

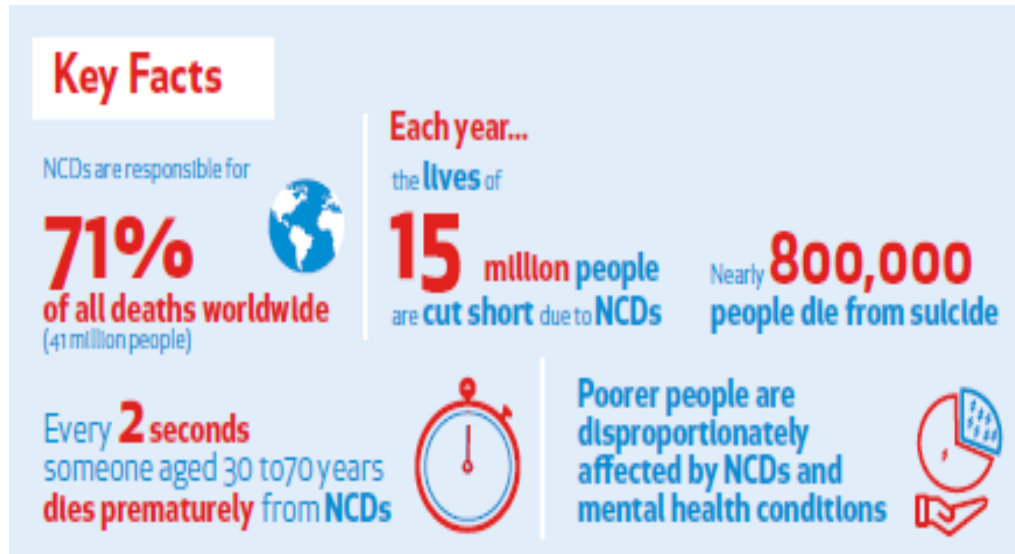


# Training of Trainer on Prevention and Treatment of Major NCDs in the Community



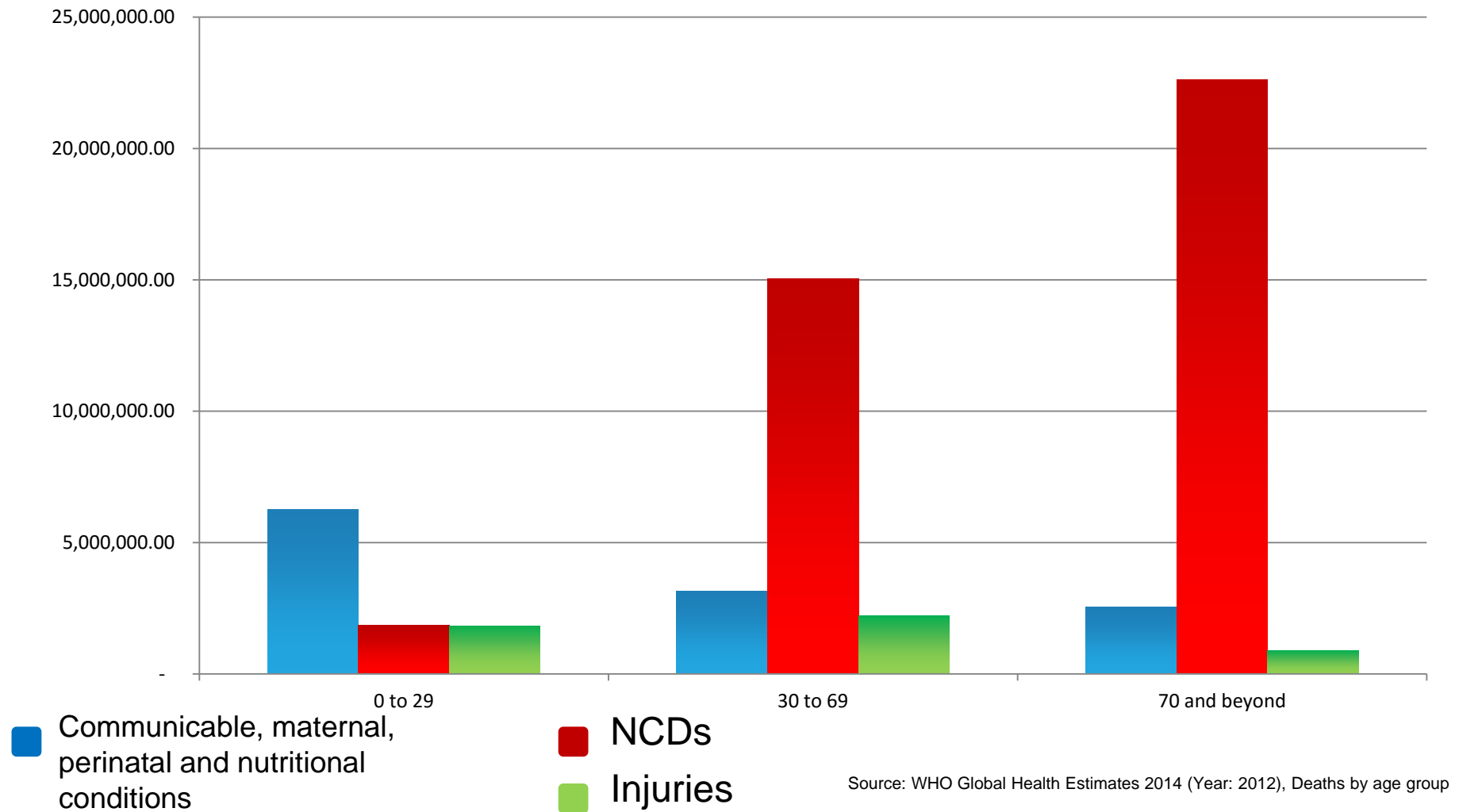
# **Current Burden of Non-Communicable Diseases**

# Global Burden of NCD

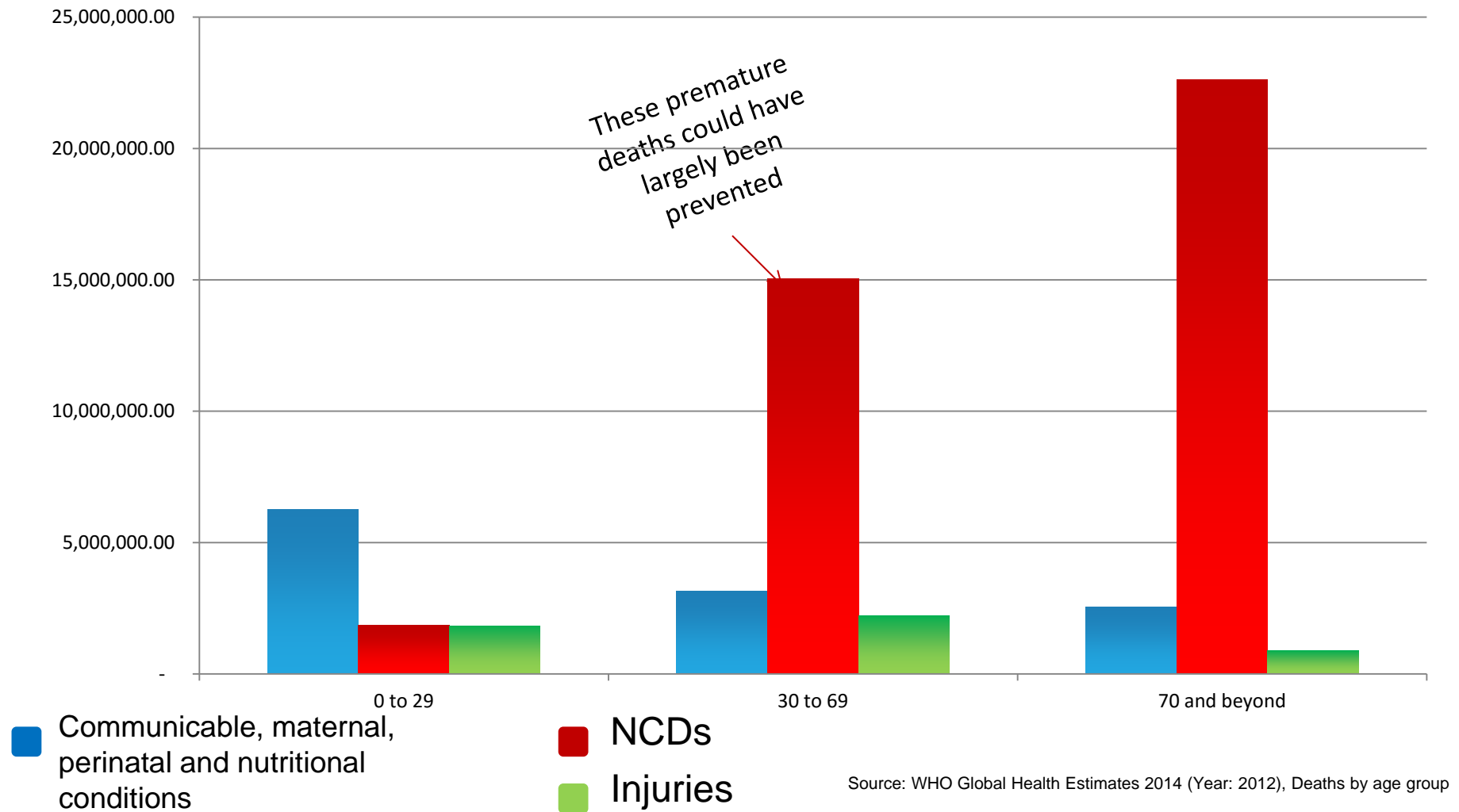


- Non-communicable diseases kill 41 million people each year, equivalent to 71% of all deaths globally.
- Each year, 15 million people die from a NCD between the ages of 30 and 69 years; over 85% of these "premature" deaths occur in low- and middle-income countries.
- Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.0 million), respiratory diseases (3.9 million), and diabetes (1.6 million).
- These 4 groups of diseases account for over 80% of all premature NCD deaths.

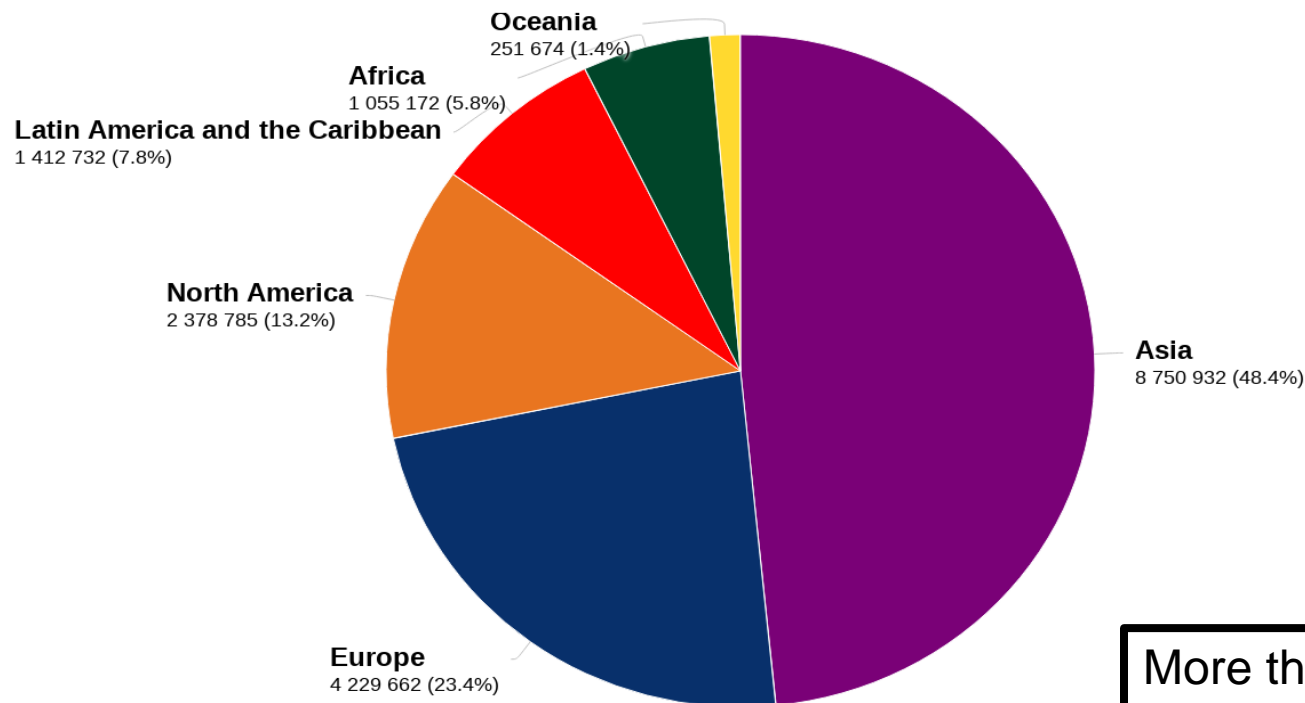
# 41 million of the 57 million global deaths in 2016 were due to NCDs



