



# How registries can help tackle the global diabetes burden

Online event

1 October 2024  
14:30-16:00 CEST



# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## WELCOME FROM THE MODERATOR



### **DR HERMELINDA PEDROSA**

IDF Vice President Physician, Chair of IDF Women and Diabetes Committee, International Relations Advisor and Advocacy at SBD (Brazilian Diabetes Society), Coordinator at the Endocrinology Unit Research Centre HRT/FEPECS, Investigator at Fiocruz Biomanguinhos

*Brasil*

## WELCOME FROM IDF

- This webinar will be recorded.
- You can activate Zoom-generated subtitles for this webinar by clicking on the closed caption (cc) button at the bottom of your Zoom window. Please note these subtitles are not 100% accurate.
- The recording, slides and feedback questionnaire will be sent to all registrants in a few days.
- Participants who attend at least 80% of this event live will receive an attendance certificate only if they complete a feedback questionnaire. Please check your spam folders if you have not received them by 20 October.
- **Please use the Q&A function to post your questions to speakers and panellists.**

# Setting the scene



# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## MESSAGE FROM THE IDF PRESIDENT



### **PROF PETER SCHWARZ**

IDF President, Research group leader at the Paul Langerhans Institute Dresden (PLID)

*Germany*



# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## REAL-WORLD EVIDENCE THE NEXT GENERATION OF CLINICAL EVIDENCE



### **PROF KAMLESH KHUNTI**

Professor of Primary Care Diabetes & Vascular Medicine at the University of Leicester,  
iCaReMe Steering Committee Member

*United Kingdom*



# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## EXPERIENCE IN IMPLEMENTING A NATIONAL DIABETES REGISTRY IN PAKISTAN



### **PROF ABDUL BASIT**

Secretary General of the Diabetic Association of Pakistan (DAP), President of the Diabetes in Asia Study Group (DASG), and Vice Chairman at the Health Promotion Foundation (HPF).

*Pakistan*



## HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

# How did it start?



# 2010 Insulin My Life

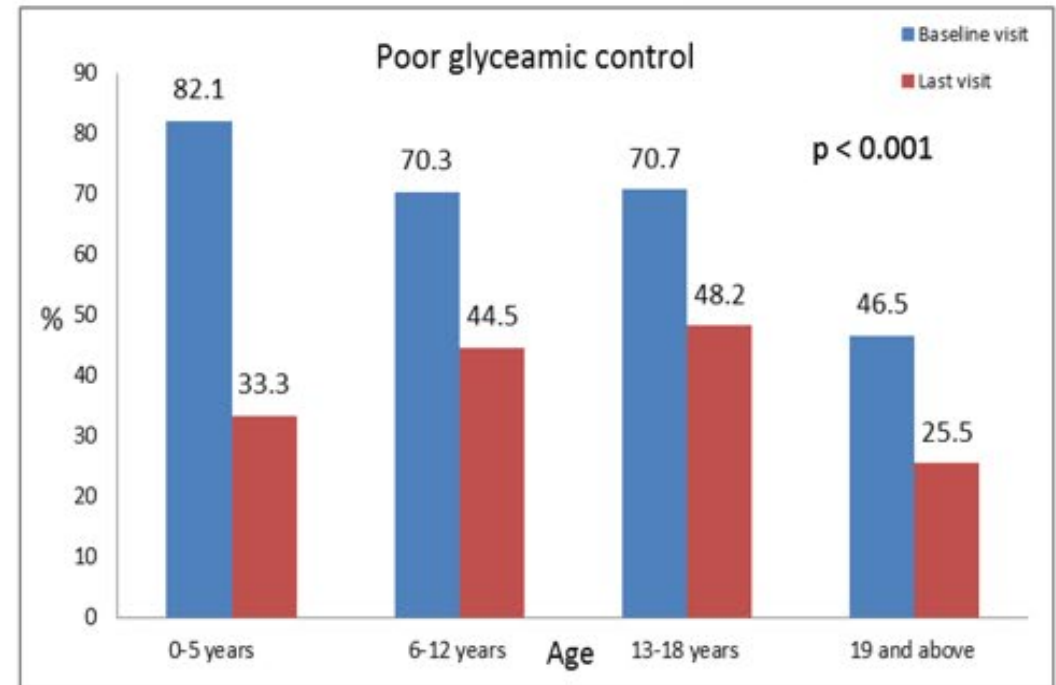


**Centers established**

**34**

**Subjects registered**

**1900+**

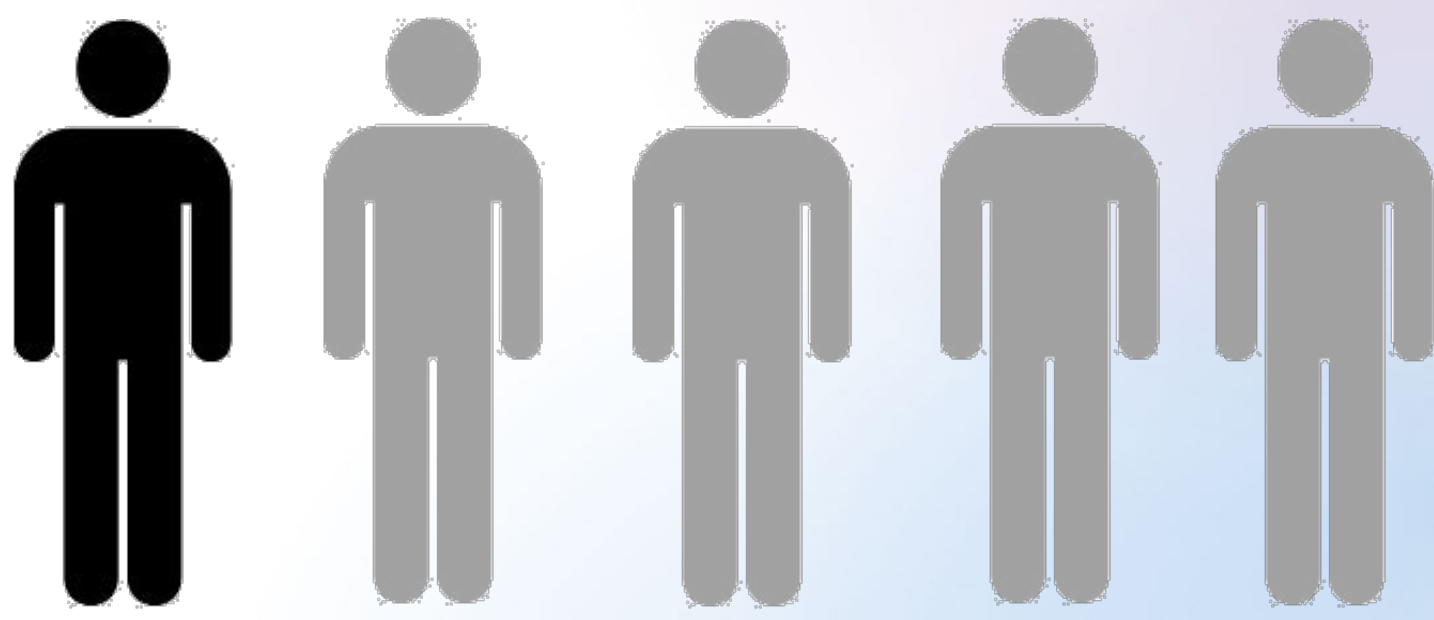


Comparison of abnormal HbA1c levels (according to age) from baseline to last visit

