Re-Building Sudan
AFTER THE WAR

GOOD HEALTH AND WELL-BEING

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CHAPTER 09

CONCEPTUAL

Mastering Women's Healthcare in Post-War Sudan: A Holistic Pathway to Equity, Resilience, and National Recovery

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ABSTRACT

PURPOSE: The conflict in Sudan has devastated healthcare infrastructure, disproportionately affecting women's access to maternal health, mental health, and gender-based violence support. This chapter develops an evidence-based framework for rebuilding a resilient women's healthcare system, drawing from global post-conflict recovery experiences.

METHODOLOGY: A multidisciplinary approach combines policy analysis, health systems research, and case studies from Rwanda, Bosnia, Democratic Republic of the Congo, and Syria to identify best practices in infrastructure redevelopment and workforce capacity-building.

FINDINGS: Decentralisation, international collaboration, and culturally sensitive service delivery are key to healthcare reconstruction. Strategies include investing in local health workforce training and integrating community-led care models.

CONTRIBUTION AND PRACTICAL IMPLICATIONS: Aligned with sustainable development goals (SDGs) 3, 5, and 16, the chapter provides policy-makers, non-governmental organisations (NGOs), and global health leaders with actionable strategies for sustainable healthcare recovery in Sudan.

LIMITATION: Contextual factors such as political stability and economic recovery may impact implementation, requiring further research to adapt global strategies effectively.

KEYWORDS: *Women; Healthcare; Evidence-Based-Strategies; Sudan; Post-War Recovery.*

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THE HISTORY OF WOMEN'S HEALTHCARE IN SUDAN

Since gaining independence in 1956, Sudan's healthcare system has evolved amid complex political, economic, and social changes. Women's healthcare services have particularly reflected these transformations, shaped by periods of modest progress and severe regression.

Post-Independence Developments (1956-1980s)

Sudan inherited a fragmented colonial health system focused on urban centres. The early post-independence government led by Prime Minister Ismail al-Azhari and Health Minister Elhaj Mohammed Ahmed sought to build a national health system and extend services to under-served rural areas (Wikipedia, 2023; El Safi, 2022). Their reforms emphasised maternal and child health (MCH), expanding facilities, tackling endemic diseases, and initiating medical education programmes. However, progress was hindered by limited resources, political instability, and dependence on foreign aid.

Despite these efforts, maternal mortality remained high, and access to reproductive health services remained inadequate. While MCH services expanded, other women's health issues such as Female Genital Mutilation (FGM), Sexual and Gender-Based Violence (SGBV) (Ali *et al.*, 2014), and mental health remained largely unaddressed (Wikipedia, 2023; 2025a).

Women's Healthcare Challenges (1980s and 1990s)

The Alma-Ata Declaration (1978) influenced Sudan's adoption of a primary healthcare model. However, this approach was undercut by civil war, economic collapse, and authoritarian rule. The introduction of Sharia law in 1983 and the rise of Omar al-Bashir's regime in 1989 further restricted women's rights, limiting healthcare access and reproductive autonomy (Wikipedia, 2025a).

Healthcare infrastructure was concentrated in urban areas, exacerbating rural disparities. Conflict and sanctions disrupted services and triggered a brain drain of medical professionals. Hospitals were under-resourced, and cultural norms discouraged women from consulting male doctors. Home births remained common, often without skilled attendance, contributing to high maternal mortality.

FGM affected over 90% of women. While early activism emerged in the 1990s, it was largely stifled by government conservatism (Hassan, 1995). Gender-based violence remained prevalent and unaddressed legally (Wikipedia, 2023). Under Sharia law, rape survivors faced criminal prosecution, deterring reporting and access to care (Hagan *et al.*, 2009; Spiegel *et al.*, 2014).

The civil war and sanctions of the 1990s caused massive displacement and famine. Disease outbreaks such as cholera and malaria disproportionately affected women and children (Khaled, 2024; Ahmed, 2025). Healthcare infrastructure deteriorated further, and access to essential services in camps and rural areas declined.

Women's Healthcare Challenges (2000-2023)

The early 2000s saw new initiatives through the millennium development goals (MDGs) and partnerships with World Health Organization (WHO) and United Nations Population Fund (UNFPA). Programmes focused on reducing maternal mortality, improving health infrastructure, and training staff. However, implementation was uneven due to ongoing conflicts, particularly in Darfur; this led to mass displacement, disrupted healthcare services, and heightened risks of violence and health complications for women (Hagan *et al.*, 2009; Ali *et al.*, 2014; Spiegel *et al.*, 2014; Awad *et al.*, 2025; Elmukashfi ShamsEldin Elobied *et al.*, 2025; Hassan *et al.*, 2025; Wikipedia, 2023).

Efforts to decentralise healthcare showed mixed results. While some regions benefited, disparities persisted due to unequal resource distribution. Cultural and socio-economic barriers, especially in rural areas, continued to limit access to care (Elmukashfi ShamsEldin Elobied *et al.*, 2025).

Impact of the April 2023 Conflict

The eruption of violence in April 2023 further decimated the healthcare system. Key impacts included:

- **Destruction of Facilities:** Hospitals such as Bashair in Khartoum were targeted or repurposed by armed groups. Over two-thirds of hospitals in conflict zones became non-functional (Reuters, 2025).
- **Sexual and Gender-Based Violence:** Reports of systematic rape, particularly by Rapid Support Forces (RSF) militias, point to ethnic cleansing tactics (Ahmed, 2024; Wikipedia, 2023).
- **Displacement:** Over 14 million people were displaced, half of whom are women. Displacement disrupted access to maternal and emergency care (Ahmed, 2025; Nichols, 2025).

If we are to find a solution for women's healthcare after decades of neglect and devastation from conflict, then we have to address these fundamental issues:

- **Healthcare Workforce and Resource Constraints:** The conflict caused mass flight of healthcare professionals. Supply chains were disrupted, and medical stockpiles looted. WHO confirmed that dozens of hospitals were rendered inoperable (Wikipedia, 2025a; Ebrahim *et al.*, 2024).
- **Infectious Diseases and Humanitarian Crisis:** Collapsed infrastructure led to cholera outbreaks (15,000 cases, 473 deaths), exacerbated by floods. Millions of children face malnutrition and disease, increasing maternal and infant mortality (Khaled, 2024).
- **International and Community Response:** Despite security and funding barriers, international agencies continue to respond. Over 30 million people now require humanitarian assistance. However, food aid worth US$13 million has been looted (Wikipedia, 2025a).

  Meanwhile, local initiatives such as the Emergency Response Rooms (ERRs) have stepped in. Led by grassroots volunteers, they provide food, water, medical supplies, and evacuations, offering a decentralised support system in areas where official aid cannot reach (Wikipedia, 2025b).

Sudan's women's healthcare services have faced decades of underinvestment (Nicholson *et al.*, 2024), discrimination, conflict, and repression. The April 2023 war has brought this crisis to a head. Solutions must prioritise rebuilding infrastructure, training health workers, expanding maternal care, combating SGBV, and supporting grassroots responses.

LESSONS FROM OTHER CONFLICT ZONES: HOW TO REBUILD WOMEN'S HEALTHCARE

Comparative Lessons in Post-Conflict Women's Healthcare Recovery (Table 1)

Sudan can learn vital lessons from countries that have rebuilt women's healthcare systems after conflict. A comparative analysis of the Democratic Republic of Congo (DRC), Syria, Rwanda, and Bosnia reveals shared challenges, such as infrastructure collapse, displacement, and sexual violence, as well as diverse recovery strategies. Below is a summary of solutions implemented, and outcomes observed.

