WORLD **DIABETES** FOUNDATION

# WDF and the global NCD agenda
# Translating commitments into action

## Caribbean NCD Forum

## Kingston, Jamaica    April 2018

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# WORLD DIABETES FOUNDATION (WDF)
## BACKGROUND

Based in Denmark

Established by pharmaceutical company ‘Novo Nordisk’ in 2002
Funding base confirmed until 2024 (with possible extension)
Annual budget approx. USD 15 million (with possible scale up)

Legal status: ‘..foundation combating diseases and serving a social and charitable purpose..’ (Supervisory jurisdiction: ‘Civil Affairs Agency of Denmark’)

Independent structure (defined by statutes; Board and Secretariat)

# WDF
# MISSION AND APPROACH

To alleviate human suffering related to diabetes and its complications among those least able to withstand the burden of the disease

Poverty focus: only support to LMICs (OECD-DAC)

Demand-driven (proposal based)

Ministry of Health/national authority ownership or support

Number of people with diabetes worldwide and per region in 2017 and 2045 (20-79 years) *

**North America & Caribbean**
2045 62million
46million 2017
increase 35%

**Middle East & North Africa**
2045 67million
39million 2017
increase 72%

**Europe**
2045 67million
58million 2017
increase 16%

**South & Central America**
2045 42million
26million 2017
increase 62%

**Africa**
2045 41million
16million 2017
increase 156%

**South East Asia**
2045 151million
82million 2017
increase 84%

**Western Pacific**
2045 183million
159million 2017
increase 15%

2045 629million
425million 2017
increase 48%

*International Diabetes Federation. IDF Diabetes Atlas, 8th edn.

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# WDF PROJECT PORTFOLIO 2002-2018

535 country projects **239 active**

116 countries **80 active**

Aggregated WDF funding **USD 137 million**

Partners: **MoHs, international organisations, civil society, a.o.**

>30 partnerships directly with MoH/national health authorities (national diabetes/NCD response frameworks)

# WDF: PROGRAMME APPROACH AND EXTERNAL IMPULSES

## ADAPTATION AND REFINEMENT 2002→2018→...

Diabetes

NCDs

Integration of NCDs into health systems

UHC ?

# COUNTRY CASE:
# UNITED REPUBLIC OF TANZANIA

Moving from pilot projects to a national diabetes / NCD response

# BACKGROUND

# MULTI-SECTORAL PARTNERSHIP

Tanzania Diabetes Association

Ministry of Health

Donors

World Diabetes Foundation
Novo Nordisk Fund Raising
Dr Zolli – Venice,Italy
NN World Partnership Project
Handicap International / EU

Curriculum development
Training
Capacity building- tools
Establishment of Association Branches
Monitoring & Evaluation
Supply & logistics system

Human resources
Clinic space

"Seed" funding

SUSTAINABLE QUALITY DIABETES SERVICE

# TDA HAS DEVELOPED SUCCESSFUL LONG-TERM RELATIONSHIPS WITH KEY STAKEHOLDERS.

## National Stakeholders

## International Stakeholders

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# TANZANIA DIABETES ASSOCIATION (TDA) WAS FORMED 31 YEARS AGO. TODAY, IT IS THE FOCAL POINT FOR DIABETES ACTIVITY IN TANZANIA.

Data collection on diabetes and risk

TDA established

5th Pan African Diabetes Study Group Meeting provides seed funding for TDA

World Partnership Project : grants funds for diabetes clinic at Muhimbili National Hospital and establishing diabetes services in three district hospitals in Dar es Salaam and Zanzibar (8) .

