

# Burden of Diseases Networking workshop

Strengthen regional collaboration, cooperation in response  
to non-communicable diseases burden in South-East Asia and China



## Addressing NCDs: What Information is needed for policy decision? BOD?

Manju Rani, MD, PhD

WHO Regional Office for South-East Asia

Delhi, India

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# What we need data for?

Advocacy for new initiatives/resources

Document the disease burden & health, social and economic impact

Monitoring the implementation of ongoing programs and initiatives

Program monitoring: Are we doing the right thing 'right'

Assessing the impact of ongoing programs and policies

Is program achieving the impact -> continue, finetune, or discontinue

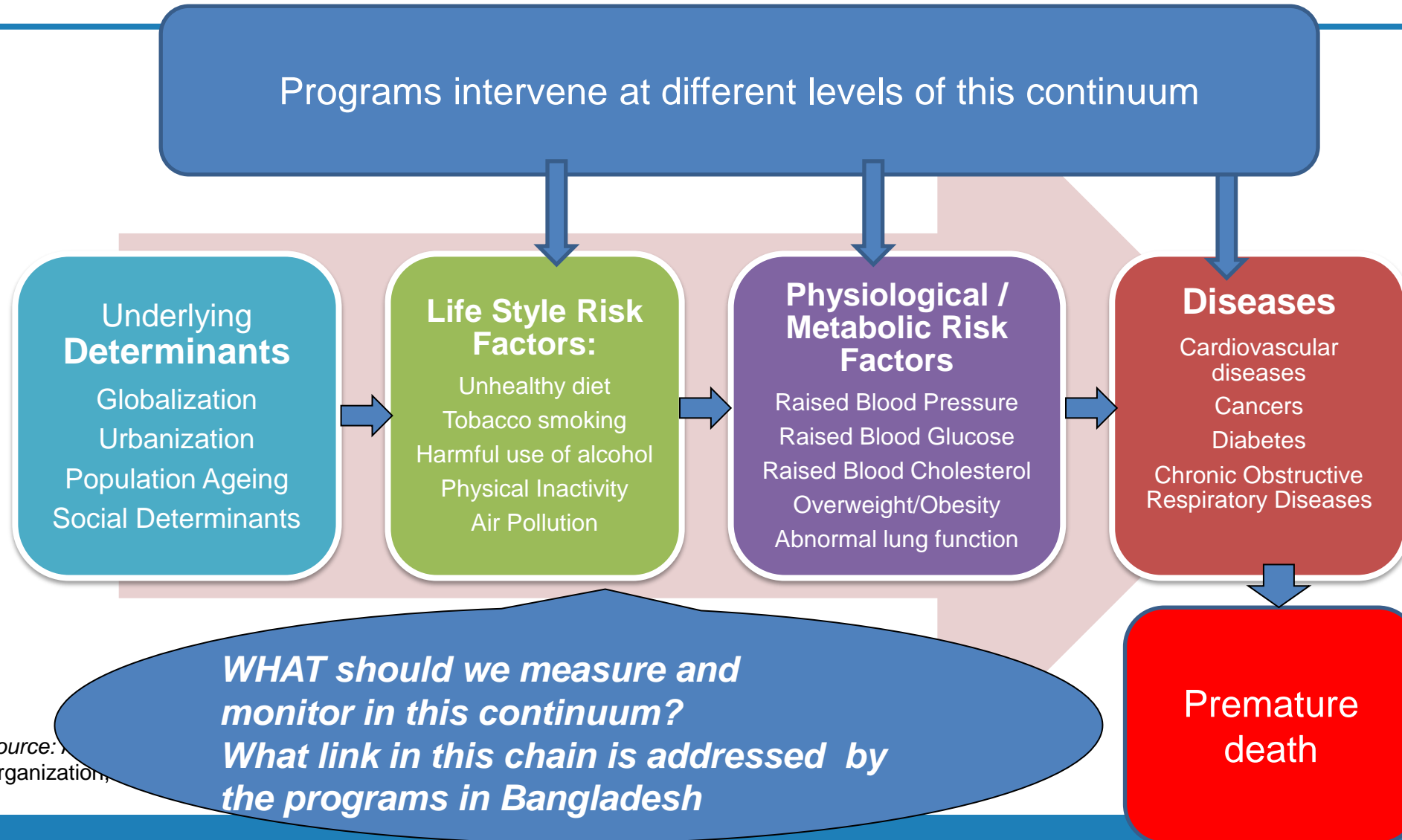
Analyze the comparative benefits of health interventions

Decision to chose the intervention among competing option to get best value for money

# We need data to answer questions such as:

- Prioritization among different conditions/risk factors
- Prioritization between different interventions: Should we introduce vaccine for cervical cancer or focus only on screening?
- What is the prevalence of risk factors (HT/DM) in different population groups, are these increasing or decreasing?
- Are alcohol or tobacco advertising bans being implemented well and stopping all advertising? Are these effective in reducing tobacco or alcohol use in our country?
- Are tobacco free policies for transport, restaurants effective?
- Are our early detection program for HT or DM working to prevent premature mortality by reducing complications?