# 15 million people died from NCDs in 2016 between ages 30 and 70



# Estimated number of Cancer New Case Both Sex , All Age

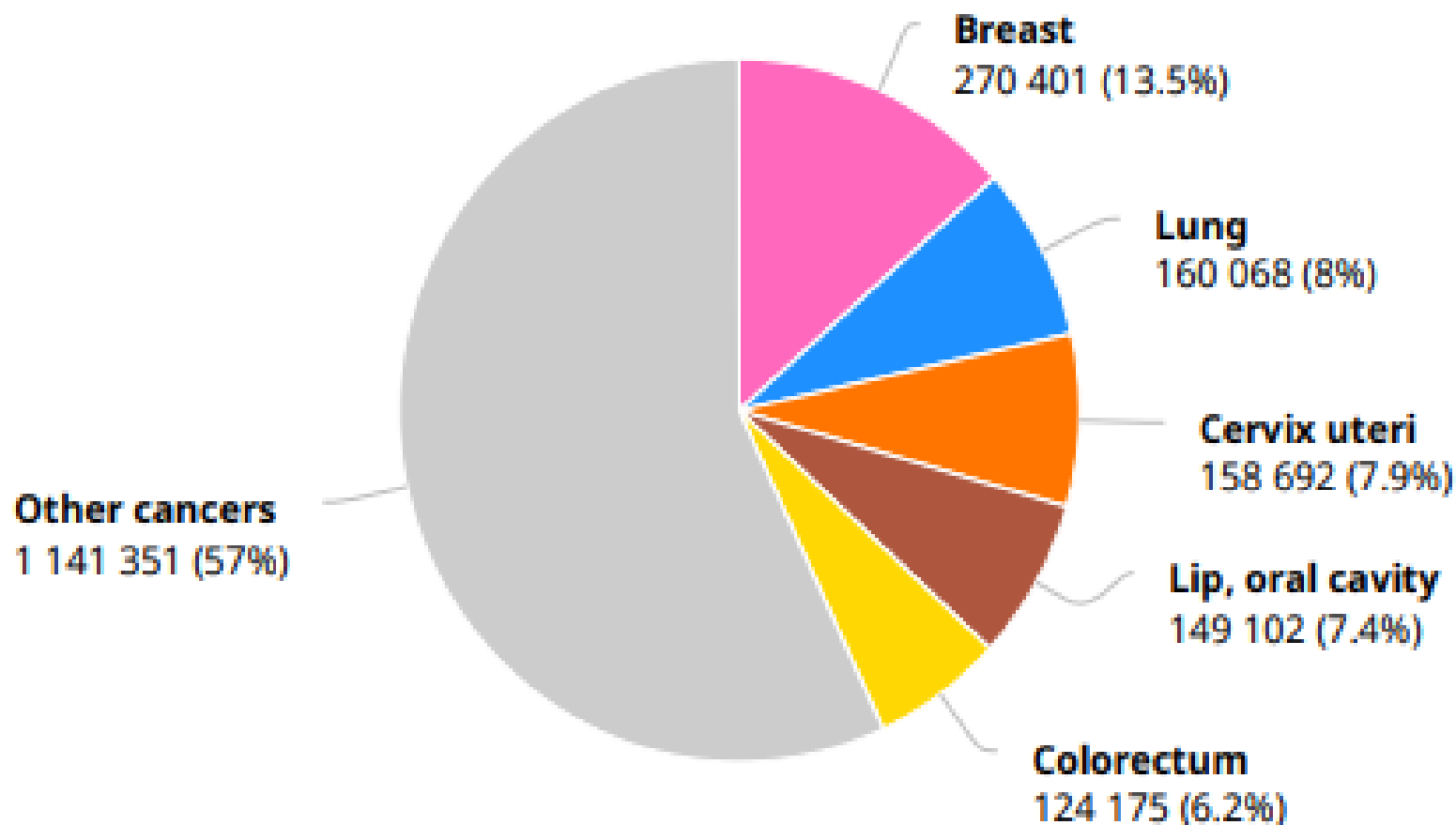


Total : 18 078 957

More than 2  
million new cases  
SEAR Region

Data Source : Globocan 2018

# New cancer cases in 2018 in SEAR

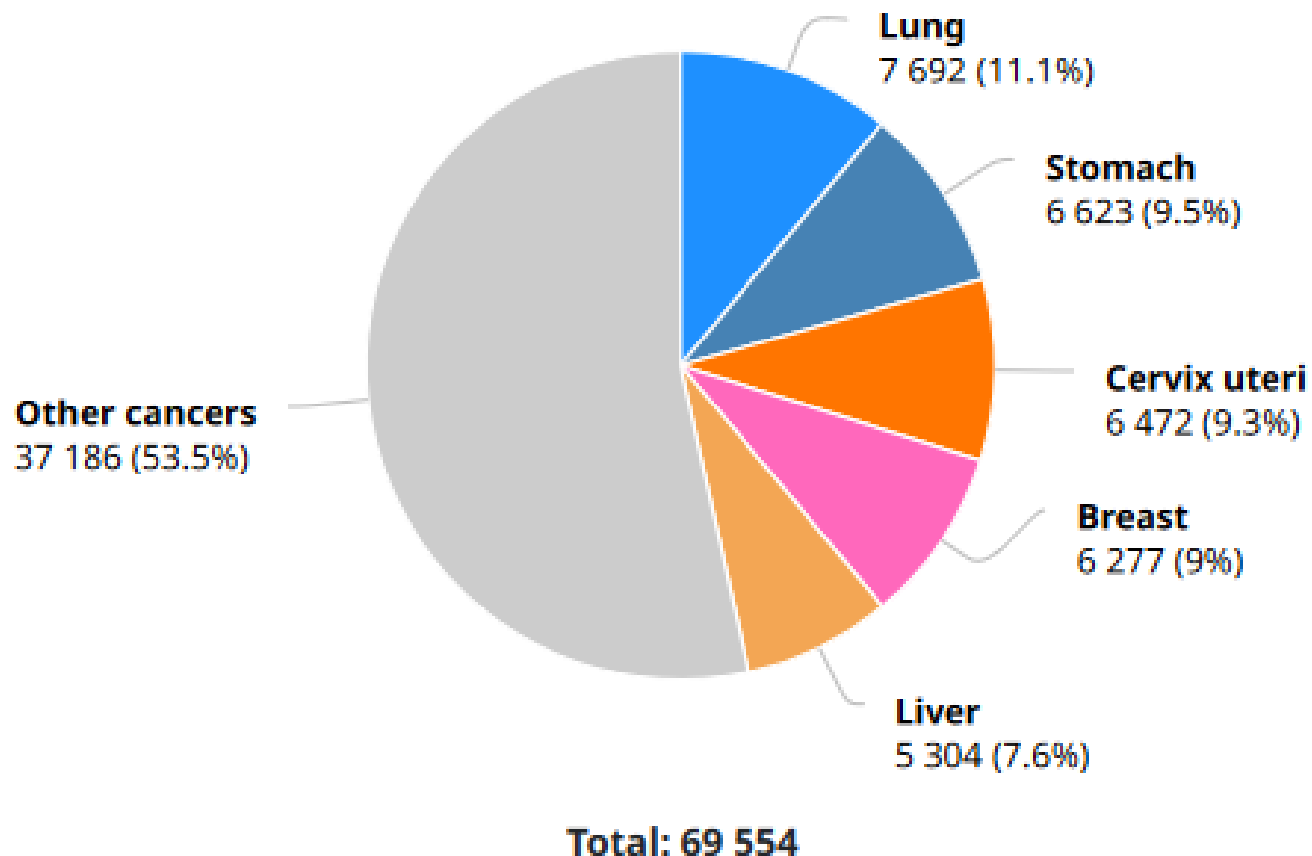


Data Source : Globocan 2018

**Total: 2 003 789**

# Myanmar 2018

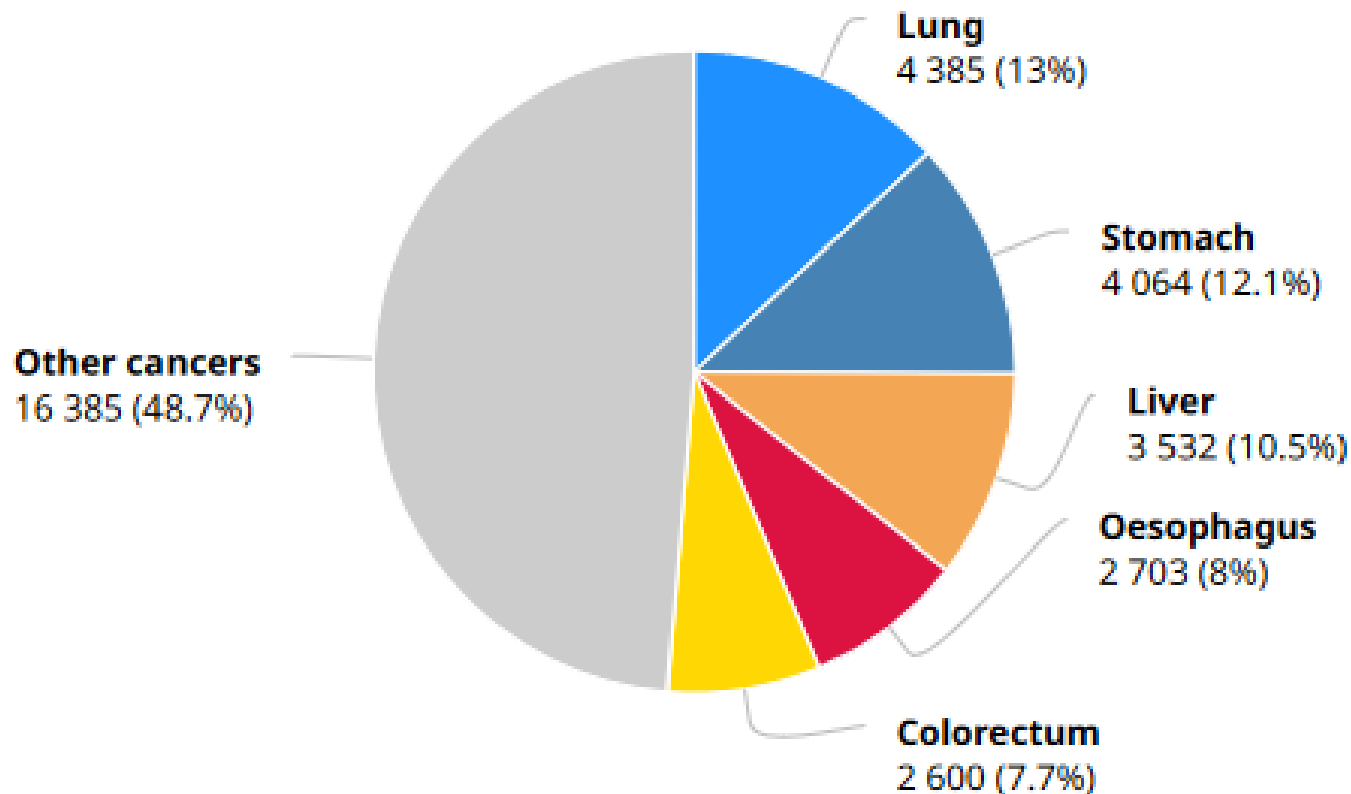
Number of new cases in 2018, both sexes, all ages





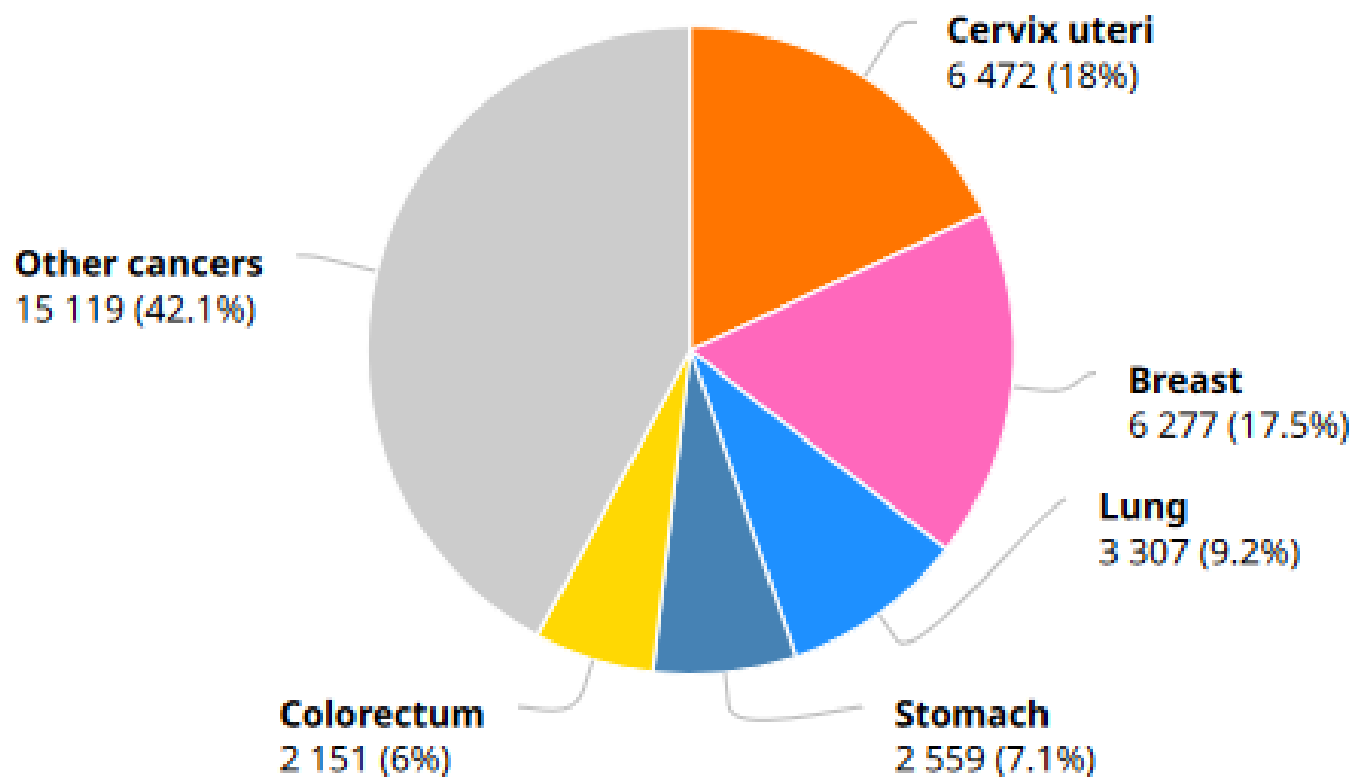
# Myanmar 2018

Number of new cases in 2018, males, all ages



**Total: 33 669**

## Number of new cases in 2018, females, all ages



**Total: 35 885**

# Myanmar Cancer Number at a glance

Total population

**53 855 731**

Number of new cases

**69 554**

Number of deaths

**51 059**

Number of prevalent cases (5-year)

