Decreasing the Global Burden of CVD: Moving the Needle

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Achieving 25 by 25
What does it mean and can we get there?

25by25 GLOBAL TARGET
A 25% relative reduction in overall mortality from cardiovascular disease, cancer, diabetes or chronic respiratory diseases

WHF GOAL
A 25% reduction in premature mortality from cardiovascular disease by 2025

Harmful use of alcohol
10% reduction

Physical inactivity
10% reduction

Salt/sodium intake
30% reduction

Tobacco use
30% reduction

Raised blood pressure
25% reduction

Diabetes/obesity
0% increase

50% of eligible people receiving drug therapy and counselling to prevent heart attack and stroke

80% availability of essential medicines and basic technologies to treat CVD and other NCDs


Trends In Age-Standardized Mortality Rate Per 100,000 Population For Ischemic Heart Disease, 1980–2012.


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Proportional contributions of specific treatments and risk factor changes to CHD mortality reduction in England and Wales, 1981 to 2000

Proportional contributions of treatments and risk factor changes to CHD mortality across countries

**United States, 1968–76**
- Treatments: 40
- Risk factors: 54
- Unexplained: 6

**New Zealand, 1974–81**
- Treatments: 40
- Risk factors: 60

**The Netherlands, 1978–85**
- Treatments: 46
- Risk factors: 44
- Unexplained: 10

**United States, 1980–90**
- Treatments: 43
- Risk factors: 50
- Unexplained: 7

**IMPACT Scotland, 1975–94**
- Treatments: 35
- Risk factors: 55
- Unexplained: 10

**IMPACT New Zealand, 1982–93**
- Treatments: 35
- Risk factors: 60
- Unexplained: 5

**IMPACT England and Wales, 1981–2000**
- Treatments: 38
- Risk factors: 52
- Unexplained: 10

**IMPACT United States, 1980–2000**
- Treatments: 47
- Risk factors: 44
- Unexplained: 9

**Finland, 1972–92**
- Treatments: 24
- Risk factors: 76

**IMPACT Finland, 1982–97**
- Treatments: 23
- Risk factors: 53
- Unexplained: 24

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Global Systolic BP Trends 1980-2008

Probability of 30% reduction in tobacco use by 2025

Average Physical Activity (MET-hours/week)

Source: Ng et al Obesity Reviews 2013; 13
Mean (95% uncertainty interval) age-standardized sodium intakes (g/day) in 1990 and 2010 in 21 Global Burden of Diseases regions.

Note: The upper symbol for each pair is for 2010. Regions are ranked by levels in both sexes combined, ages 20+.

Use of secondary meds by income (%)

Affordability of standard treatment for coronary heart disease in the private sector in selected low- and middle-income countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of days' wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>1.6</td>
</tr>
<tr>
<td>Brazil</td>
<td>5.1</td>
</tr>
<tr>
<td>Malawi</td>
<td>18.4</td>
</tr>
<tr>
<td>Nepal</td>
<td>6.1</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>1.5</td>
</tr>
<tr>
<td>Pakistan</td>
<td>5.4</td>
</tr>
</tbody>
</table>
CABG and PCI rates by GNI (%)

Impact of wealth on mortality

Country Wealth And Disease Burden In Low- And Middle-Income Countries

- Diarrheal diseases
- Upper respiratory infection
- Protein energy malnutrition
- Peptic ulcer disease
- Meningitis
- Lower respiratory infection
- COPD
- Stroke
- Ischemic heart disease
- Lung cancer
- HIV/AIDS
- Liver cancer

Bollyky et al. 2015 Health Affairs
## Income Growth and Risk Factor Reduction

### Estimated Income Growth And Risk-Factor Reduction Required To Meet The World Health Organization’s (WHO’s) 25×25 Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>Estimated annualized income growth required to meet target by 2025 (%)</th>
<th>Estimated annualized risk reduction required to meet target by 2025 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>13.2</td>
<td>23</td>
</tr>
<tr>
<td>Chronic respiratory disease</td>
<td>18.6</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Cardiovascular disease</strong></td>
<td><strong>14.7</strong></td>
<td><strong>2.2</strong></td>
</tr>
<tr>
<td>Cancer</td>
<td>48.5</td>
<td>7.7</td>
</tr>
</tbody>
</table>
• Reductions will require a mix of both treatments and policies to reduce CVD mortality

• Policy interventions will likely include a focus on tobacco and salt reduction

• Countries will need to improve access to medications and develop health systems that are capable of managing acute conditions