limited to economic, labour, health, logistics, and technology to model for the development impact of the local manufacturing and its effect on reducing the cost of supply chain aspects.
    6. The increase in health spending should be aligned to an increment in the fiscal space and a careful selection of technical modalities and health priorities that are more impactful, that provide best value for money, primary centric, and that are prevention-focused. The provision of quality public services augments the prevention of the private and out of pocket financing.
    7. There should be a special consideration to the fact that the private and insurance systems are relatively immature in Sudan to capture the high proportion of the informal sector and to have significant contribution to the total health expenditure.
    8. To set indicators that evaluates the outcome of the health system in relation to the financing method.
- The post revolution societal change can modulate strengthening of a full move towards a well-defined primary care and PHC aspects. There is more chance of devolution of health and well-being aspects; preventative, promotive, emergency preparedness and surveillance to the local communities. A detailed costed stepwise plan for UHC with quantified targets and modalities, and a linkage with human resource development are to be set, and it should appear in the immediate phase and also as a bridge to the wider state building programme. A board of hospitals should be developed as part of the stewardship and governance structuring through a costed plan that tackles the whole first referral, secondary, and tertiary service delivery processes.
- A clear multidisciplinary linkage with one health and a multi-hazard and risk based preparedness plan should be sought as a mean of strengthening national surveillance systems , the timely action, the demonstration of primary care and locality tasks, and augment the collective redirection towards PHC, and the whole of state resilience building.

Nonetheless the policy and strategic direction should be very realistic in setting the immediate and the long term expected achievement . The comprehension should cover all building blocks with an affirmation that no single strategy works in isolation, moreover an advocacy and partnership component should be aligned with the policy to sustain the social inclusion, to ensure meeting community needs, and to build the social contract with communities as primary benefactors. A multidisciplinary critical mass of researchers should be assigned to cater for the economic modelling of interventions, to enforce public policy perspective, and to enforce the anthropologic and sociological perspectives all through the short and long term processes of state building. This will help in building

an evidence based driven policy. The research team should also develop continuous evidence generation on the implementation in term of feasibility, effectiveness and efficiency of the plan of action in meeting community needs.

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