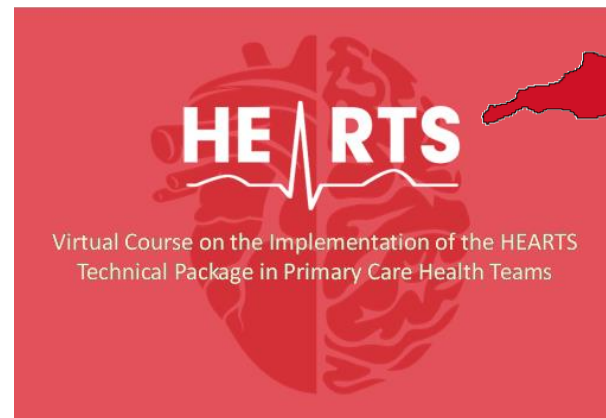




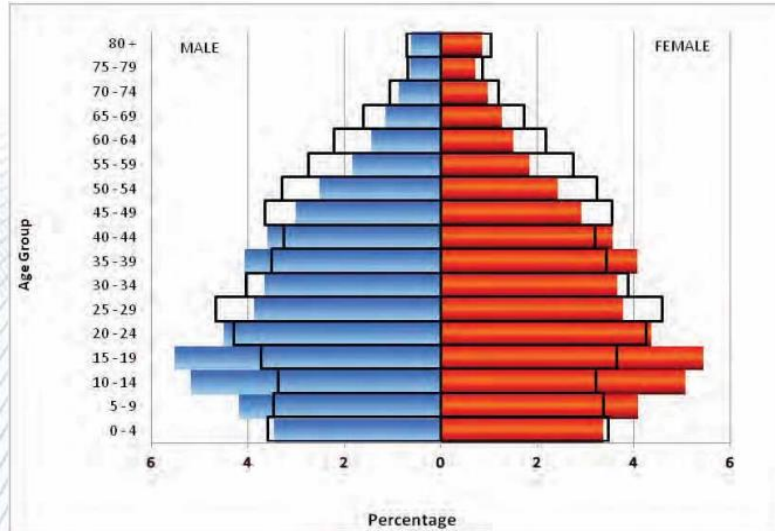
# Global HEARTS Initiative – Trinidad and Tobago Implementation and Scale Up MOH Overview



**Dr. Rohit Doon**  
Advisor Public Health, Ministry of Health  
Trinidad and Tobago.

# Country Population Profile –

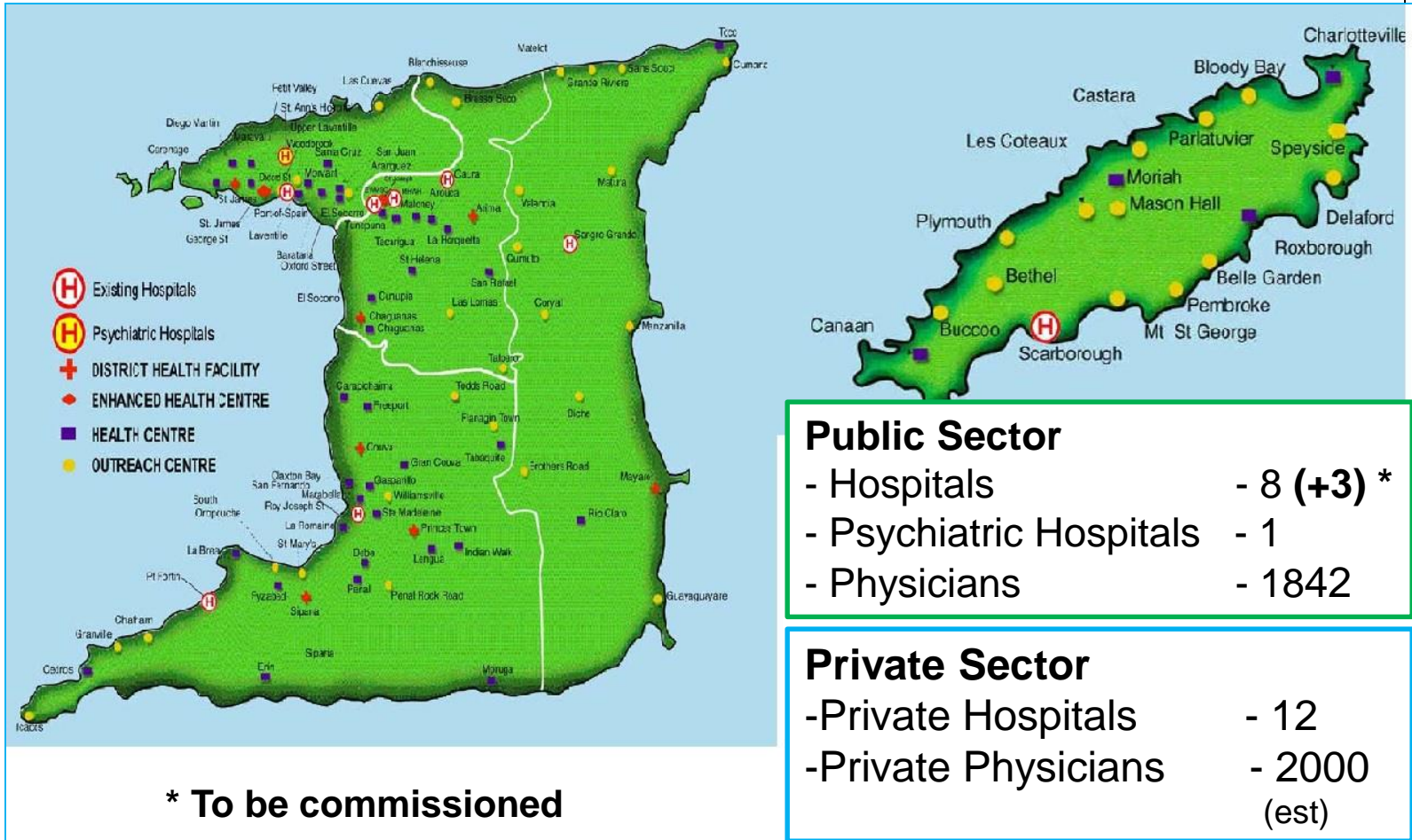
(Estimated 2017)



