

SCAN TO ACCESS THE EVENT AGENDA AND SPEAKERS' BIOS



DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

Side event to the 2025 World Health Assembly

Red Cross Museum | Geneva
19 May | 18:00-20:00





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

WELCOME AND OPENING REMARKS



PROF PETER SCHWARZ

IDF President

Germany



MR BENT LAUTRUP-NIELSEN

WDF Head of Global Advocacy

Denmark

SCAN TO ACCESS THE SPEAKERS' BIOGRAPHIES



IDF DIABETES ATLAS – 2024 ESTIMATES



1 in 9

Adults (20-79 years)
has diabetes (*589
million people*)



3 in 4

Adults with diabetes live in
low- and middle-income
countries



4 in 10

Adults with diabetes
are undiagnosed (*252 million
people*)



1.8 million

Children and adolescents
below 20 years have type
1 diabetes



3.4 million

Deaths are attributed to
diabetes



11.9%

Of global health expenditure
is spent on diabetes (over
USD 1 trillion)

THE POTENTIAL OF DIGITAL HEALTH FOR NCDs

- Key NCD mortality figures in 2021:
 - NCDs account for 60% of global deaths.
 - 43 million global deaths – 18 million of them in people under 70 years old
 - In LMICs: 3 in 4 deaths are due to NCDs
- The continued rise of diabetes and other NCDs affects the well-being of hundreds of millions of people, hinders economic advancement and pushes vulnerable people into poverty.
- We need to act now by harnessing the power of digital technologies and health innovations.
- These innovations can help prevent millions of deaths by supporting detection, early diagnosis, and improving the quality of care of diabetes and other NCDs.

PANEL 1:

Digital health transformation in the global NCD response





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

PANEL 1: Digital health transformation in the global NCD response



DR FARSHAD FARZADFAR

Scientist, World Health Organization



MR MICHAEL FROST

Senior Advisor, Health Information Systems Programme (HISP), University of Oslo



DR JACKIE MAALOUF

IDF Vice-President and President of DiaLeb

Transforming NCD Monitoring at Primary Health Care: From Paper to Digital Action

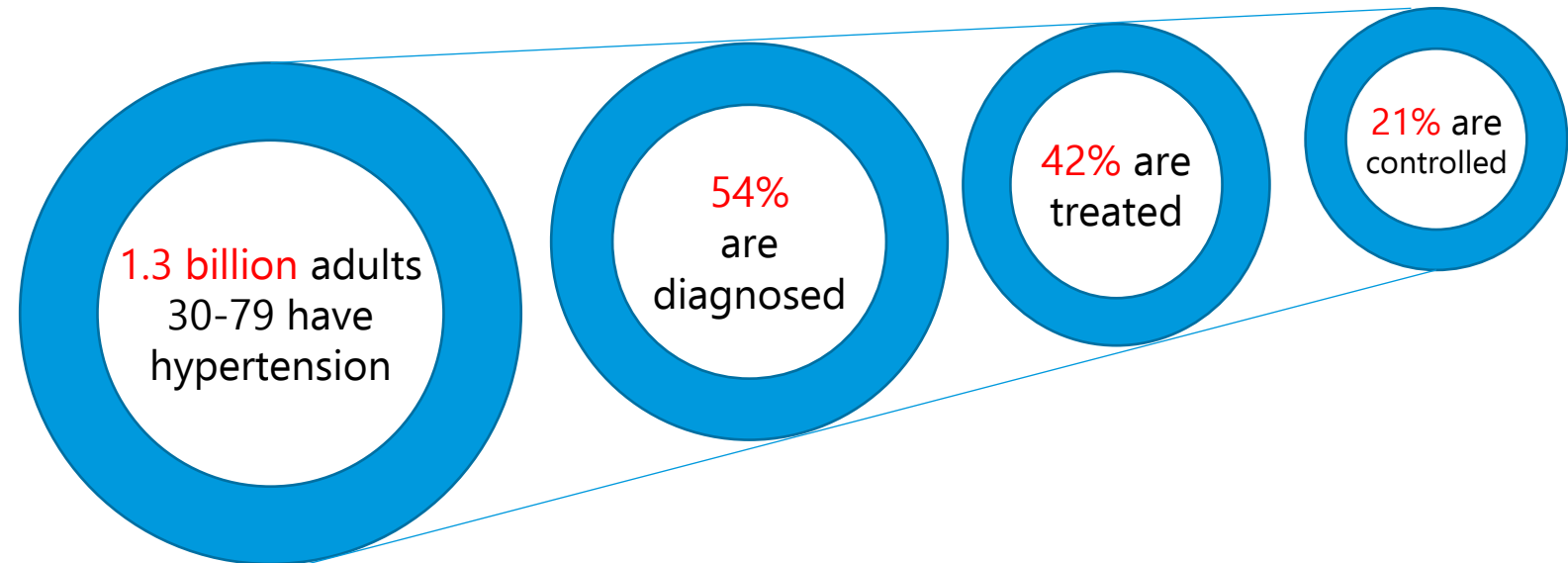
Farshad FARZADFAR, MD, D.Sc., MPH, MHS

Scientist,

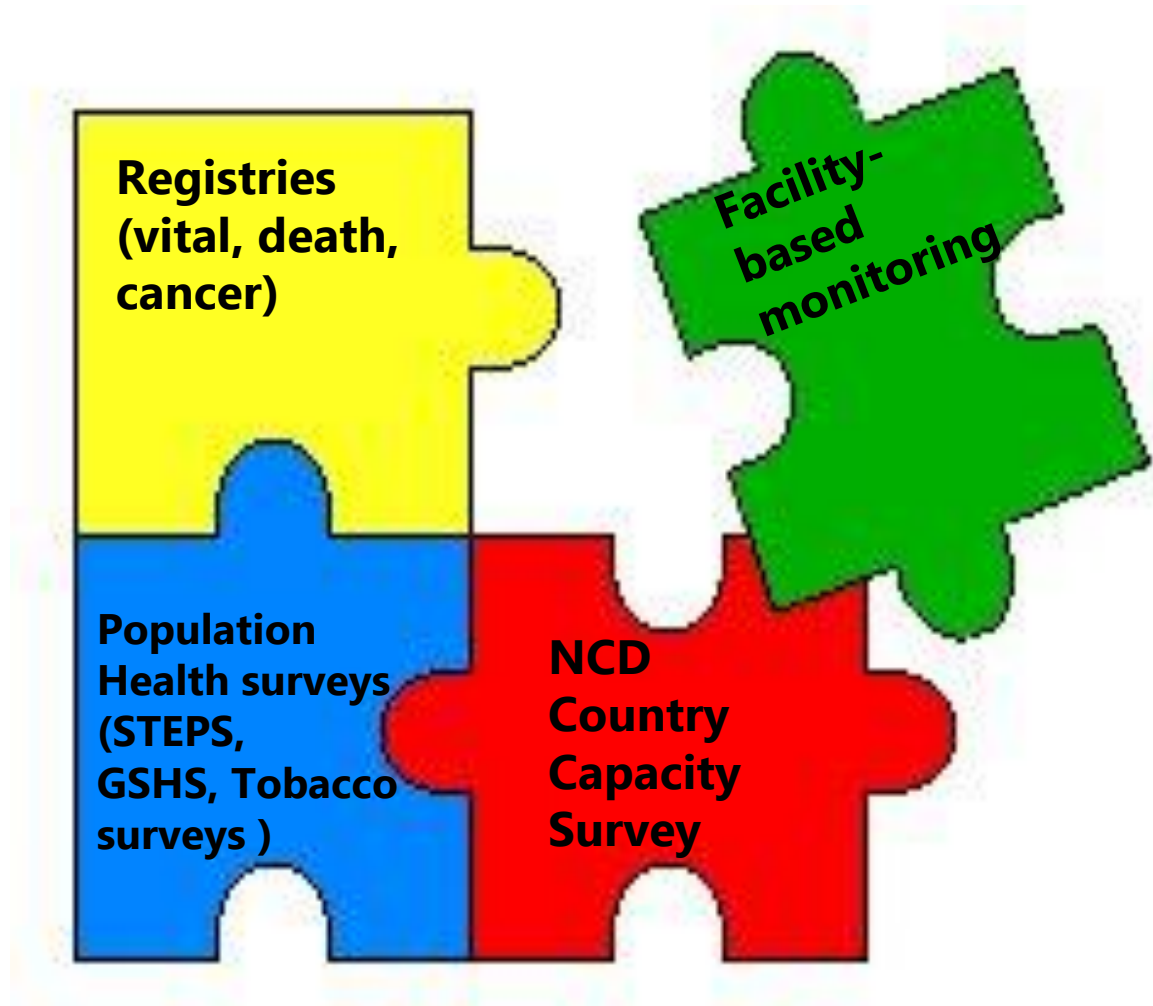
SMR unit, NCD Department, WHO, HQ,
Geneva

THE CHALLENGE

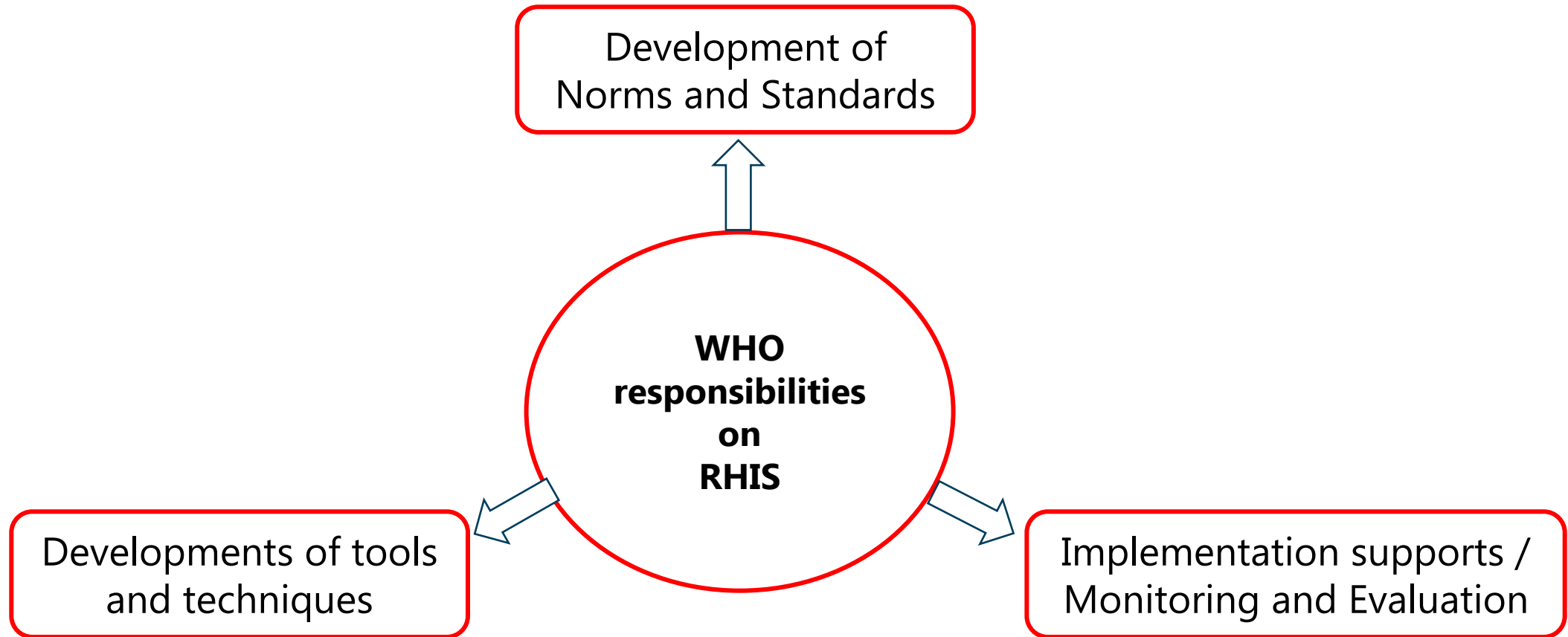
- NCDs are leading global health burdens, but **data systems remain fragmented**.
- **Weak facility-level monitoring** hinders program evaluation, service improvement, and policy feedback.
- PHC settings lack standardized tools for **tracking patient care and service performance**.