Diabetes clinics established in district hospitals in Lake region _ WDF Funding

Diabetes / NCD clinics rolled out /strengthened to all zonal (4), regional (28) and district hospitals (187) Under National Diabetes /NCD program including integrated training - funded by WDF

1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

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# BURDEN

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# BURDEN OF TYPE 2 DIABETES & HYPERTENSION

| | Diabetes | Hypertension |
|---|---|---|
| Prevalence in1980s | | |
| Rural population | <1% | 2-7% |
| Urban population | <2% | 7-15% |
| Special groups | 5-6% | 25-40% |
| Asian Indian groups | 9-12% | |
| Prevalence in 2000 | | |
| Urban population | ˜5% | |
| Prevalence in 2012 | | |
| STEPS Survey (countrywide) | 9% | 27% |
| Previously diagnosed | ˜2% | 1.8% |

# BURDEN – OTHER CVD RISK FACTORS & GDM

- **Dyslipidaemia: 15-32%**
- **Obesity: 12-36% (in rural areas: 5% to 25%)**
- **Ischaemic Heart Disease: no data but clinic records reveal increasing trends**
- **Stroke: based on previous studies, incidence increasing**
- **Prevalence of Gestational Diabetes (GDM):**
  - Rural 1.0%
  - Urban 8.4%
  - Average 5.9%

# NEEDS ASSESSMENT

# PROPORTION OF PATIENTS SCREENED FOR COMPLICATIONS IN THE LAST ONE YEAR (N=411)

| Procedure | % |
|---|---|
| Dilated eye examination | 18.3 |
| Blood pressure | 76.9 |
| Weight measurement | 73.5 |
| Urinalysis | 61.8 |
| ECG | 8.5 |
| Serum creatinine | 5.8 |
| Lipid profile | 4.9 |
| Foot examination | 10.0 |
| Dental examination | 5.6 |

# PROBLEMS THAT PATIENTS FACE IN ACCESSING CARE (N= 411)

| Problem | % |
|---|---|
| Clinics irregular/ inconvenient time | 24.1 |
| Can not afford transportation cost | 61.3 |
| Can not afford cost of medication | 47.9 |
| Can not afford cost of investigations | 21.4 |
| Lack of medications | 41.4 |
| Few health care providers | 48.2 |

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# MEDICAL PAYMENT SOURCES AMONGST PEOPLE WITH DIABETES (N=2139)

| Source of payment | % |
|---|---|
| Paid from own income | 79.2 |
| Paid from social support fund | 13.6 |
| Paid from donations | 1.3 |
| Paid from money from family or friends | 35.1 |
| Paid from money borrowed | 23.1 |
| Paid by selling possessions | 3.0 |
| Paid by selling house or land | 2.6 |

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# INTERVENTIONS

# IMPORTANT MILESTONES

- 2003: Train and strengthen Diabetes Clinic at National Referral Hospital (MNH) and three other zonal referral hospitals (KCMC, Bugando, Mbeya).
- 2005: Train and establish diabetes services at all regional hospitals (21) and 3 district hospitals in Dar es Salaam
- 2006-8: Train and establish diabetes services at 25 district hospitals in the Lake Zone as a "pilot"
- 2009-2011: Monitor & evaluate
- 2012: Plan for a National Diabetes /NCD Program – 4 referral hospitals, 27 regional referral hospitals and 187 district hospitals. Review and develop training curriculum for diabetes & other NCDs for different levels of health care

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UGANDA
DEM. REP. OF THE CONGO
Lake Victoria
0 100 200 km
0 100 200 mi
KENYA
RWANDA
BURUNDI
Arusha
Kigoma
Lake Tanganyika
Dodoma
DAR ES SALAAM
Mafia Island
Indian Ocean
DEM. REP. OF THE CONGO
Lake Nyasa
Lindi
Mtwara
ZAMBIA
MALAWI
DEM. REP. OF THE CONGO
MOZAMBIQUE

# CARE FOR CHILDREN WITH TYPE 1 DIABETES

Children up to 22 years

- Enrolled if <=18 years at diagnosis,
- Supported till 22 years old
- Total 800 in 14 clinics
- Donated Insulin, syringes, blood glucose meters and test strips, and urine test strips
- Support by Novo Nordisk (CDiC) & Roche Diagnostics
- Received & Distributed by TDA
- Ended 2017, Government expected to take over

Adolescents 19-26 years:
Total 1320 in 34 clinics

- Enrolled if 19-22 years
- Supported up to 26 years
- Donated insulin, syringes, blood glucose test strips
- Support by International Diabetes Federation
- Received & Distributed by TDA

Capacity building:

- Training on type 1 diabetes to 26 HCPs
- Paediatric Endocrinologists trained (0 in 2006 to 7 in 2017)