# What Information: From Risk factors to NCDs and death: A continuum



Source: World Health Organization

# Main sources of data :



Health facilities:  
transactional data from  
Health facilities

**Service coverage**

**Disease  
registries**



Civil and Vital  
Registration

**Mortality-by age,  
sex, by cause**

**Fertility: Birth**



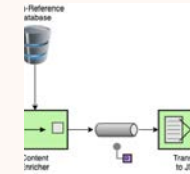
Population-based  
health **Surveys**

**Prevalence of  
risk factors**

**Service coverage**



Special  
studies/Research



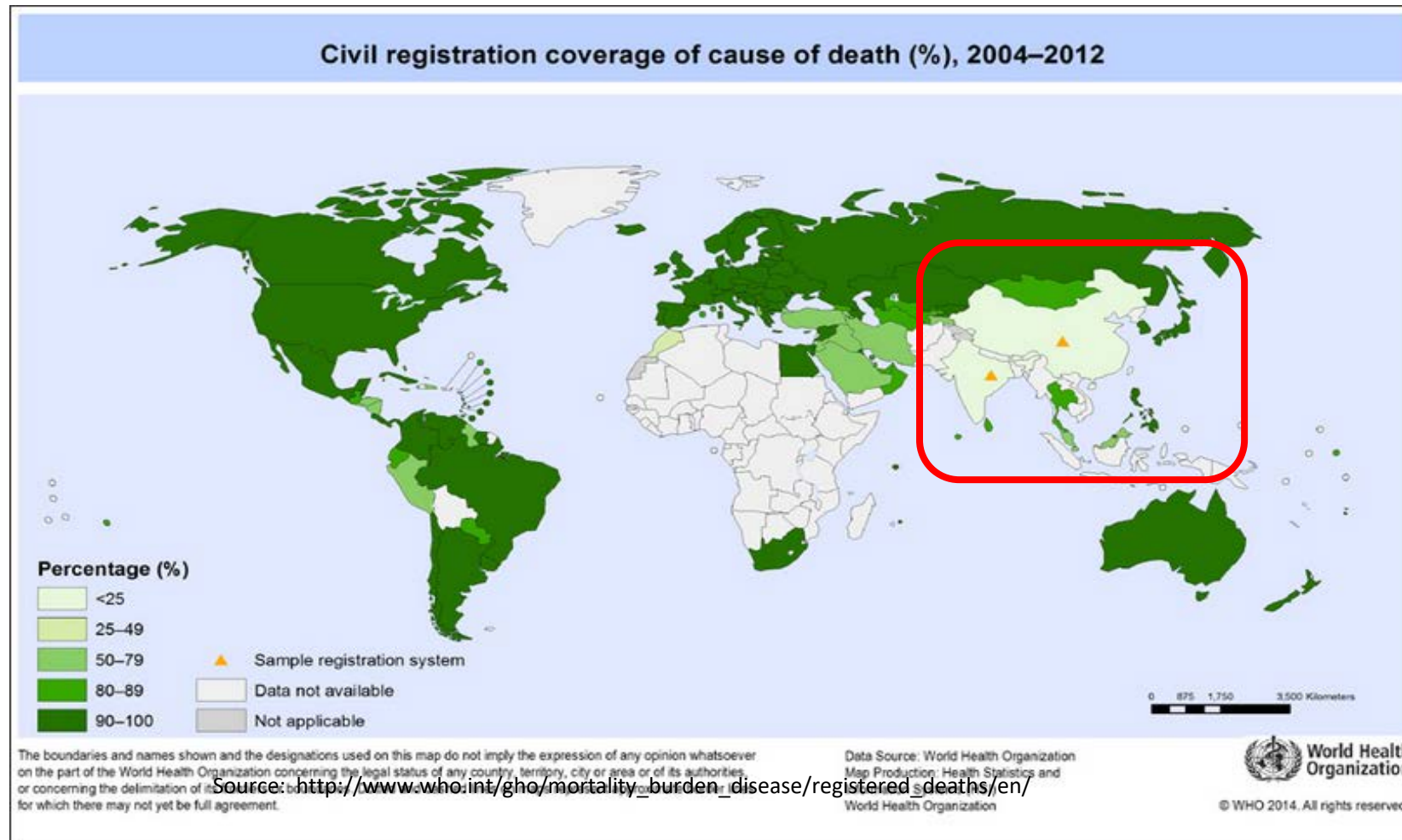
Claims data base of  
**Social health  
insurance system**