Total – 1.37 Million  
 Males – 49.6 %  
 Females 50.4%

Population 18 years and over	Males 35.7 %	Females 37.2	Total 1,000,000 (73 %)
Population 60 years and over	Males 6.8 %	Females 8.1%	Total 204,130 (15 %)
Population 65 years and over	Males 4.6 %	Females 5.5 %	Total 137,000 (10.1 %)

# MoH – Public Health Clinical Infrastructure



# Description of MoH Primary Health Care Clinical Infrastructure



Type of Facility	Catchment Population	Hours of Operation
<b>Outreach Health Centre</b> Primary Care / CMOH	Up to 5000	Nurse Led – 1-5 days/week Physician Led – 1-2 days/week 8 am – 4 pm
<b>Health Centre</b> Primary Care / CMOH	Up to 30,000	Physician Led; 5 days / week 8 am – 4 pm
<b>Enhanced Health Centre</b> Primary Care / CMOH	Up to 50,000	Physician Led; 5 days / week Several concurrent clinics in progress from Monday - Friday
<b>District Health Facility</b> Primary Care / CMOH	Up to 120,000	Physician Led; 24 hr service; 7 days per week

Total 103 Health Centres

# Distribution of NCD Mortality



<b>NCD</b>	<b>NUMBER OF DEATHS 2015</b>	<b>% OF DEATHS 2015</b>	<b>2015 CAUSE SPECIFIC DEATH RATES (PER 100,000 POPULATION)</b>
<b>HEART DISEASE</b>	<b>2673</b>	<b>25</b>	<b>198.0</b>
<b>DIABETES</b>	<b>1497</b>	<b>14</b>	<b>110.9</b>
<b>CANCER</b>	<b>1390</b>	<b>13</b>	<b>103.0</b>
<b>CEREBRO-VASCULAR DISEASE</b>	<b>1069</b>	<b>10</b>	<b>79.2</b>
<b>NCD'S OVERALL</b>	<b>6629</b>	<b>62</b>	<b>491.2</b>

# Intermediate/Biologic Risk Factors

(PANAM STEPS NCD Risk Factor Survey 2011)