Ahmedani MY, et al. Optimized health care for subjects with type 1 diabetes in a resource constraint society; A three-year follow-up study from Pakistan. World Journal of Diabetes 2019;15:10:224

# Prevalence of T2DM and Associated Risk Markers

**1 in 5 persons aged 20 and above have diabetes**



# 33 million people with diabetes in Pakistan

Rank	2021		2030		2045	
	Country or Territory	Adults with diabetes, (million)	Country or territory	Adults with diabetes, (million)	Country or territory	Adults with diabetes, (million)
1	China	140.9	China	164.1	China	174.4
2	India	74.2	India	92.9	India	124.9
3	<b>Pakistan</b>	<b>33.0</b>	<b>Pakistan</b>	<b>42.9</b>	<b>Pakistan</b>	<b>62.0</b>
4	United States of America	23.7	United States of America	34.8	United States of America	36.3
5	Indonesia	19.5	Indonesia	23.3	Indonesia	28.6
6	Brazil	15.7	Brazil	19.2	Brazil	23.2
7	Mexico	14.1	Mexico	17.1	Bangladesh	22.3
8	Bangladesh	13.1	Bangladesh	16.1	Mexico	21.2
9	Japan	11.0	Egypt	13.8	Egypt	20.0
10	Egypt	10.9	Turkey	10.8	Turkey	13.4

IDF Diabetes Atlas 10<sup>th</sup> edition updates, Available from:  
<https://diabetesatlas.org/data/en/country/150/pk.html> (Last accessed on November 12, 2021)

# Aims and Objective of DRDP

Incidence and prevalence

National action plan and prevention policy

Structured and uniform clinical care

Implementation of National Guidelines

Specific post graduate teachings; Preventive managers

Policy making and legislation

Linking with Regions; e.g. DASG and IDF-MENA Region



## HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

# How did it progress?

# Stakeholders for DROF

Ministry of National Health Services Regulations and Coordination



National Institute of Health



Health – Research Advisory Board (Health RAB)



Health Promotion Foundation (HPF)



Diabetic Association of Pakistan (DAP)





# National Bioethics Committee (NBC) Approved



National Institutes of Health  
Health Research Institute  
National Bioethics Committee (NBC)  
\*\*\*\*\*



**Ref: No.4-87/NBC-782/22/2325**

**Date: June 16, 2022**

**Prof. Abdul Basit**

Baqai Institute of Diabetology and Endocrinology and  
Diabetic Association of Pakistan  
Plot No. 1-2, II-B, Nazimabad No2

**Karachi**

Subject: **Diabetes Registry of Pakistan (DROP) (NBC-782).**

*Dear Prof. Abdul Basit*

I am pleased to inform you that the above mentioned project has been approved by the "Research Ethics Committee" of "National Bioethics Committee" for a period of one year.

For the continuation of project in the next years, you have to send a progress report and a formal request asking for continuation of projects (however, you do not need to submit REC application or pay any processing fee again).

Kindly keep the National Bioethics Committee, Secretariat updated about the progress of the project and submit the formal final report on completion.

Yours sincerely

**(Prof. Dr. Saima Perwaiz Iqbal)**  
Chairperson  
NBC-Research Ethics Committee



# Advocacy

## Sindh Health Department – BIDE



Health and Population Welfare Department, Sindh @Sindh... · 1h ...  
Karachi (18-06-21): MoU signed b/w Baqai Institute of Diabetology, Diabetic Association of Pakistan & Sindh Health Department for the standardisation of diabetic treatment in all healthcare facilities. Minister for Health & Secretary Health oversaw the signing #SindhHealth



- Primary prevention
- Diabetes Awareness
- Diabetes Registry of Pakistan(DROP)
- Conduct diabetes research

18th June 2021

## Meeting with DDG Sindh for standardization of diabetes care in rural health centers of Sindh

## Training Programs in rural and urban areas of Sindh

Murad Memon Goth, Matiari with Sindh Government



# Advocacy

## MoU

### MoU PPHI – BIDE

## Meeting with CEO & COO of PPHI for standardization of diabetes care in PPHI HF



- Primary prevention
- Diabetes Awareness
- Diabetes Registry of Pakistan(DROP)
- Conduct diabetes research