Democratic Republic of Congo (DRC): Addressing sexual violence and healthcare disruptions

Prolonged conflict in eastern DRC has severely impacted women's health, with sexual violence systematically used as a weapon of war. In 2023, Médecins Sans Frontières (MSF) treated over 25,000 survivors, highlighting the scale of the crisis. Limited infrastructure and persistent insecurity continue to restrict access to care in rural areas (Kiakuvue *et al.*, 2024; Wikipedia, 2024; Reinholdz *et al.*, 2024).

The Panzi Hospital in Bukavu, founded by Dr Denis Mukwege, provides integrated medical, psychological, and legal services to survivors (PHF, 2022). NGOs have trained healthcare providers in trauma-informed obstetric care and sexually transmitted disease (STD) management, while mobile clinics have delivered essential maternal and reproductive services in remote zones. Legal reforms and community education campaigns have also worked to reduce stigma and improve protections (Reinholdz *et al.*, 2024).

Nevertheless, ongoing violence and weak legal enforcement continue to hinder durable recovery.

Syria: Restoring women's healthcare in conflict zones

The Syrian civil war has devastated its healthcare system. The targeted destruction of hospitals has increased maternal mortality, and left many women without skilled birth assistance (Dong, 2019; Baker and Heisler, 2015).

To address this, local health workers, supported by NGOs established underground and mobile clinics in war-affected areas (Dong, 2019). At the regional level, UNFPA and WHO worked with Jordan, Turkey, and Lebanon to deliver reproductive healthcare to Syrian refugees in camps (ICRC, 2015).

Telemedicine enabled exiled Syrian doctors to remotely train midwives and nurses, while mental health programmes helped displaced women cope with trauma and violence (ICRC, 2015). Although millions of refugee women benefited, insecurity continues to restrict in-country recovery efforts.

Rwanda: Rebuilding a health system after genocide

Following the 1994 genocide, Rwanda's healthcare system collapsed. Most medical personnel were lost or displaced, and maternal mortality surged (Uwishema, 2023; Selden *et al.*, 2025).

The government launched Mutuelle de Santé, a community-based health insurance scheme to provide universal maternal and reproductive care (Uwishema, 2023; Ndayishimiye *et al.*, 2025). With support from the Global Fund and WHO, Rwanda scaled up antenatal, postnatal, and childbirth services (Selden *et al.*, 2025).

Thousands of community health workers (CHWs) were trained to serve rural populations. Legal reforms outlawed gender-based violence (GBV) and female genital mutilation (FGM), backed by national enforcement mechanisms. Complementary family planning and women's empowerment programmes helped improve autonomy and health outcomes.

Between 2000 and 2020, Rwanda reduced maternal mortality by 75%, becoming a leading model in post-conflict health recovery (Uwishema, 2023; Selden *et al.*, 2025; Ndayishimiye *et al.*, 2025).

Bosnia: Post-War reconstruction and mental health integration

After the Bosnian War (1992-1995), Bosnia faced widespread destruction of healthcare infrastructure. Thousands of facilities were damaged, and war trauma left women especially vulnerable (Hasic, 2021; Litvinova *et al.*, 2024; Begagić *et al.*, 2024).

With support from the European Union (EU), World Bank, and WHO, Bosnia prioritised hospital rehabilitation in cities such as Sarajevo and Mostar. Recognising the psychological toll, community-based mental health centres were established with help from NGOs such as MSF, integrating trauma services into primary healthcare to reduce stigma (Reinholdz *et al.*, 2024).

Partnerships with European universities trained a new generation of healthcare workers. Public health and reconciliation initiatives also ensured access to legal and psychological services for survivors of conflict-related sexual violence (Kiakuvue *et al.*, 2024; Hasic, 2021; Comtesse *et al.*, 2019; Elmukashfi ShamsEldin Elobied *et al.*, 2025).

While Bosnia has made substantial progress, ongoing political fragmentation among ethnic groups continues to hinder healthcare governance and sustainable planning.

Table 1: Comparative Summary of Solutions and Lessons Learned

Country	Key Solutions	Impact and Progress
DRC	Specialised hospitals, mobile clinics, trauma care training, legal reforms	Improved trauma services, but conflict and law enforcement gaps remain
Syria	Underground clinics, refugee services, telemedicine, mental health programmes	Effective refugee care, but internal access remains precarious
Rwanda	Universal insurance, maternal investment, CHWs, GBV laws, women's empowerment	Major drop in maternal mortality, robust systems, global recognition
Bosnia	Infrastructure rebuilding, mental health in primary care, medical training abroad, survivor legal protections	Strong recovery in trauma care and systems, though governance remains fragmented

Source: Constructed by author

Strategic Insights from Global Case Studies for Sudan

- **Holistic Survivor Care:** The DRC's Panzi Hospital model demonstrates the impact of integrating medical, psychological, and legal services for survivors of sexual violence (Amodu *et al.*, 2020; Reinholdz *et al.*, 2024; PHF, 2022).
- **Adaptable Healthcare Delivery:** Syria's use of mobile clinics, underground hospitals, and telemedicine shows how care can continue during conflict (Dong, 2019; ICRC, 2015).
- **Government-Led Reform:** Rwanda's success with community health insurance and gender equity highlights the power of political will (Uwishema, 2023; Selden *et al.*, 2025; Ndayishimiye *et al.*, 2025).
- **Mental Health Integration:** Bosnia's trauma-informed care model, supported by NGOs such as MSF, proves mental health is essential in recovery (Uwishema, 2023; Reinholdz *et al.*, 2024; Hasic, 2021).

These models offer Sudan practical, community-based, and resilient strategies for post-conflict women's healthcare.

METHODOLOGY

Researching and Informing Women's Healthcare Reconstruction in Post-War Sudan: A Multidisciplinary Roadmap to Recovery

To effectively rebuild Sudan's women's healthcare system post-conflict, a structured, evidence-based methodology is essential. This chapter uses a multidisciplinary framework combining health systems research, policy analysis, and comparative case studies from conflict-affected countries including the DRC, Syria, and Rwanda. This strategy informs a phased roadmap to recovery that aligns immediate action with long-term sustainability (Figure 1).

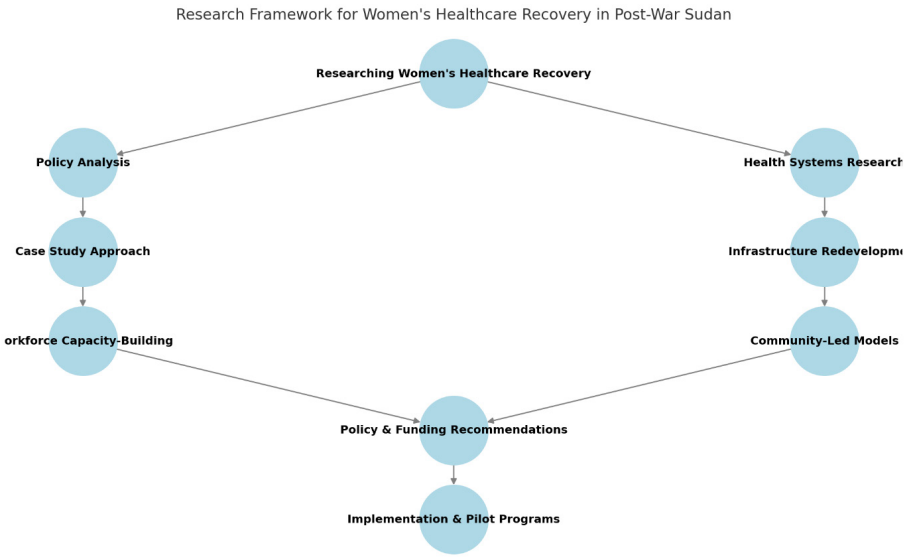

Figure 1: Research Framework for Women's Healthcare Recovery in Post-War Sudan

Source: Constructed by author

Phased Approach to Recovery

Phase 1: Emergency and conflict-adapted interventions (0-2 years)

Sudan's immediate post-conflict response must focus on delivering life-saving care to displaced and vulnerable women through mobile, decentralised, and cross-border healthcare systems. Mobile health units are vital for reaching internally displaced persons (IDP) camps, offering maternal care, contraception, emergency obstetric services, and trauma-informed treatment for survivors of gender-based violence (GBV).