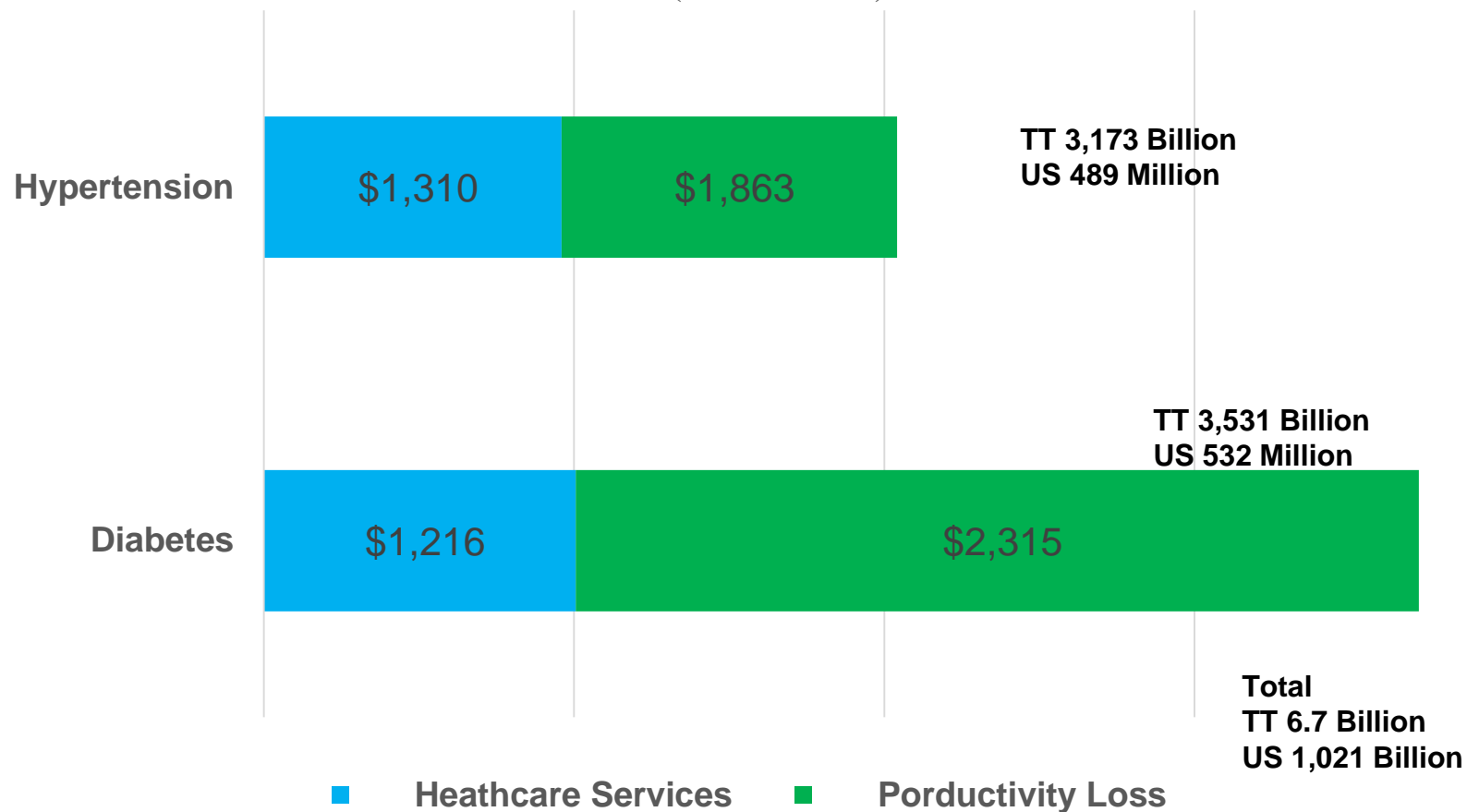


- **Prevalance of Elevated blood pressure** -  
**26.3%** (had or were currently on anti-hypertensive medication)  
**29.8% of males**                      **23.1% females)**
- **Prevalence of elevated total cholesterol** -  
**23.5%** ( $\geq 6.2$  mmol/L or being currently on medication for raised cholesterol)  
**28.3% in males**                      **18.9% in females**