**Potential new  
source: data on  
incidence, survival,  
outcome, quality,  
variation in care**

Data to be used in different combination to answer different questions: No one source is complete

# Completeness of CRVS: Age-specific and cause specific deaths-a major input for BOD

## Civil Registration of Deaths: Coverage



Limited available of actual cause-specific mortality data in ASEAB.

Difficult to monitor trends in cause specific and premature mortality

Most available data are estimates based on very weak input data

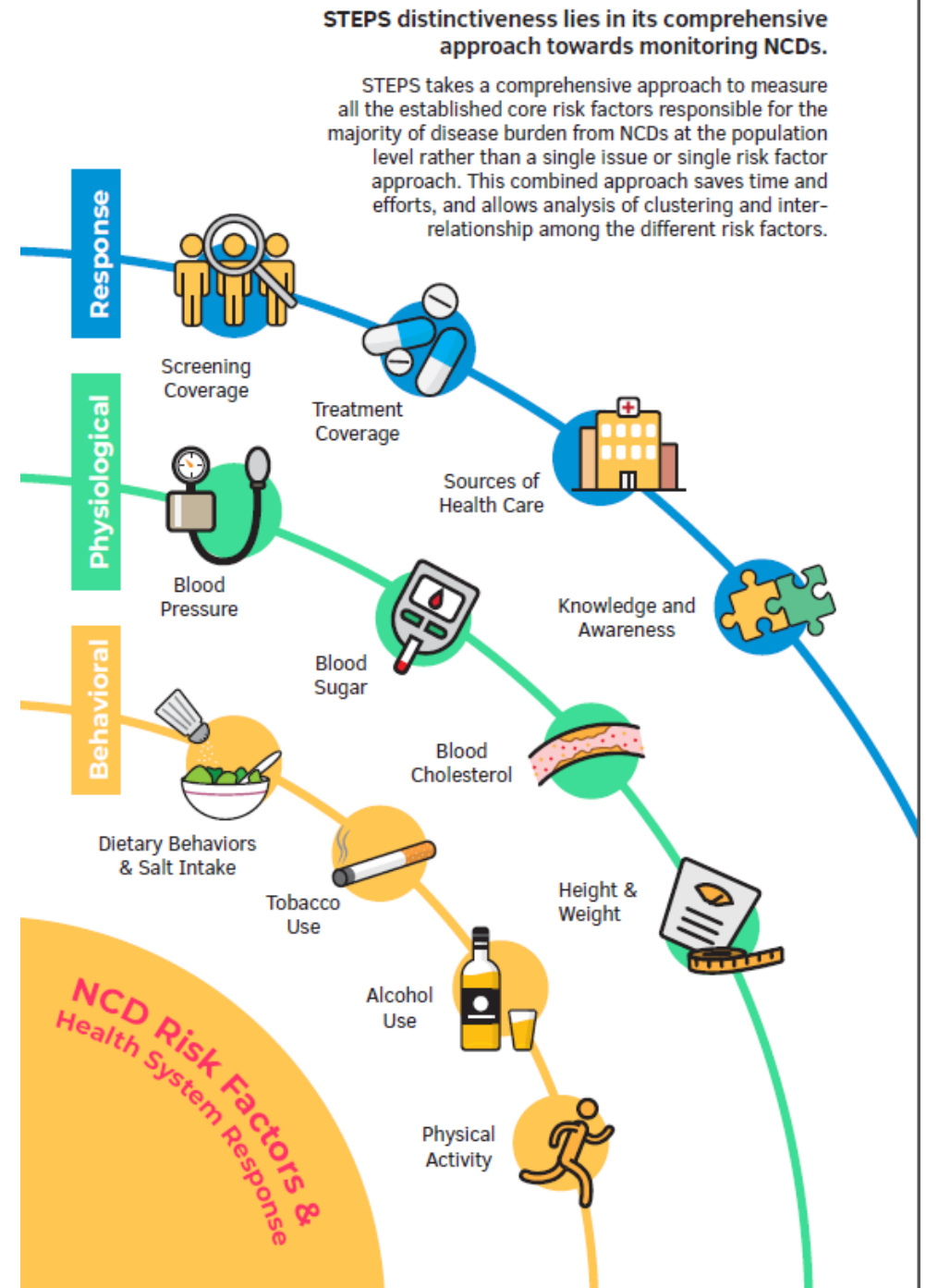


# Implementation of Population-based Surveys in South-east Asia

## For adolescent and adults

*Prevalence of risk factors is important to know the disease burden attributed to that risk factor.*