# Tanzania Registry - age at diagnosis

120
100
80
60
40
20
0

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

**Year of age**

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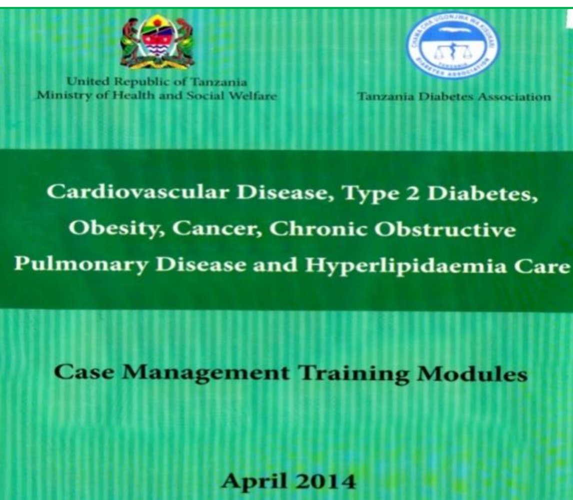
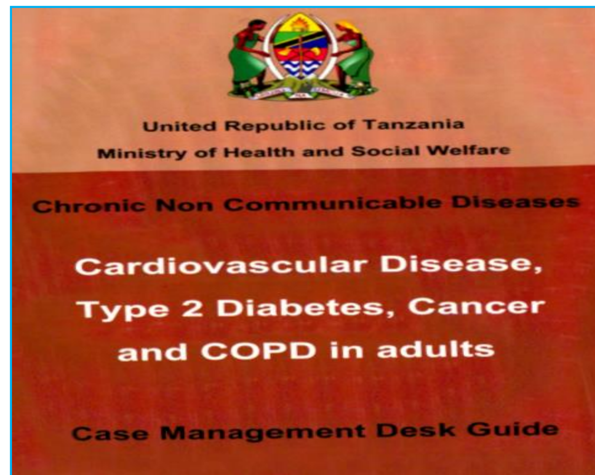
# TYPE 1 DIABETES - TRENDS

| Year | HbA1C (5) | DKA (n) | Mortality (n) |
|---|---|---|---|
| 2005 | >14 | | |
| 2011 | 12.6 | 30 | 9 |
| 2012 | 12.1 | 23 | 4 |
| 2014 | 10.3 | 10 | 7 |
| 2016 | 9.6 | 9 | 5 |

# TRAINING CURRICULUM FOR NCDS DEVELOPED & MANUALS PREPARED



# OTHER INFRASTRUCTURE SUPPORT

**For all hospitals**

- Height & Weight scales
- BP Machines
- Stethoscopes
- Glucose meters
- Snell's Charts
- Direct Ophthalmoscopes
- Measuring tapes
- Monofilaments
- Tuning forks

**For Zonal Referral hospitals**

**Diabetes Foot equipment:**

- Vascular Doppler Recorder
- Neuropathy Analyzer
- Plantar Pressure Strides System Pedography

**Diabetes Eye equipment:**

- Fundus Camera
- Slit Lamp
- Indirect Ophthalmoscope
- Laser Photocoagulation

# TANZANIA NATIONAL DIABETES/NCD PROGRAM

- Implementation under the National Strategy for Non Communicable Diseases.
- Coordination under the Ministry of Health, Community Development, Gender, Elderly & Children
- Tanzania Diabetes Association (TDA) as project implementer.
- Funded by World Diabetes Foundation (WDF)
- Goal - Reduction of morbidity & mortality due to Diabetes/NCDs in Tanzania through development of a comprehensive system of care for people with NCDs and public awareness creation.

