Prevention and control of Noncommunicable diseases

Challenges & Opportunities

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NCD and Health Promotion
Changing times
Outlines (Structure)

Causes of causes

What works?

What can be done?
Outlines (Structure)

- Causes of causes
- What works?
- What can be done?
Causation pathway for NCD

Figure 1. The causation pathway for chronic diseases

UNDERLYING DETERMINANTS
- Globalization
- Urbanization
- Population ageing
- Social determinants

COMMON RISK FACTOR
- Unhealthy diet
- Physical inactivity
- Tobacco and alcohol use
- Air pollution
- Age (non-modifiable)
- Heredity (non-modifiable)

INTERMEDIATE RISK FACTOR
- Raised blood sugar
- Raised blood pressure
- Abnormal blood lipids
- Overweight/obesity
- Abnormal lung function

DISEASES
- Cardiovascular disease (Heart disease and stroke)
- Cancer
- Diabetes
- Chronic respiratory disease

## Noncommunicable Diseases

### 4 Diseases, 4 Modifiable Causative Risk Factors

<table>
<thead>
<tr>
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<th>Tobacco Use</th>
<th>Unhealthy diets</th>
<th>Physical Inactivity</th>
<th>Harmful Use of Alcohol</th>
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Premature deaths due to NCD

Total number of deaths in the world

- High-income countries: 5.9M
- Upper middle-income: 3.0M
- Lower middle-income: 3.3 M
- Low-income countries: 2.3M + 10.2M + 3.7M + 13.6M

- Group I – Communicable diseases, maternal, perinatal and nutritional conditions
- Group II – Other deaths from noncommunicable diseases
- Group II – Premature deaths from noncommunicable diseases (below the age of 60), which are preventable
- Group III - Injuries

Source: The Global Burden of Disease 2010
Mortality by WHO Region, 2000

Junk food generation

• Average amount of typical snacks, fast food and treats eaten by children between the ages 4-10 in just one year.
Rapid transition
Think big, act on your tummy

Longer the belt, shorter the life ....
Distribution of Waist Circumference

India, Female

WAIST CIRCUMFERENCE (cm)

Percentage

Urban
Peri-urban
Rural

< 50
50 - 59.9
60 - 69.9
70 - 79.9
80 - 89.9
90 - 90.9
100 - 109.9
110 - 119.9
> 120

POPULATION APPROACH

HIGH RISK INDIVIDUAL APPROACH

NCC, Korea (1 Nov 2010)
Outlines (Structure)

Causes of causes

What works?

What can be done?
How can people make a choice?
Hidden fats..

- Animal products: 21%
- Cakes, cookies, crackers, pies, bread, etc: 40%
- Margarine: 17%
- Fried potatoes: 8%
- Potato chips, corn chips, popcorn: 5%
- Household shortening: 4%
- Salad dressing: 3%
- Breakfast cereal: 1%
- Candy: 1%

Now Entering A Trans Fat Free Zone
Our foods are fried in trans fat free oil

NCC, Korea (1 Nov 2010)
Ban Transfats (USA)

• With the stroke of a pen, Governor Arnold Schwarzenegger will make California the first state in the nation to make its restaurant foods free of artificial trans fat.

• It’s a bold move that will prevent thousands of heart attack deaths in that state and save millions of health care dollars.

Governor Schwarzenegger Promotes Health and Nutrition by Signing Nation-Leading Trans Fat Bill

July 25 2008
Food Labelling systems in Australia: The more green and the fewer red symbols, the healthier the product.
Traffic light labels - UK
Marketing

• They work on our ‘desire’
WHO Recommendations

1. The policy aim should be to reduce the impact on children of marketing of foods high in saturated fats, trans-fatty acids, free sugars or salt.
   - Effectiveness depends on two elements
     - Reach, frequency and impact (exposure)
     - Content design and execution (power)

2. Overall policy objective should be to reduce both the exposure of children to, and power of, marketing of foods high in ....
   - Depending on national circumstances and resources
     - Comprehensive approach-restricting all marketing to children
       - Highest impact
     - Stepwise approach-either exposure or power
Controls on advertisement

• **EU television without frontiers directive**
  – TV adverts shall not cause moral or physical detriments to minors

• **Ireland**
  bans cartoon characters and celebrities to promote foods

• **France** mandatory health messages should accompany adverts on TV and radio

• **Sweden** total ban for adverts aimed at children less than 12 yrs
It is cheaper to live unhealthy!!