KEY DATA SOURCES FOR COMPREHENSIVE NCD MONITORING



WHO'S ROLE IN STRENGTHENING NCD RHIS AT HEALTH FACILITIES



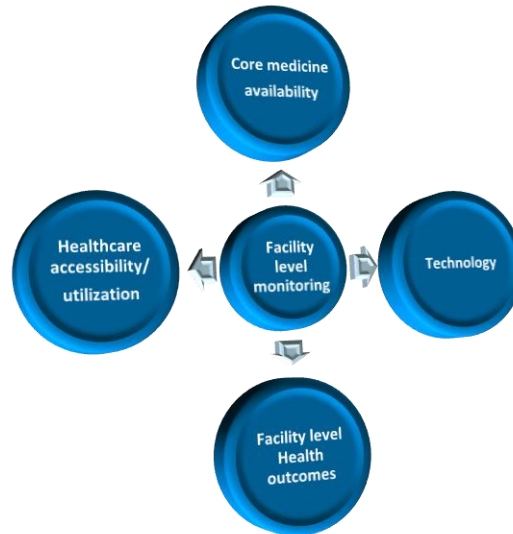
DEVELOPMENT OF NORMS AND STANDARDS USING A SCIENTIFIC METHODS

Monitoring Norms and standard pipeline:

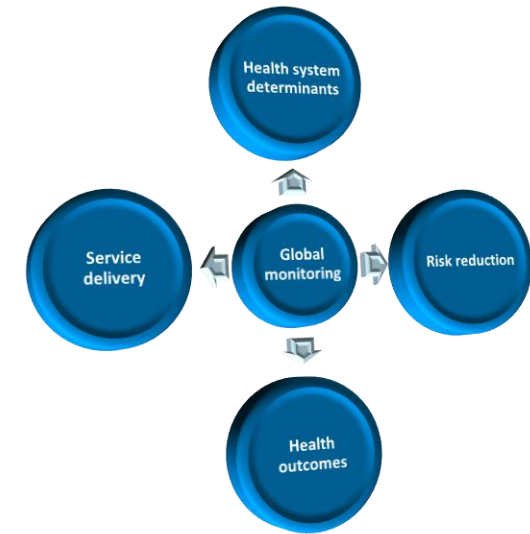
- Cancers
- Secondary and tertiary
- PEN Plus
- Oral Health
- Obesity and smoking



Facility-based Monitoring



Global Monitoring Framework



Digital and Analytical Solutions

Analytical Solution

Digital solutions pipeline:

- Secondary and tertiary NCD DHIS2
- DAK
- Interoperability layers

Digital Solutions

Decision support system: Small area estimation

Data collection platform: DHIS2 aggregate

Data collection platform: DHIS2 Tracker

Data collection platform: E-registry

Decision support system: CVDs risk scoring

Decision support system: Action plan developer

- Facility level indicators **(YES)**
- Core patient level indicators **(YES)**
- Optional indicators **(NO)**
- Tracking patient **(NO)**
- Detailed patient information **(NO)**
- Estimated time for data entry in the system **(Less than 10 min/month)**
- Available languages: **English, French, Spanish, and Arabic**

- Facility level indicators **(YES)**
- Core patient level indicators **(YES)**
- Optional indicators **(YES)**
- Tracking patient **(YES)**
- Detailed patient information **(NO)**
- Estimated time for data entry in the system **(Less than 30 seconds/patient)**
- Available languages: **English, French, Spanish, and Arabic**

- Facility level indicators **(YES)**
- Core patient level indicators **(YES)**
- Optional indicators **(YES)**
- Tracking patient **(YES)**
- Detailed patient information **(YES)**
- Estimated time for data entry in the system **(More than 10 mins/patient)**
- Available languages: **English**

- WHO CVDs risk scoring
- System agnostic
- API is available
- Mini-App is available
- Lab and non-Lab based risk scoring
- Manual or database fetch

- Sets thresholds using facility average performance data
- System agnostic
- Support target setting
- Benchmarking
- Supporting target achievement with quantitative metrics

- Using nationally representative Surveys (such as **STEPS survey**) and **statistical methods** provides **reliable sub-national estimates at the district or province levels** that could be used as inputs in “action plan developer”

Data Entry

Organisation Unit: Beryllium
 Data Set: Noncommunicable Diseases
 Period: January 2024 (Prev year, Next year)
 Filter on section: Show all sections

Beryllium - January 2024 - No Data Element Selected

Run validation
Print form
Print blank form

- Availability of medicines
- Availability of technologies
- Availability of trained staff
- Supervisory visit received
- Cervical cancer screening
- Early diagnosis of cancer-associated signs and symptoms
- Disease control

Action Plan Developer

Dashboard Targets Admin

Filter in section	Value
1. Functional blood pressure measuring device	<input type="radio"/> Yes <input type="radio"/> No
2. Plasma glucose testing (lab /point-of-care testing)	<input type="radio"/> Yes <input type="radio"/> No
3. Hemoglobin A1c testing (lab /point-of-care testing)	<input type="radio"/> Yes <input type="radio"/> No
4. Human papillomavirus testing	<input type="radio"/> Yes <input type="radio"/> No
5. Availability of Pap smear testing	<input type="radio"/> Yes <input type="radio"/> No
6. Availability of visual inspection with acetic acid testing	<input type="radio"/> Yes <input type="radio"/> No
7. Peak flow meter and mouthpiece	<input type="radio"/> Yes <input type="radio"/> No

Complete Incomplete Run validation

Data Entry

Organisation Unit: Beryllium
 Data Set: Noncommunicable Diseases
 Period: January 2024
 Filter on section: Show all sections

Availability of medicines Availability of technologies
 Early diagnosis of cancer-associated signs and symptoms

Filter in section	Asthma	
1. People registered with NCD		
2. People with controlled NCD		

NCD - E-Registry

- Home
- Search
- Persons referred care centers
- Task List
- Add New Disease
- Offline Clients
- Settings
- Logout

Version No : 1.0.2

Save and continue Save and add now

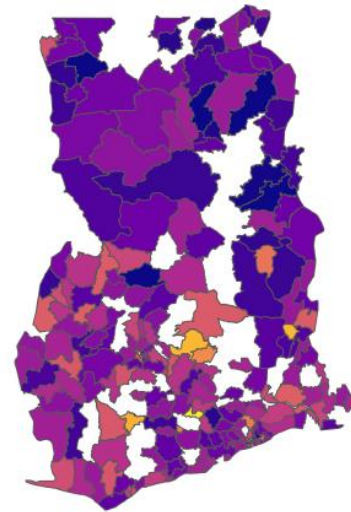
Facility Dashboard

Indicators of Facility-Based Individual Calculation

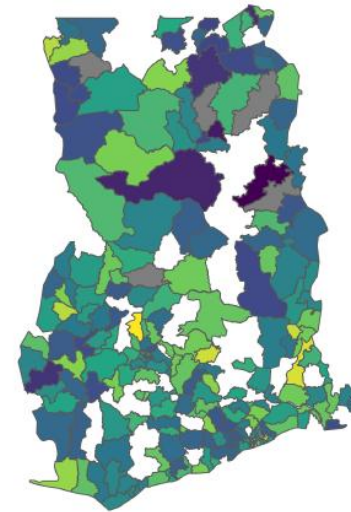
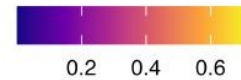
Dashboard Set

Province: Milky Way
 District: Aquaris
 Facility: Helium
 Report Date: 2022-12-31
 Threshold Level: Province C

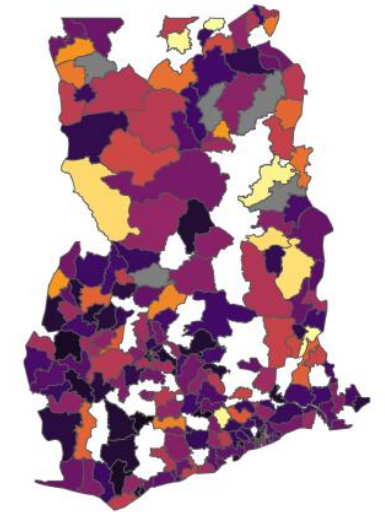
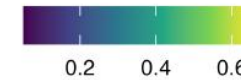
Targets Achieved Percentage of Target



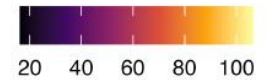
Direct estimates



95% CI widths



CV



COUNTRY SUPPORTS (IMPLEMENTATION)



1

Advocacy



2

Analytical support for RHIS Data: quality, coverage, and performance insights



3

Digital platform End User Testing (Health Professional Review)



4

Technical Support for Developing the National NCD Framework



5

Monitoring and Evaluation of initiatives, projects, programs



WHO NCD DHIS2 DEMO INSTANCE

The demo user credentials for different languages are:

1. Arabic:

- username: demo_ar
- password: Ar@12345

2. English:

- username: demo_en
- password: En@12345

3. French:

- username: demo_fr
- password: Fr@12345

4. Spanish

- username: demo_es
- password: Es@12345



<https://dhis2.smrwho.org/>

Thank you

farzadfarf@who.int





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

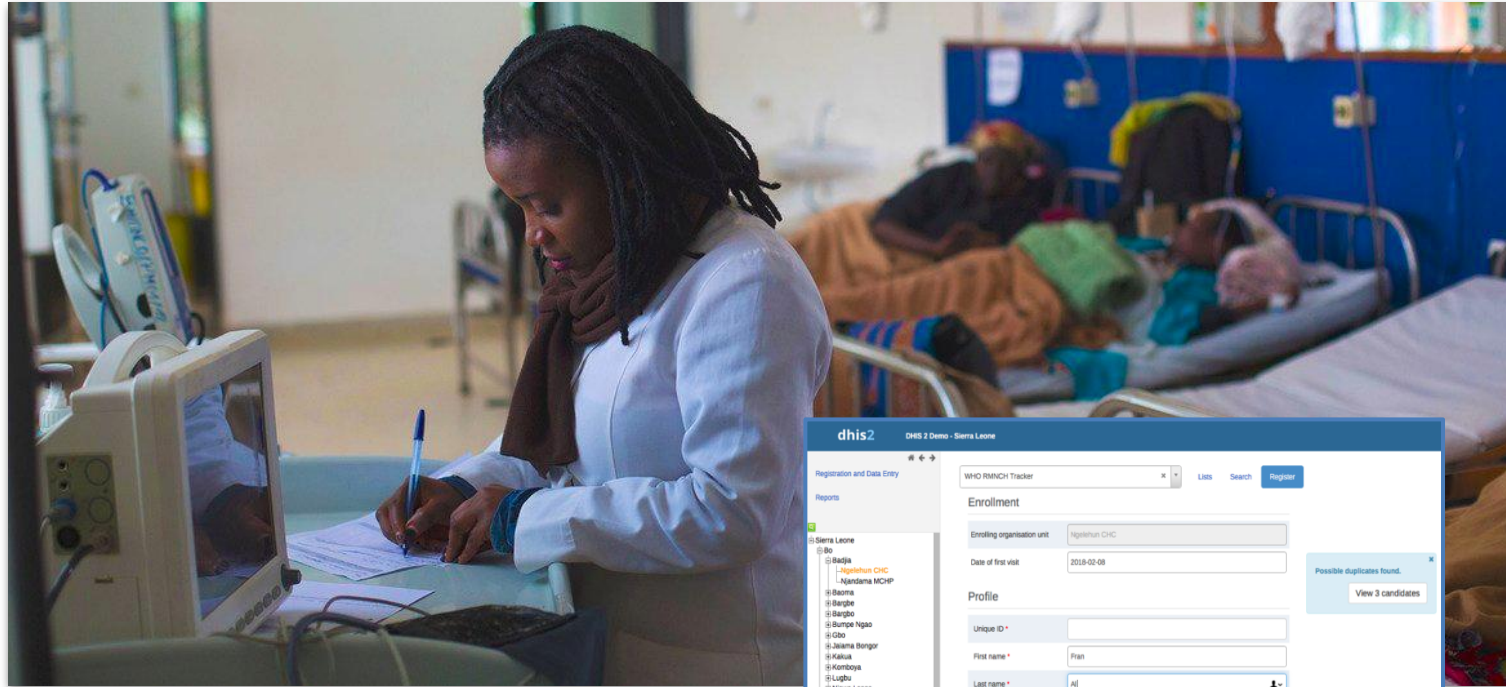
A call for unified approaches and scaled investment

DHIS2 AND NCDs



MR MICHAEL FROST

Senior Advisor, Health Information Systems Programme (HISP), University of Oslo



DHIS2 and NCDs

dhis2 DHIS 2 Demo - Sierra Leone

Registration and Data Entry

WHO RANCH Tracker

Enrollment

Enrolling organisation unit: Ngajahun CHC

Date of first visit: 2018-02-08

Profile

Unique ID *

First name *: Fran

Last name *: A

Address

Postal code

City

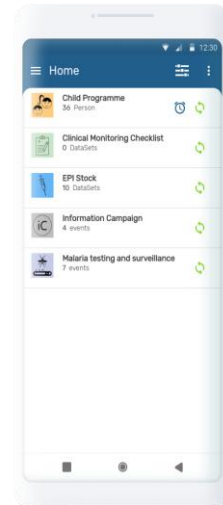
Mobile number

Email address

Birth date *: yyyy-MM-dd

Civil status

Continue Print form Cancel



ABOUT DHIS2

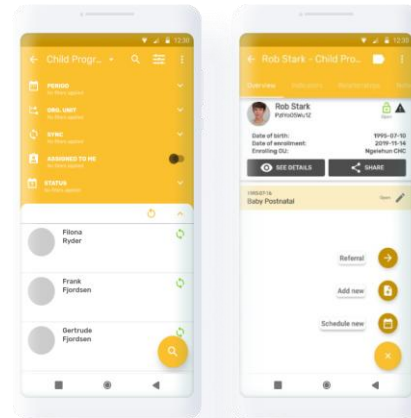
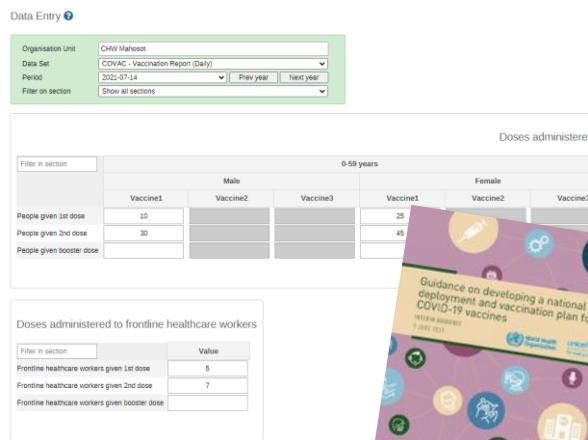
- **Open-source** web-based platform coordinated by HISP Centre at the University of Oslo
- Fully customizable and entirely **free of licensing fees**
- DHIS2 systems and the data in them are **locally owned and maintained**
- World's largest health management information system (HMIS), deployed at national scale by Ministries of Health in **70+ countries, used in 130 countries**

Configure DHIS2 to meet local needs & global standards

Collect data online and offline by PC, mobile devices & SMS

Analyze data with custom dashboards, maps, charts, & send automatic alerts

Extend DHIS2 with custom apps and integrations





THE HISP CENTER AT UiO

Mission Statement

HISP Centre and the HISP network work in solidarity with countries to strengthen sustainable, locally-governed information systems and digital infrastructure, empowering the public sector to make data-driven decisions that improve people's lives.

Our Approach

Participatory design and co-creation of local solutions through action research with local partners.

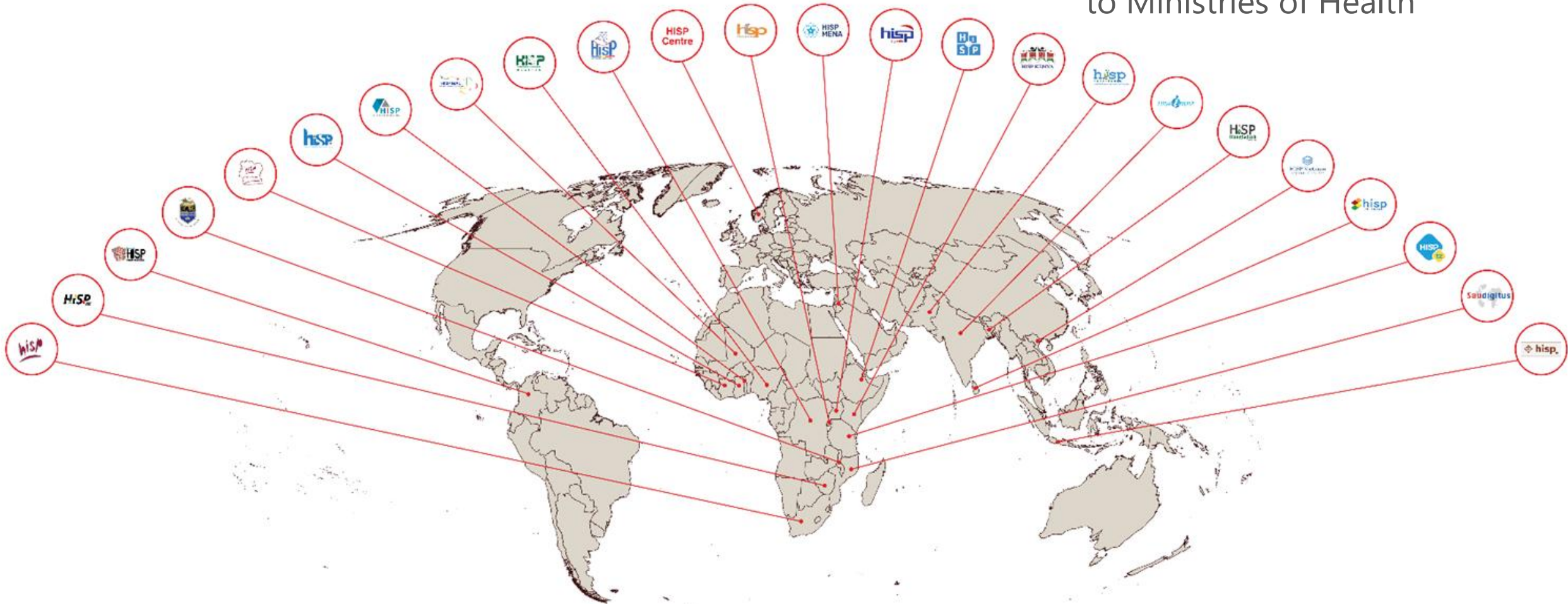
Development of generic and open-source software tools and shared resources that can be adapted to local needs.

Implementation support and capacity strengthening to facilitate local system ownership.