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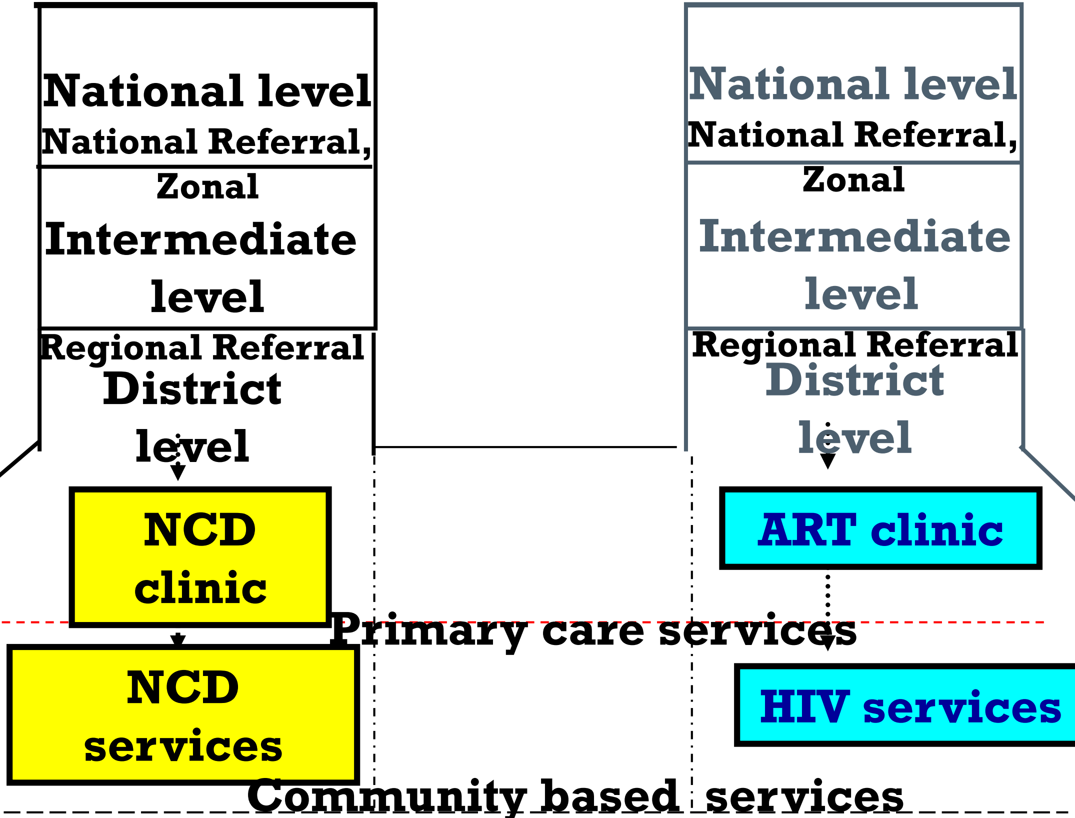
# TRAINING TARGETS

| Facility Level | NCD Clinics | Specialty Clinics | Nutrition | Sensitization |
|---|---|---|---|---|
| Zonal Referral Hospitals | 2 MO/AMO/CO<br>2 Nurses | 2 HCP RCH<br>2 HCP TB/Leprosy<br>2 HCP Eye/Dental<br>2 HCP HIV/AIDS | | |
| Regional Referral Hospitals | 2 MO/AMO/CO<br>2 Nurses | 2 HCP RCH<br>2 HCP TB/Leprosy<br>2 HCP Eye/Dental<br>2 HCP HIV/AIDS | 1 Regional Nutritionist | 2 RHMTs |
| District Hospitals | 2 MO/AMO/CO<br>2 Nurses | 1 HCP RCH<br>1 HCP TB/Leprosy<br>1 HCP Eye/Dental<br>1 HCP HIV/AIDS | 1 District Nutritionist | 1 CHMT |
| Health Centers | 1 MO/AMO/CO<br>1 Nurse | | | |
| Dispensaries: Provided 5 copies of IEC Manual to each public dispensary | | | | |

# PROGRAM LEVEL MONITORING TOOLS

- **Five Tools**
  1. Community level awareness of NCDs
  2. Patient characteristics and utilization
  3. Health Care Providers: service delivery
  4. Healthcare Facility Capacity
  5. Diabetes Clinic Services Monthly reports




- Power imbalance
- Financial disparity
- Historical difference
- Centralised HIV vs. decentralised NCD treatment services
- Separate M and E