**26th November 2020**



# CDiC Centers – Pakistan

05 Main Centers

21 Satellite Centers

2250 children

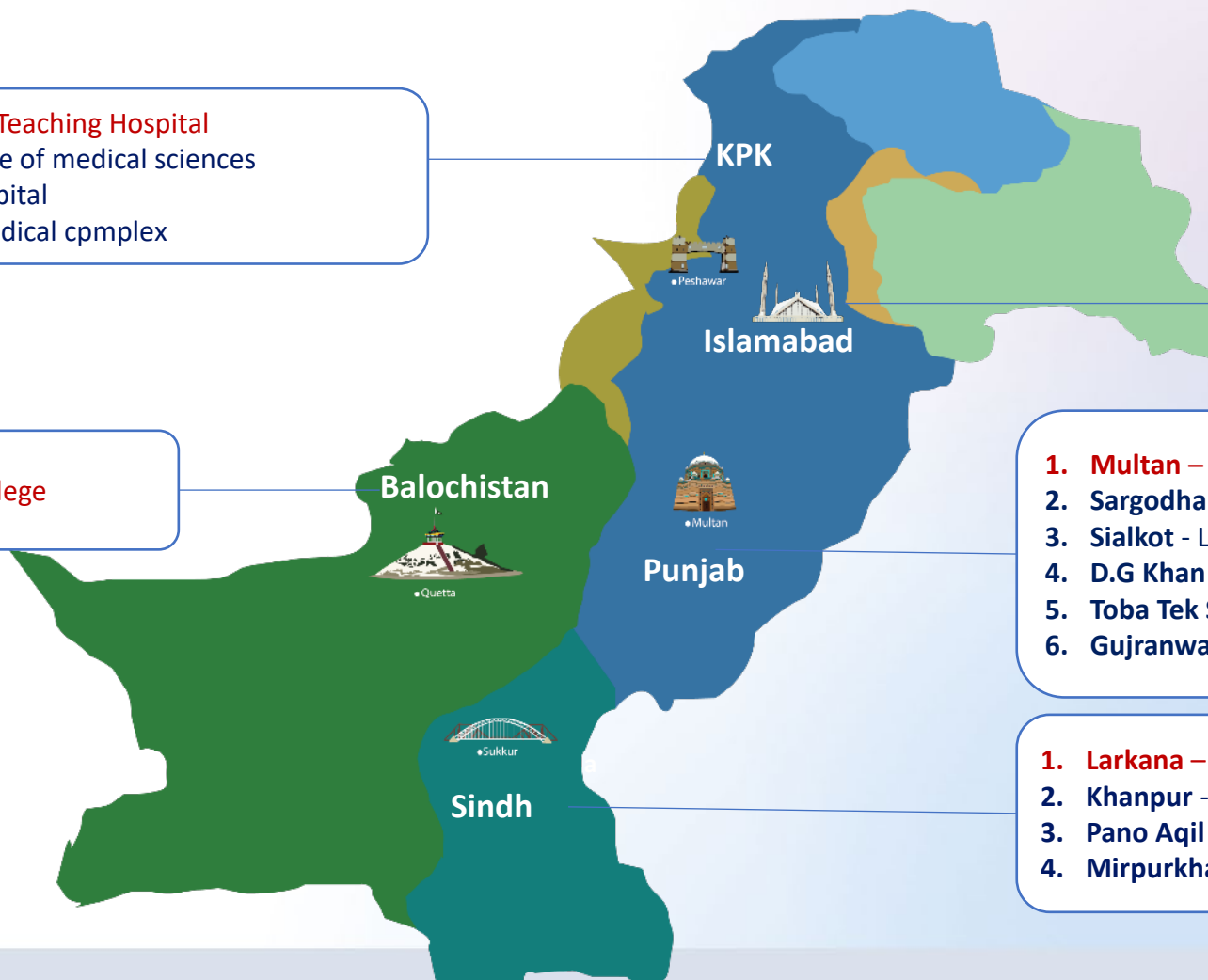
1. **Peshawar** – Northwest Teaching Hospital
2. **Mengora** - Swat Institute of medical sciences
3. **Timergara** - Jasmin Hospital
4. **Abbottabad** - Valley Medical complex

**Islamabad** – Yashfeen Trust

**Quetta** – Bolan Medical College

1. **Multan** – Childrens Hosp. and Inst of Child Health
2. **Sargodha** - Mubarak Medical Complex
3. **Sialkot** - Liver & Diabetes Clinic
4. **D.G Khan** - Zafar Diabetes and Endocrine Centre
5. **Toba Tek Singh** - Al Raheem Clinic
6. **Gujranwala** - Rasheed Medical Complex

1. **Larkana** – Shanzay Diabetes & Endocrine Clinic
2. **Khanpur** - Hassan Rasheed Hospital
3. **Pano Aqil** - Advance Diabetic & Cardio Clinic
4. **Mirpurkhas** - Rehman Medicare Clinic





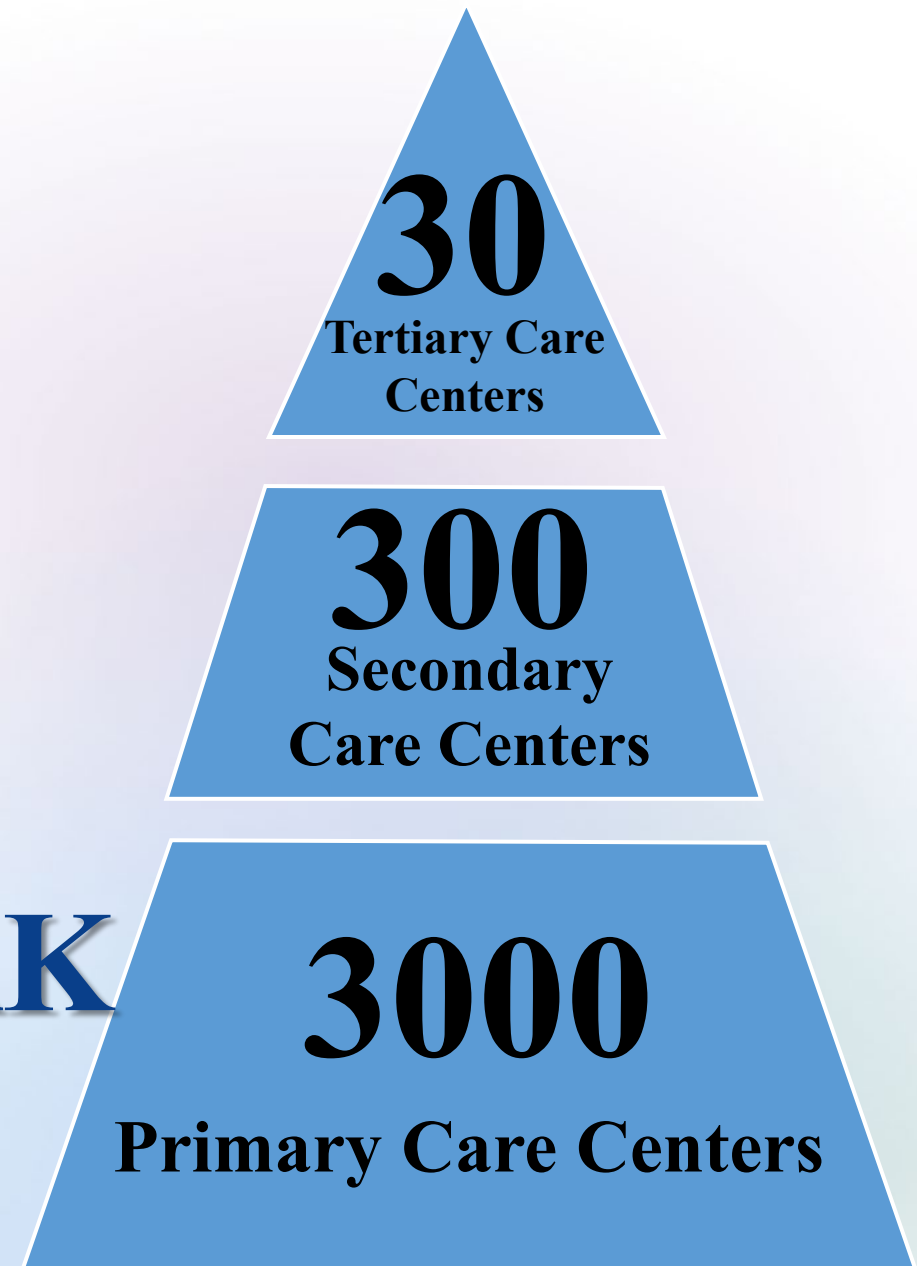
## HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

# How do we see its future?





# NATIONAL DIABETES NETWORK



# Barriers and Solutions

- Initiate the process and governments get involved.
- Capacity building.
- Minimal Model registries to make it time-effective.
- Adequate anonymization increases healthcare personnel's confidence and decreases the sense of insecurity.
- Private-public partnerships with cross-financing models ensure sustainability
- Implementation and surveillance gets stronger with government involvement. Bodies like WHO play a key role in its facilitation.