To extend the reach of these services, telemedicine platforms and community health workers (CHWs) must be utilised. Short message service (SMS) based maternal health tools and virtual consultations can guide pregnant women remotely, while trained CHWs and midwives deliver prenatal and postnatal support at the community level. This dual approach fosters both capacity and trust within affected populations.

Cross-border access will also be critical. Sudan should collaborate with Chad, Egypt, Ethiopia, and South Sudan to ensure that Sudanese women in refugee camps or in transit can access reproductive healthcare. Such partnerships guarantee care for those beyond national borders.

To maintain service delivery in conflict zones, Sudan should work with the United Nations (UN), African Union (AU), and Intergovernmental Authority on Development (IGAD) to create safe medical corridors. Drawing inspiration from Syria's underground clinics (Dong, 2019), Sudan can establish protected facilities in high-risk areas.

Emergency GBV services should be fully integrated into this phase. This includes establishing safe spaces within IDP camps, distributing post-exposure prophylaxis (PEP) kits and emergency contraception, and offering psychosocial and legal support through UN agencies and humanitarian partners.

Phase 2: Stabilisation and transition (2-5 years)

As conflict subsides in some areas, Sudan must transition to building a locally led and gender-sensitive healthcare system. Infrastructure rehabilitation is a top priority. Damaged health centres should be repaired, and modular birthing units installed to restore services quickly in partially stable regions. These structures are cost-effective and scalable in areas lacking permanent facilities.

Sudan can learn from Rwanda's decentralised healthcare model that successfully utilised CHWs to deliver maternal health services in rural communities. Adapting this model will involve expanding CHW-led maternal hubs, especially in under-served regions, to increase both access and trust.

Workforce development must accelerate. Sudan should reintegrate displaced medical professionals by establishing diaspora-led virtual training programmes, reconnecting them with local health systems. In addition, task-shifting strategies should train CHWs and midwives to assume greater roles in family planning and emergency obstetrics. Regional training hubs in Egypt, Ethiopia, and Chad can serve as interim centres for clinical education.

Policy reform is also essential. Sudan must introduce emergency healthcare laws that guarantee women's access to contraception, obstetric care, and GBV services. These rights should be embedded in peace negotiations and post-war governance frameworks to ensure sustainability.

To enhance responsiveness, local health governance must be empowered. Establishing women-led local health councils can decentralise decision-making and ensure that recovery efforts are responsive to community-specific needs.

Phase 3: Long-Term reform and sustainability (5+ years)

The third phase focuses on establishing a universal, self-sustaining healthcare system embedded within Sudan's broader national reconstruction. Central to this effort is the creation of a universal women's health insurance model. This should be supported through public-private partnerships (PPPs), international donors, and mobile-based payment tools, ensuring equitable and affordable access for all women, especially those in low-income or remote areas.

As Sudan's digital infrastructure grows, mobile health wallets and mobile money platforms will reduce administrative inefficiencies and empower women to manage their healthcare spending independently.

Sustained recovery also requires robust legislative reform. Sudan must criminalise GBV, female genital mutilation (FGM), and child marriage, and ensure these laws are enforced at the community level. Strong oversight mechanisms must accompany legal changes to ensure real-world impact.

Finally, government investment must be institutionalised. Maternal and reproductive healthcare funding should be protected through constitutional guarantees and included in national budget allocations (Ibrahim *et al.*, 2024; Nicholson *et al.*, 2024). Without these commitments, the system will remain vulnerable to future instability or shifts in political priorities.

In summary, a phased, globally informed approach enables Sudan to rebuild its women's healthcare system by combining mobile services, cross-border collaboration, legal reform, and community-led governance to ensure both immediate impact and long-term resilience.

STRATEGIC ACTIONS FOR REBUILDING WOMEN'S HEALTHCARE IN SUDAN POST-APRIL 2023 CONFLICT

Drawing from our research framework and global case comparisons, Sudan's healthcare recovery must emphasise decentralisation, international collaboration, and culturally sensitive, women-centred approaches. The following strategic actions provide a roadmap for a conflict-adapted and sustainable healthcare recovery effort (see Table 2).

Table 2: Strategic Actions for Rebuilding Women's Healthcare in Sudan (Post-April 2023)

Strategic Focus	Objective	Key Actions	Expected Impact
Decentralisation	Improve access via localised care	Regional hubs, CHW training, mobile clinics, telemedicine	Increased coverage, reduced dependence on central systems
International Collaboration	Leverage partnerships for aid and expertise	Engage WHO, UNFPA, MSF, cross-border training	Immediate support and lasting resilience
Culturally Sensitive Care	Align services with social norms	Midwife training, TBAs, gender-sensitive policies	Better service acceptance and reproductive health outcomes
Workforce Training	Strengthen healthcare staffing	Fast-track training, diaspora involvement, rural incentives	Local capacity growth, reduced aid dependency
Governance and Resilience	Build transparent health governance	Post-conflict health commission, digital infrastructure	Accountability, equitable access, system sustainability

Source: Constructed by author

Sudan's recovery offers a chance not just to rebuild, but to design a stronger, equitable, and community-rooted women's healthcare system. This will require state commitment, constitutional protection for maternal health, and regional partnerships for implementation and financing.

Phased Implementation Strategy for Women's Healthcare Recovery

A phased strategy is essential for rebuilding Sudan's women's healthcare system in a way that adapts to changing security conditions, resource limitations, and political realities. This approach allows for a structured transition from emergency care to long-term reform (see Table 3).

PHASE 1: Emergency and conflict-adapted interventions (0-2 years)

In the immediate post-conflict period, delivering life-saving care to women in conflict zones and displacement camps must be the top priority. This can be achieved through rapidly deploying mobile reproductive health clinics, supported by UNFPA, WHO, Médecins Sans Frontières (MSF), and the Sudanese medical diaspora. These clinics can offer antenatal care, emergency obstetric services, contraception, and trauma counselling. Training community health workers (CHWs), particularly women, in basic emergency response, maternal care, and GBV support will be crucial to ensuring outreach in hard-to-reach communities.

To improve access in active conflict areas, Sudan must negotiate humanitarian corridors to enable safe travel for healthcare workers and patients. Drawing from Syria's model, these corridors could allow continued healthcare delivery even under threat. Women in critical condition should also be referred to cross-border facilities in Chad, Egypt, and South Sudan, with support co-ordinated through the UN, African Union (AU), IGAD, and humanitarian agencies such as the Red Cross.

A focused gender-based violence (GBV) and trauma response is essential. Safe spaces within IDP camps should be established for survivors, while rapid-response teams, supported by MSF, the International Rescue Committee (IRC), and Women for Women International, should distribute post-exposure prophylaxis (PEP) kits, emergency contraception, and offer psychological and legal support.

PHASE 2: Stabilisation and transition (2-5 years)

As certain areas regain stability, the focus should shift to strengthening local health systems. Rehabilitating damaged clinics and establishing modular birthing centres in secure regions will help restore maternal care services. At the community level, maternal health hubs, inspired by Rwanda's decentralised model, should be scaled up to improve access in under-served areas. Partners such as the World Bank, the African Development Bank Group (AfDB), and private donors will be essential for funding this expansion.

Health workforce development must be accelerated to sustain recovery. Sudan should establish regional training programmes in Egypt, Chad, and Ethiopia, while activating virtual education initiatives through the diaspora to train nurses, midwives, and CHWs. Blending in-person and remote training will help address severe workforce shortages, especially in maternal and reproductive health.