**113 581**

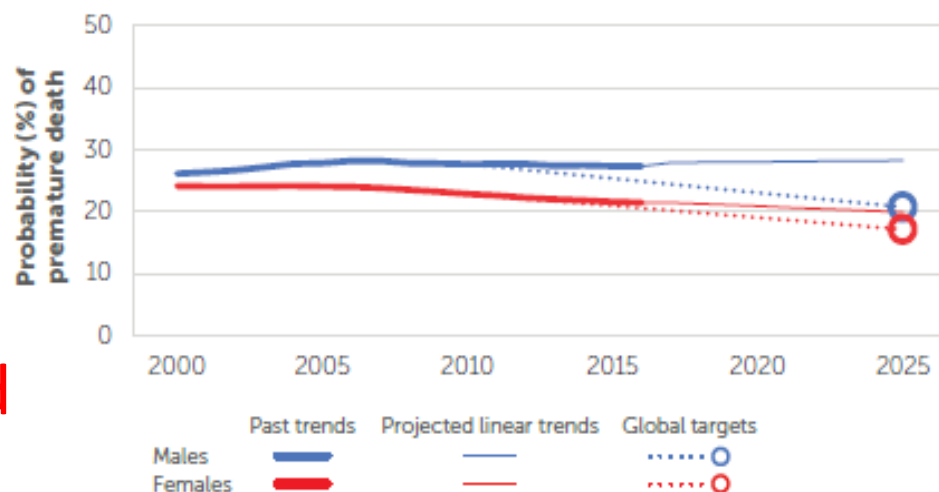
# Myanmar and NCD Overview

- Population- 51,486,253 (Census 2014)
- Epidemiological transition taking place in the country the same with Regional and Global trend
- 94% adults live with at least 1 risk factor of NCDs (STEPS 2014)
- 68% deaths due to NCDs (WHO-2017)

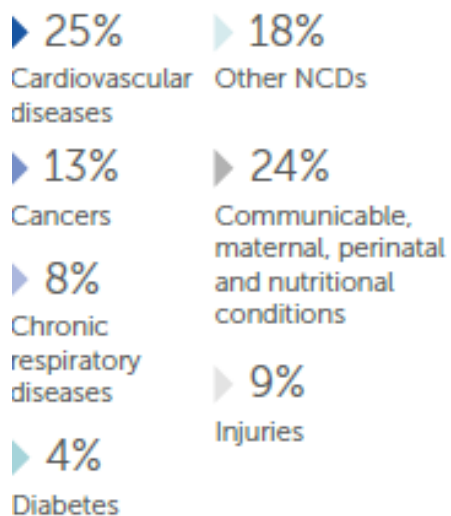


**Myanmar** is unlikely to meet the target for reducing premature mortality from NCDs unless urgent prioritized actions implemented

RISK OF PREMATURE DEATH DUE TO NCDs (%)\*

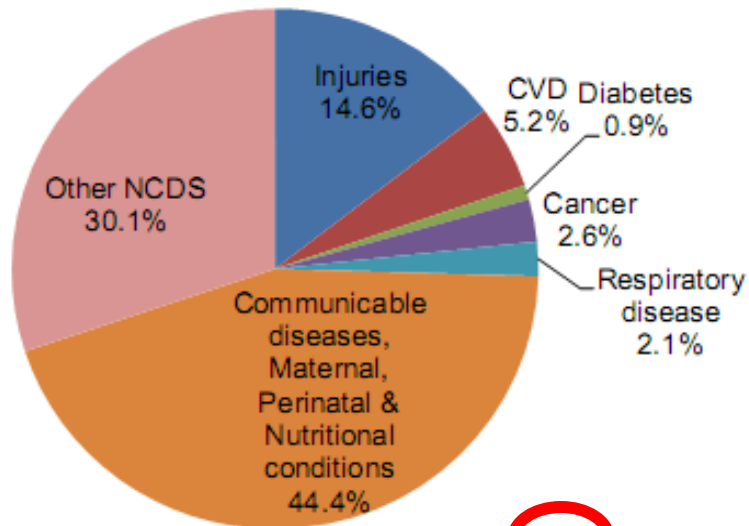


PROPORTIONAL MORTALITY\*

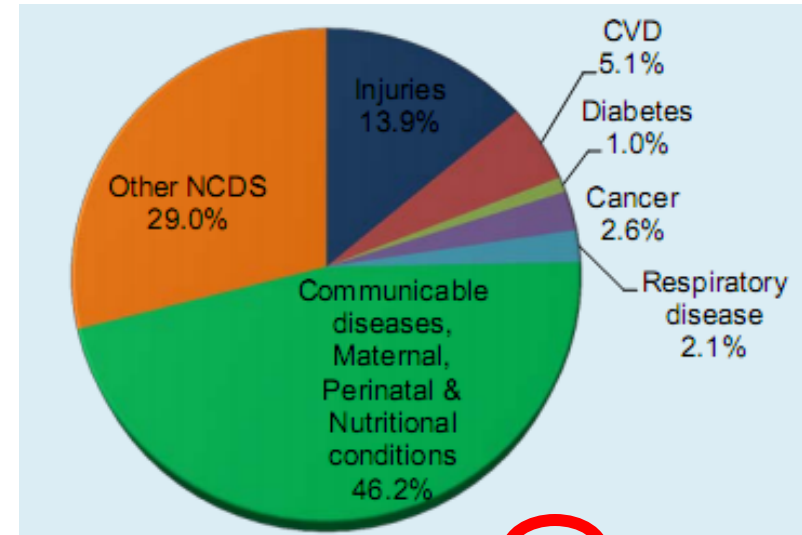


- Cardiovascular diseases (heart attack and stroke) are the leading causes of mortality responsible for one out of every four deaths
- Most premature deaths from cardiovascular diseases can be prevented

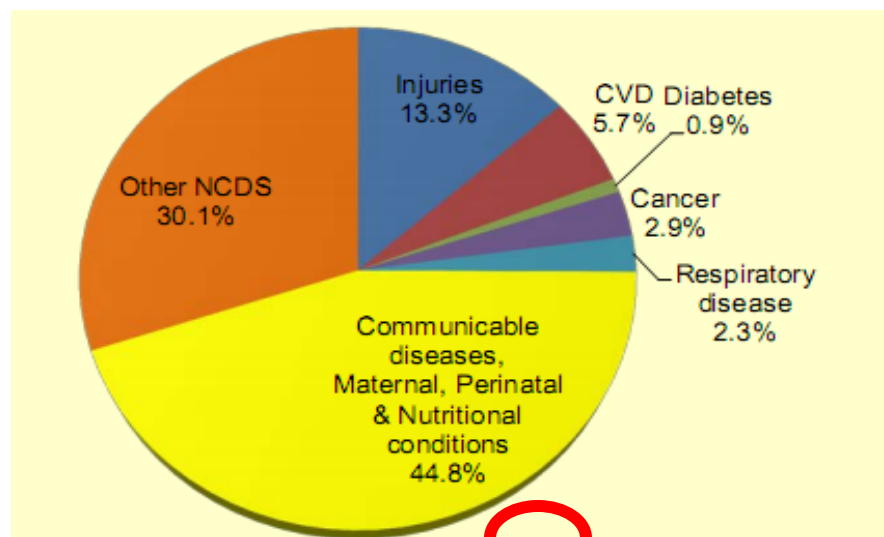
# Distribution of NCD Patients in Hospital Admission - Myanmar 2014-2016



NCDs are estimated to account for 41% of all morbidity in 2014



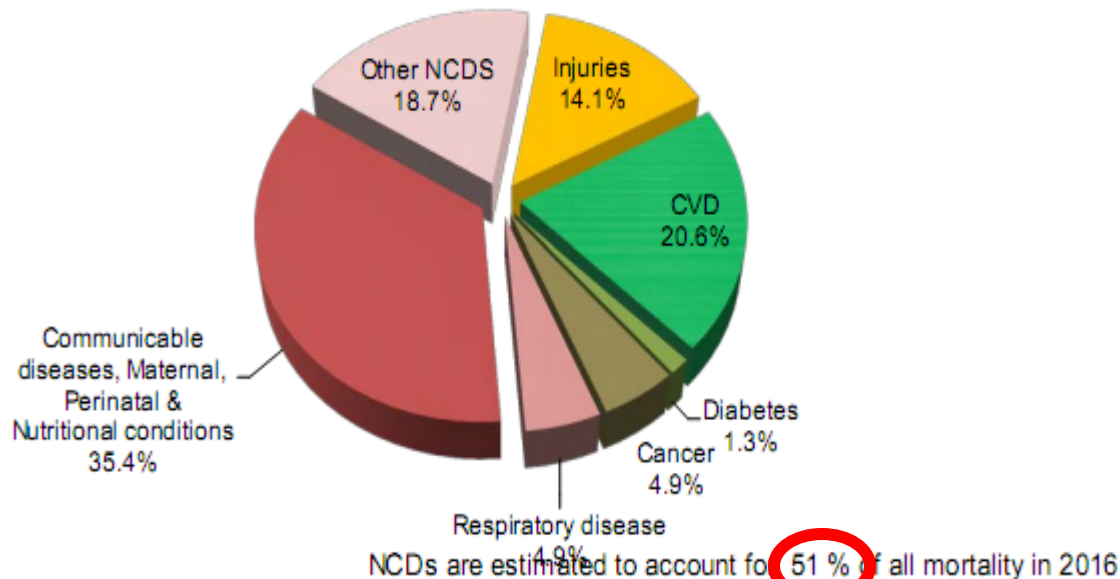
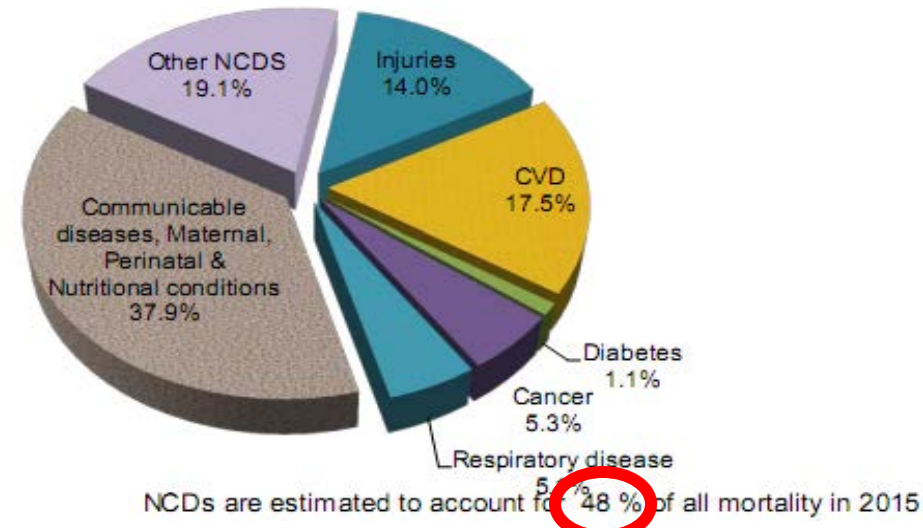
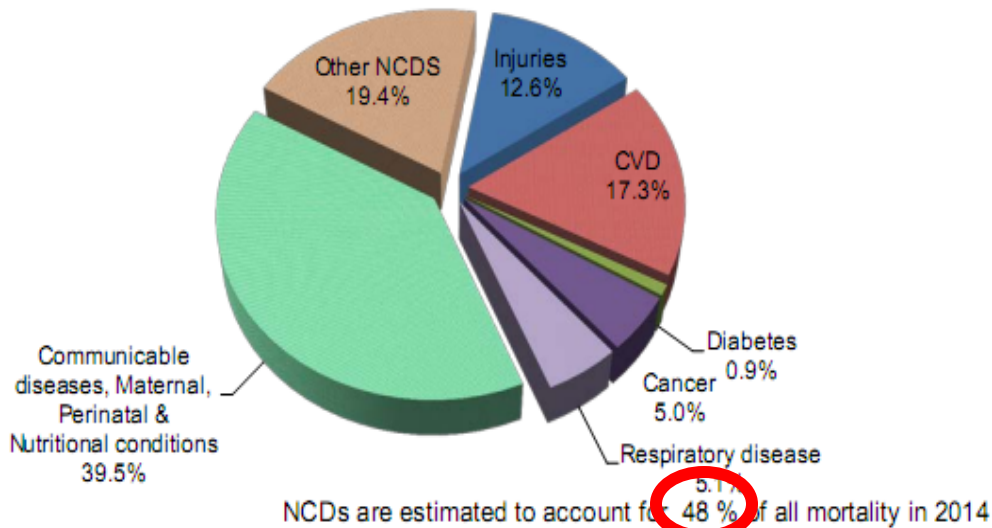
NCDs are estimated to account for 40% of all morbidity in 2015