# NCD and HIV programmes

# PWANI REGION: HEALTH FACILITIES REPORTED AVAILABILITY OF SPECIALIZED HEALTH SERVICES IN THE LAST ONE MONTH BY LEVEL/STATUS

| | **Total, n (%)** | **Hospitals** | **Health Centres** | **Dispensaries** |
|---|---|---|---|---|
| **Total number of Facilities** | **31 (100)** | **6** | **16** | **9** |
| Antenatal care / PMTCT | 31 (100) | 6 | 16 | 9 |
| Delivery | 28 (90.3) | 6 | 15 | 7 |
| Immunization/Growth monitoring | 31 (100) | 6 | 16 | 9 |
| Family planning | 29 (93.5) | 6 | 15 | 8 |
| HIV | 30 (96.8) | 6 | 15 | 9 |
| TB/Leprosy | 27 (87.1) | 6 | 15 | 6 |
| **Diabetes/other NCDs** | **6 (19.4)** | **3** | **2** | **1** |

# PWANI REGION: HEALTH EDUCATION/COUNSELLING SERVICES OFFERED ONE MONTH BEFORE THIS SURVEY BY HEALTH FACILITY LEVEL: MEAN AND RANGE OF NUMBER OF SESSIONS

| Health education/counselling | Hospital | | Health Centre | | Dispensary | |
|---|---|---|---|---|---|---|
| **Total** | **N=6(100)** | **Mean (Range)** | **N=16(100)** | **Mean (Range)** | **N=9(100)** | **Mean (Range)** |
| Healthy Diet and Nutrition | 6 | 15.5(4,28) | 14 | 9.6(2,30) | 6 | 8.8(4,20) |
| **Physical Activity** | **3** | **15(5,20)** | **6** | **8(1,20)** | **5** | **3(1,6)** |
| Breast Feeding | 6 | 10.2(4,20) | 15 | 10.2(2,28) | 9 | 11(2,20) |
| HIV /AIDS | 6 | 15(5,20) | 15 | 11.3(2,30) | 8 | 10.1(2,20) |
| TB/Leprosy | 4 | 12.3(4,20) | 12 | 9.8(1,20) | 7 | 3.6(1,8) |
| **Diabetes** | **2** | **12(4,20)** | **3** | **8.3(1,20)** | **2** | **2.5(1,4)** |
| **Hypertension** | **2** | **12(4,20)** | **7** | **5.9(1,28)** | **4** | **6.3(1,10)** |
| **Cancer** | **4** | **12.5(4,20)** | **7** | **8.6(1,20)** | **3** | **1(1,1)** |
| **Asthma** | **2** | **11(2,20)** | **7** | **4(1,15)** | **4** | **2.3(1,4)** |
| Family planning | 6 | 13.3(3,20) | 15 | 10.9(1,20) | 9 | 10.6(3,20) |

**Mass Media**
Education

**Screening Camps**
Education & Screening
World Health Days

**School Health**
Education &
Screening

**Workplaces**
Education &
Screening

**Community**

**Community Health Workers**
Education
Screening
Treatment Adherence

Re-Attending OR Emergency

**All Facility Attendees**

All New

**Health Education**

**General Disease Screening & Individual Health Education**
Body Mass Index
Blood Pressure
Blood Glucose
Provider Initiated HIV
Councelling & Testing
TB Screening