Simultaneously, legal and policy reforms are needed to align healthcare delivery with women's rights and protections. Legislation should be enacted to outlaw FGM, GBV, and child marriage, while guaranteeing women's reproductive health rights. These protections must be incorporated into peace agreements and the post-conflict legal framework. Support from UN Women, the AU, and Sudanese civil society organisations will be critical for these reforms to gain traction.

PHASE 3: Long-Term recovery and reform (5+ years)

The final phase aims to build a self-sustaining national women's health system. A core component is the creation of a universal maternal health insurance model; this should be piloted through community-based schemes and integrated with mobile banking and health savings platforms. This model will improve financial access for women in both urban and rural communities. Key implementation partners include the World Bank and Sudan's private health sector.

In parallel, Sudan must advance institutional reform and government investment. This includes enacting constitutional protections for maternal healthcare and embedding gender-responsive budgeting within the national fiscal framework. Legislation against GBV must be enforced with community-level accountability mechanisms, ensuring that legal reforms are supported by real-world implementation.

Co-ordination through a post-transition Sudanese Parliament, together with support from the UNDP, will be essential to institutionalising these changes and guaranteeing that women's healthcare remains a national priority, protected from future political or economic instability.

Table 3: Summary of Implementation Timeline

Phase	Time	Key Actions	Key Partners
Phase 1	0-2 years	Mobile clinics, ceasefires, GBV response	UNFPA, MSF, WHO, IRC
Phase 2	2-5 years	Infrastructure, training, policy reform	World Bank, AU, diaspora
Phase 3	5+ years	Universal insurance, legal reform	Sudanese MoH, UNDP, private sector

Source: Constructed by author

Challenges of Implementation with Limited Resources

Sudan's post-conflict healthcare reconstruction must navigate severe humanitarian needs, limited fiscal capacity, and collapsed infrastructure. A decentralised, mobile-led approach offers the most practical path forward. By leveraging telemedicine, task-shifting to community health workers (CHWs), and modular clinics, Sudan can deliver essential services without heavy investment in fixed infrastructure. Priority actions include training CHWs in maternal emergencies, repurposing community buildings such as schools and mosques into clinics, and deploying solar-powered container clinics in off-grid areas.

Regional training collaborations with Ethiopia, Egypt, and Chad can address workforce shortages through fast-track programmes. International partnerships, with WHO, GAVI, and the African Union (AU), are vital for vaccine supply chains, maternal health logistics, and the development of digital health information systems for oversight and accountability.

Cultural sensitivity is crucial. Integrating traditional birth attendants (TBAs), engaging religious leaders such as imams, and deploying female-led health teams will improve service acceptance, particularly in conservative areas. For long-term resilience, investments in solar energy, offline-capable technologies, and local health workforce training are essential. Real-time

health data systems will enable equitable resource distribution and effective impact monitoring as is standard practice for multiple government and non-government organisations (e.g., World Health Organization and the African Union).

In conclusion, Sudan's recovery demands a phased, inclusive strategy that combines international support, legal reform, and community-based solutions to build a sustainable maternal health system essential for national recovery.

BUDGETARY CONSIDERATIONS AND LONG-TERM SUSTAINABLE FINANCING

Rebuilding Sudan's women's healthcare system requires a strategic, phased financial plan. Drawing from similar post-conflict efforts in Rwanda, Syria, and the DRC: the total estimated cost ranges from US$1.5 to US$2.2 billion over five years. Funding must blend humanitarian aid, development grants, public-private partnerships (PPPs), and government allocations.

Estimated Budget and Phased Funding Strategy

PHASE 1: Emergency response (0-2 years) (Table 4)

- **Estimated Budget:** US$350M-US$500M
- **Goal:** Deliver life-saving maternal and reproductive healthcare to displaced and vulnerable women.

Table 4: Budgetary Considerations in Phase 1 Recovery

Action	Estimated Cost (USD)	Funding Sources
Mobile health units (50 units)	$50M	UNFPA, WHO, MSF
Emergency maternal kits (500,000 kits)	$25M	Global Fund, UNFPA
5,000 CHW deployments	$100M	African Development Bank (AfDB), European Union (EU), Humanitarian Aid
Cross-border care services	$75M	United Nations High Commission for Refugees (UNHCR), regional governments
Telemedicine/SMS services	$30M	United Nations Development Programme (UNDP), private telecoms
Safe houses for GBV survivors	$20M	UN Women, IRC
Logistics and transport	$50M	WFP, Red Crescent
Admin, training and contingency	$50M	World Bank, Gates Foundation
Total Phase 1	**$350M-$500M**	**Multilateral aid**

Source: Constructed by author

Primary Funding Strategy:

- Emergency grants from UN agencies, EU, and the AU.
- Bilateral aid from regional neighbours (Egypt, Chad, Ethiopia).
- Private donations for digital health and maternal services.

PHASE 2: Stabilisation and transition (2-5 years) (Table 5)

- **Estimated Budget:** US$600M-US$900M
- **Goal:** Rebuild core infrastructure and expand the women's health workforce.

Table 5: Budgetary Considerations in Phase 2 Recovery

Action	Estimated Cost (USD)	Funding Sources
Rehabilitating 100 hospitals/ clinics	$250M	World Bank, AfDB
200 community birthing centres	$200M	UNFPA, Gates Foundation
Hiring/training 10,000 workers	$150M	Diaspora, EU, UNHCR
5 regional training hubs	$100M	Egypt, Ethiopia, AU
Digital health expansion	$50M	Private sector, telecoms
Pilot maternal health insurance	$50M	PPPs, WHO
Legal framework development	$25M	UN Women, CSOs
Total Phase 2	**$600M-$900M**	**International development partners**

Source: Constructed by author

Primary Funding Strategy:

- Grants from World Bank, AfDB, UNDP (targeting Sudan's post-war reconstruction).
- Regional investment (Egypt, Ethiopia, Gulf states) (who are likely to invest in Sudan's recovery).
- Public-private partnerships (insurance, telemedicine).

PHASE 3: Long-Term recovery and reform (5+ years) (Table 6)

- **Estimated Budget:** US$500M-US$800M
- **Goal:** Build a self-sustaining, resilient national women's healthcare system.

Table 6: Budgetary Considerations in Phase 3 Recovery

Action	Estimated Cost (USD)	Funding Sources
Building 5 new state-of-the-art women's hospitals	$300M	World Bank, Sudanese Gov.
Expanding Sudan's universal health insurance model	$100M	PPPs, WHO, AfDB
Integrating women's health into the national development plan	$50M	UNDP, Parliament
Creating a gender-sensitive healthcare financing system	$50M	International Monetary Fund (IMF), Ministry of Finance
Strengthening medical schools and training Sudanese women in healthcare	$100M	Egypt/Ethiopia, scholarships
Total Phase 3	**$500M-$800M**	**Government-led with global support**

Source: Constructed by author

Primary Funding Strategy:

- Government budget guarantees.
- Foreign direct investment (FDI) in health innovation.
- Sudanese Health Fund (donor + private endowments).

A summary can be seen in Table 7.

Table 7: Summary of Estimated Budget and Funding Strategy

Phase	Timeline	Estimated Budget	Funding Strategy
Phase 1: Emergency Response	0-2 Years	$350M-$500M	UN, humanitarian aid
Phase 2: Stabilisation	2-5 Years	$600M-$900M	Development banks, Public Private Partnerships (PPPs)
Phase 3: Long-Term Reform	5+ Years	$500M-$800M	Government, IMF, private sector

Source: Constructed by author

Transitioning Sudan's Women's Healthcare Systems from Donor Dependency to Self-Sufficiency

This funding strategy would ensure a mix of short-term emergency aid, medium-term development grants, and long-term self-sustaining financing. Sudan's health recovery must effectively and deliberately shift from donor reliance to local ownership. This transition requires transparent governance, robust public-private investment, and embedding healthcare in national recovery plans (Table 8).