LOCALLY SUSTAINED: THE HISP NETWORK

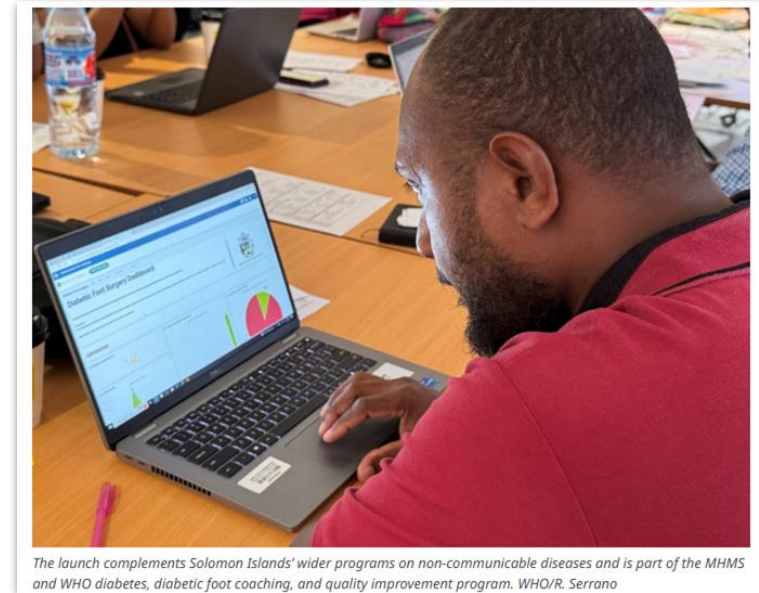
A collaborative network of 24 locally owned organizations providing long-term support to Ministries of Health



DHIS2 AND NCDs: COUNTRY EXAMPLES

Nigeria Hypertension Control

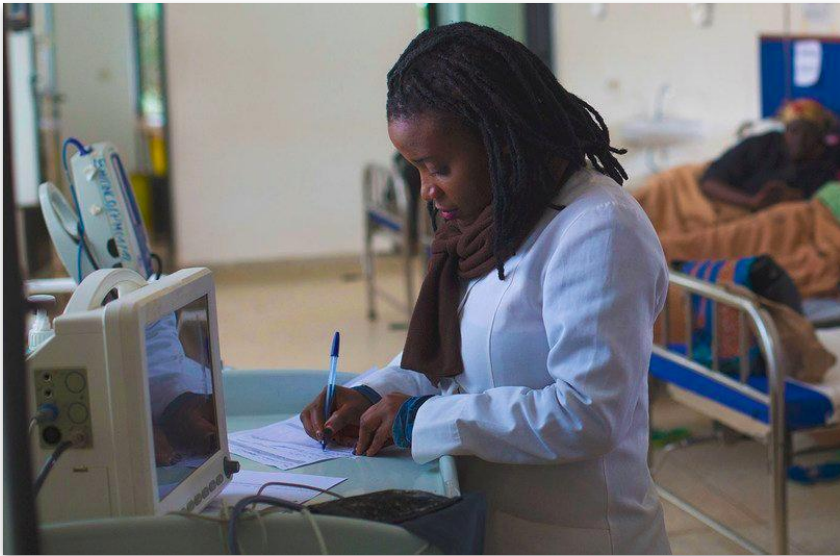
- Reduced waiting time for follow-up visits to under 30 seconds
- Increased the number of diagnosed patients by more than 50%



Solomon Islands: Diabetes Surgical Care

Enables tracking of individual patients who are undergoing diabetes-related surgeries at the National Referral Hospital (NRH)

DHIS2 AND NCDs: COUNTRY EXAMPLES



Cancer Registry

HISP Rwanda worked with the Rwanda Biomedical Centre and Ministry of Health to develop a web-based DHIS2 register for cancer, and a custom data exchange application that integrates DHIS2 with CanReg5 software.

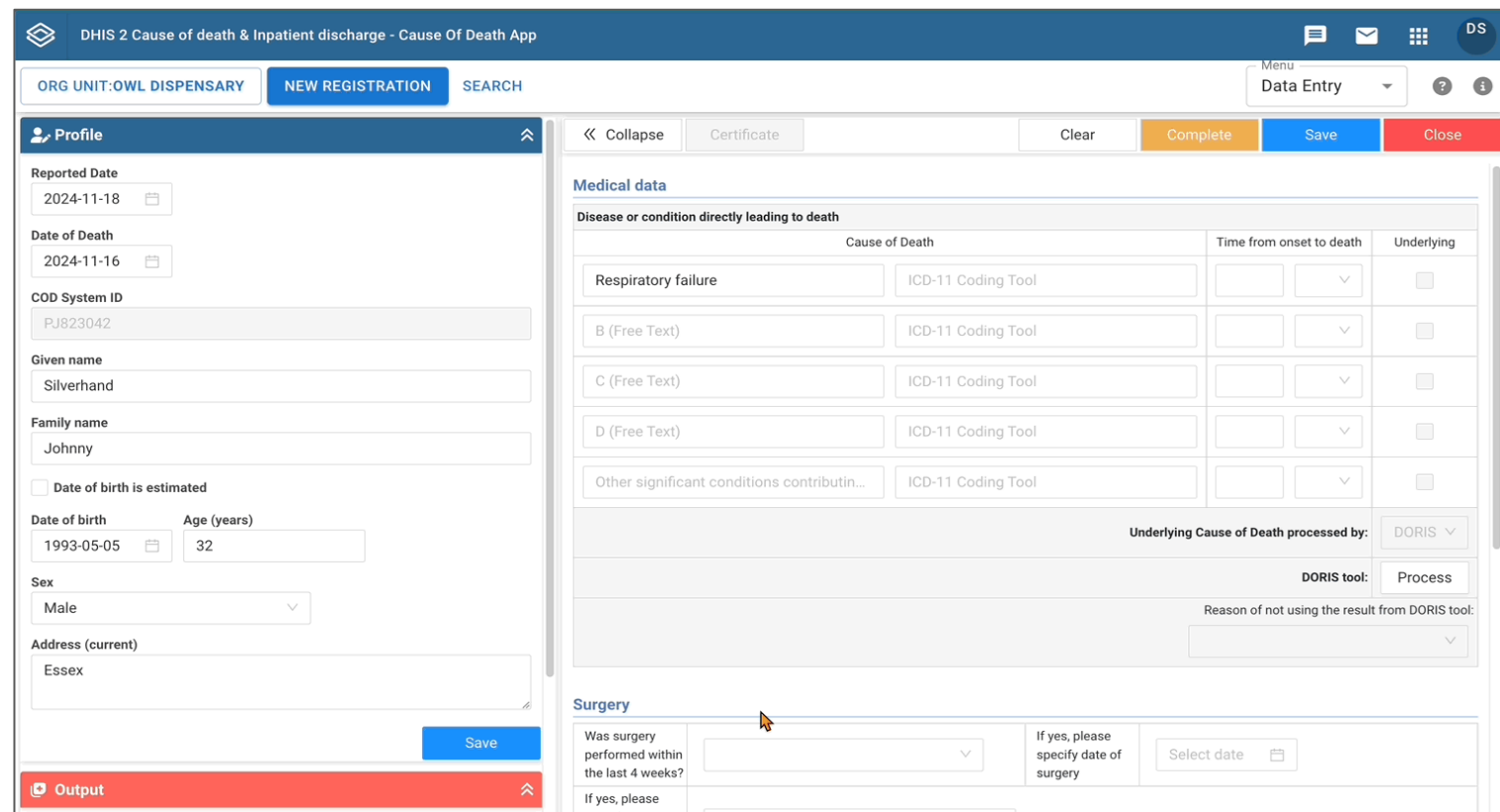
Americas: Cardiovascular Healthcare

As of the end of 2024, 33 countries in the Americas and the Caribbean have agreed to integrate the HEARTS in the Americas program in their primary healthcare networks.



MORTALITY SURVEILLANCE TOOLKIT

- Rapid Mortality Surveillance: Fact-of-death reporting from communities/all points & excess death analyses
- Verbal autopsy data: integration into national DHIS2
- Reporting/notification of vital events from facilities (deaths, births, stillbirths)
- Digitized Medical Certificate of the Cause of Death (MCCOD) and digital certificate generation
- ICD-11 COD app: search and assign an ICD-11 code; automation with DORIS coding tool



DHIS 2 Cause of death & Inpatient discharge - Cause Of Death App

ORG UNIT: OWL DISPENSARY NEW REGISTRATION SEARCH

Menu Data Entry

Profile

Reported Date: 2024-11-18

Date of Death: 2024-11-16

COD System ID: PJ823042

Given name: Silverhand

Family name: Johnny

Date of birth is estimated

Date of birth: 1993-05-05 Age (years): 32

Sex: Male

Address (current): Essex

Save

Output

Medical data

Disease or condition directly leading to death			
Cause of Death	ICD-11 Coding Tool	Time from onset to death	Underlying
Respiratory failure	ICD-11 Coding Tool		<input type="checkbox"/>
B (Free Text)	ICD-11 Coding Tool		<input type="checkbox"/>
C (Free Text)	ICD-11 Coding Tool		<input type="checkbox"/>
D (Free Text)	ICD-11 Coding Tool		<input type="checkbox"/>
Other significant conditions contributin...	ICD-11 Coding Tool		<input type="checkbox"/>

Underlying Cause of Death processed by: DORIS

DORIS tool: Process

Reason of not using the result from DORIS tool:

Surgery

Was surgery performed within the last 4 weeks?

If yes, please specify date of surgery

WHAT WORKS

- Local ownership
- Local adaptation
- Integration into routine systems
- Optimized to support healthcare workers workflows
- Long term collaboration

WHAT DOESN'T

- Vendor lock-in
- Rigid systems
- Stand alone, vertical systems
- Reporting requirements with no benefit to the users
- Short-horizon projects

RESILIENCE!



DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

IDF DIGITAL ENGAGEMENT AND FUTURE ROADMAP



DR. JACKIE MAALOUF

IDF Vice-President and President of DiaLeb

Lebanon



Celebrating our journey of educating healthcare professionals worldwide through digital innovation. Together, we are building a future where quality diabetes education & care reaches every corner of the globe.



Evolution of IDF Global Standards



1990s

First IDF Standards of Education Published



2000s

Launch of IDF Global Guideline for Type 2 Diabetes and international education modules



2010s

Introduction of IDF School of Diabetes online platform



IDF vision for AI and Digital Health: from standards to impact



Global AI Guidelines for Diabetes Care

Consensus-based standards addressing ethics, safety, efficacy and clinical workflows.



Equitable Access & Policy Advocacy

Promote affordable AI solutions in LMICs and drive policy action for rights-based digital health transformation.



Not-for-Profit, Inclusive Innovation

Aligned with IDF's mission to serve global public health.



A Future-Ready, People-Centred IDF

IDF as a digital health convener—advancing scalable, person-centred, AI-driven solutions in diabetes care worldwide.

Despite progress, digital transformation in NCD care faces significant challenges:

- ⚠️ Digital divide: Limited access to devices, connectivity, and digital literacy.
- ⚠️ Fragmented solutions: Many pilots, few scalable or interoperable systems.
- ⚠️ Data privacy & ethics: Inadequate frameworks in many regions.
- ⚠️ Lack of investment in sustainable and people-centered innovations.
- ⚠️ Health workforce resistance or capacity gaps in adopting digital tools.

IDF focused on the future

Digital Convener

Strengthening IDF's role as a facilitator of digital innovations in diabetology

Scalable Solutions

Development of tools that can be deployed on a large scale for maximum impact

Person-Centered Approach

Prioritizing people's needs in all technological innovations

Global Leadership

Shaping the future of diabetes care through AI and digital technologies

Call to Action

Let's move from promise to practice. IDF calls on all stakeholders to:

- Invest in digital health literacy for providers and people living with NCDs.
- Scale successful models like the IDF School of Diabetes using regional adaptation
- Develop inclusive policies that integrate AI with safeguards and equity in mind.
- Foster cross-sector partnerships to break silos and enhance interoperability.
- Include NCDs in digital health strategies across all global health frameworks.