# IDF has selected our DROD registry as an example for LMICs



How registries can help tackle the global diabetes burden



# National Institutions



**Liaquat National Institute of  
PG Med & Health Sciences,  
Karachi**



**Diabetic Association  
of Pakistan (DAP)**



Sobhraj Maternity  
Hospital

**Sobhraj Maternity  
Hospital**



**The Karachi Institute  
of Biotechnology and  
Genetic Engineering  
(KIBGE)**



**University of Karachi  
(KU)**



**Jinnah Sindh Medical  
University, Karachi (JSMU)**



**Fatima Jinnah Medical  
College, Lahore**



**Dow University of Health  
Sciences (DUHS)**



**King Edward Medical  
University, Lahore**



**Jinnah University for  
Women (JUW)**



**Bolan Medical  
College, Quetta**



**National Institute of  
Diabetes &  
Endocrinology (NIDE)**



**Khyber Medical  
University, Peshawar**



**Liaquat University of  
Medicine and Health  
Sciences, Hyderabad**



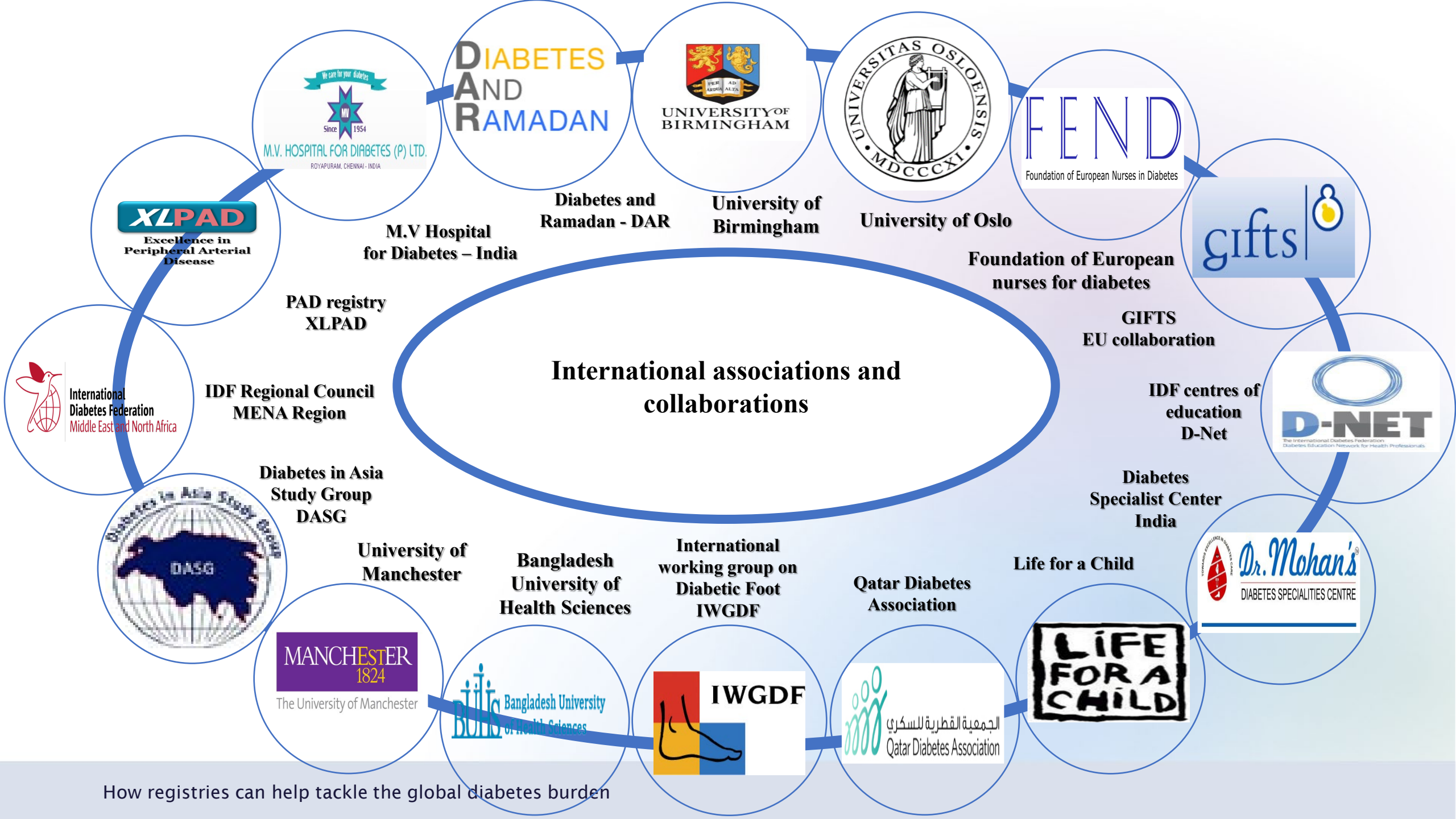
**Pakistan Endocrine  
Society (PES)**



**PG Medical Institute,  
Hayatabad Medical  
Complex, Peshawar**



**Rana Liaquat Ali  
Khan Government  
College of Home  
Economics (RLAK)**



How registries can help tackle the global diabetes burden

○ THANK  
YOU ALL



# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## FROM DATA TO ACTION: THE ROLE OF FACILITY-BASED MONITORING IN DIABETES CONTROL

