ISoP Africa Chapter Meeting

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Envisioning database networks for safety surveillance in Africa - opportunities and challenges

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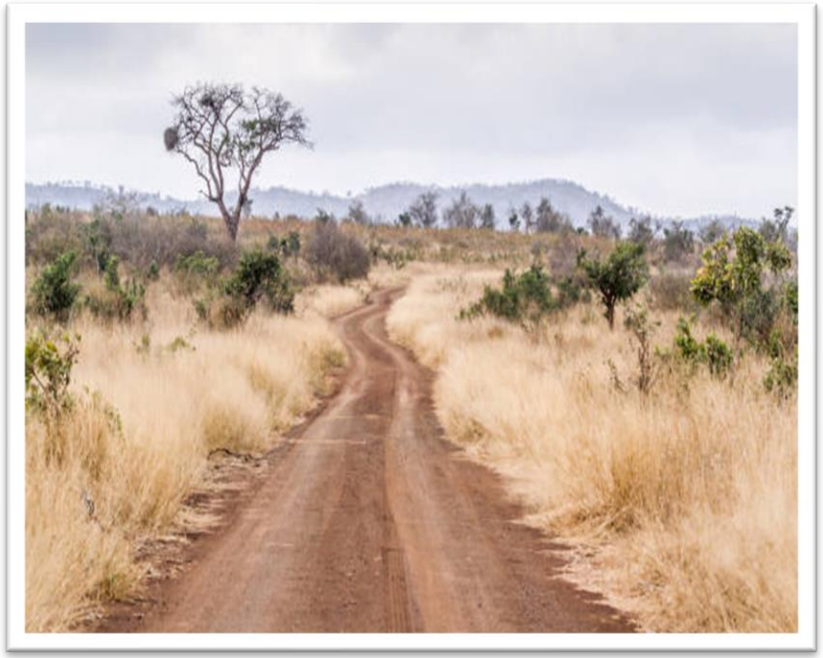
The journey we will go on together

- The new status quo of vaccination in Africa
- The role of vaccine safety surveillance
- The state of vaccine safety infrastructure in Africa
- Existing vaccine safety data networks
- The GVDN “LMIC Model”
- Lessons learnt for future database networks



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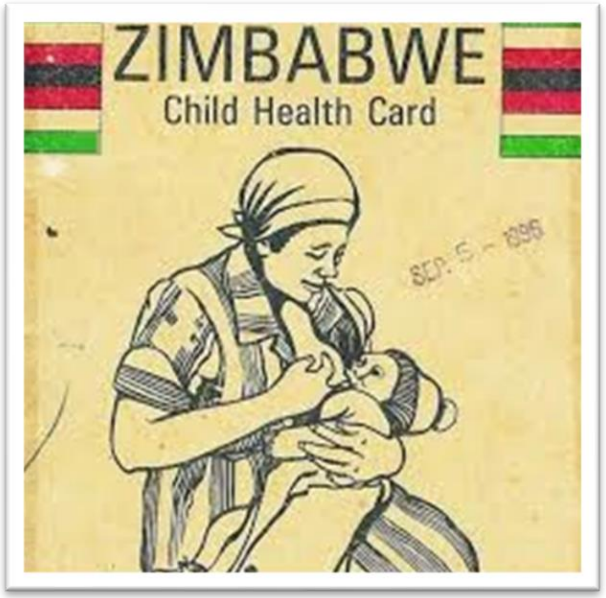
Accepting the new status quo

- The COVID-19 pandemic and the need for urgent mass vaccinations highlighted **an increasing problem with vaccine hesitancy**
- Recent data from WHO and UNICEF show that the uptake of routine **childhood vaccinations has seen the most significant continuous drop** in thirty years, with notable regressions throughout Africa[1]
- This issue extends to adult vaccinations with some studies indicating **safety concerns as a potential barrier to vaccines**[2]
- Misinformation is a serious contributor to this[3], and high-quality vaccine safety data is required to counter this, amongst other approaches