Table 8: Proposed Transition from Donor Dependency to Sustainability

Phase	Timeline	Funding Sources	Self-Financing Goal
Phase 1	0-2 Years	Donor-funded	10-20%
Phase 2	2-5 Years	Hybrid funding (PPPs, government)	40-60%
Phase 3	5+ Years	Government and private investment	80-90%

Source: Constructed by author

This phased, mixed-financing model balances emergency relief with long-term reform. It integrates donor assistance, diaspora remittances, regional partnerships, and economic planning to achieve a self-sustaining, inclusive women's healthcare system in Sudan.

THE ROLE OF ARTIFICIAL INTELLIGENCE (AI) IN FACILITATING WOMEN'S HEALTHCARE IN POST-WAR SUDAN: OPPORTUNITIES AND CHALLENGES

Comparative Healthcare Recovery: Sudan vs. Other War Zones and Western Nations

Sudan's healthcare recovery lags significantly behind both Western nations and other post-conflict countries. On a 10-point scale, Sudan currently scores 2.1, reflecting the devastating impact of infrastructure collapse, prolonged conflict, workforce shortages, and fragmented governance. In comparison, Rwanda, a post-conflict success, scores 6.8, thanks to strong political will, AI integration, community health models, and donor support (Feigin *et al.*, 2024; Romanello *et al.*, 2022). Syria and the DRC, despite ongoing crises, have managed moderately better recoveries through humanitarian aid and decentralised service delivery. Western countries such as the USA, UK, and Germany maintain scores between 9.5-9.8, underpinned by consistent investment and advanced infrastructure.

This disparity underscores the need for Sudan to adopt AI-enabled strategies alongside governance and funding reforms to bridge the healthcare gap (Figure 2).

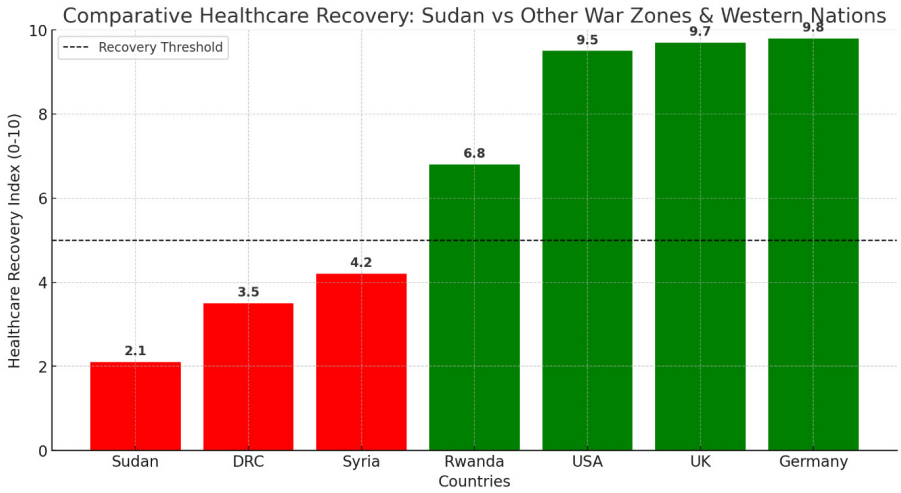

Figure 2: Comparative Healthcare Recovery

Legend:

- **Sudan** – Very low index due to conflict, weak systems, and fragmented aid.
- **DRC, Syria** – Moderate recovery with patchy progress.
- **Rwanda** – A replicable post-conflict recovery model.
- **USA/UK/Germany** – Stable, high-performing systems.

Source: Constructed by author

AI's Transformative Potential in Sudan's Recovery

For Sudan to catch up, medical technology is going to be key. This must be in the form of Artificial Intelligence (AI) that can play a transformative role in Sudan's post-war healthcare recovery, particularly in addressing women's health challenges amid limited resources, infrastructure damage, and workforce shortages (Shabani *et al.*, 2025; Owoche *et al.*, 2025; Reuters, 2025). The technology can support:

- **Telemedicine:** AI-powered Chatbots and mobile apps can guide pregnant women, offer remote consultations, and flag high-risk cases.
- **Maternal Health Monitoring:** SMS-based health tracking combined with AI-supported mobile ultrasound tools can help detect pregnancy complications.
- **Disease Outbreak Prediction:** AI can analyse environmental and health data to predict and contain outbreaks in refugee camps.
- **CHW Training:** AI-enabled learning platforms reduce dependence on formal institutions and allow rapid training and upskilling of frontline health workers.

In low-resource settings such as Rwanda, Syria, and Ethiopia, such innovations have successfully improved maternal and neonatal outcomes (Owoche *et al.*, 2025; Reuters, 2025).

Challenges to AI Integration in Sudan

Several systemic barriers must be addressed for AI to take root in Sudan's post-war recovery:

- **Limited Connectivity and Power Supply:** Internet and electricity blackouts are frequent. Solutions must function offline or through low-bandwidth platforms.
- **Data Scarcity:** Sudan lacks electronic medical records. Low-cost digital health registries are urgently needed.
- **Ethical and Cultural Concerns:** Scepticism around AI tools, particularly for reproductive health, requires community engagement and localisation.
- **Workforce Digital Literacy:** Healthcare professionals require training in basic digital and AI skills (Romanello *et al.*, 2022; Hussein *et al.*, 2025).

Partnerships with Sudanese tech developers and global digital health organisations will be essential to bridge these gaps.

AI in Women's Healthcare: Benefits vs. Challenges

Sudan must strike a balance between leveraging AI's benefits and managing its limitations. Figure 3 highlights these in green and red respectively.

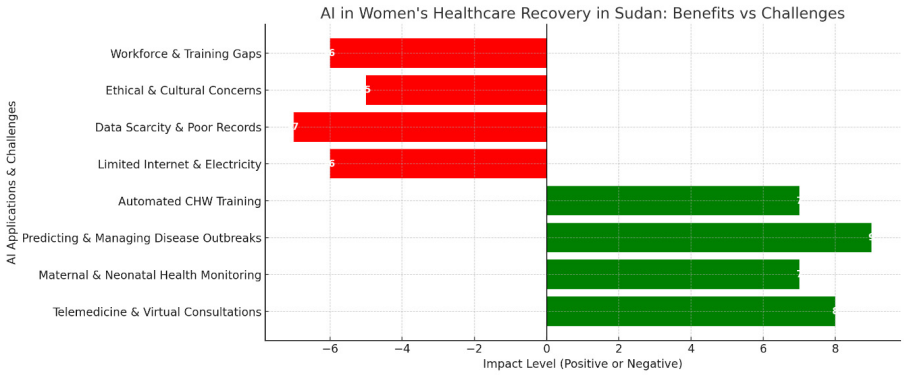

Figure 3: Benefits vs. Challenges of AI in Women's Healthcare Recovery

Legend:

- **Highlights beneficial positive applications**
- **Highlights challenges and limitations that must be addressed**.

Source: Elmukashfi ShamsEldin Elobied *et al.*, 2025; Hussein *et al.*, 2025; Owoche *et al.*, 2025

To succeed, Sudan must prioritise AI tools that work offline, are mobile-friendly, and offer targeted training for CHWs and midwives.

Projected Recovery Timeline with AI Integration

If fully implemented, AI could dramatically accelerate Sudan's recovery, closing the gap with global healthcare standards over the next two decades (Figure 4).