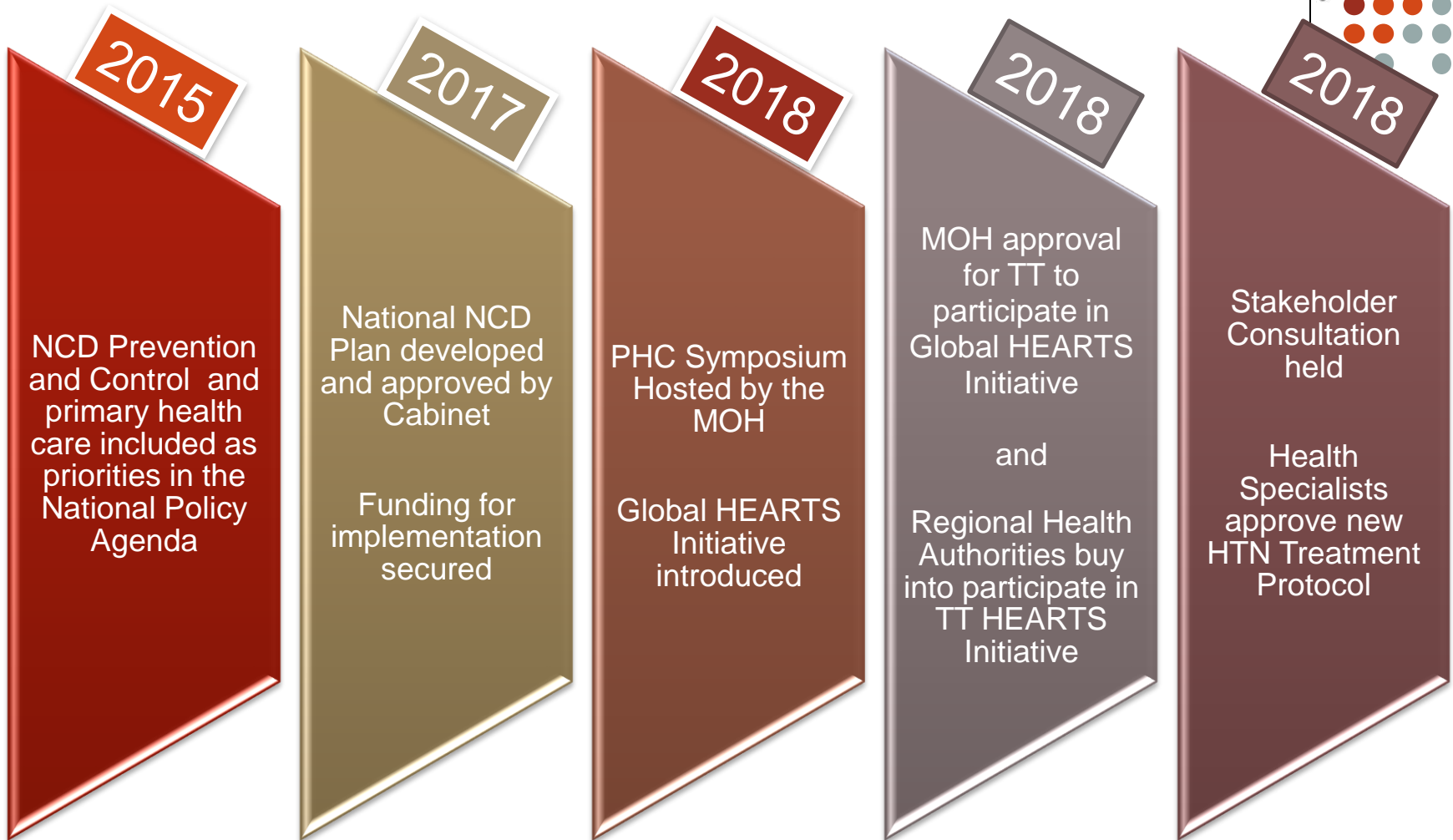
# Economic Dimensions of NCDs



**Table 1: Cost of Hypertension and Diabetes – IDB Annual Estimate -2016  
(TT\$ Millions)**

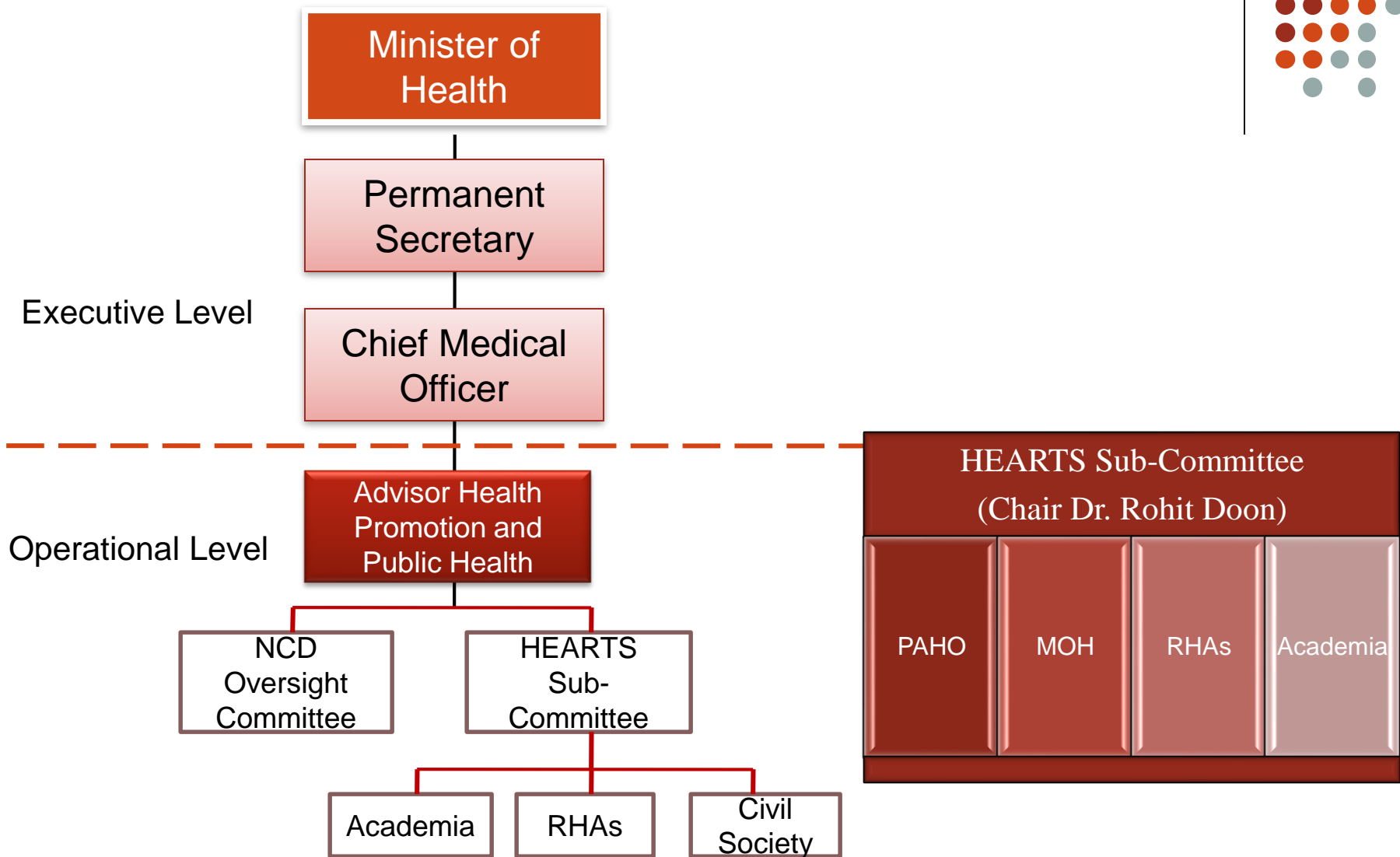


# ELEMENTS FACILITATING POLITICAL COMMITMENT





# Governance Structure for HEARTS Initiative





# Global HEARTS Sites

## National Population – 1.3 Million

<b>HEARTS Site</b>	<b>Population</b>
● Arima District Health Facility	60,000
● Sangre Grande Enhanced Health Centre	40,000
● Freeport Health Centre	11,000
● Oxford Street Health Centre	22,000
● Scarborough Health Centre	16,000
<b>Total</b>	<b>149,000</b>



# Chronic Disease Assistance Form



Physician's  
Copy



MINISTRY OF HEALTH  
Chronic Disease Assistance Plan (C-DAP)

C-DAP R<sub>x</sub> No.:

9828025

R<sub>x</sub> Date      /      /       
          dd      mm      yyyy

Patient's Name .....

	Item	Directions for use	Qty. Disp.
51	Insulin 70 / 30 [Novo]		
52	Insulin 70 / 30 [Lilly]		
53	Insulin N.P.H [Novo]		
54	Insulin N.P.H [Lilly]		
55	Insulin Regular [Novo]		
56	Insulin Regular [Lilly]		
58	BGM Strips - Abbot		
59	BGM Strips - Roche		
21	Syringes		
2	Gliclazide 80mg Tablets		
3	Glibenclamide 5mg Tablets		
4	Metformin 500mg Tablets		
5	Acetazolamide 250mg Tablets		
6	Betaxolol 0.25% Eye Drops		
7	Pilocarpine 2% Eye Drops		
8	Pilocarpine 4% Eye Drops		
9	Timolol 0.5% Eye Drops		
10	Atenolol 50mg Tablets		