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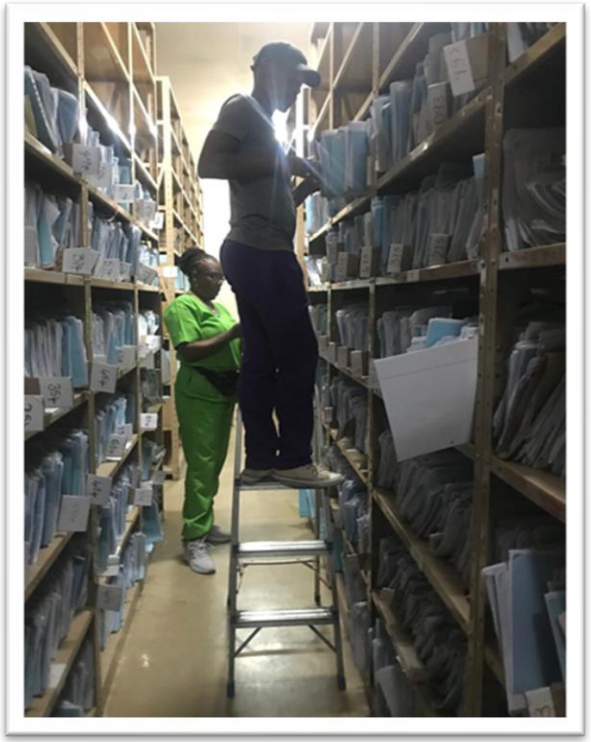
The role of safety surveillance

- Safety surveillance is crucial to the goal of providing vaccine safety data
- The challenge with that **is most serious vaccine adverse events are very rare** and require large amounts of people to be enrolled in post-licensure vaccine safety studies
- This can be done in a segmented approach by different researchers, but a more effective way to do this is to pool data and resources to **form database networks that work to produce generalizable vaccine data**



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The state of vaccine safety infrastructure

- Most of the world lives in middle or low-income countries
- Most **vaccine safety infrastructure** has been **centralized in high income countries.**
- This was considered acceptable because most new vaccines were used in high income countries for a long time prior to use in low-income countries.
- This is no longer true.
    - With vaccines being developed for **diseases endemic to Africa**, there is need to build infrastructure to ensure their safety in local populations

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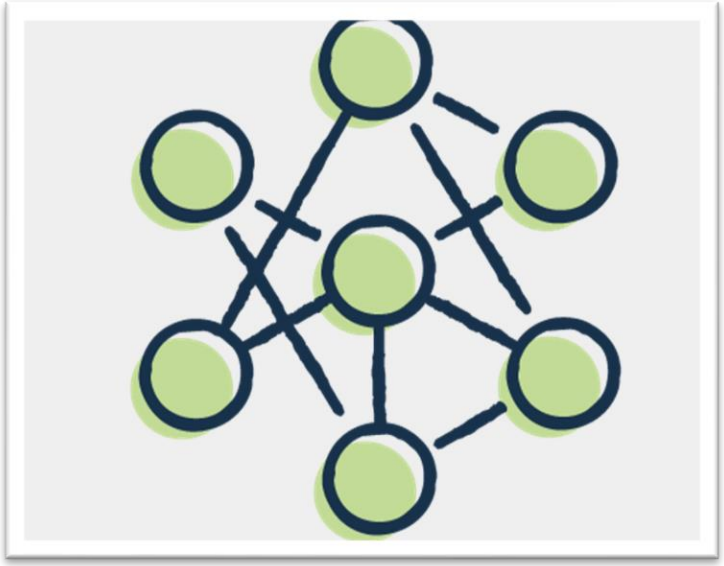
Existing vaccine data networks

- One example of an existing data network is the Global Vaccine Data Network: a network of sites agreeing to conduct globally coordinated active surveillance and epidemiologic vaccine studies
- Its strength lies in numbers, with over 31 sites across 6 continents and 26 countries
  - ✓ Inclusion of multiple countries allows comparison of **different vaccines** and **different schedules** as well as **providing increased statistical power**.
- Their work has been in done in collaboration with various African sites, including South Africa