Poverty in Most of the World

Poverty in America
Taxation as a means to change behaviour

• The tobacco experience
  – education is not enough: regulation, litigation, and legislation are needed too.
  – Increasing taxes on cigarettes has been the single most effective strategy in reducing smoking.

• The best chance for success is to impose a penny per ounce Sugar Sweetened Beverages tax, resulting in a rise of a dollar or two in the price of a six pack of sodas or a 2 litre bottle.
  – Most people favour such taxes.
  – In New York state, projections of a penny per ounce tax on SSBs: prevent 145 000 cases of adult obesity and 37 000 cases of diabetes in a decade. Save $2bn in healthcare costs.

Source: The case of the sugar sweetened beverage tax: Douglas Kamerow, BMJ 2010;341:c3719
Change of bottles in life
Physical inactivity

- Work - mostly sitting
- At home – in front of TV
- Play-on computer
- Travel-motorized
- Everything to make us more sedentary
- ‘Obesogenic’ environment
- We need to change the environment which will facilitate physical activity
Evidence

Why was the Toronto Charter for Physical Activity Developed?

Reports

Commitment
WHO Recommendations
Global Physical Activity

• 5-17 years
Accumulate at least 60 minutes of moderate to vigorous intensity physical activity daily.

• 18-64 years
Do at least 150 minutes of moderate-intensity aerobic physical activity spread throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity spread throughout the week or an equivalent combination of moderate-and vigorous-intensity activity. Aerobic activity should be performed in bouts of at least 10 minutes.
What determines our health?

Policy in action

Before:

After:
# Role of Ministries

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Upstream interventions

TAP TURNERS OR FLOOR MOPPERS?

Policies/ lack of it in other sectors

Treating individuals with NCD
Outlines (Structure)

Causes of causes

What works?

What can be done?
Enabling environment

• Whole of Government approach

• Health in all policies
  – Strong policies and their implementation to control tobacco and alcohol
  – Reduce market pressures from influencing dietary choices
    • Control on advertisement of food to children
    • Food labelling to help consumer choice
  – Make local fruits and vegetables available and affordable
  – Control fat, sugar and salt in mass manufactured products and restaurants
  – Provide parks and cycle lanes to promote physical activity
‘Settings’ based approach

- Health promoting **schools, workplaces, markets etc.**

- **Healthy Cities/ Islands**
  - ‘Captive’ population
  - Usually under one command
  - Facilitates policy level changes
  - Can create enabling environment
  - Availability of resources
  - Ability to demonstrate results
  - Sustainability of interventions
  - Participation by beneficiaries
Figure 26. WHO/ISH risk prediction chart for WPR B. 10-year risk of a fatal or non-fatal cardiovascular event by gender, age, systolic blood pressure, total blood cholesterol, smoking status and presence or absence of diabetes mellitus.
What is health?

“Health is wealth”

*American proverb*
Re-framing

Not:
“Health in All Policies”

But:
“All policies need health!”

Without health:
• we do not have an economically viable population;
• we cannot have sustainable communities
• we will not have the capacity to protect our environment
Let us Move and Communicate
First Lady Michelle Obama kicks off "Let's Move", a program designed to tackle childhood obesity by encouraging exercise and healthy eating. The First Lady is joined by Cabinet members, athletes, educators, students and others at the kickoff event.
Michelle Obama: Play 60 in New Orleans!

Michelle Obama congratulates players after a football game in support of the NFL's Play 60 campaign at New Orleans' Brock Elementary School on Wednesday (September 8).

The First Lady was joined by NFL alums Deuce McAllister and Eddie George as well as Taylor Swift!

Play 60 is an NFL movement designed to tackle childhood obesity!

"It's not just enough that you exercise, but you also have to watch what you put in your body," Michelle said as she addressed an audience of kids. "You can't live on soda and chips and all that. You can't. Sorry. If you could, I tell you, I would. But you can't. You've got to have vegetables and fruits."