11	Bendrofluazide 5mg Tablets		
12	Enalapril 10mg Tablets		
40	Frusemide 40mg Tablets		
13	Lisinopril 10mg Tablets		
14	Methyldopa 250mg Tablets		
16	Nifedipine SR 20mg Tablets		
18	Digoxin 0.125 mg Tablets		
19	Glyceryl Trinitrate 0.5mg Tablets		
20	Isosorbide Dinitrate 10mg Tablets		
22	A.S.A 81mg Tablets		
57	Simvastatin 40mg Tablets		
23	Ibuprofen 200mg Tablets		
24	Diclofenac SR 100mg Tablets		
25	Amitriptylline 25mg Tablets		
26	Benzhexol 2mg Tablets		
42	Chlorpromazine 100mg Tablets		
28	Fluoxetine 20mg Capsules		
29	Sulpiride 50mg Tablets		
30	Trifluoperazine 5mg Tablets		
31	Terazosin 2mg Tablets		
32	Terazosin 5mg Tablets		
33	Salbutamol Inhaler		
34	Beclomethasone Inhaler		
35	Prednisolone Syrup		
36	Prednisolone 5mg Tablets		
37	Spacer Device (Pediatric)		
43	Phenytoin Sodium 100mg Capsules		
44	Phenytoin Sodium 125mg /5ml Suspension		
45	Sodium Valporate 200mg Tablets		
46	Sodium Valporate 200mg/5ml Suspension		
47	Carbamazepine 200mg Tablets		
48	Carbamazepine 100mg/5ml Suspension		
49	Levodopa/Carbidopa 100/25mg Tablets		
50	Omeprazole 20mg Capsules		

ID # .....

**For Physician's Use Only**

Physician's Name (Block Letters)

Physician's Signature

Physician's Address

**Dispensing Pharmacist's Use Only**

Pharmacy Name

License #.....

Pharmacist Name

Reg. No. ....

Date Dispensed:      /      /       
                          dd      mm      yyyy