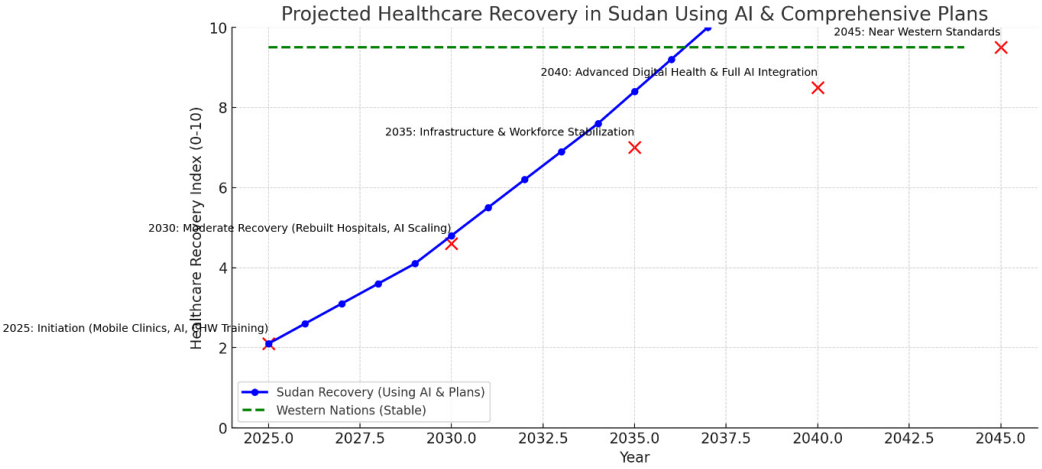

Figure 4: AI-Driven Recovery Forecast for Sudan's Healthcare System

Source: Romanello *et al.*, 2022; Owoche *et al.*, 2025

Key Insights from Figure 4:

- **2025 (Initiation Phase):** Sudan starts at 2.1 (low healthcare index) with initial interventions such as mobile clinics, AI-assisted health monitoring, and CHW training.
- **2030 (Moderate Recovery Phase):** With rebuilding of hospitals, AI scaling, and workforce stabilisation, Sudan reaches 4.6, approaching the levels of other post-war nations such as Syria or the DRC.
- **2035 (Infrastructure and Workforce Stabilisation):** More healthcare professionals trained, AI integrated into diagnosis and telemedicine, boosting the index to 7.0.
- **2040 (Advanced Digital Health and AI Integration):** AI is fully embedded in healthcare decision-making, predictive analytics, and diagnostics, moving Sudan's healthcare index to 8.5, approaching high-performing emerging economies
- **2045 (Near Western Standards):** If Sudan sustains AI integration, governance reforms, and investment in healthcare infrastructure, it could reach Western healthcare stability levels (~9.5).

This timeline assumes consistent implementation, political stability, and sustained investment.

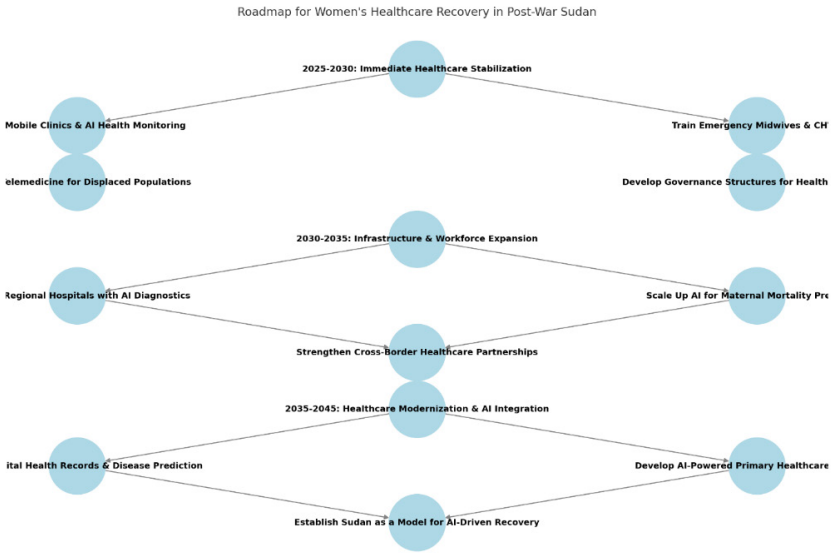

Figure 5: Roadmap to AI-Enabled Women's Healthcare in Sudan

Source: Constructed by author

Figure 5 outlines the phased implementation strategy from 2025 to 2045, illustrating key milestones such as *AI-assisted maternal health monitoring, midwife training, hospital rebuilding, and healthcare digitalisation.*

Clearly, AI alone will not rebuild Sudan's healthcare system, but it can act as a powerful catalyst when aligned with international collaboration, community engagement, and long-term investment. If Sudan prioritises AI-based maternal health tools, scalable training, and telehealth platforms, it can recover faster and more equitably than otherwise possible.

A national strategy for AI in healthcare, backed by donors, digital innovators, and local professionals, can transform Sudan's fragmented system into one that is resilient, decentralised, and data-driven. With co-ordinated implementation, Sudan has the potential to reach global standards of women's healthcare by 2045.

DISCUSSION: REBUILDING SUDAN'S HEALTHCARE SYSTEM THROUGH LEARNING, PLANNING, AND INNOVATION

Rebuilding Sudan's women's healthcare system after years of conflict presents significant challenges. However, lessons from Rwanda, Syria, and Bosnia offer practical strategies for building a resilient, decentralised, and digitally enabled system (Reinholdz *et al.*, 2024; Romanello *et al.*, 2022; Cheong Chi Mo *et al.*, 2023). Sudan must adopt a phased, multidisciplinary approach grounded in political commitment, international collaboration, community participation, and innovation.

Applying Global Lessons to Sudan's Context

Sudan's instability mirrors Syria's wartime context, where hospitals were frequently targeted. In Syria, mobile clinics and telemedicine sustained services in conflict zones, an approach Sudan should replicate. Financial constraints remain a barrier, particularly due to dependence on external aid. Rwanda addressed similar challenges through public-private partnerships (PPPs) and a large-scale CHW programme, a model Sudan can adapt (Nichols, 2025).

In Bosnia, post-war recovery spanned over a decade and relied on low-cost, interim strategies. Sudan can utilise solar-powered mobile clinics, AI diagnostic tools, and SMS-based maternal health platforms to provide essential care during reconstruction. Countries such as India and Kenya have demonstrated the effectiveness of such technologies in improving maternal outcomes in low-resource settings (Romanello *et al.*, 2022; Owoche *et al.*, 2025).

Opportunities for Innovation: AI, Collaboration, and Sustainability

Sudan has the opportunity to bypass traditional systems by integrating Artificial Intelligence (AI) into women's healthcare. AI-enabled telemedicine, maternal tracking, and disease surveillance can address systemic gaps. In Kenya and India, AI has helped reduce maternal mortality by up to 30%, a goal Sudan could aim for (Shabani *et al.*, 2025; Owoche *et al.*, 2025).

Cross-border partnerships with Egypt, Chad, and South Sudan could provide temporary services and medical training to support Sudanese populations in displacement. Similar to Syria's refugee strategy, regional agreements could expand care while building domestic capacity.

By positioning itself as a model for AI-assisted post-conflict recovery, Sudan can attract funding from WHO, UNFPA, the World Bank, and tech investors. Rwanda's success with digital health earned international acclaim; Sudan can pursue a similar path (Selden *et al.*, 2025; Romanello *et al.*, 2022).

Engaging Stakeholders: Government, NGOs, and the Private Sector

Effective recovery requires co-ordination across government, NGOs, and the private sector. Sudanese authorities must integrate mobile and AI-enabled services into national health plans. Legal and regulatory reform, following Rwanda's example, is needed to support digital innovation (Wikipedia, 2025b; Selden *et al.*, 2025; Lucero-Prisno *et al.*, 2022).