NCDs are estimated to account for 42% of all morbidity in 2016

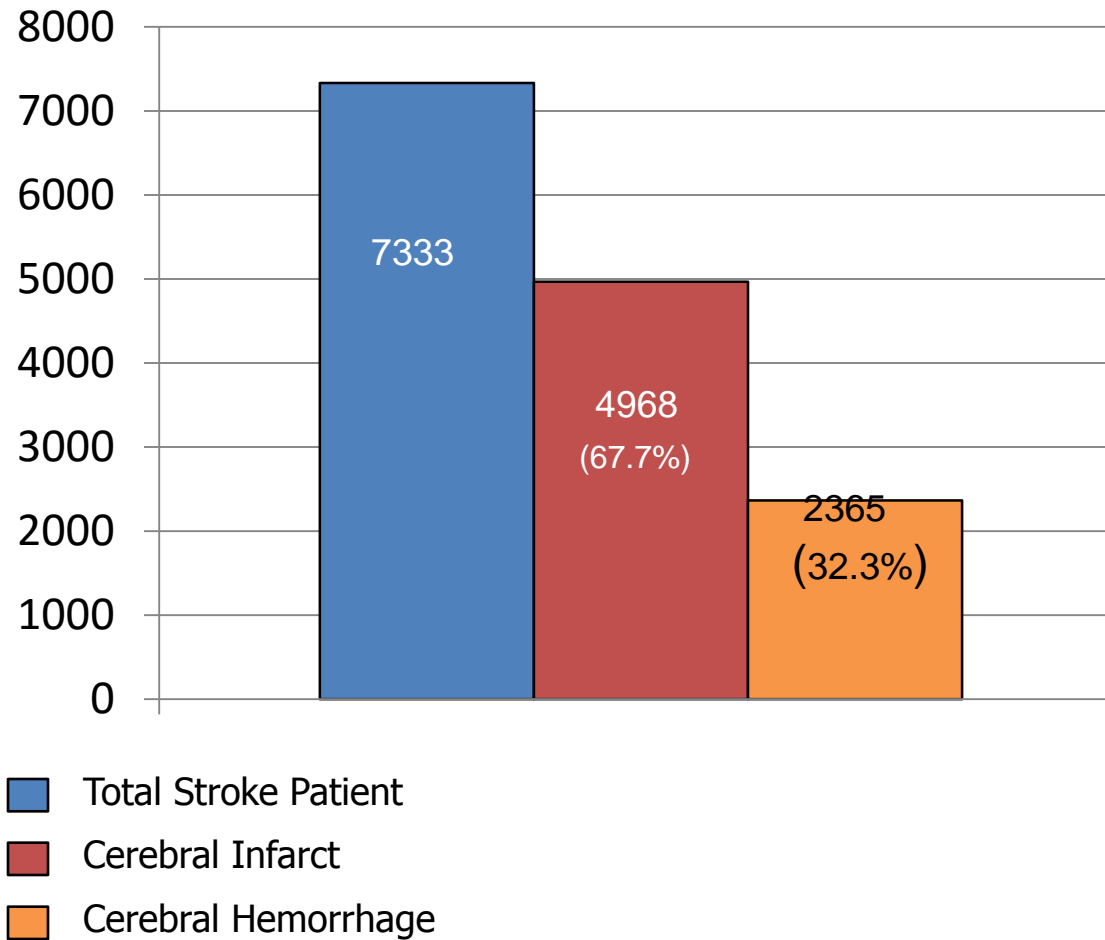
**Source: Hospital Statistics Report (2014-2016)**

# Morbidity due to NCDs in Hospital Admitted Patients 2014-2016



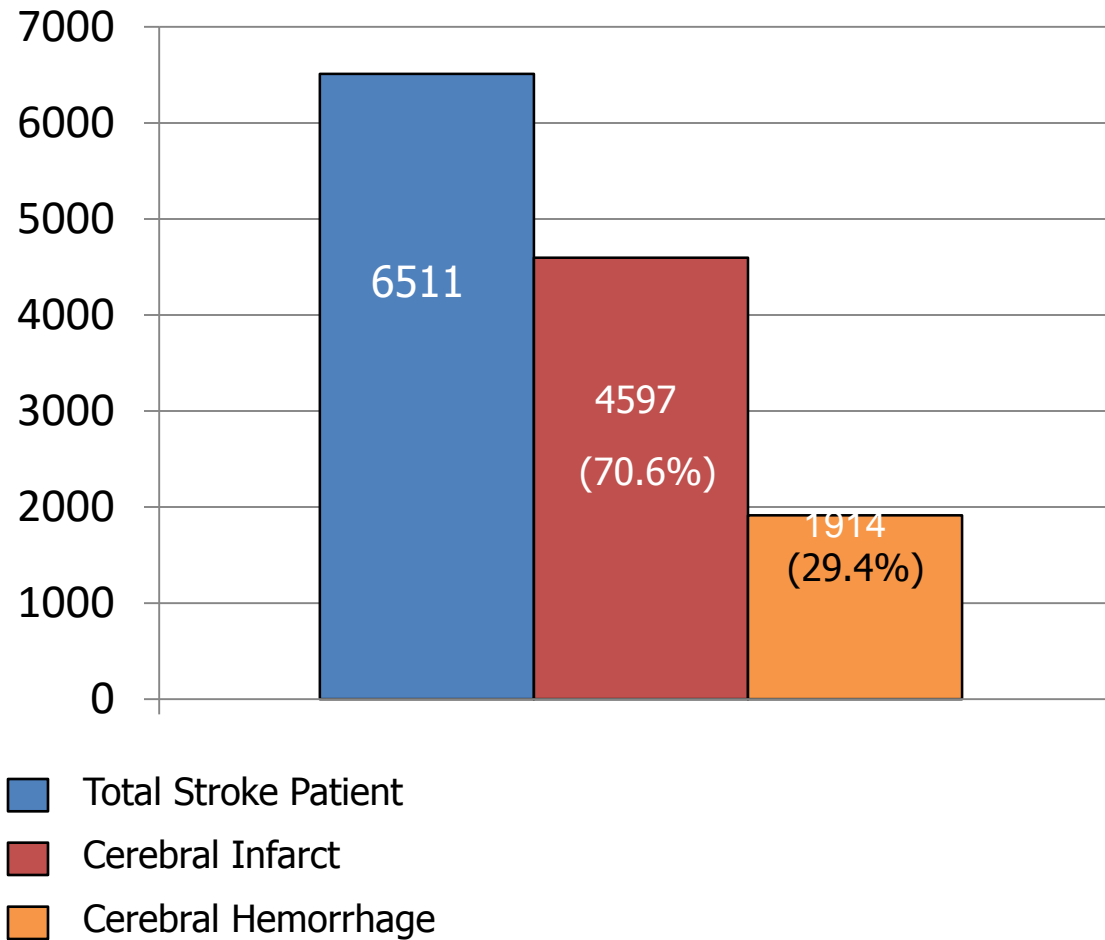
**Source: Hospital  
Statistics Report  
(2014-2016)**