**For Repeat Prescriptions Only**

Physician's Name

Original C-DAP R<sub>x</sub> # Name

**For Patient / Recipient Only**

Patient / Recipient's Signature

Patient / Recipient's ID Card #

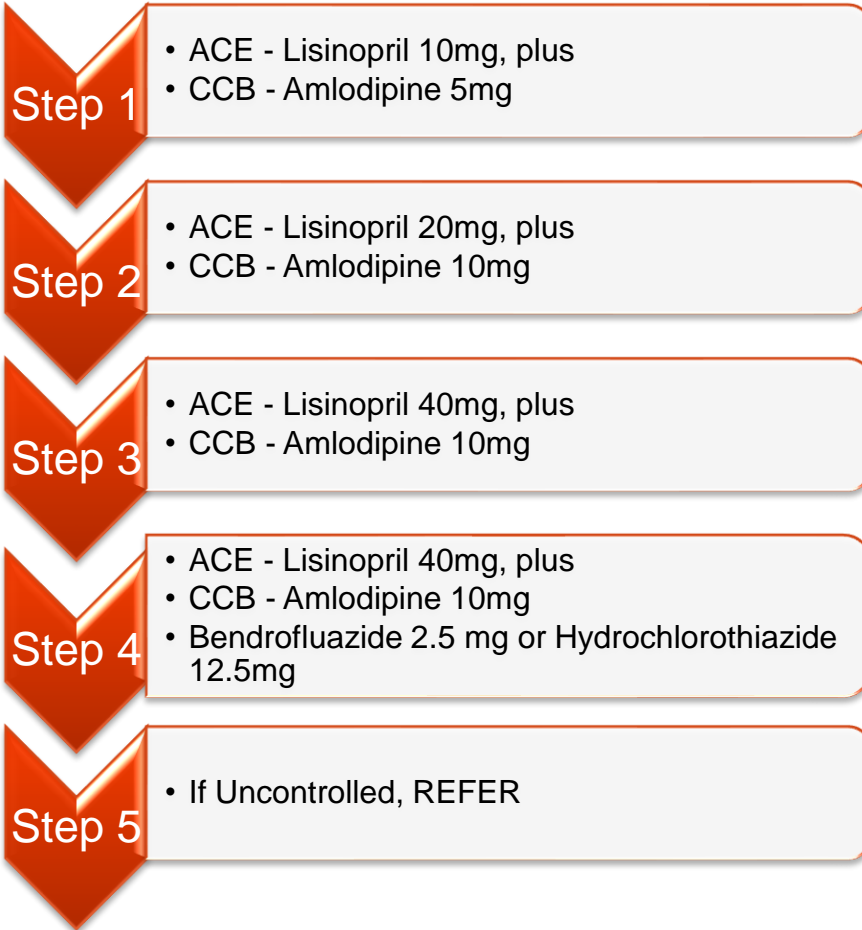
# Hypertension Algorithm



## ALGORITHM 1 – ACCEPTABLE

If BP > 140/90 with No Comorbidities.

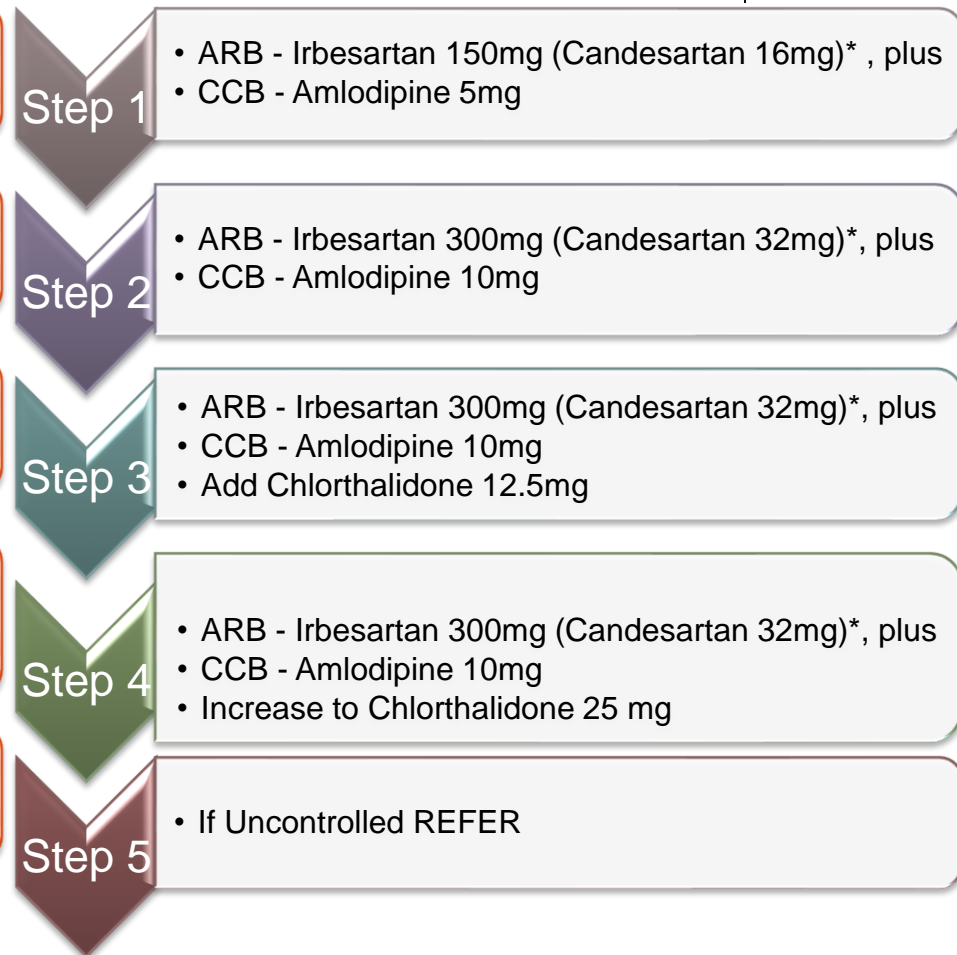
If uncontrolled (sBP>140mmHg OR dBP>90mmHg) after one month, move to next step;



## ALGORITHM 1 – PREFERRED

If BP > 140/90 with No Comorbidities.