As we celebrate 75 years, IDF reaffirms its commitment to digital health transformation that serves people not just systems.

Let's ensure no one is left behind in the journey toward universal, quality, and digitally empowered NCD and Diabetes care.

***Digital health is not just technology
It is a Human Right Enabler in the Diabetes and NCD response.***

Thank you!





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

PANEL 1: Q&A



DR FARSHAD FARZADFAR

Scientist, World Health Organization



MR MICHAEL FROST

Senior Advisor, Health Information Systems Programme (HISP), University of Oslo



DR JACKIE MAALOUF

IDF Vice-President and President of DiaLeb

LIVED EXPERIENCE PERSPECTIVE:

The importance of digital solutions to improve the lives of people living with diabetes and other NCDs





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

The importance of digital solutions to improve the lives of people living with diabetes and other NCDs



MS NUPUR LALVANI

IDF Blue Circle Voice member and founder of Blue Circle Foundation

India

PANEL 2:

Digital health solutions in practice: the case for scaling-up





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

PANEL 2: Digital health solutions in practice – the case for scaling-up



MS JACKLYNNE OGUTU

WDF Head of Digital Solutions



DR ELIZABETH ONYANGO

Head of NCD Prevention and Control Unit,
Kenya Ministry of Health



DR OMARY UBUGUYU

Assistant Director, NCDs, Tanzania
Ministry of Health



DR CHAMPIKA WICKRAMASINGHE

Deputy Director General, Ministry of Health
NCDs, Sri Lanka



DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

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COUNTRY CASES: THE CASE FOR SCALING UP



MS JACKLYNNE OGUTU

WDF Head of Digital Solutions



73%
of all NCD
related deaths
are in LMICs¹

80%

of people with
diabetes live in
low- and
middle-income
countries²



That's
475

**million
people**

living with diabetes where
financial and human resources
are scarce.

Digital health *can* help
close the care gap — if we
work together

Our ongoing projects

From 2002-2024, WDF provided €223.5 million in funding to 621 partnership projects in 120 countries.

96 Total ongoing projects in 2024

South and Central America, North America and the Caribbean

12

Ongoing projects in 13 countries

Europe

6

Ongoing projects in 4 countries

Global

2

Ongoing project

Middle East and North Africa

7

Ongoing projects in 4 countries

South East Asia

15

Ongoing projects in 6 countries

Africa

46

Ongoing projects in 31 countries

Western Pacific

8

Ongoing projects in 8 countries

Leveraging digital health transformation to scale for impact

- ➔ • Increase reach
- ➔ • Improve efficiencies
- ➔ • Drive impact



**Without governance,
ethics and interoperability,
we risk creating a digital
future that exacerbates
inequities rather than
resolving them**

**Digital health is not a luxury
—it is a lifeline**



Thank you.



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DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

THE KENYA EXPERIENCE



DR ELIZABETH ONYANGO

Head, NCD Control Unit, Division of Cancer and NCDs, Kenya Ministry of Health

Kenya

HEALTH POLICY AND LEGISLATIVE REFORMS

Digital Health Act, 2023

Establishes the Digital Health Agency (DHA)

DHA to establish an Integrated Health Information System

DHA charged with Digital Health Solutions certification

Recognizes e-health as a model for health service delivery

Social Health Act, 2023

Provide for the implementation of the Social Health Insurance Fund

Provide for the implementation of the Primary Healthcare Fund

Provide for the implementation of Emergency, **Chronic** and Critical Illness Fund

Provide for the mandatory registration for every person resident in Kenya

Facility Improvement Financing Act, 2023

Provide for mechanisms for the collection, retention and management of revenue derived from health services rendered at public health facilities in Kenya

Data Protection Act, 2019 & Regulations

Established the office of the Data Protection Commissioner

Provides oversight on data processing operations

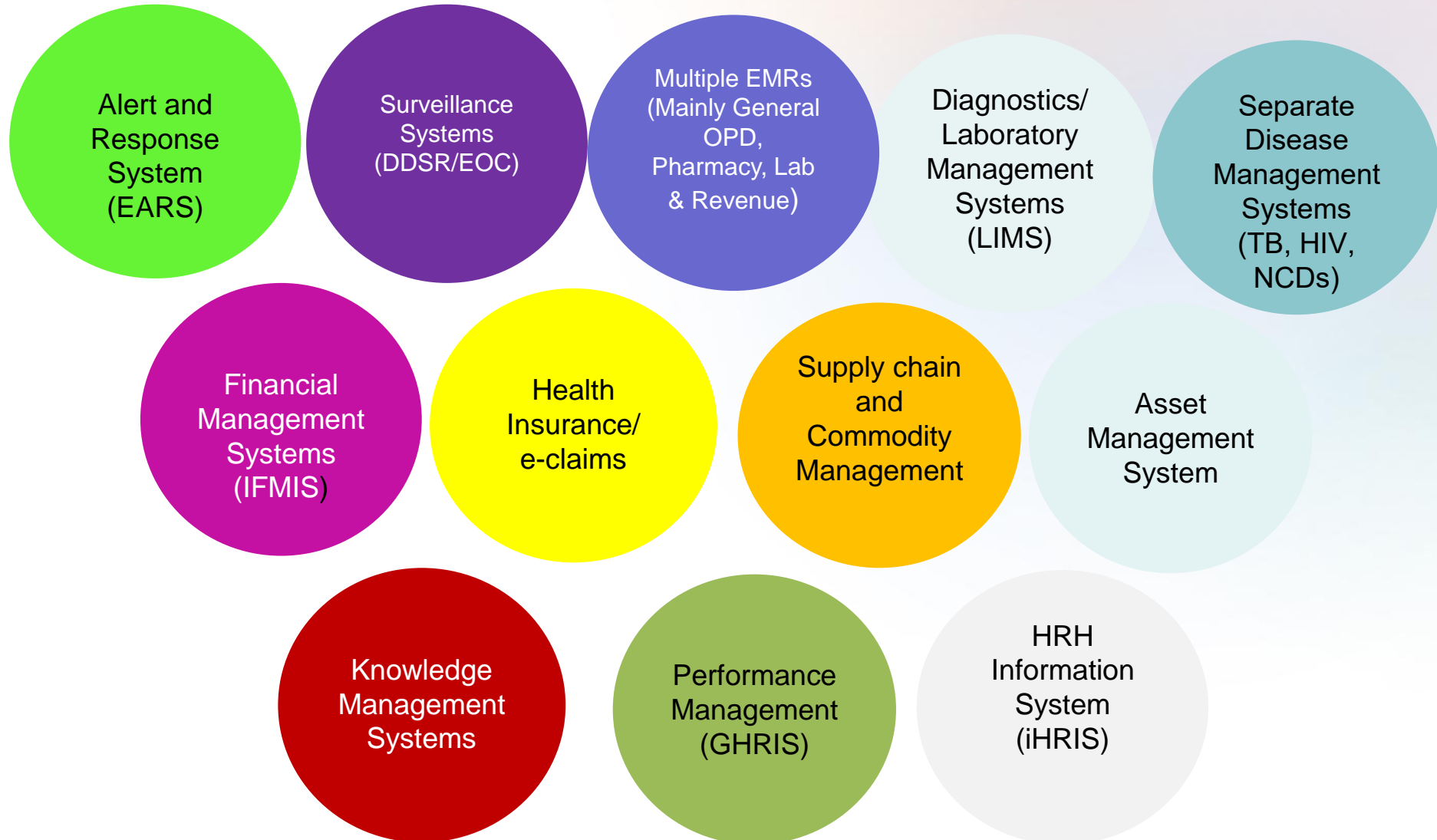
Calls out health data as sensitive data and provides a separate guidance note on handling health data

Defines rights of a data subject e.g., patients

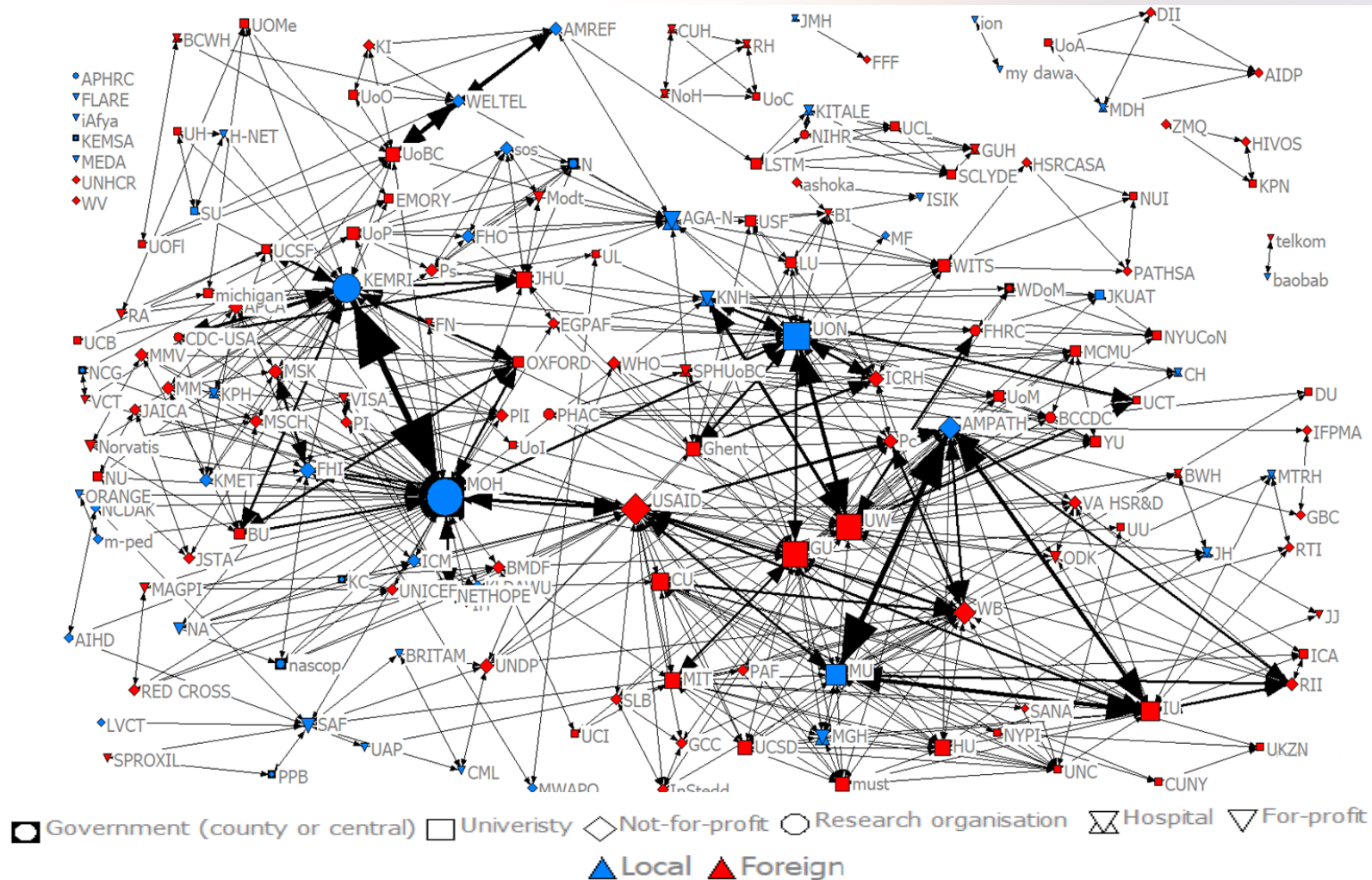
Provides guidelines for data protection impact assessment