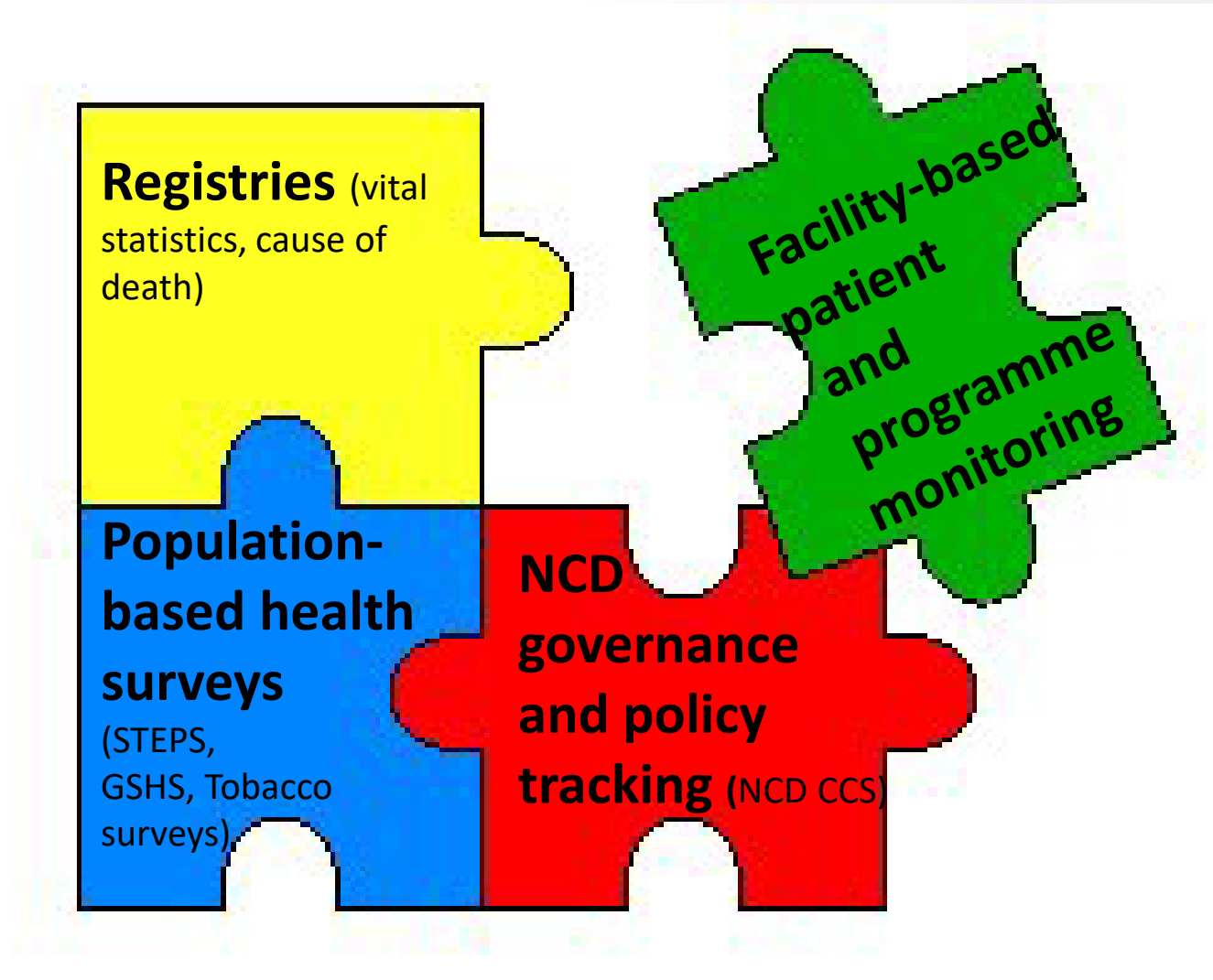


**PROF FARSHAD FARZADFAR**

Scientist, NCD department, WHO, HQ

*Switzerland*

# NCD surveillance system components





# Facility-based monitoring Guidance

1

One of the NCD surveillance components

2

Provides data at the patient and facility levels

3

Targets improvement in healthcare and health status from bottom to up

4

Includes 22 core and 59 optional indicators

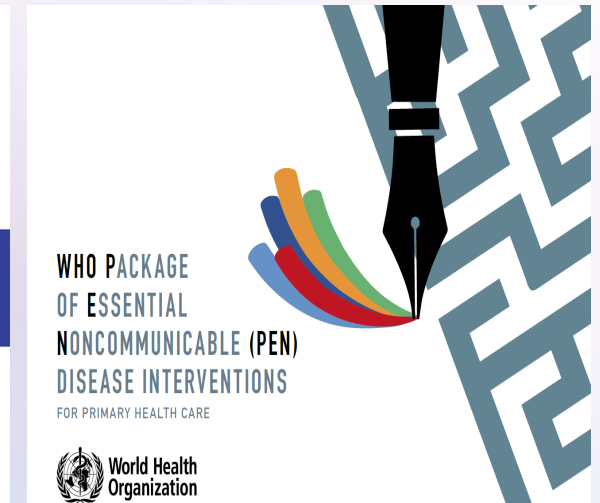
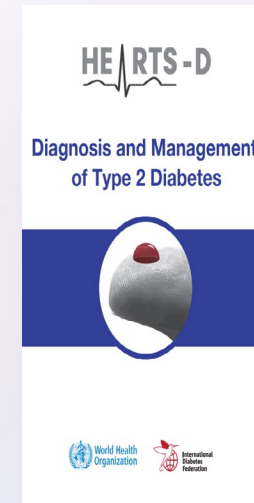
5

Provides details in metadata as standards for calculating the indicator



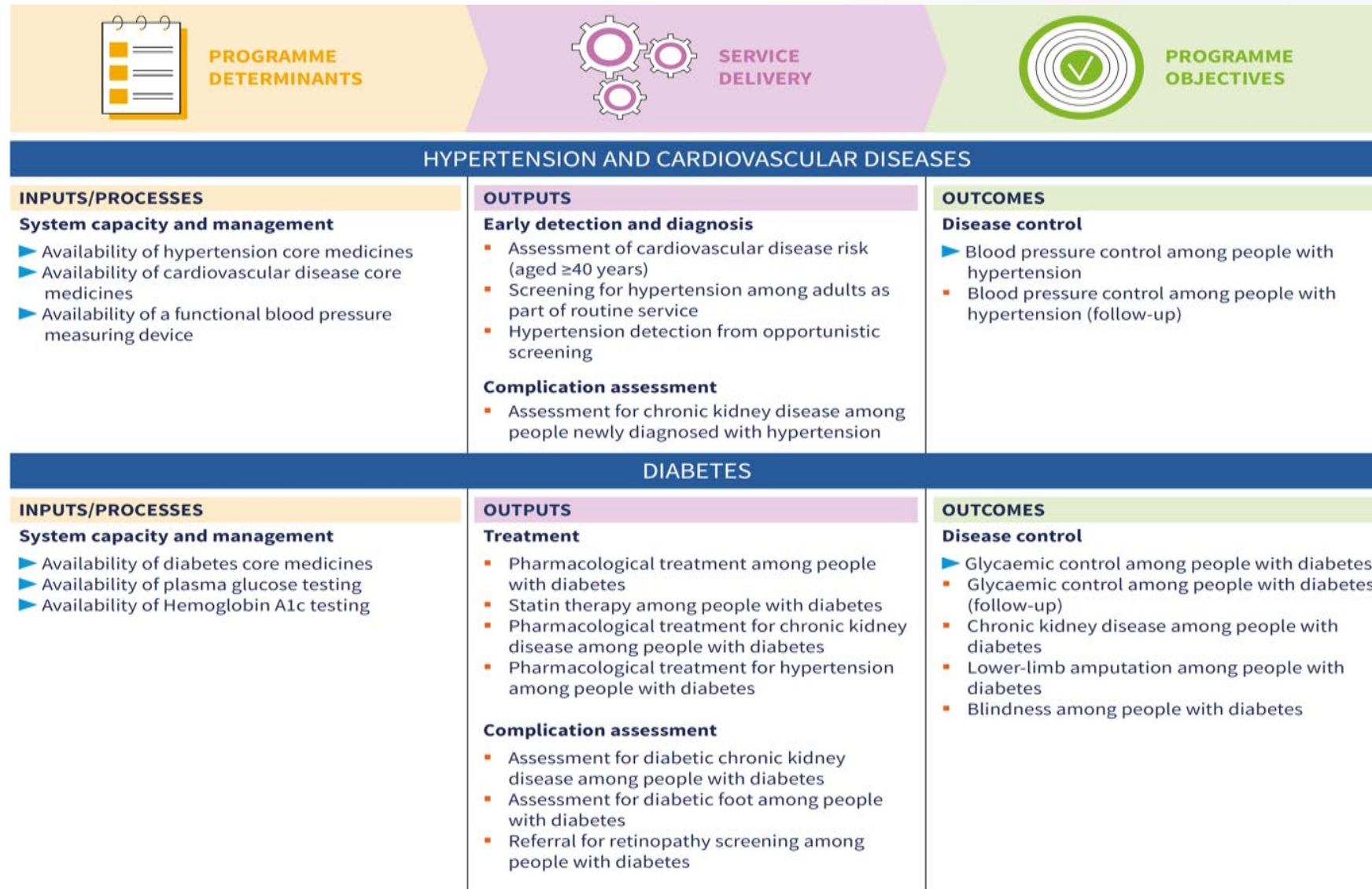
# Noncommunicable disease facility-based guidance: scope and development process