If uncontrolled (sBP>140mmHg OR dBP>90mmHg) after one month, move to next step;



**AVOID ACE inhibitors and ARBs in Pregnancy**

\* Candesartan may be substituted if Irbesartan unavailable

# Impact of CDAP Program on CVD

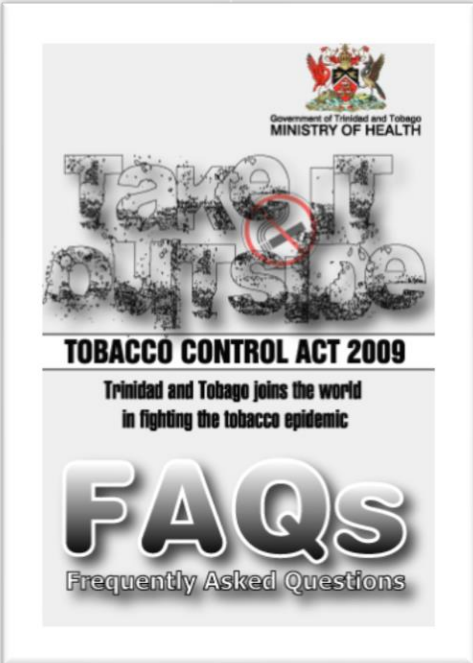


- **During the 2004 to 2008 period CVD mortality rates declined significantly.**
  - Age adjusted mortality has dropped 18.8% since 2004
  - Even though data on population coverage of CVD treatments and risk factors prevalence over this period is scant the decline is likely due to an increase in treatment availability.
- **Several CVD control strategies were employed (CABG, PCI, Health Promotion and Drug treatment).**
- **The drop in CVD mortality rates observed in Trinidad and Tobago are most likely the result of availability of multiple treatments available, the Chronic Disease Assistance Program (CDAP Drug Management) program is the one that accounts for the larger percentage.**



# What Are We Implementing at a Population-based Level and What is the Progress?



Component	Expected result	Strategic priority to the present (May 2019)	Progress score
<p><b>Tobacco</b></p> 	<p>FCTC, fully implemented.</p>	<ul style="list-style-type: none"> <li>• Tobacco Control Legislation passed 2009</li> <li>• Health Professionals trained to design Tobacco Cessation programs integrated into PHC</li> <li>• Tobacco Education program implemented</li> <li>• Tobacco Control Unit established</li> <li>• The 5 key interventions of the FCTC, including the availability of smoking cessation in the first level of care implemented.</li> </ul>	<p>4</p>

# What Are We Implementing at a Population-based Level and What is the Progress?



Component	Expected result	Strategic priority to the present (May 2019)	Progress score
<b>Salt</b>	Regulations to reduce salt consumption implemented	<ul style="list-style-type: none"> <li>• Salt study integrated into the 2019 STEPS Survey Instrument</li> <li>• Survey of local food sources, high in sodium</li> <li>• Nutrition Standard for Food served to children in schools developed</li> <li>• Parliament adopted CARICOM's Six Point Policy for Promoting Healthy Diets which includes salt reduction</li> <li>• TTO participating in a pilot program to reduce salt consumption in CARICOM States</li> </ul>	2

# What Are We Implementing at a Population-based Level and What is the Progress?



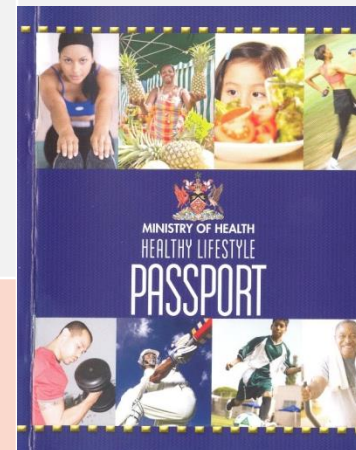
Component	Expected result	Strategic priority to the present (May 2019)	Progress score (1 to 5; 5 advanced progress status)
<b>Industrially produced Trans fats</b>	Regulations to eliminate trans fats implemented	<p>TTO National NCD Plan identified elimination of Trans Fats as a priority action.</p> <p>Parliament of the GORTT, adopted CARICOM's Six Point Policy for Promoting Healthy Diets which includes elimination of Trans Fats from the food supply</p>	1



# Progress in the implementation of the HEARTS technical package



Component	Expected results for 2025	Strategic priority to the present (May 2019)	Progress score
<b>Implementation of technical package for CVD management with emphasis on hypertension and secondary prevention for the primary care level</b>			
Strengthening health systems for improved management of CVD	<p>HEARTS chronic care model implemented in at least 70% of primary health care facilities</p> <p>80% increase in proportion of persons controlled</p>	HEARTS institutionalized in at least one (1) Primary Care Health Centre in each RHA to improve treatment of HTN in	2
Healthy lifestyles counseling	Self-management /patient education based for management and care of HTN and Diabetes implemented for 80% of persons with NCDs (guided by HEARTS Package)	<p>NGO/Civil society partnership established</p> <p>Sensitisation of clients at demonstration sites about HEARTS</p> <p>Healthy lifestyles module implemented for clients (module H of HEARTS)</p>	2