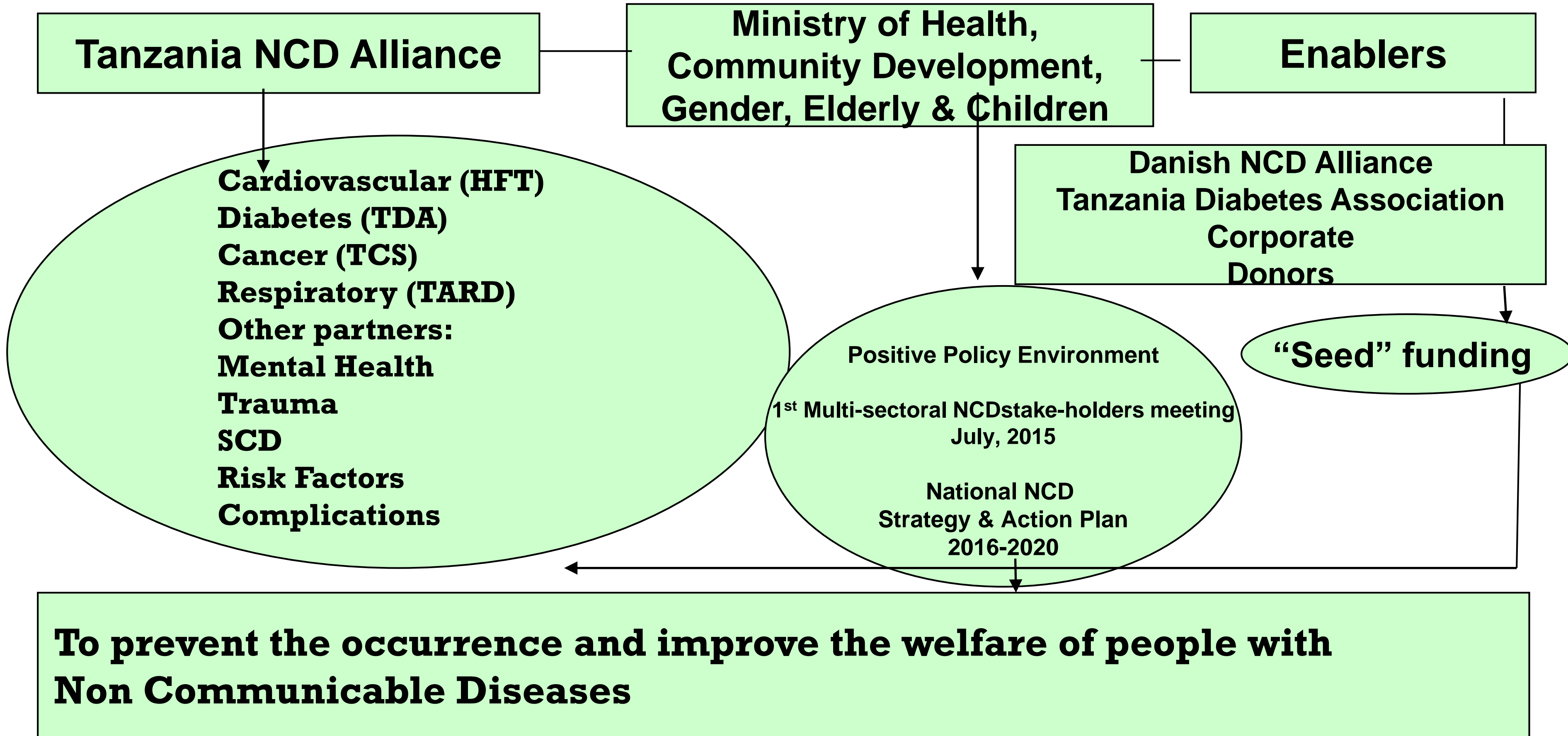
**Disease Specific Services**
RCH
CTC
Diabetes/NCDs
TB/Leprosy
General OPD

**Regional & District Level Services**
Specialty Clinics
OutReach Clinics
New & Yearly Checks

# BENEFITS OF APPROACH

- **Sharing of Human Resources Approach to Care:**
  - All key silent diseases attended
- **Sharing physical space:**
  - Clinics for chronic diseases on different days in rotation
- **Sharing of blood samples and laboratory personnel:**
  - Malaria test and Blood glucose
  - PMTCT and blood glucose
  - VCT and blood glucose
  - Screening for complications: renal, lipids, liver, heart
  - RCH: GDM, HT, EPH Gestosis
- **TB & HIV and diabetes : co –existence & mutual screening**
- **Community Health Workers (CHWs):**
  - for community awareness and screening (all diseases of public importance)
  - CHWs are now part of the establishment of MoH
- **One centre in primary health facilities for health education and key diseases screening**

# MULTI-SECTORAL PARTNERSHIP



# WAY FORWARD

- **Tertiary and Secondary Care Health Facilities: training, tools, protocols in place and integrated care has been implemented – awaiting evaluation**
- **Primary care (health centres and dispensaries ) to be piloted in one region before scaling up.**
- **Community Health workers and Peer educators will be the key drivers of prevention and advocacy at Primary Care level.**
- **Primary prevention program at School level in partnership with MoHCDGEC, MoE, PORALG and APHFTA**

# THANK YOU

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