- Comprehensive monitoring for essential noncommunicable disease interventions at primary care settings
  - Cardiovascular diseases including hypertension
  - Diabetes
  - Asthma and chronic obstructive pulmonary disease
  - Breast cancer, cervical cancer, childhood cancers and general cancers
- Rigorous development and prioritization processes (experts' opinions, systematic reviews, global and regional priorities)





# Facility-based patient and program monitoring framework



# Indicator metadata

- Definition, purpose, numerator, denominator, calculation method, aggregation, disaggregation, sources of data, key data elements, frequency of reporting, users of data, limitations/comments and related links
- Comparability of data across geographical areas and across times

## C2-Availability of plasma glucose testing

<b>Indicator name</b>	Availability of plasma glucose testing
<b>Purpose</b>	To ensure uninterrupted services to diagnose diabetes and assess glycemic control among patients with diabetes
<b>Definition</b>	Proportion of health facilities that have capability of laboratory or point of care plasma glucose (PG) testing
<b>Numerator</b>	Number of health facilities reporting capability of performing either laboratory or point of care PG tests in the reporting period
<b>Denominator</b>	Total number of health facilities
<b>Method of calculation</b>	$\text{Numerator} \div \text{denominator} \times 100$
<b>Aggregation</b>	District, province, state, national
<b>Disaggregation</b>	Health facility, provider ownership type (public/private), facility location type (urban/rural), plasma glucose testing site (point-of-care or laboratory)
<b>Sources of data</b>	Health facility reports, regional logistics information system or survey
<b>Key data elements</b>	Count of number of facilities reporting "test capability"
<b>Frequency of reporting</b>	Quarterly
<b>Users of data</b>	District-, province- and state-level managers to focus supervision on health facilities reporting no lab capability, making facilities capable and strengthening health systems to ensure uninterrupted laboratory services
<b>Limitations/ comments</b>	In some settings the health facilities do not provide laboratory services so the reporting units will need to come from other laboratory service providers
<b>Related links</b>	Harmonized health facility assessment (HHFA): core questions <a href="https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa)">https://www.who.int/publications/i/item/harmonized-health-facility-assessment-(hhfa)</a>

# Digital Data Collection tool (NCD DHIS2)

Back | NCD patient monitoring form

Indicators | Feedback | Timeline Data Entry | Tabular Data Entry

Hypertension - Initial visit | **Hypertension - Follow-up visit**

Date of visit \*  
2024-02-01

**Hypertension - Follow-up visit**

Date of visit	2024-02-01
SBP (mmHg)	130
DBP (mmHg)	80
Diagnosed with CVD	<input type="radio"/> Yes <input checked="" type="radio"/> No
High-risk CVD	Yes
Prescribed treatment for hypertension?	<input checked="" type="radio"/> Yes <input type="radio"/> No
• Thiazide and thiazide-like agents	<input checked="" type="checkbox"/>
Dosage (number and unit)	12.5 mg
Dosage (frequency per day)	daily
• Angiotensin-converting enzyme inhibitors	<input type="checkbox"/>
• Angiotensin-receptor blockers	<input type="checkbox"/>
• Long-acting dihydropyridine calcium channel blockers	<input type="checkbox"/>
Date of follow-up visit	2024-05-01

Complete | Delete | Print form

Profile Edit

Unique ID

Given name: Marta

Middle name

Family name: Mercado

Sex at birth: Female

Date of birth known:  Yes  No

Age - estimated: 1981-03-04 | 43 Years | 0 Months | 1 Days

Mother's maiden name (Given name Middle name Family name): Jane Mercado

Father's name (Given name Middle name Family name): Marlon Mercaod

Current address - village and district: [Please select]

Current address - details: Rue de Lyon 75

Same as permanent address:  Yes  No

Permanent address - village and district: [Please select]

Permanent address - details: Rue de Lyon 75

Contact phone number: 0772421800

Email address: marta@y.com

Asthma programme enrolment:

COPD programme enrolment:

Diabetes programme enrolment:

Hypertension programme enrolment:

Cervical cancer screening and treatment:

Clinical breast evaluation for early diagnosis of breast cancer:

Clinical evaluation for early diagnosis of other cancers:

If you added a new disease to the patient, please remember to save your changes by clicking the blue save button below. If not please ignore this warning.

How registries can help tackle the global diabetes burden

# Cardiovascular Disease Risk Scoring

Individual Calculation ^

[Manual Data Entry](#) [Fetch from DHIS2](#)

---

### Parameters

What is the patient's country of residence? How old is the patient?

Ghana × ▼ 55 × - +

What is the patient sex? Does the patient smoke? Is the patient diabetic?

Female  Male  No  Yes  No  Yes

What is the patient's systolic blood pressure in mmHg? What is the patient's total cholesterol in mmol/L?