Global health actors, WHO (Awad *et al.*, 2025; Elmukashfi ShamsEldin Elobied *et al.*, 2025; Litvinova *et al.*, 2024; Romanello *et al.*, 2022; Hussein *et al.*, 2025), UNFPA (Shabani *et al.*, 2025), GAVI (Izzoddeen *et al.*, 2025; Hassan *et al.*, 2025; Abdelrahim *et al.*, 2025; Haeuser *et al.*, 2025), and the Global Fund, must fund mobile clinics, workforce development, and infrastructure. NGOs can deliver care in displaced communities and assist in training efforts.

Tech firms, such as Google Health (Shabani *et al.*, 2025; Owoche *et al.*, 2025), IBM Watson, and African AI start-ups, should be encouraged to co-develop solutions tailored to Sudan's needs. This public-private collaboration will reduce donor dependency over time.

Optimising Data and Analytics

AI-generated health data will be key to tracking progress and securing long-term funding. Documenting successful pilots can demonstrate impact and attract further investment. Data systems will also improve service targeting, outbreak response, and resource allocation.

Critical Resource Areas

Three pillars are essential for sustainable recovery:

1. **Financial Resources:** Develop an AI-friendly health sector, enable microfinance for women's health, and engage the diaspora.
2. **Human Resources:** Implement scholarships, task-shifting for CHWs, and mentorship from Sudanese professionals abroad.
3. **Infrastructure and Technology:** Invest in mobile clinics, solar-powered systems, and digital records to reach conflict-affected zones.

A Roadmap for Action

- **Phase 1 (0-2 years):** Deploy mobile clinics, initiate AI-supported maternal care, and scale GBV support.
- **Phase 2 (2-5 years):** Rehabilitate health infrastructure, expand training, and digitise systems.
- **Phase 3 (5+ years):** Institutionalise AI, establish national health insurance, and build permanent facilities.

While challenging, rebuilding Sudan's women's healthcare system is possible. By applying lessons from Rwanda, Syria, and Bosnia, and leveraging innovation, mobile delivery, and partnerships, Sudan can transition from crisis to a resilient, equitable healthcare model. This chapter outlines a blueprint for transformation, grounded in gender equity, legal reform, and international co-operation.

CONTRIBUTION OF THIS CHAPTER TO THE GLOBAL KNOWLEDGE BASE

Limitations of the Healthcare Recovery Framework in Sudan

While this chapter outlines a comprehensive strategy for rebuilding Sudan's women's healthcare system, several limitations must be addressed. Political instability, economic hardship, and ongoing security threats undermine effective implementation. Unlike Rwanda's centralised governance model post-genocide (Selden *et al.*, 2025; Uwishema, 2023; Anema *et al.*, 2008), Sudan's fragmented institutions complicate co-ordination and accountability. Challenges such as corruption in aid distribution, hyperinflation, and under-investment (Nicholson *et al.*, 2024) further constrain resources.

In addition, conflict-related displacement, the presence of unsafe zones, and inaccessible regions have significantly delayed infrastructure development. Modernisation efforts are hindered

by digital and cultural divides, including resistance to AI tools, preference for traditional birthing practices, and the lack of electronic health records.

To mitigate these constraints, the framework prioritises decentralised service delivery, mobile healthcare, alternative financing mechanisms, and culturally adapted AI solutions. Its success, however, depends on empirical validation, pilot implementation in stable zones, and collaboration with global health institutions to tailor approaches to Sudan's evolving post-conflict context.

Advancing Global Health Policy and Post-Conflict Reconstruction

This chapter contributes to global health policy by providing a replicable, evidence-based framework for post-conflict recovery in Sudan. Drawing on models from Rwanda (Uwishema, 2023; Selden *et al.*, 2025), Bosnia (Hasic, 2021; Comtesse *et al.*, 2019; Elmukashfi ShamsEldin Elobied *et al.*, 2025; Reinholdz *et al.*, 2024;), Syria (Dong, 2023; ICRC, 2015), and the DRC (Nyakio *et al.*, 2024a, 2024b; Reinholdz *et al.*, 2024; Haeuser *et al.*, 2025; Amodu *et al.*, 2020), it presents strategic recommendations for restoring infrastructure, integrating digital health, and strengthening governance.

It aligns with the **Sustainable Development Goals (SDGs):**

- **SDG 3 (Health and Well-being):** Promotes AI-assisted maternal care and mobile clinics;
- **SDG 5 (Gender Equality):** Emphasises CHW training and legal protections;
- **SDG 16 (Peace and Institutions):** Advocates for transparent governance and anti-corruption systems.

AI and Technological Innovation in Post-War Healthcare

As one of the first chapters to explore AI's role in Sudan's post-conflict healthcare, it highlights AI's potential in maternal health monitoring, remote diagnostics, and disease tracking (Shabani *et al.*, 2025). It also addresses barriers including low infrastructure, digital illiteracy, and cultural resistance, recommending offline tools, local partnerships, and community engagement to support scalable implementation.

A Blueprint for Sudan's Healthcare Recovery

The chapter introduces a three-phase roadmap (2025-2045):

1. **Phase 1:** Mobile care, CHW expansion, AI-supported maternal health;
2. **Phase 2:** Infrastructure and digital systems development;
3. **Phase 3:** AI integration, predictive analytics, and institutional reform.

This chapter provides a practical blueprint for restoring women's healthcare in conflict-affected settings, combining global best practices with SDG-aligned reforms to guide policy-makers, NGOs, and international health institutions in rebuilding resilient, inclusive systems, beginning with Sudan.

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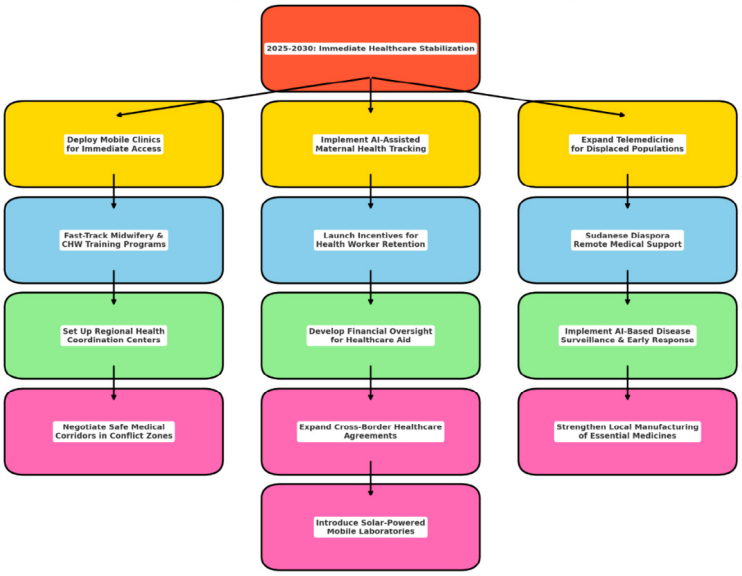
APPENDICES

APPENDIX 1: POST-WAR WOMEN'S HEALTHCARE RECOVERY IN SUDAN FLOWCHART 2025-2030

2025-2030: Immediate Healthcare Stabilisation in Sudan

This flowchart illustrates the first critical phase of Sudan's healthcare recovery, focusing on emergency i mprovements. These action tion.