- All these recent health reform legislations have significant implications on how **NCD services are delivered, accessed and financed**, as well as **NCD data management and utilization**
- Digital is a key enabler across the legislation, with ongoing efforts to integrate service delivery with health insurance and other payment and financing mechanisms

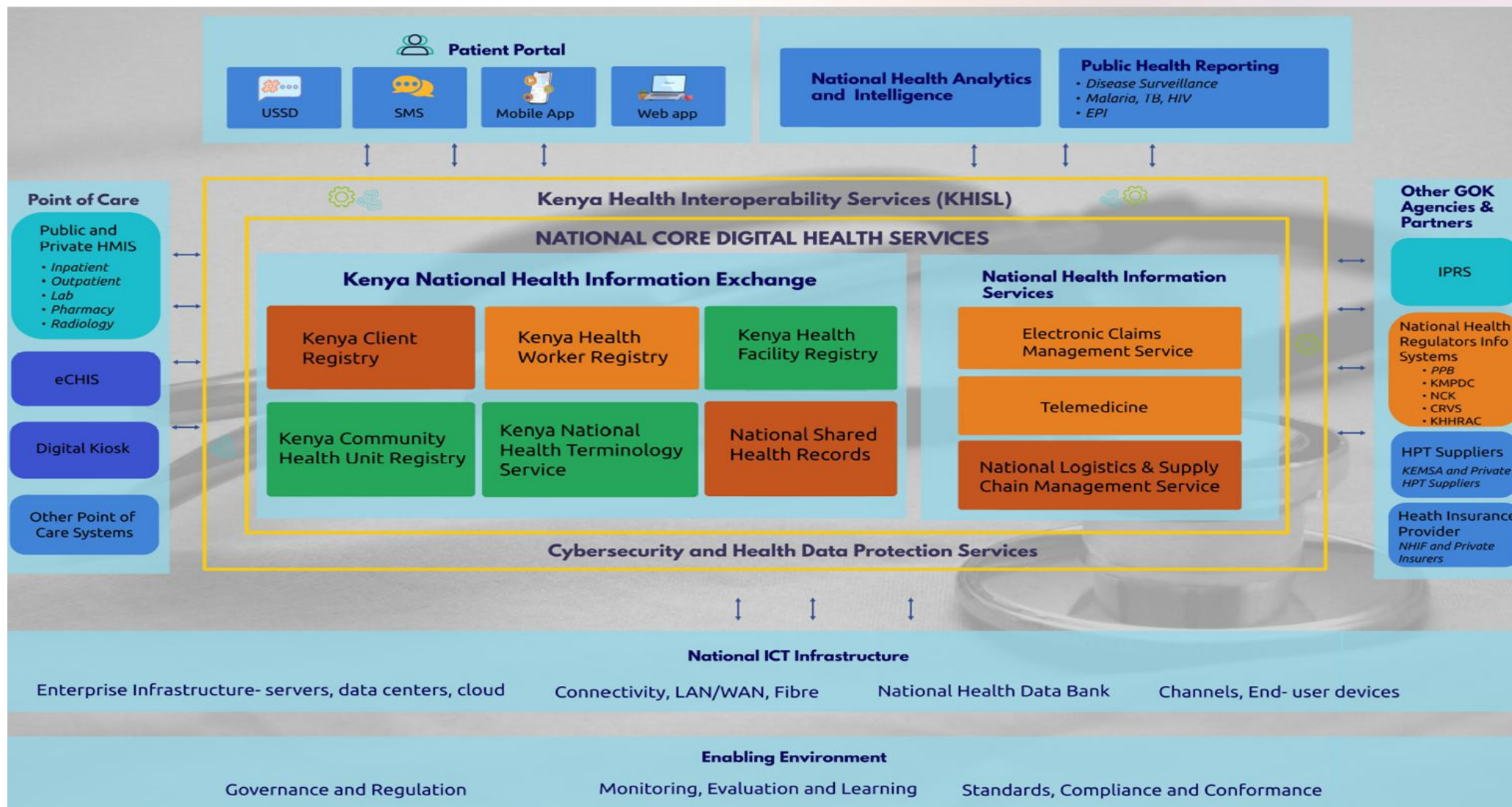
WHERE WE ARE COMING FROM: FRAGMENTED HEALTH INFORMATION SYSTEMS



WHERE WE ARE COMING FROM: DISJOINTED E-HEALTH NETWORKS



WHERE WE ARE MOVING TO: 'TAIFACARE'-THE KENYA DIGITAL HEALTH SUPERHIGHWAY



DIGITIZING THE FRONTLINES: ELECTRONIC COMMUNITY HEALTH INFORMATION SYSTEM (E-CHIS)

Overall goal of community health services

- To improve service delivery through integrated, participatory and sustainable community health services, towards the attainment of Universal Health Coverage
- To achieve this goal, the Community Health Policy 2020-2030 was formulated, aiming at:
 - Empowering Kenyan households and communities to take charge of their own health
 - Improved knowledge and increased access to quality healthcare services.

The e-CHIS system serves two main functions;

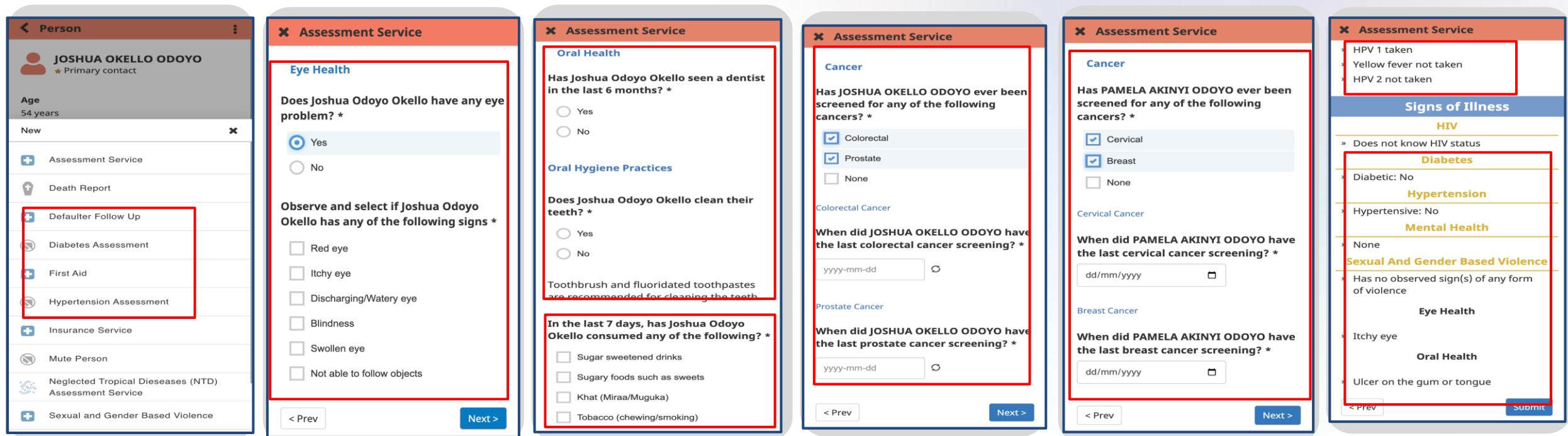
- Service delivery: Facilitates the day-to-day business of community health
- Data, reporting and supervision: Generate and consume information emanating from the service delivery data

Scope

- Household Registration
- Birth & death registration
- Economic Survey
- Assessments (child health & over 5)
- Pregnancy & postnatal home visits
- Family planning service
- Immunization Service
- Defaulter tracing
- Wash and HAP services
- CEBS signal Reporting
- First Aid Services
- **NCDs**
- NTDs
- Referral follow-ups
- Sexual and gender-based violence services
- Events based surveillance
- Commodity management

E-CHIS FACILITATING NCD SERVICES

Comprehensive, integrated workflows covering hypertension, diabetes, mental health, priority cancers, risk factors, oral health, eye health and injuries.



NCD DIGITIZATION EVOLUTION

Case study of the SPICE digital platform

From a stand-alone DM/HTN solution to integration into the 'Superhighway'