180.00 × - + 5.50 × - +

[Calculate the 10-Year Risk of a CVD Event](#)

---

### Result

10-Year Risk of a CVD Event

**10%**



## WHO – CVD Risk Calculator

This tool is based on World Health Organization cardiovascular disease risk charts: revised models to estimate risk in 21 global regions published in the [Lancet Global Health](#).

[Laboratory-Based](#) [Non-Laboratory-Based](#)

Individual Calculation ^

[Manual Data Entry](#) [Fetch from DHIS2](#)

---

### Parameters

What is the patient's country of residence? How old is the patient?

Select a country ▼ 40 to 74 Years - +

What is the patient sex? Does the patient smoke? Is the patient diabetic?

Female  Male  No  Yes  No  Yes

What is the patient's systolic blood pressure in mmHg? What is the patient's total cholesterol in mmol/L?

10 to 300 mmHg - + 0.1 to 20 mmol - +

[Calculate the 10-Year Risk of a CVD Event](#)

---

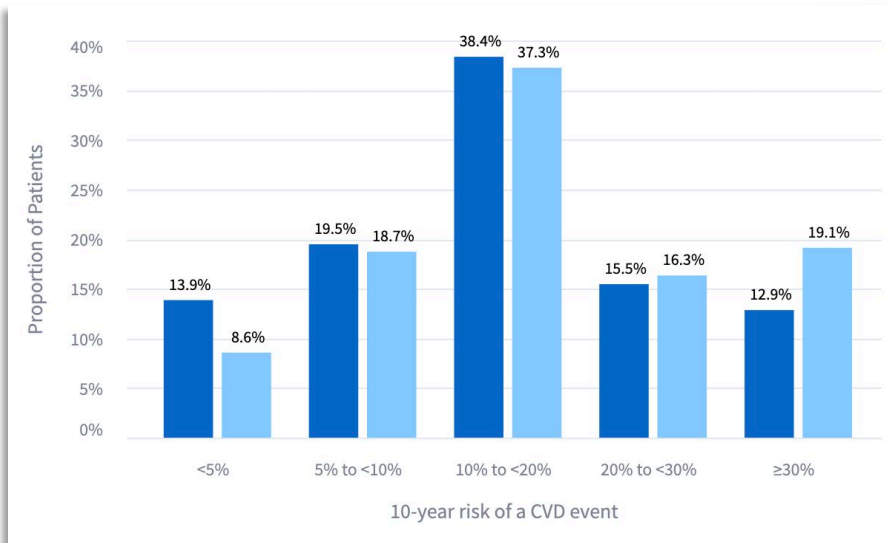
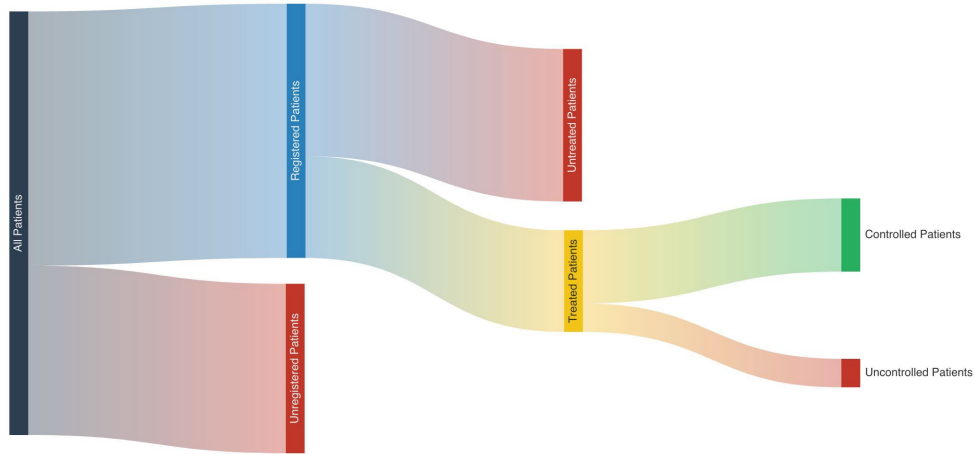
### Batch Calculation

#### Data Upload

Upload patients dataset in CSV ( [.csv](#) ) or Excel ( [.xlsx](#) , [.xls](#) ) format. For download of the template Excel file for **laboratory-based** CVD risk calculation, [click here](#).

Drag and drop file here Limit 200MB per file • CSV, XLSX, XLS [Browse files](#)