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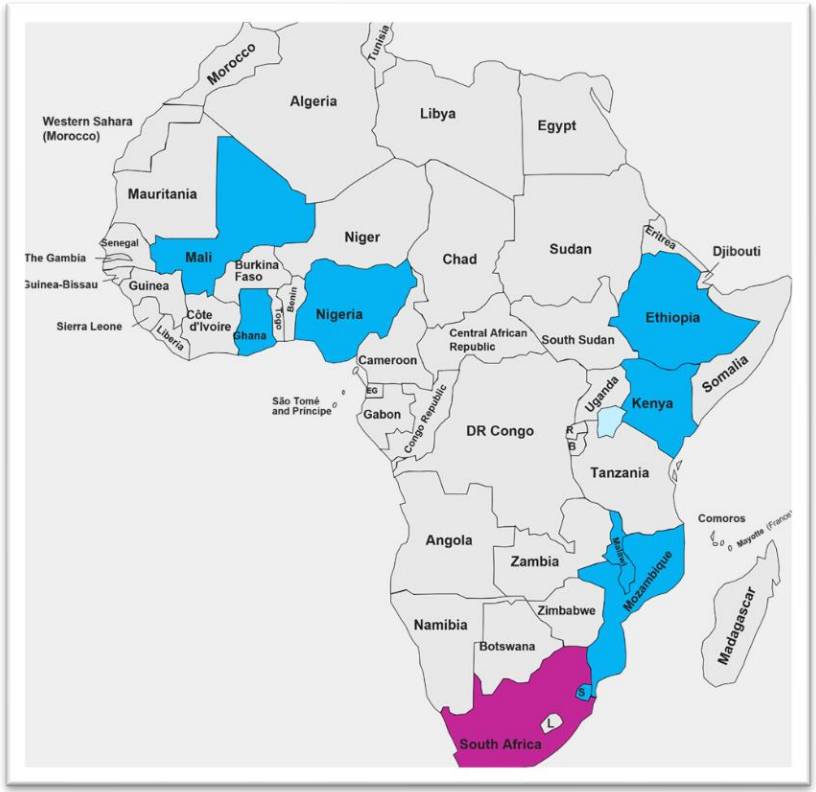
The GVDN "LMIC Model"

- The data collection model was initially developed for **real time hospital data collection** in South Africa.
- It was adapted for use in the ALIVE network of LIC countries in collaboration with GAVI
    - It was also adopted at three hospital sites in India.
- **More than 60,000 hospitalizations were screened** for possible adverse events of special interest following COVID-19 vaccination
- This **model is exportable to other countries** and sites for use in clinical trials as well as post introduction studies.



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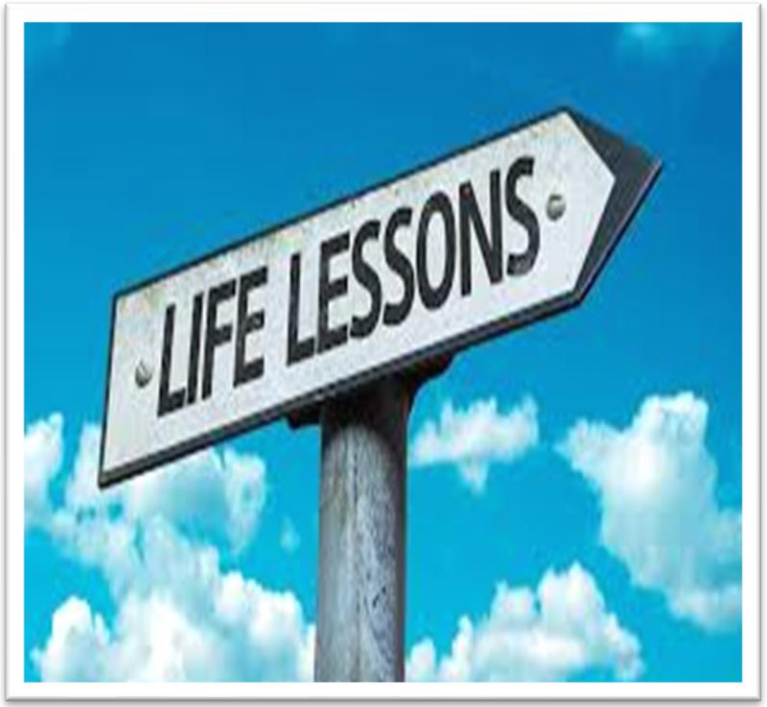
Lessons learnt for future database networks

- Although the surveillance was a great stride forward in the inclusion of Africa in vaccine safety database networks, **several challenges are yet to addressed**
  - ✓ Data availability incl. that of patient medical records, vaccination history and previous treatment records
  - ✓ Digitization of largely paper-based databases
  - ✓ Privacy considerations when sharing data across multiple organisations
  - ✓ Limited resources to investigate and confirm adverse events



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References

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THANK YOU

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