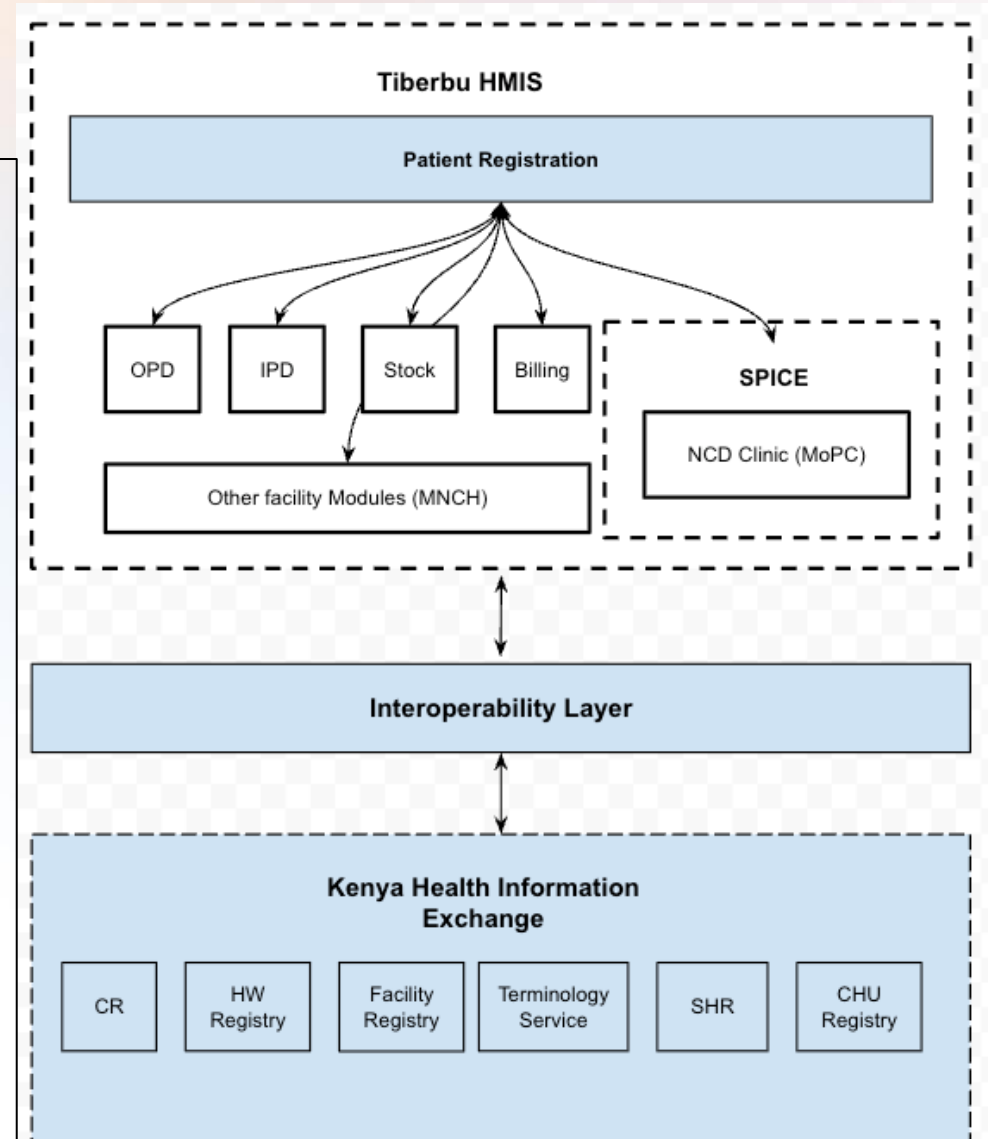
2019-2023: SPICE launches in Kenya:
9 counties, 84 facilities, 80,000 patients

2022: Data migration to the Integrated National Health Data Center

2023: Integration/automated data push to DHIS 2/KHIS

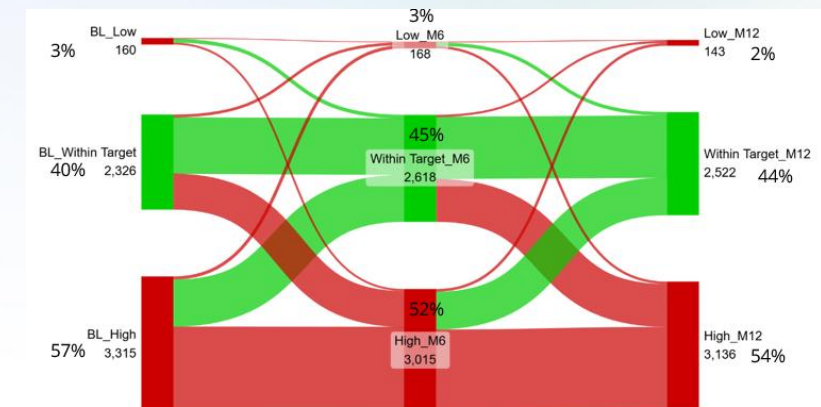
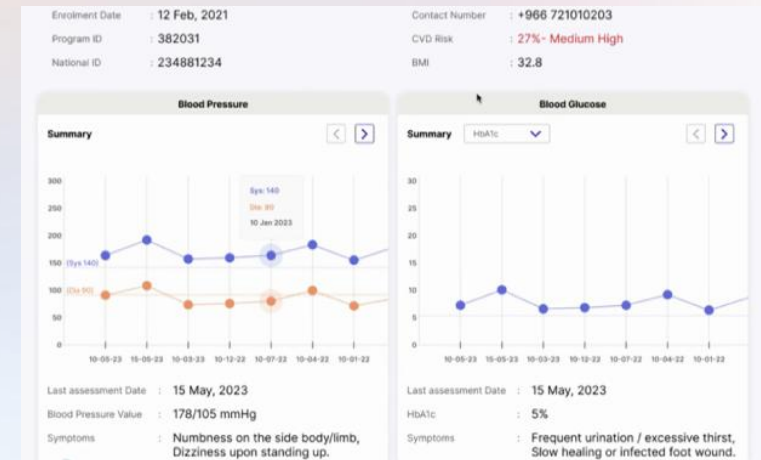
2024: WDF catalytic grant implementation:
Targeting digital enabled NCD care expansion to **35 counties, 350 additional facilities** and 320,000 patients over 3 years

2025: Integration into TaifaCare/Tiberbu HMIS as NCD module:
Projected expansion to **>5,000 facilities across 47 counties**; integration with other digital services e.g., e-claims



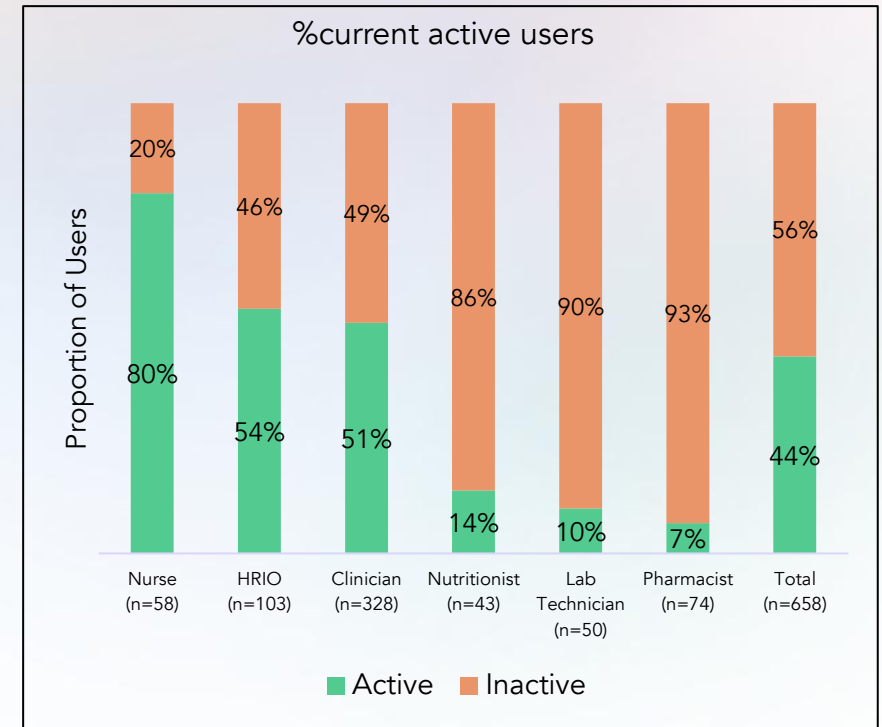
BENEFITS WE HAVE OBSERVED FROM DIGITIZATION OF NCD SERVICES

- Improved availability and quality of NCD data.
 - Improvements in HTN/DM KHIS reporting rates in the WDF project sites from 10% at baseline to 75% as at April 2025.
- Real-time visibility of patient management and quality of care; ranging from linkage to care, retention in care, control rates, prescribing practices, lifestyle factors etc.
- Efficiency in NCD programming and patient management
 - Reduced data-management/reporting load on health workers, allowing them more time for service delivery
 - Availability of longitudinal patient information, regardless of where they are managed, reducing duplication in history taking, tests etc.; improving patient safety and experience
- Data utilization- reliable data that has informed:
 - Forecasting and quantification of essential medicines
 - Redistribution of medicines to lower-level facilities
 - Targeted support supervision, training and mentorship approaches



AREAS OF IMPROVEMENT

- Full operationalization of the 'Superhighway', especially health information exchange between community systems and health facility HMIS to facilitate linkage to care and community-based ongoing monitoring, especially for NCDs
- There would be complexities around counties/health facilities letting go of their legacy EMRs to embrace the centralized, national HMIS, which might continue driving fragmentation
- Low digital adoption among health workers, contributing to care continuity and data gaps
- The feeling that digital is 'time consuming' might necessitate innovations around digital documentation at the point of service
- Despite data availability, data demand and utilization, especially at the point of service (facilities, sub-counties etc.) remains sub-optimal
- Infrastructural gaps, including insufficient hardware, hardware replacement, unstable and inconsistent internet connectivity in some hard-to-reach areas.



CONCLUSION

- Digital solutions present a unique opportunity to improve patient care, especially for NCDs that require longitudinal management
- Strong legislative and policy environments, as well as infrastructural investments are key enablers
- Fragmentation of digital solutions can do more harm than good; NCD digital solutions can not exist in silos, they have to be integrated into the larger digital ecosystem if they are to meet patient and health system needs.
- If digital solutions are to deliver on population health outcomes, especially for NCDs, they have to be scaled and sustainably financed.
- Having digital is one thing, but having it used is another. Investments have to go into understanding and driving digital adoption and the attendant data utilization.



DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

THE TANZANIA EXPERIENCE



DR OMARY UBUGUYU

Assistant Director, NCDs, Tanzania Ministry of Health

Tanzania

COUNTRY PROFILE: THE UNITED REPUBLIC OF TANZANIA

- **61 million** inhabitants
 - **Two-thirds** (63.8%) live in rural areas
- Rapid urbanization over the past 30 years, (19% in 1990 to 37% in 2020)
- The total fertility rate - **4.9**
- Life Expectancy of **66.4 years** (Female is 68.3 years: Male 64.5 years)
- Two third (63%) of population are below 25 years
- **NCDs attribute to 34% of all deaths and 18% of Premature Mortality**
- **There are more than 10,000 Health facilities**
 - **More than 80% public owned**
 - **More than 80% are at PHC level**



1960s

1980s

2000s

2020s

2025

- All medical records were paper based
- Health Services were free of charges
- Predominantly infectious diseases
- Life expectancy was 47 years

- All medical records were paper based
- DHIS was introduced to support decision making
- Predominantly infectious diseases

- EMR was introduced in tertiary facilities
- Fragmented and less utilized
- Disease specific registries (SCD Registry etc)
- Incidences and burden of NCDs increased
- The 1st STEPS Survey conducted in 2011/12

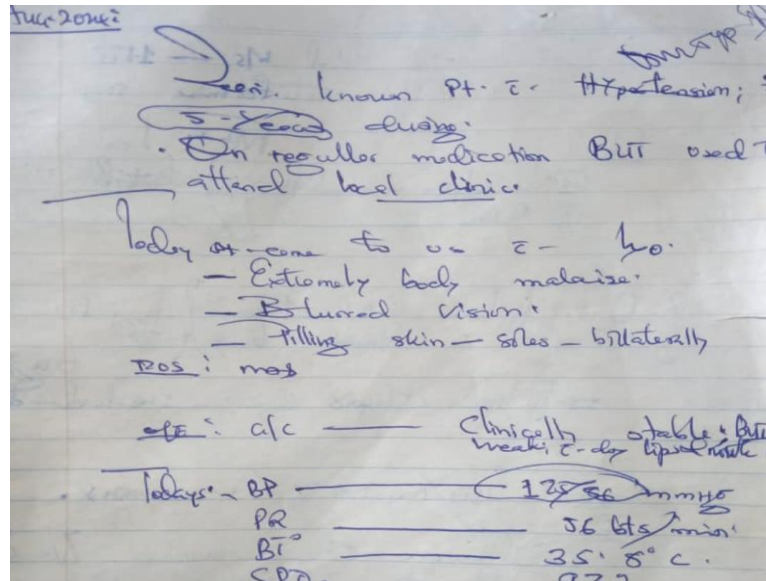
- Integration of EMRs (more than 120s)
- **Interoperability as the instruction from H.E Dr. Samia S. Hassan President of URT**
- AI supported EMR
- Introduction of Telemedicine's services
- Strengthening of Distance learning Platforms
- **Diabetes Compass was introduced**

- 5000 PHC facilities are integrated into GoTHOMIS
- All Regional referral Systems are integrated into one system
- EMR vs DHIS-2 Integration
- AI supported services
- Data use workshops & initiatives at Council levels
- NCD Dashboard
- UCS for community Data

Evolution of the Medical Records in Tanzania...

GAPS ON NCD HMIS

- The Health care system and MR was designed for acute infections conditions
- Poor NCD data quality that led to establishment of multiple registries
- No community Data for NCDs
 - Reliance on surveys (STEPS Survey, GSHS, GTCR etc)
 - Very expensive and takes long time
 - Community oriented data were for HIV/TB and RMNCH
- Data use & validation meetings for NCDs are not conducted
- DHIS-2 dataset don't capture key parameters for NCDs
- Exercise books are reliable source of patients' information



- *The main sources of information to monitor clinical care were patients' exercise books*
- *Difficult to make follow up as there were very few details on patients' progress*



- *No real time data for decision making*
- *All reports and dashboards are extracted and printed*
- *Difficult to track progress in real time*

ADDRESSING NCD CHALLENGES THROUGH DIGITAL HEALTH TRANSFORMATION IN TANZANIA



The Government of the United Republic of Tanzania and WDF launched Diabetes Compass in 2021 to address data challenges for NCDs and promote use of digital platforms to accelerate progress towards SDG 3.4

The main Goals of the Program are:

Digital health promotion & disease prevention

- Improved documentation of business processes and requirements

Enabled centralised NCD data sharing among facilities which can contribute to better diagnosis and management.

- Improved data availability, efficiency, and care delivery.
- AI-powered personalised health messages

Enhancing health literacy via digital channels

Early identification of high-risk individuals

- AI/ML for behaviour change & tailored interventions



ACHIEVEMENTS

- **About 5,000 (78%) of PHC facilities are using centralized EHRs (GoTHOMIS)**
 - Over 300,000 health workers trained through the national eLearning platform
- **Tanzania has Digitalised health supply chain (eLMIS)**
 - Improve availability of health commodities from 51% (Jan 2023) to 90% (April 2025)
- Better financial control and decision-making.
- National rollout of the unified community health system (UCS)
 - Over 1,500 clients served through unified community system,
 - 100,000 referrals from the community
 - Improved data availability, efficiency, and care delivery.

FACILITATORS

- **Political will** with strong digital health policies and presence of digital health strategic Plan 2020 - 2025 & that of 2025 - 2030
- Tanzania had infrastructures to support establishment of EMRs. **Tanzania had very strong HIV & TB EMRs**
- Awareness on the rise on the burden of NCDs
- Devolution Policy that delegates power to the local authorities to make a close monitoring and follow up of health initiatives
- Presence of ICT & DHIS-2 Focal person at council levels that facilitate upatake centralized GoTHOMIS

BARRIERS/THREATS

Potential barriers include:

- Low number of HRH and high rate of computer/ICT Illiteracy.
- Inadequate Infrastructures and unstable internet connectivity.
- Limited integration of NCD data with other data.
- Weak data quality & lack of data use behaviours/culture
- Poor interoperability across public & private sectors.





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

THE SRI LANKA EXPERIENCE



DR CHAMPIKA WICKRAMASINGHE

Deputy Director General, Ministry of Health NCDs

Sri Lanka

TARGETS TO ACHIEVE VISION FOR NCD MANAGEMENT

- Global Target of reduction of premature deaths by 25% of the current level.
- Every year screening 25% of the target population.
- 50 % effective control of hypertension.
- 50% effective treatment of diabetes.
- Making all essential NCD drugs available 24x7.



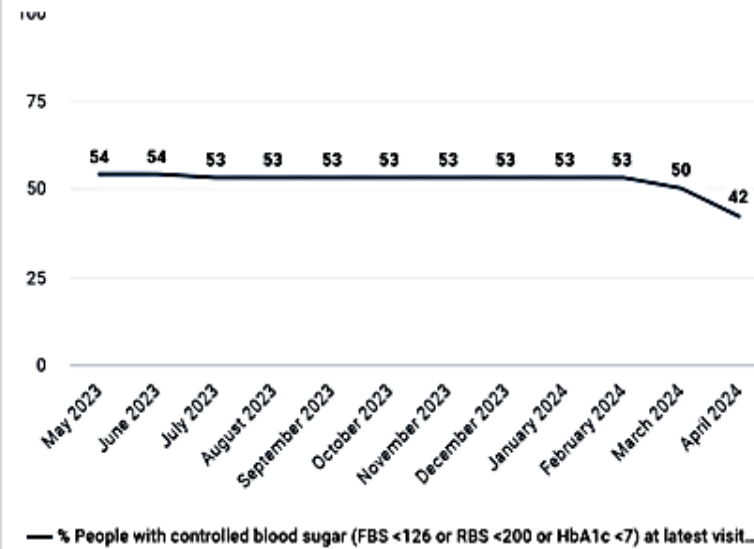
DIGITAL ECOSYSTEM IN SRI LANKA IS ENABLING DIGITAL TRANSFORMATION

- Started around 10 years back
- Developed the e-health standards and guidelines
- Networking of all health institutions
- Training of staff in digital transformation
- Introduced a health numbering system for all health care institutions so we can link different digital systems.
- Developed a personal health number and tested it across a cluster of hospitals
- Identified different digital systems at that time and developed a digital health blueprint
- Incorporating different systems into the one digital platform is taking place with assistance from global fund

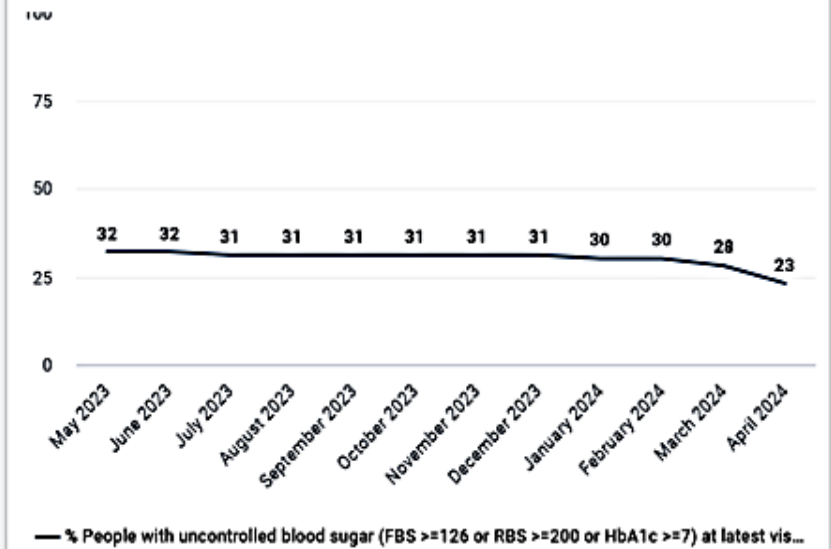
TREATMENT OUTCOMES

Overview of outcomes of diabetes health service delivery. The data gives an overview of how well people are managed and if they are reaching key treatment

% Controlled blood sugar at latest visit in past 3 months



% Uncontrolled blood sugar at latest visit in past 3 months



% Controlled blood sugar - last month

50%

% Controlled blood sugar - last month

1 466

% Uncontrolled blood sugar - last month

23%

Uncontrolled blood sugar - last month

814

Factor

1. Screening App

2. HLC App

3. Clinic App

4. DHIS 2 Dashboard

THE ROLE OF DIGITAL HEALTH SOLUTIONS IN MANAGEMENT OF NCDS

- Enabled **task shifting** of screening to digitally enabled **community health workers**
- **Improved efficiency** at the busy clinics where hundreds of patients visit on a day
- Access to **patient data** for **close monitoring and management**
- Visualization and **data analytics** are available for the policy makers at MoH to **inform interventions**



BARRIERS AND ENABLERS TO DIGITAL HEALTH TRANSFORMATION WITHIN NCDS

Barriers

1. Economic vulnerability and funding constraints to scale
2. Digital literacy and training gaps especially in rural clinic
3. Public infrastructure gaps for cloud dependant tools
4. Lack of adequate human and infrastructure resources for the transformation

Enablers

1. Sri Lanka Digital health blueprint emphasis on interoperability
2. Strong collaboration & support from MoH & partners
3. Existing digital infrastructure e.g personal health number, digital health blueprint, Govt. servers
4. Strong support from the MoH and the implementing partners





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

PANEL 2: Q&A



MS JACKLYNNE OGUTU

WDF Head of Digital Solutions



DR ELIZABETH ONYANGO

Head of NCD Prevention and Control Unit,
Kenya Ministry of Health



DR OMARY UBUGUYU

Assistant Director, NCDs, Tanzania
Ministry of Health



DR CHAMPIKA WICKRAMASINGHE

Deputy Director General, Ministry of Health
NCDs, Sri Lanka

REFLECTIONS AND CLOSING REMARKS





DIGITAL HEALTH TRANSFORMATION IN THE GLOBAL NCD RESPONSE

A call for unified approaches and scaled investment

REFLECTIONS AND CLOSING REMARKS



DR DERRICK MUNEENE

Unit Head, Capacity Building and Collaboration Team, Digital Health and Innovation Department, WHO



MS SANNE FROST HELT

WDF Senior Director Policy and Partnerships

THANK YOU!