# Universal NCD Dashboard and Action Plan Developer



**A** Action Plan Developer
Dashboard Targets Admin

## Facility Dashboard

Indicators of Facility-Based Patient and Programme Monitoring

### Dashboard Settings

Province: Milky Way

District: Aquaris

Facility: Helium

Report Date: 2022-12-31

Threshold Level:  Province  District

### Standardized Indicators

Standardized Patient-Level Indicators Based on the Specified Threshold

### Targets Achievement

Percentage of Target Achievement for Patient-Level Indicators

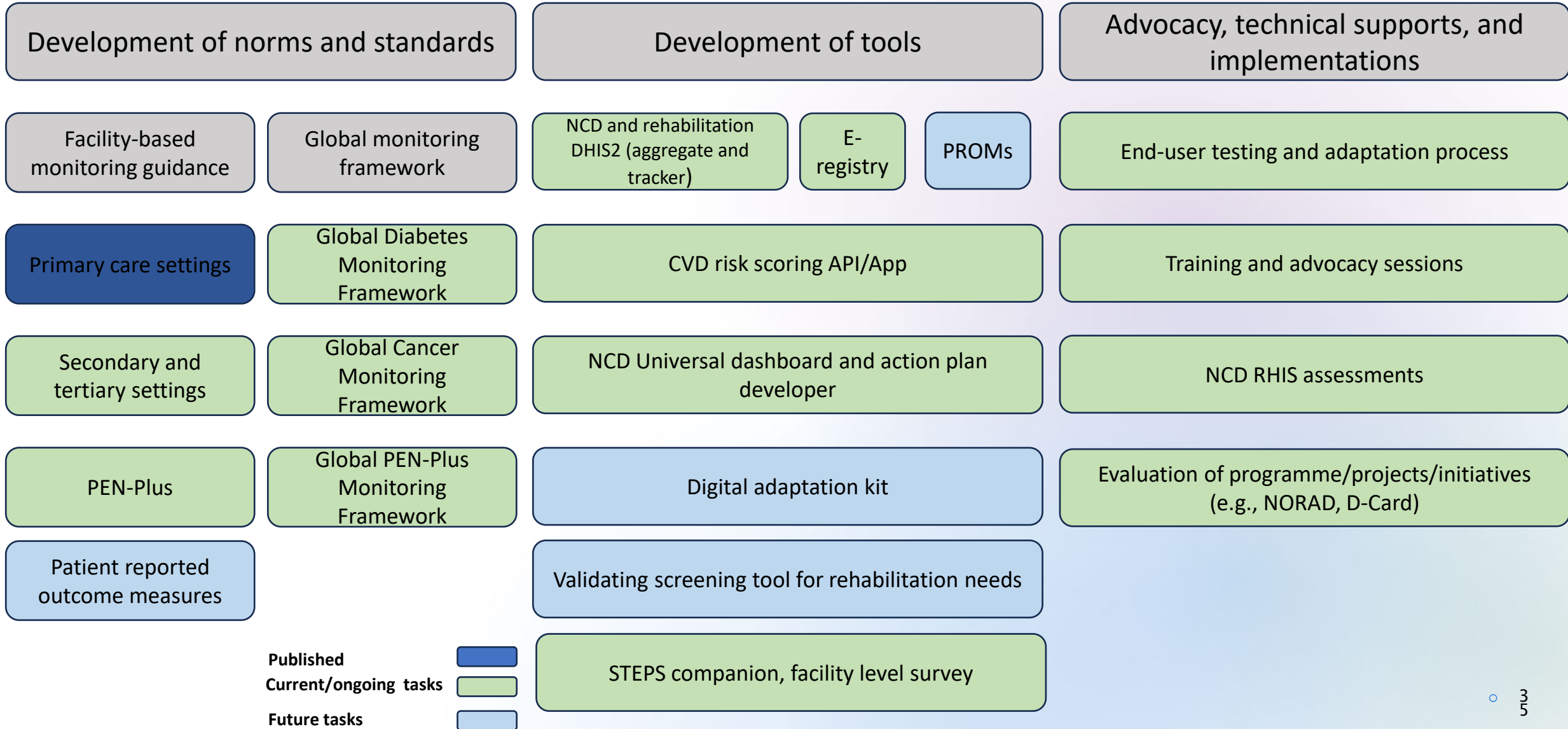
### Indicator Values

Value of Patient-Level Indicators with Percent Change Compared to the Previous Report Export

INDICATOR	FACILITY	DISTRICT	PROVINCE	NATIONAL
<b>BRCC1</b> Breast Cancer C1	77.5 (↔-2.9%)	80.0 (↔-2.8%)	80.6 (↔-2.9%)	75.0 (↔-2.7%)
<b>BRCC2</b> Breast Cancer C2	100.0 (↔-2.6%)	94.1 (↔-2.7%)	91.2 (↔-2.9%)	84.8 (↔-2.7%)
<b>CHCC1</b> Childhood Cancers C1	70.8 (↔-2.8%)	59.0 (↔-2.9%)	50.3 (↔-3.1%)	46.8 (↔-2.9%)
<b>CHCC2</b> Childhood Cancers C2	100.0 (↔-2.2%)	96.7 (↔-3.6%)	91.2 (↔-3.1%)	84.8 (↔-2.9%)
<b>CRDC3</b> Chronic Respiratory Diseases C3	46.0 (↔-2.1%)	35.2 (↔-2.7%)	39.3 (↔-2.9%)	36.5 (↔-2.7%)
<b>CRDC4</b>	87.8	88.4	89.0	87.8

How registries can help tackle the global diabetes burden

# Facility-based monitoring stream work





# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

# THANK YOU

[farzadfarf@who.int](mailto:farzadfarf@who.int)





# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## ASPECTS AND ANECDOTES AROUND A TYPE 1 DIABETES REGISTRY



**DIANA NOVELO ALZINA**

YLD Mentor and Council's Treasurer of the Diabetes Association of Southeastern Mexico (Asociación Mexicana de Diabetes en el Sureste)

*Mexico*

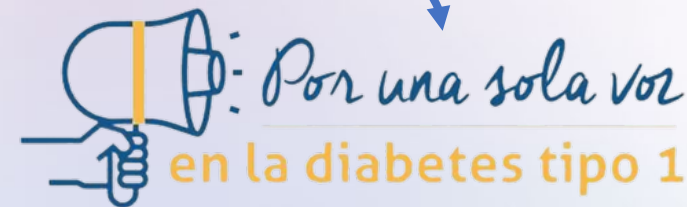
## A TYPE 1 DIABETES REGISTRY

- A YLD project that joined forces with the National movement **“One Voice in Type 1 Diabetes”** for a national type 1 diabetes registry in Mexico.

- The intention of a national registry:

- ❖ **Reach the maximum goal** → complete access to treatment
- ❖ **Obtain statistical data** → advocate for policies that improve the quality of care
- ❖ **Appel for Budget** → a government budget specific for T1D
- ❖ **Assert rights to health** → better care, fewer complications, more lives saved.

Movement's logo:



3. Impulsar un registro nacional de personas con diabetes tipo 1



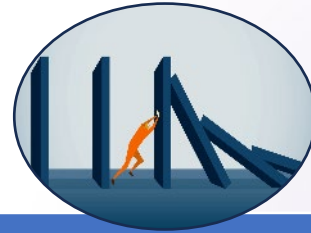
# COMMENTS BASED ON: THE REGISTRY OF PEOPLE LIVING WITH TYPE 1 DIABETES IN THE STATE OF YUCATAN, MEXICO.



## ACHIEVEMENTS

130 registries in Yucatan  
2,279 registries nationally

Statistical data provided



## CHALLENGES

Lack of participation

Calls and manual filling of  
the database

Lack of knowledge in the  
management of softwares



## RECOMMENDATIONS

Appeal for an official  
national registry

Invest in a reliable software

Have an expert in the area of  
technology and softwares.



# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

# THANK YOU

# Discussion panel and Q&A





# HOW REGISTRIES CAN HELP TACKLE THE GLOBAL DIABETES BURDEN

## CLOSING REMARKS AND THANKS



### **DR HERMELINDA PEDROSA**

IDF Vice President Physician, Chair of IDF Women and Diabetes Committee, International Relations Advisor and Advocacy at SBD (Brazilian Diabetes Society), Coordinator at the Endocrinology Unit Research Centre HRT/FEPECS, Investigator at Fiocruz Biomanguinhos

*Brasil*

## CLOSING REMARKS AND THANKS

- The recording, slides and feedback questionnaire will be sent to all registrants in a few days.
- Please respond to the feedback questionnaire to help us improve future IDF online events.
- Send any questions you may have to [advocacy@idf.org](mailto:advocacy@idf.org) or [atlas@idf.org](mailto:atlas@idf.org)



**Sign up for the IDF newsletter**



# Shape the future of diabetes



## IDF World Diabetes Congress

Bangkok, Thailand, 7 – 10 April 2025

### Why attend

- 10 programme streams
- 130 hours of scientific sessions
- 250 international speakers

### Key date

- 31 Oct 2024 Early rate deadline



# THANK YOU