*Reducing the prevalence of different risk factors is a goal of many policies and programs.*



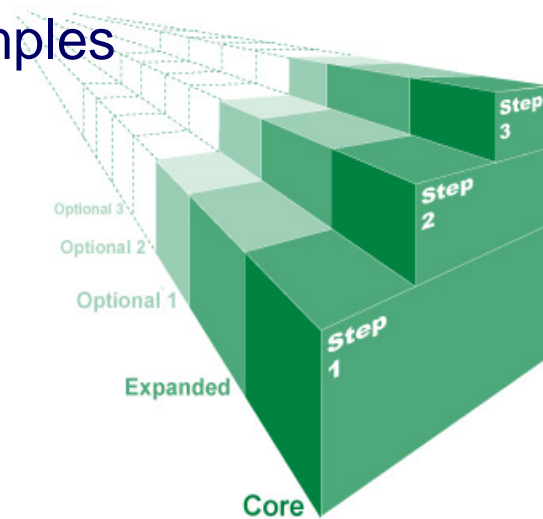
# STEPS Surveys (Integrated NCD risk factor surveys 18-69) – The framework

## Different levels of risk factor assessment:

- STEP 1 – questionnaire
- STEP 2 – physical measurements
- STEP 3 – blood samples

## Three modules:

- Core
- Expanded
- Optional



- Global School Health Surveys (adolescents)
  - Self-administered questionnaires
  - School-based for convenience
  - Covers most of the risk factors





# Program and Patient Monitoring

- Program monitoring:
  - Coverage of program: percentage of beneficiaries reached.
  - Quality of coverage
- Data to monitor patient progress
  - Rate of continuation of treatment
  - Rate of control



# Getting data from health facilities or point of care: Some key facts about health care systems in South-East Asia-2:

Private sector a major provide in many countries

<3 minutes: Average time per outpatient consultation

1-2 staffs: Staff available at Lowest-level health facilities that act as manager, provider, care-taker of facilities.

Unrealistic expectation: The facility staff enter the data while providing clinical care to the patient



Data collection and analysis

Requires:

Time

Human resources

Infrastructure

Curious managers and policy-makers

Each additional data element proposed to collected in a clinical setting:

Has **implications for clinical time available** for patient care!!

Data collection should improve quality of care/NOT hamper it.

# Data from Health Facilities

## What they can tell us:

- Patient load for different diseases at different level of health facilities
- Helps in program planning
- Monitoring of outcomes in individual patients/group of patient
- Variations in quality of health facilities.

## What they CANNOT tell us

- *Prevalence* of different risk factors such as tobacco, alcohol, hypertension or diabetes.
- *Service coverage*: Overall proportion of people screened/ on treatment
- Patterns of care-seeking

# Summary Measures of Population Health

- Want to compare two population or two interventions—should be compared by mortality (among whom?), disease incidence, duration of disease or disability caused by a disease?
- Can we combine the impact of these dimension of a disease into a single measure or a summary measure?
  - Disability Adjusted Life Years (DALYs) is one such measure.
- These summary measures are useful:
  - Want to compare health of one population with another
  - Analyze the benefits of health interventions for use in CE analysis.
  - Attribute burden from risk factors

# DALY Calculation

(the easiest way)

Years of lost life  
(YLLs)

+

Years lost to  
disability  
(YLDs)

## Inputs

- Life expectancy at age of death
- Age at death

## Inputs

- Duration of disease/injury
- Disability weight of disease/injury
- % long-term cases

# To summarize,

- Different information may be needed for policy decisions:
  - Disease morbidity (incidence/prevalence, disability, duration of disease),
  - Disease mortality (total deaths, deaths at different ages—premature mortality)
  - Risk factors that cause disease (tobacco, alcohol, physical inactivity, unhealthy diet etc.
  - Program coverage, program cost, etc.
  - Summary measures such as life expectancy, DALYs, QALY combine different aspect of a disease (based on some assumptions)
    - These help us to compare different diseases (caused different combination of deaths, sickness and disabilities) for prioritization
    - Help to assess the comparative cost-benefit analysis of different program or policy decisions affecting