LEGEND:

Emergency Healthcare Services

- Mobile clinics provide immediate medical aid to conflict-affected populations
- AI-assisted maternal health tracking ensures remote monitoring and better pregnancy outcomes
- Telemedicine services extend healthcare to displaced populations and conflict zones

Healthcare Workforce Emergency Training

- Fast-tracking midwifery and community health worker (CHW) training increases health coverage
- Incentive programmes for healthcare workers help retain skilled professionals in Sudan
- Sudanese diaspora doctors provide remote medical support via telemedicine and AI-assisted diagnostics

Governance and Digital Health Foundations

- Regional health co-ordination centres improve healthcare management and aid distribution
- Financial oversight ensures transparency in healthcare funding and resource allocation
- AI-based disease surveillance helps track and prevent outbreaks, ensuring rapid emergency response

Security and Access to Healthcare

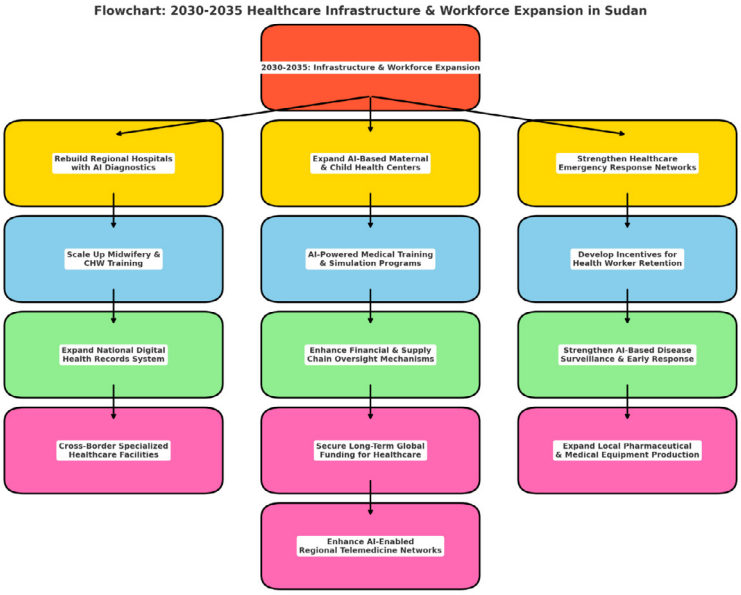
- Safe medical corridors in conflict zones ensure access to emergency healthcare
- Cross-border healthcare agreements provide Sudanese refugees and displaced populations with medical support
- Strengthening local manufacturing of medicines reduces dependency on imports
- Solar-powered mobile laboratories enable on-site disease testing and diagnostics

This structured roadmap would ensure Sudan's healthcare system stabilises after the war, providing critical medical care, trained professionals, and improved security measures, all of which set the stage for long-term infrastructure rebuilding and AI-powered healthcare transformation.

APPENDIX 2: POST-WAR WOMENS HEALTHCARE RECOVERY IN SUDAN FLOWCHART 2030-2035

2030-2035: Healthcare Infrastructure and Workforce Expansion in Sudan

This flowchart illustrates the second phase of Sudan's healthcare recovery, focusing on rebuilding infrastructure, training healthcare workers, and establishing AI-driven healthcare governance. These efforts lay the groundwork for AI-enhanced healthcare expansion in later years.



LEGEND:

Healthcare Infrastructure Expansion

- Rebuilding hospitals with AI diagnostics ensures modernised healthcare facilities
- AI-based maternal and child health centres improve reproductive and neonatal care
- Strengthening emergency response networks enhances Sudan's ability to manage medical crises

Healthcare Workforce Development

- Scaling up midwifery and community health worker (CHW) training increases access to skilled care
- AI-powered medical training enables efficient skill development and medical simulations
- Retention incentives for health workers ensure staff remain in the country

Governance and Digital Health Oversight

- A national digital health records system improves patient tracking and healthcare planning
- Financial and supply chain oversight strengthens transparency in funding and medical resources
- AI-powered disease surveillance allows for early detection of outbreaks and response planning

Global Collaboration and AI Healthcare Expansion

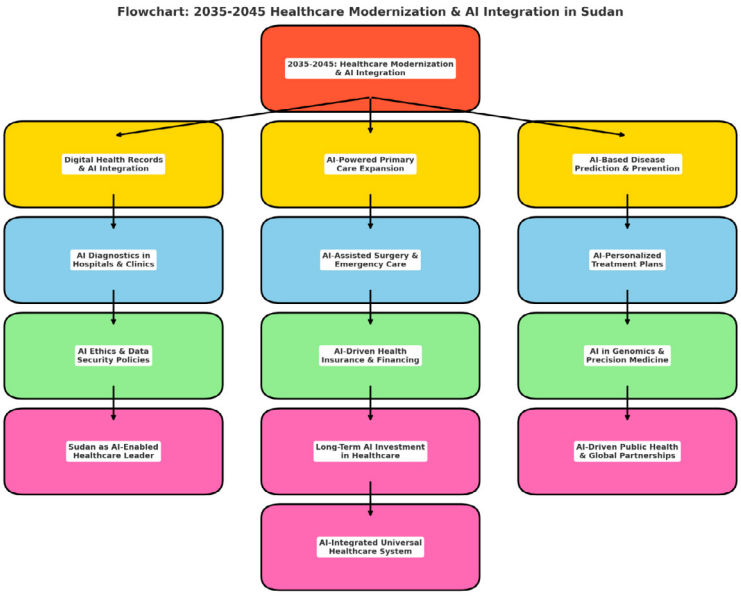
- Cross-border healthcare facilities allow Sudanese patients to access specialised care regionally
- Long-term global funding partnerships secure financial stability for healthcare recovery
- Local pharmaceutical and equipment production ensures self-sufficiency and reduces import dependency
- AI-driven telemedicine networks improve remote healthcare delivery and expand Sudan's digital health capabilities

This structured roadmap provides a clear, strategic approach for Sudan to strengthen healthcare infrastructure and workforce capacity, ensuring sustainable healthcare development leading into AI modernisation in the following decade.

APPENDIX 3: POST-WAR WOMENS HEALTHCARE RECOVERY IN SUDAN FLOWCHART 2035-2045

2035-2045: Healthcare Modernisation and AI Integration in Sudan

This flowchart illustrates the final phase of Sudan's healthcare transformation, where AI becomes fully embedded in medical services, governance, and public health systems. The roadmap is structured into four key categories, each building on previous developments to ensure a fully AI-integrated universal healthcare system by 2045.



LEGEND:

AI-Driven Digital Health Transformation

- The foundation of modernisation includes AI-powered primary care, predictive healthcare, and national digital health records
- AI integration enhances data management, disease tracking, and automated diagnostics, ensuring efficiency in healthcare delivery

Advanced AI in Healthcare Services

- AI-assisted diagnostics, robotic surgeries, and personalised treatment plans will revolutionise patient care
- AI-powered mobile clinics will provide remote and under-served communities with advanced healthcare

AI Governance, Regulation, and Research

- Establishing AI ethics policies and data security will ensure safe AI adoption in healthcare
- AI-driven health insurance and financing models will make quality healthcare more accessible
- Genomic research and precision medicine will allow for personalised treatment strategies

Global Leadership and AI-Enabled Universal Healthcare

- Sudan will position itself as a leader in AI-driven healthcare in Africa
- Attracting long-term AI investment and expanding global partnerships will ensure sustainability and growth
- By 2045, Sudan will achieve a fully AI-integrated universal healthcare system, improving health outcomes for all citizens

This structured roadmap provides a clear, evidence-based strategy for Sudan to become a leader in AI-driven healthcare, ensuring affordable, efficient, and high-quality healthcare services for all by 2045.

BIOGRAPHY

Professor Sohier Elneil is the first Professor of Urogynaecology at University College London and a leading Consultant at University College Hospital and the National Hospital for Neurology and Neurosurgery. With a career dedicated to women's pelvic floor health, she has treated conditions including fistula, FGM, mesh complications, chronic pelvic pain, and neurological dysfunction. Her commitment to research and innovation led to collaborations on implantable technologies for complex pelvic disorders. Sohier authored key national policy documents, including the influential incontinence and prolapse chapter in the 2014 Chief Medical Officer's report The Health of the 51%: Women. She has received multiple national awards, including the Simpson Smith Medal in Surgery (2021) and the NHS Health Hero Award (2018). A leader in integrated, holistic care, she has worked with NICE, MHRA, RCOG, and international societies, and chaired charities like FORWARD UK. Her work continues to transform care for women globally.