## The Stroke Patient admitted to Yangon General Hospital in Year 2016



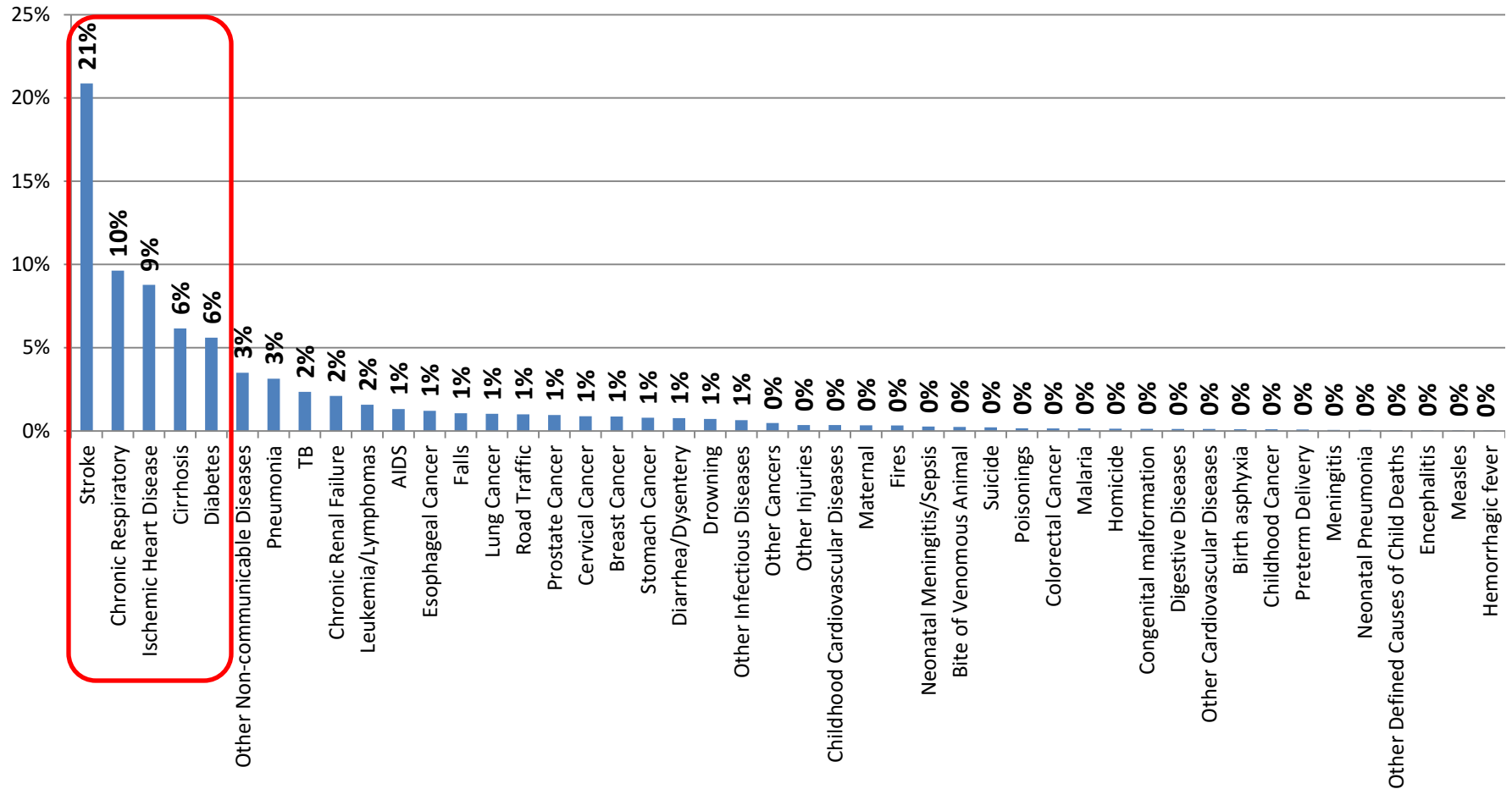


## The Stroke Patient admitted to Yangon General Hospital in Year 2017



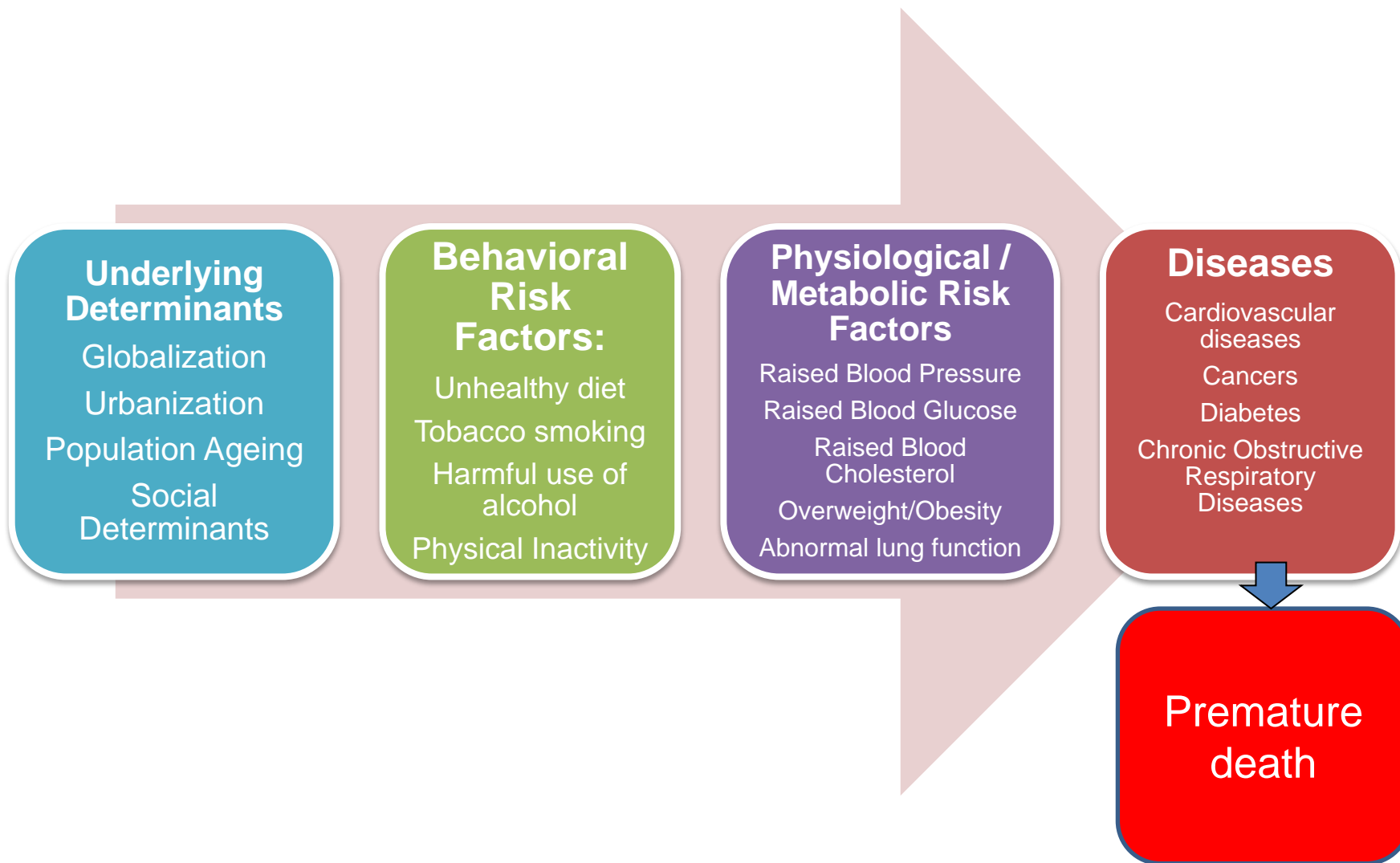
# Cause of death distribution - Cause Specific Mortality Fraction (CSMF)

## All ages in 42 townships (Jan-June 2018)



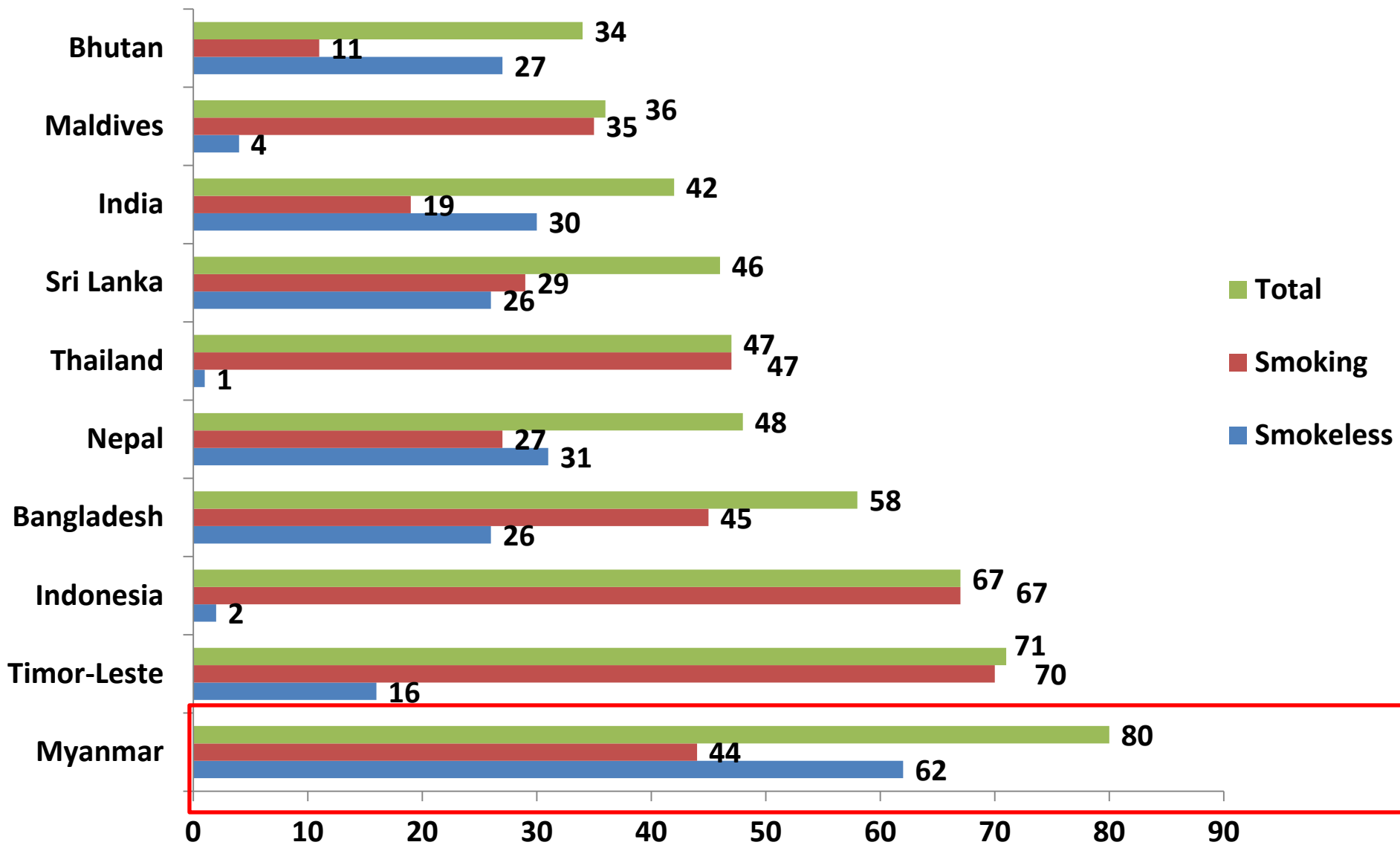
# **Risk Factors for Non-Communicable Diseases**

# What are NCDs Risk Factors?

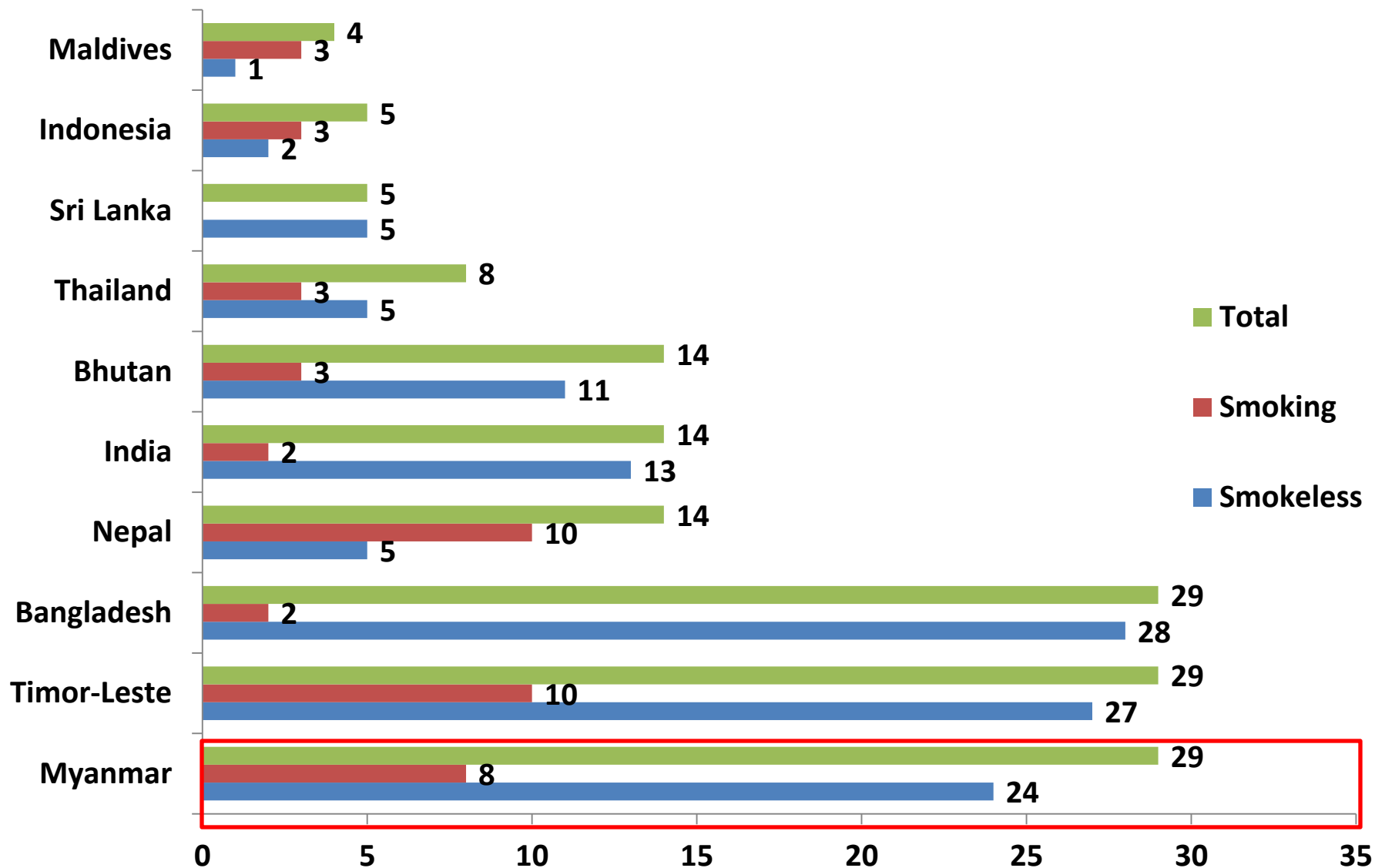


Source: Adapted from *Preventing Chronic Disease: a Vital Investment*.  
Geneva, World Health Organization, 2005.

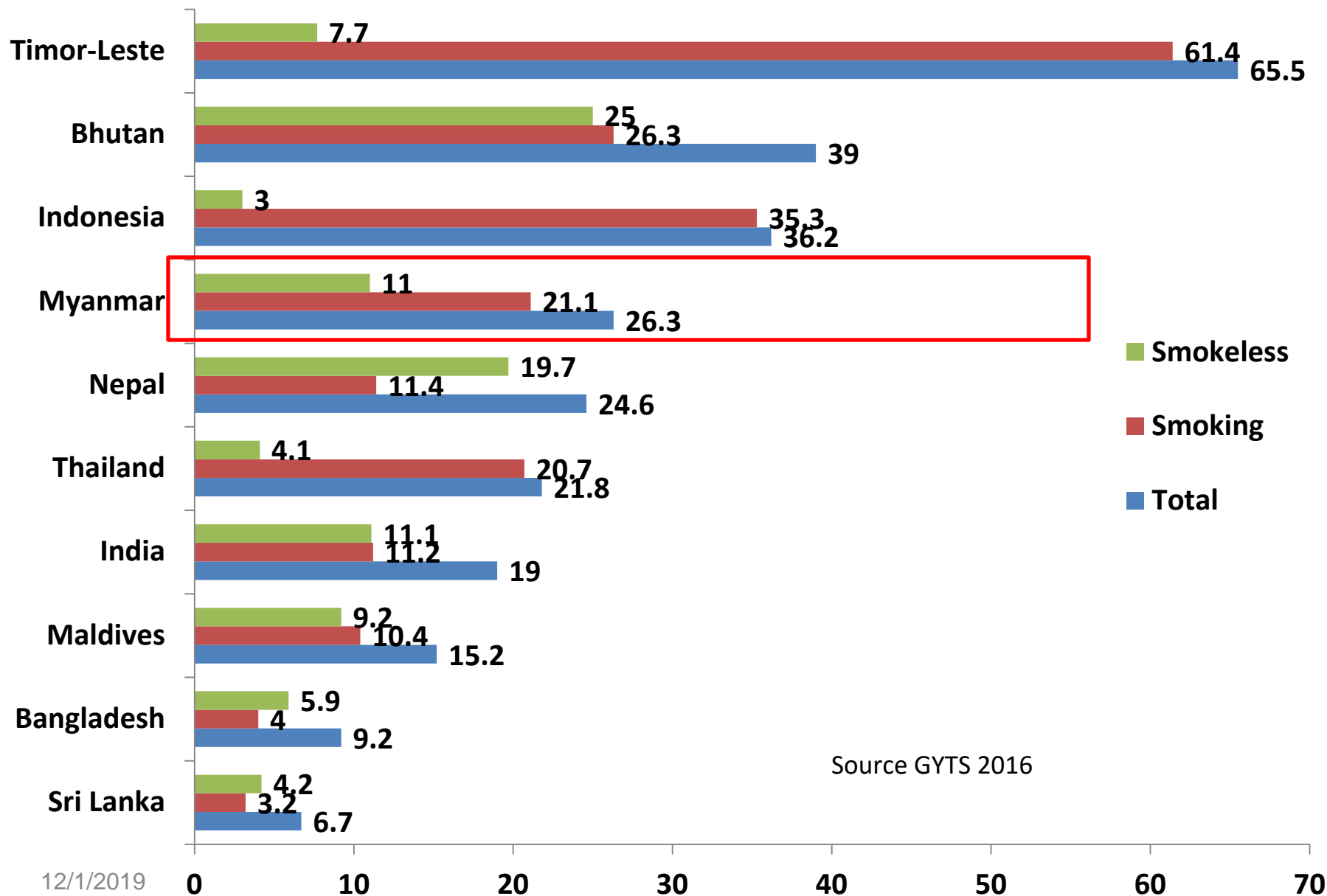
## Current tobacco use among **adult men** (in %)