# Progress in the implementation of the HEARTS technical package



Component	Expected results for 2025	Strategic priority to the present (May 2019)	Progress score
<b>Implementation of technical package for CVD management with emphasis on hypertension and secondary prevention for the primary care level</b>			
Protocols / treatment algorithms	Standardized Evidence-based treatment Guidelines for HTN	Treatment Algorithm developed, approved and implemented in all demonstration sites	2
Access to essential medicines and technologies	Formulary for CDAP revised  New Drugs used for treatment of HTN	Core set of medications for hypertension and CVD secondary prevention (module A of HEARTS) available for population especially the most vulnerable groups	2

# Monitoring Of Data Quality And Measurements



- Targets and indicators selected and agreed on
- Monitoring framework established and used
- Evaluation team identified. Evaluation conducted 1 year after the program
- Articles and research papers on TTHI written. At least one article published in a peer reviewed journal
- Public forum to share the results of the program conducted after 1 year

# Monitoring Data Quality And Measurements



Targets and indicators selected and agreed on

Strengthening Registries  
Paper to Electronic

Standardisation of technology. Training and updates for staff and partners of HEARTS

Monitoring framework established and used

Evaluation team identified. Evaluation conducted 1 year after the program

Articles and research papers on TTHI written. At least one article published in a peer reviewed journal

Public forum to share the results of the program conducted after 1 year



# System For Monitoring The Quality Of Measurement Data

Component	Expected results for 2025	Strategic priority to the present (May 2019)	Progress score
<b>Education and certification of providers</b>	Providers have performance protocols and are certified for blood pressure measurement	Providers have performance protocols and are certified for blood pressure measurement	<b>2</b>
<b>Blood pressure measuring devices</b>	Policy is defined, regulations and mechanisms are established to enforce regulations for validated devices	Automated devices are used	<b>2</b>
		Manual devices are used AND are calibrated and validated	

# System for monitoring the quality of measurement data



Component	Expected results for 2025	Strategic priority to the present (May 2019)	Progress score
<b>Blood pressure measuring devices</b>	Policy defined. Regulations and mechanisms established for validating devices	<b>Standardised electronic HTN devices are used AND are calibrated and validated as per policy</b>	2
<b>Clinical audit</b>	Clinical audit system implemented, as part of a quality management system	Functional clinical audit system that regularly evaluates clinical documents, adherence to blood pressure measurement protocols and therapeutic algorithm.	2
<b>System for monitoring</b>	Monitoring of key variables to evaluate the quality of measurements	Mean of systolic and diastolic blood pressure	2
		Mean of diastolic blood pressure and standard deviations.	2
		Prevalence of terminal digit 0, 2, 4, 6, 8 if using manual devices	2

# Where we are implementing and what population we are covering with the HEARTS Initiative



Implementation site	Coverage: Baseline	Coverage goal for 2020	Control: Baseline	Control Goal for 2020
Sangre Grande Enhanced Health Centre	36%	50%	20%	50%
Oxford Street	In progress	20% increase	In progress	30% increase
Scarborough	17%	40%	In progress	30% increase
Freeport Health Centre	In progress	20% increase	In progress	30% increase
Arima District Health Facility	20%	40%	In progress	30% increase

# Roadmap for HEARTS to become a model of care within Primary Care in 2025 and coverage of the entire population



**Approval of the National Treatment Protocol and Algorithm** for Hypertension in PHC

**Training of Staff** in RHAs in the Use of the TTO Treatment Protocol and Algorithm for Hypertension in PHC

**Phased introduction of Treatment Guidelines** and Algorithm in PHC

**Capacity Building** for TTHI Implementation in Regional Settings: Team Based Care, Healthy Lifestyle

**Establishment of M&E mechanism** and Surveillance system  
-core standardised indicators ; Minimum data sets -Registries

**Updating of Drug Formulary** and Realign Purchasing Intention of Hypertensive Drugs

**Increase access to health technology/** equipment for managing HTN in PHC settings

**Scale up of TTHI** with each RHA





# Elements that are facilitating the implementation

- High level political commitment
- Buy in and commitment from RHAs
- Funding for scale up available
- Mechanism for access to essential medicine is in place (Chronic Disease Assistance Programme)
- Technical support accessible

# Roadmap for HEARTS to become a model of care within Primary Care in 2025 and coverage of the entire population



Agreement on the National Treatment Protocol and Algorithm for Hypertension in PHC

Capacity Building for TTHI Implementation in Regional Settings:

Procurement of Equipment and Technology support

Establishment of core set of standardised indicators for monitoring and evaluation of TTHI

Change CDAP Formulary and Purchasing of Hypertensive Drugs

Phased introduction of Treatment Protocol and Algorithm

Standardisation of Minimum Data Sets

Strengthening Registries and NCD Surveillance

Development of M&E strategy and documentation of TT HEARTS

# Thank You



Government of the Republic of Trinidad and Tobago

Ministry of Health