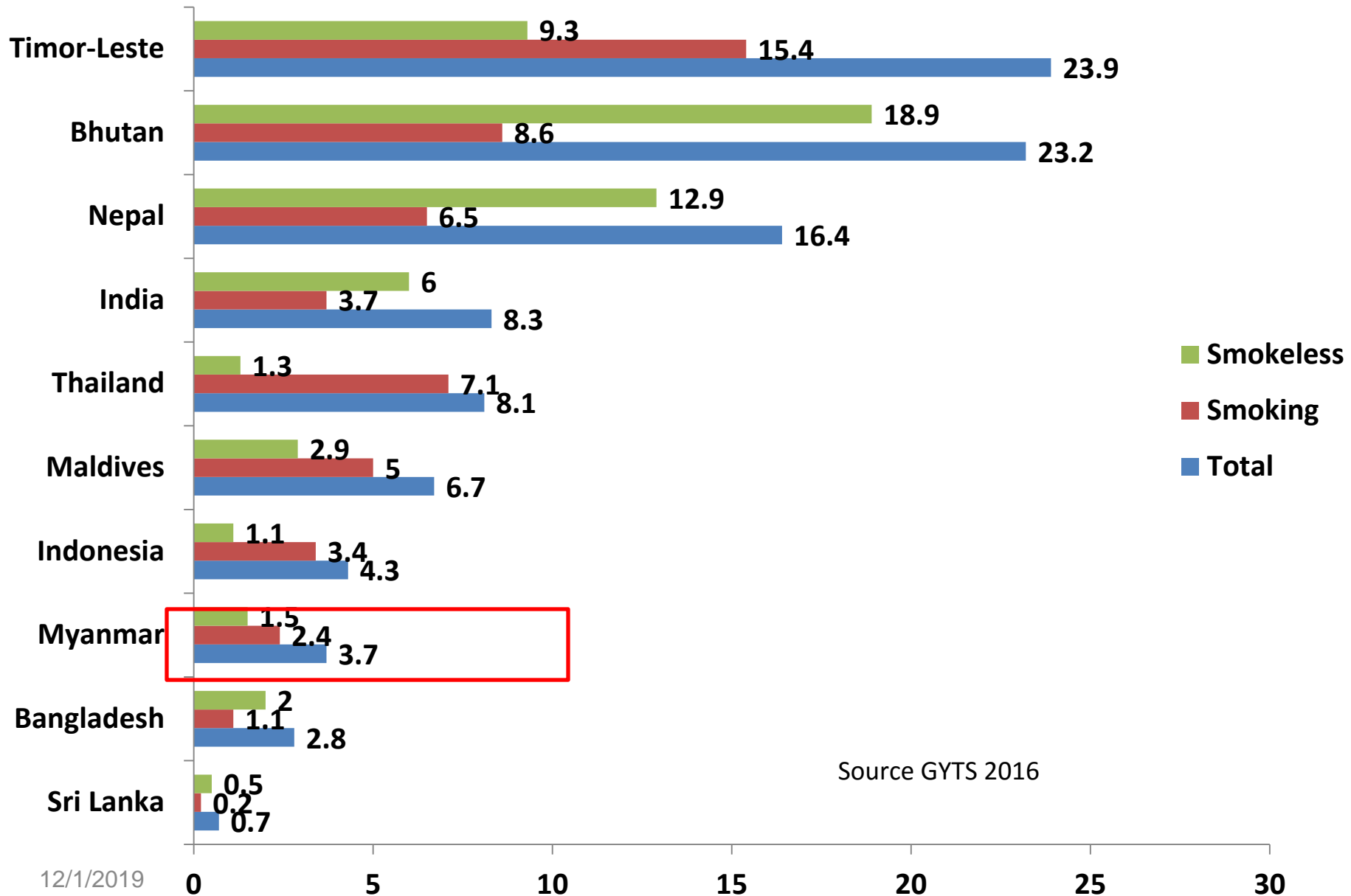
## Current tobacco use among **adult women** (in %)



## Current tobacco use among youth (**boys**, in %)



## Current tobacco use among youth (**girls**, in %)





# Findings of STEP survey, 2014

| Description  | Male   | Female | Both sexes |
|--|--------|--------|------------|
| Percentage of current smoker   | 43.8 % | 8.4%   | 26.1%      |
| Percentage of current smokeless tobacco user   | 62.2 % | 24.1%  | 43.2 %     |
| Percentage of with raised fasting blood glucose or raised 2-h blood or currently on medications for raised blood glucose | 9.1%   | 11.8%  | 10.5 %     |
| Percentage of overweight in adult (BMI $\geq 25$ kg/m <sup>2</sup> )   | 14.1%  | 30.8%  | 22.4 %     |
| Percentage of adult Obesity (BMI $\geq 30$ kg/m <sup>2</sup> )   | 2.6%   | 8.4%   | 5.5 %      |
| Percentage of adults with raised blood pressure (SBP $\geq 140$ and/or DBP $\geq 90$ mmHg)                               | 24.7%  | 28%    | 26.4 %     |
| Percentage of Adult with high blood cholesterol level  | 30.9%  | 42.5%  | 36.7 %     |
| Percentage of current drinker  | 38.1%  | 1.5%   | 19.8 %     |

# **Global Action Plan & Targets for Non-Communicable Diseases Prevention and Control**

# The WHO Global NCD Action Plan 2013-2020

## – six objectives



**Objective 1**  
To raise the **priority** accorded to the prevention and control of NCDs in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy



**Objective 2**  
To strengthen national capacity, leadership, **governance**, multisectoral action and partnerships to accelerate country response for the prevention and control of NCDs



**Objective 3**  
To reduce **modifiable risk factors** for NCDs and underlying social determinants through creation of health-promoting environments



**Objective 4**  
To strengthen and orient **health systems** to address the prevention and control of NCDs and the underlying social determinants through people-centred primary health care and universal health coverage



**Objective 5**  
To promote and support national capacity for high-quality **research and development** for the prevention and control of NCDs



**Objective 6**  
To monitor the trends and determinants of NCDs and **evaluate progress** in their prevention and control





## I SUPPORT GOAL 3 GOOD HEALTH AND WELL-BEING



Commits governments to develop national responses:

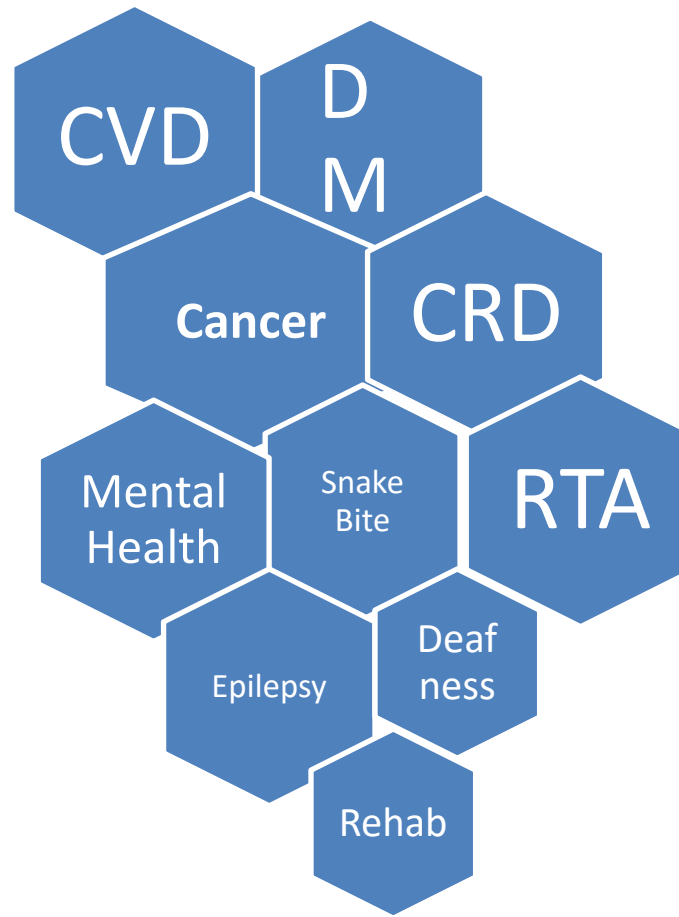
- **Target 3.4:** By 2030, reduce by one third premature mortality from NCDs
- **Target 3.5:** Strengthen responses to reduce the harmful use of alcohol
- **Target 3.8:** Achieve universal health coverage
- **Target 3.a:** Strengthen the implementation of the WHO Framework Convention on Tobacco Control
- **Target 3.b:** Support research and development of vaccines and medicines for NCDs that primarily affect developing countries
- **Target 3.b:** Provide access to affordable essential medicines and vaccines for NCDs

## 9 GLOBAL TARGETS FOR NONCOMMUNICABLE DISEASES FOR 2025



# Ministry of Health and Sports Effort to combat NCD in Myanmar

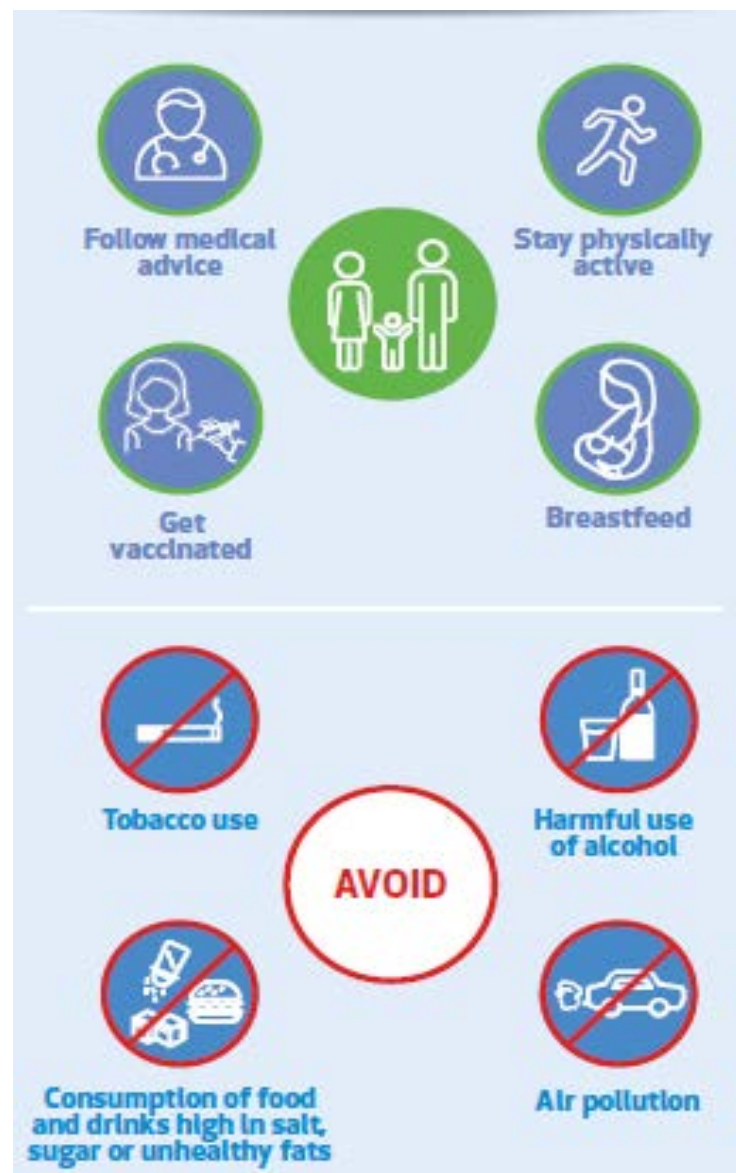
# DOPH –NCD Unit





# Are NCDs Preventable and How?

- Most Premature Deaths and Suffering from NCD are preventable
- NCD Best Buys





# NCD Prevention and Control

## Prevention

- To focus on **reducing the risk factors** associated with Major NCDs
  - Promote Physical Activities
  - Tobacco Control
  - Alcohol Control
  - Unhealthy Diet
- **Health Promotion**
- **Low-cost solutions** exist for governments and other stakeholders

## Control

- PEN approach for major NCD
- Preventive Cardiology for early detection and treatment
- It is also secondary Prevention to reduce complication



# NCD Best Buys

## Population-wide interventions Multi-sectoral

## Individualised interventions Health Sector

| Risk factor / disease                  | "Best buy" Interventions  |
|--|---|
| Tobacco use                            | <ul style="list-style-type: none"> <li>- Raise taxes on tobacco</li> <li>- Protect people from tobacco smoke</li> <li>- Warn about the dangers of tobacco</li> <li>- Enforce bans on tobacco advertising</li> </ul> |
| Harmful use of alcohol                 | <ul style="list-style-type: none"> <li>- Raise taxes on alcohol</li> <li>- Restrict access to retailed alcohol</li> <li>- Enforce bans on alcohol advertising</li> </ul>  |
| Unhealthy diet and physical inactivity | <ul style="list-style-type: none"> <li>- Reduce salt intake in food</li> <li>- Replace trans fat with polyunsaturated fat</li> <li>- Promote public awareness about diet and physical activity</li> </ul>           |
| Cardiovascular disease and diabetes    | <ul style="list-style-type: none"> <li>- Provide counselling and multi-drug therapy for people with medium-high risk of developing heart attacks and strokes</li> <li>- Treat heart attacks with aspirin</li> </ul> |
| Cancer                                 | <ul style="list-style-type: none"> <li>- Hepatitis B immunization beginning at birth to prevent liver cancer</li> <li>- Screening and treatment of pre-cancerous lesions to prevent cervical cancer</li> </ul>      |

# DOPH - NCD Screening and Treatment

- Secondary Prevention of Major NCD at PHC Level
- Based on WHO PEN approach
- Service include Screening and Treatment of DM and HT , Screening of Oral , Breast and Cervical Cancers
- 10 yr CVD risk assessment is conducted
- Covered 232 townships (from 2017 May up to date )
- In April 2019 - Ministry of Health and Sports initiate to go a big way on preventive cardiology

# Community Health Clinics **Cum** Diabetes , Hypertension Screening , Diagnosis and Treatment Clinics

2017

| January  | February   | March  | April  |
|--|--|--|--|
| Su M Tu W Th F Sa<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | Su M Tu W Th F Sa<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28          | Su M Tu W Th F Sa<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 31 | Su M Tu W Th F Sa<br>1<br>2 3 4 5 6 7 8<br>9 10 11 12 13 14 15<br>16 17 18 19 20 21 22<br>23 24 25 26 27 28 29<br>30 |
| May  | June   | July   | August   |
| Su M Tu W Th F Sa<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 | Su M Tu W Th F Sa<br>1 2 3<br>4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30    | Su M Tu W Th F Sa<br>1<br>2 3 4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 31 | Su M Tu W Th F Sa<br>1 2 3 4 5<br>6 7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 |
| September  | October  | November   | December   |
| Su M Tu W Th F Sa<br>1 2<br>3 4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30    | Su M Tu W Th F Sa<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | Su M Tu W Th F Sa<br>1 2 3 4<br>5 6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30    | Su M Tu W Th F Sa<br>1 2<br>3 4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 31 |

2018

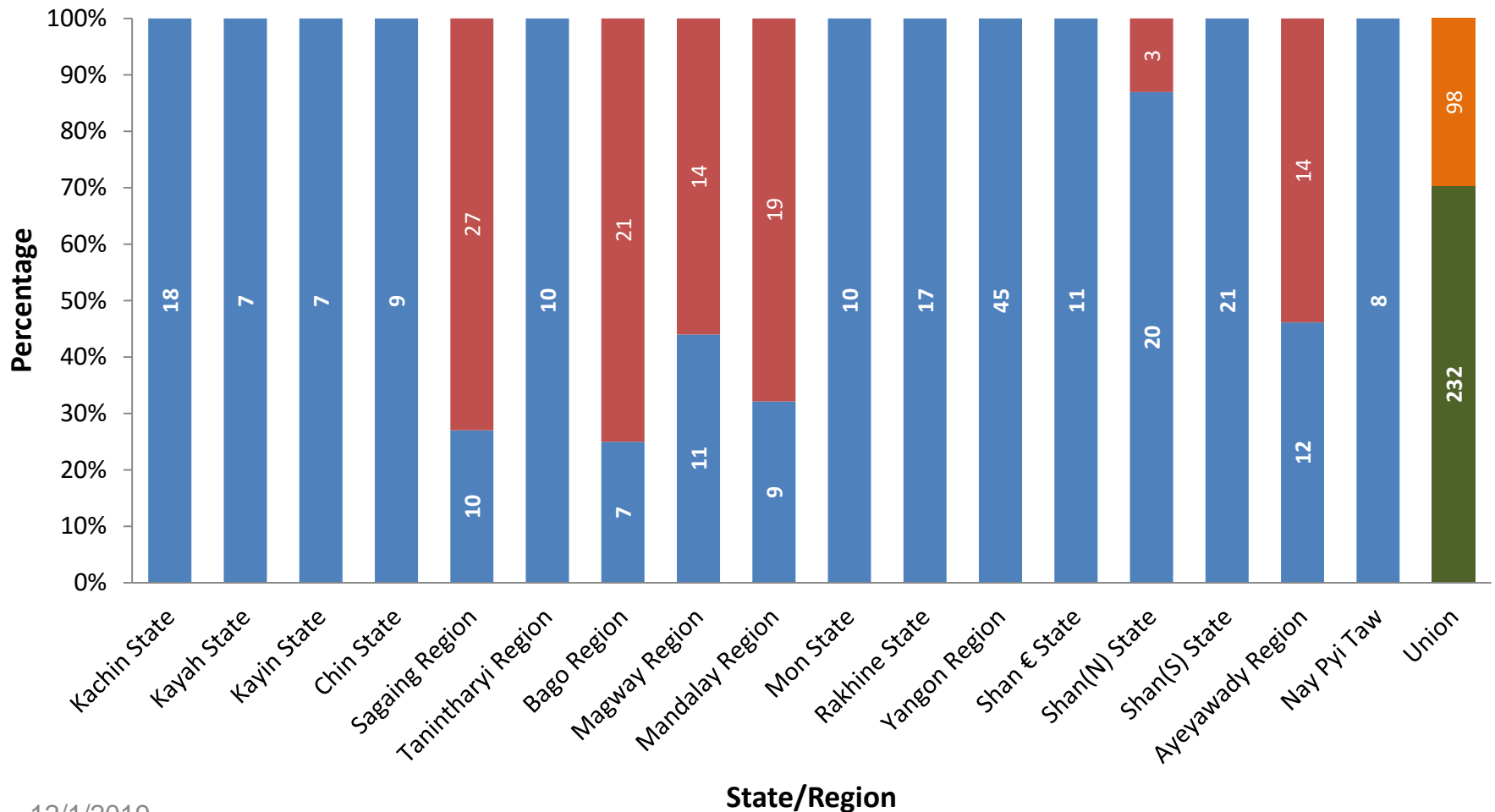
| January  | February   | March  | April  |
|--|--|--|--|
| Su M Tu W Th F Sa<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 | Su M Tu W Th F Sa<br>1 2 3<br>4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28          | Su M Tu W Th F Sa<br>1 2 3<br>4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 31 | Su M Tu W Th F Sa<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30    |
| May  | June   | July   | August   |
| Su M Tu W Th F Sa<br>1 2 3 4 5<br>6 7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 | Su M Tu W Th F Sa<br>1 2<br>3 4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30    | Su M Tu W Th F Sa<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | Su M Tu W Th F Sa<br>1 2 3 4<br>5 6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30 31 |
| September  | October  | November   | December   |
| Su M Tu W Th F Sa<br>1<br>2 3 4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30    | Su M Tu W Th F Sa<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 | Su M Tu W Th F Sa<br>1 2 3<br>4 5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30    | Su M Tu W Th F Sa<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 |

CHC

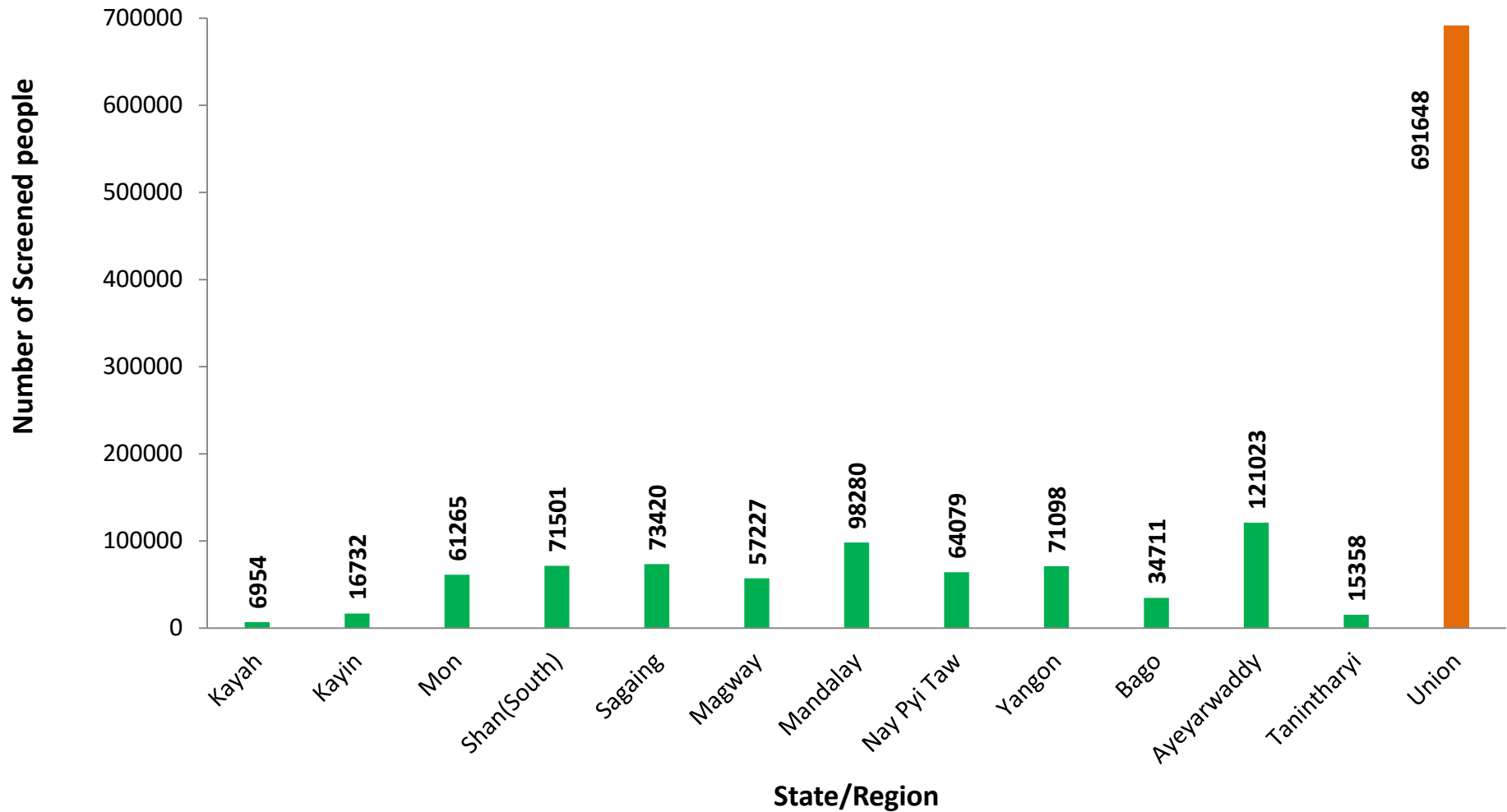
# PEN Approach Vs CHC Approach

| Preparation / implementation | PEN   | CHC  |
|------------------------------|---|--|
| Training                     | Conducted   | Not able to Conduct  |
| IEC Material                 | Provided  | Not Provided   |
| Supplies & Equipment         | Provided  | From PEN Supplies  |
| Interventions                | <ul style="list-style-type: none"> <li>• Screening and Treatment of DM, HT</li> <li>• CVD Risk assessment</li> <li>• Cancer Screening</li> <li>• Chronic Respiratory Disease Treatment</li> <li>• Health Promotion</li> </ul> | <ul style="list-style-type: none"> <li>• Screening and Treatment of DM, HT</li> <li>• CVD Risk assessment</li> <li>• Elderly Care</li> <li>• Health Promotion</li> </ul> |
| Focal Unit                   | NCD   | Basic Health   |
| Implementation Site          | RHC and SRHC  | RHC  |
| Township Covered             | Trained 232 Townships   | All Township   |

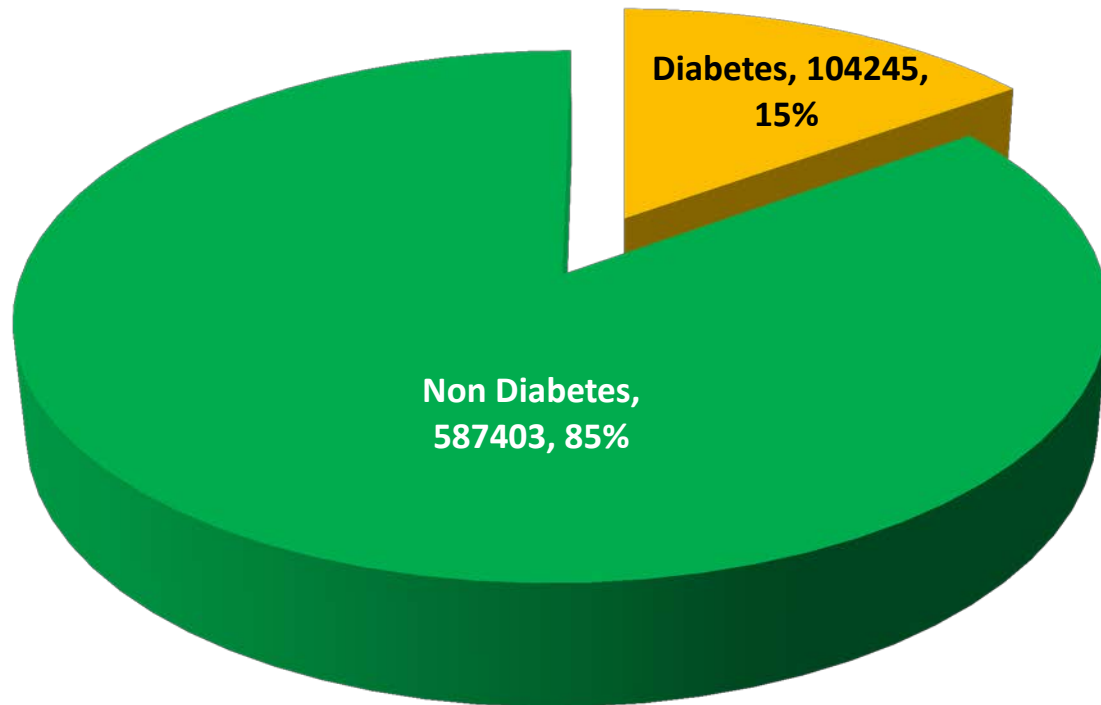
# Training and Implementing of Diabetes and Hypertension Clinics in PEN Approach (2017 May – 2019 February)



# Total Screened Patient by State/Region ( 2017 May -2018 Dec ) from 149 Townships

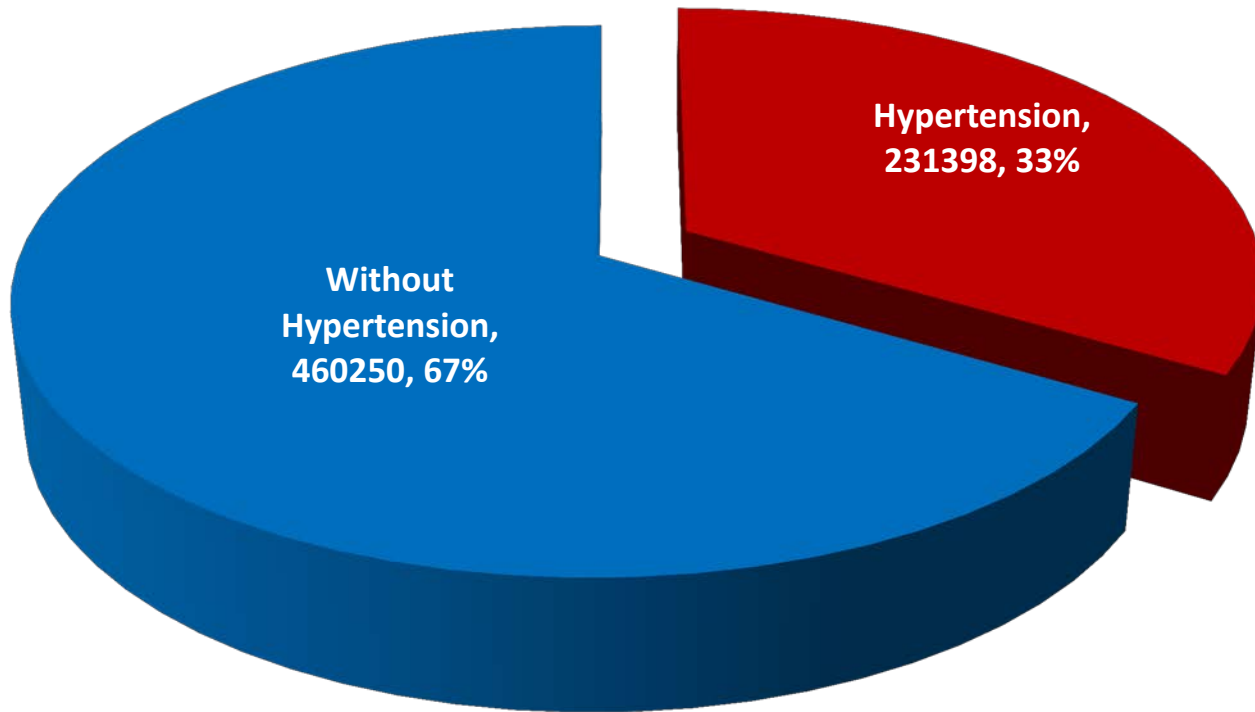


# Diabetes among screened patients ( 2017 May -2018 Dec ) from 149 Townships

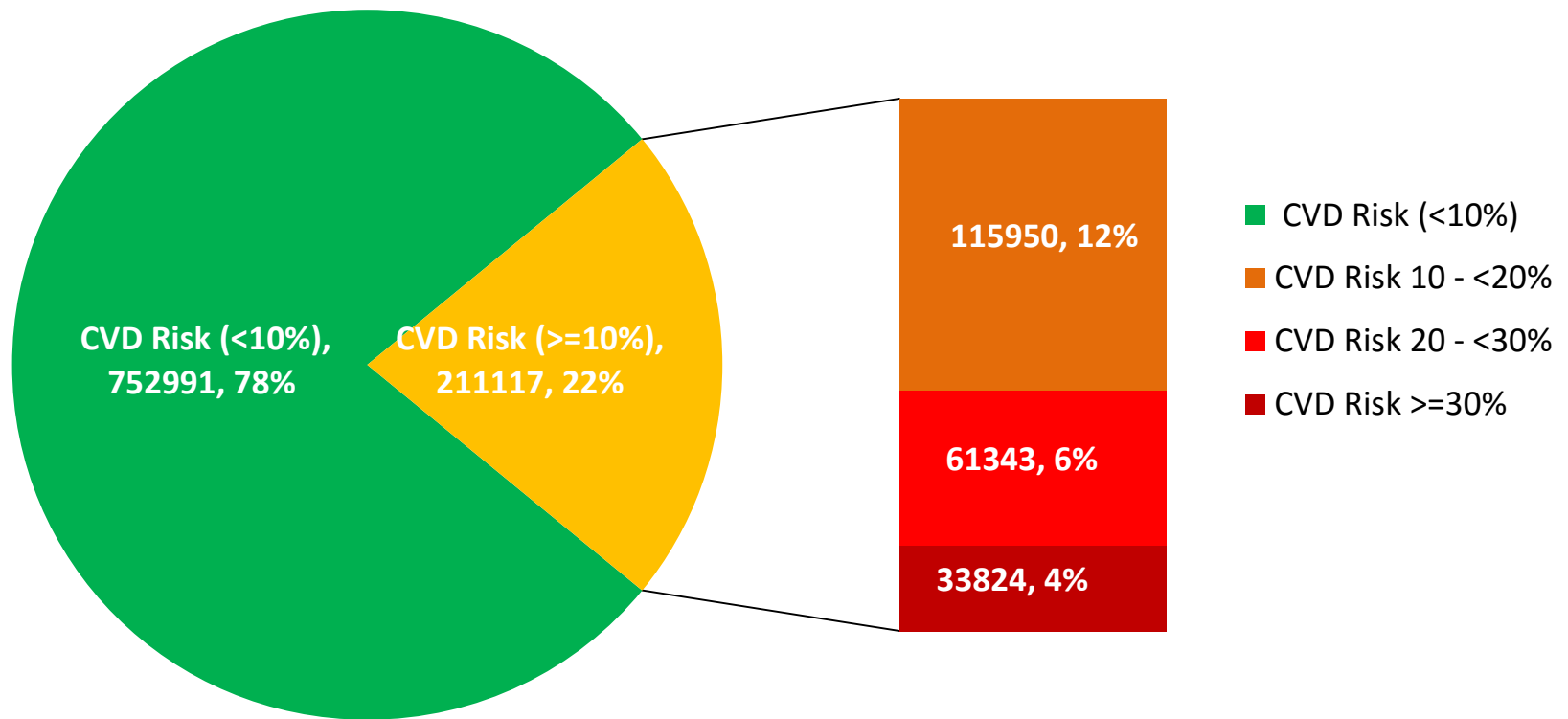




# Hypertension among screened patients ( 2017 May -2018 Dec ) from 149 Townships



# CVD Risk among screened patients ( 2017 May -2018 Dec ) from 149 Townships



# Assessment of Cardio Vascular Risk



# Weakness of NCD Clinics

## Coverage

- Not planned Target Population
- Most Clinic are Facility Based
- Community outreach are still weak in most Townships
- Lack of support for Outreach Services
- Awareness about NCD Clinics is low

## Quality of Care

- High Lost to follow up
- Team-based approach is a challenge
- Weak coordination among Hospital Doctors and BHS
- Some staff need training
- Screening of Cancer is weak

# Weakness of NCD Clinics -contd

## Supplies

- Replenishment of medicines is not possible
- Weak supply Chain
- All items of NCD medicines are not procured
- Not product segmentation (Central & Regional Supplies)

## M and E

- Clinical mentoring and supportive supervision is weak
- Health outcome monitoring system
- Community outreach are still weak in most Townships
- Limited support for M&E at all level

# Providers' reasons for not readiness at NCD Clinics (n=47)

| Reasons given by BHS<br>(multiple responses) | No. of providers by type<br>of facility |               |                   | Total<br>No. (%) |
|--|---|---------------|-------------------|------------------|
|  | MCH<br>n = 6                            | RHC<br>n = 21 | Sub RHC<br>n = 20 |                  |
| Facility had not enough medicines for NCDs   | 6                                       | 19            | 15                | 40 (85.1%)       |
| Facility had not enough equipment            | 6                                       | 11            | 8                 | 25 (53.2%)       |
| Facility had not full staff                  | 2                                       | 3             | 4                 | 9 (19.2%)        |
| Health staff were already overload           | 0                                       | 2             | 1                 | 3 (6.4%)         |
| Facility had no trained staff for NCDs       | 0                                       | 0             | 1                 | 1 (2.1%)         |
| Other  | 0                                       | 5             | 7                 | 12 (25.5%)       |

Study on Preparedness and responsiveness of NCD service delivery: PEN clinics, Myanmar( 2019 April –May )

# Reported NCD medicines used at PEN clinics by type of facility (n = 131)

| Type of medicines  | Type of facility |     |         |                   | Total<br>No. (%) |
|--------------------|------------------|-----|---------|-------------------|------------------|
|                    | MCH              | RHC | Sub RHC | Special<br>clinic |                  |
| Amlodipine 5 mg    | 13               | 52  | 57      | 3                 | 125 (95.4%)      |
| Atenolol 50 mg     | 4                | 8   | 10      | 1                 | 23 (17.6%)       |
| Enalapril 5 mg     | 0                | 8   | 5       | 0                 | 13 (9.9%)        |
| Metformin 500 mg   | 13               | 49  | 47      | 2                 | 111 (84.7%)      |
| Gliclazide 80 mg   | 10               | 31  | 30      | 2                 | 73 (55.7%)       |
| Aspirin 75 mg      | 2                | 8   | 12      | 1                 | 23 (17.6%)       |
| Atorvastatin 10 mg | 2                | 3   | 4       | 0                 | 9 (6.9%)         |

**Study on Preparedness and responsiveness of NCD service delivery: PEN clinics, Myanmar( 2019 April –May )**

# Providers' reasons for not readiness at NCD Clinics (n=47)

| Types of refilling<br>(Multiple responses) | Essential medicines |      | Equipment |      |
|--|---------------------|------|-----------|------|
|  | No.                 | %    | No.       | %    |
| Received from higher level                 | 64                  | 48.9 | 64        | 48.9 |
| Bought by using different funding sources  | 27                  | 20.6 | 18        | 13.7 |
| Bought by staff with own expense           | 28                  | 21.4 | 25        | 19.1 |
| Bought by patients                         | 4                   | 3.1  | 2         | 1.5  |
| Shared among facilities                    | 0                   |      | 1         | 0.8  |
| Don't know                                 | 0                   |      | 1         | 0.8  |

**Study on Preparedness and responsiveness of NCD service delivery: PEN clinics, Myanmar( 2019 April –May )**



# NCD Clinic in Preventive Cardiology Approach

2019

| January |    |    |    |    |    |    |
|---------|----|----|----|----|----|----|
| Su      | M  | Tu | W  | Th | F  | S  |
|         |    | 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 |
| 27      | 28 | 29 | 30 | 31 |    |    |

| May |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|
| Su  | M  | Tu | W  | Th | F  | S  |
|     |    |    | 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  | 27 | 28 | 29 | 30 | 31 |    |

| September |    |    |    |    |    |    |
|-----------|----|----|----|----|----|----|
| Su        | M  | Tu | W  | Th | F  | S  |
| 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 | 27 | 28 |
| 29        | 30 |    |    |    |    |    |



| April |    |    |    |
|-------|----|----|----|
| W     | Th | F  | Sa |
| 3     | 4  | 5  | 6  |
| 10    | 11 | 12 | 13 |
| 17    | 18 | 19 | 20 |
| 24    | 25 | 26 | 27 |

| August |    |    |    |
|--------|----|----|----|
| W      | Th | F  | Sa |
|        | 1  | 2  | 3  |
| 7      | 8  | 9  | 10 |
| 14     | 15 | 16 | 17 |
| 21     | 22 | 23 | 24 |
| 28     | 29 | 30 | 31 |

| December |    |    |    |
|----------|----|----|----|
| W        | Th | F  | Sa |
| 4        | 5  | 6  | 7  |
| 11       | 12 | 13 | 14 |
| 18       | 19 | 20 | 21 |
| 25       | 26 | 27 | 28 |



1<sup>st</sup> Preventive Cardiology meeting, Mingalarthiri Hotel, Nay Pyi Taw(15-5-2019)





**Thank you for your kind attention**