Using Data and Accountability to Drive Progress

Global Health Leadership Forum
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Factors that affect health

Socioeconomic Factors

Changing the Context
Individuals making healthy choices

Long-lasting Protective Interventions

Clinical Interventions

Counseling & Education

Examples from global health

Smallest Impact

Education on infant care; instruction on water sanitation, condom use

Treatment for infectious disease (HIV, TB, etc.); Rx for htn, diabetes, etc.

Vaccines; mass drug Rx for tropical diseases; IRS; bed nets; circumcision

Clean air & water; control of toxic substances; food & drug safety; safe roads

Poverty; education; housing; inequality

Largest Impact
Challenges and means to address

- Money
- Politics
- Microbes
- Economic interests
- Technical excellence including in surveillance
- Good management
- Effective communication
- Strategic action
Get the best data, implement effective programs, and be accountable for the outcomes
Evidence for public health action

Measure burden
• How big a problem?
• Who does it affect and where?

Determine feasibility and impact
• Are interventions effective?
• Are interventions feasible and scalable?
• Are interventions cost-effective?
• Are interventions working?
Implement effective programs
“TB control is very simple. There’s only one rule. No cheating. Every patient you start on treatment, you are responsible for their outcome.”

Karel Styblo, visit to New York City, 1993
DOTS: evidence-based public health practice

**DOTS is a 5-component TB control strategy**

- Political commitment
- Diagnosis by microscopy in health facilities
- Adequate supply of quality drugs
- Directly observed treatment
- Accountability
Treatment observation in New York City
Tuberculosis control as a model

- Rigorous surveillance
- Standardized treatment (ARV, BP…)
- Patient-centered care
- Ensure and support accountability for outcomes
- Sustain political commitment
- Need to address social determinants of health
Lessons from tuberculosis control

• Accessible diagnosis and treatment, generally through the routine health care system
• Evidence-based therapeutics
• Patient-centered case management
• Specialized supervision
• Accountability with simple and powerful information system
DOTS progress in 22 high-burden countries, 2006-2007

Source: WHO. Countries from AFR, AMR, EMR and EUR shown in red, those from SEAR and WPR shown in black.
New smear positive case detection rate of India, 1st quarter 2010
% of registered TB patients with known HIV status, 1st quarter 2010
WHO’s Stop TB Strategy

- Pursue high-quality DOTS expansion and enhancement
- Address TB-HIV, MDR-TB, and the needs of poor and vulnerable populations
- Contribute to health system strengthening based on primary health care
- Engage all care providers
- Empower people with TB, and communities through partnership
- Enable and promote research
Preventing mother-to-child HIV transmission saves lives globally
1.4 million HIV-infected women became pregnant in 2009

- Significant progress, but still far to go
  - Only ~53% of pregnant women w/ HIV receive ARVs
  - ARVs can reduce MTCT from 35% to <5%

- Potential to virtually eliminate pediatric HIV/AIDS with increased coverage

Infections prevented: 180,000
Infants born with HIV: 269,000
Assumes ~1/3 transmission rate without intervention
Polio cases last 4 months: June-Sept 2010

Year to date comparison, 2009-10

Data at WHO/Geneva as of 17 September 2010
Implement effective policies
For the first time in global history...

- More people live in urban than rural areas
- There are more people who are overweight than underweight
- There are more deaths among adults than children
- Higher rates of NCDs in developing than developed countries
Non-communicable diseases in the developing world

- NCDs now kill more people globally than infectious disease
- NCD burden has risen rapidly and is a major threat to economic and social development
- By 2020, NCDs will kill almost 4x as many people globally as infectious disease
- Will affect the poor most heavily, who die at earlier ages
Trends in numbers of global deaths, children and adults, 1970-2010

In 1970, there were about the same number of deaths among both children and adults.
Trends in numbers of global deaths, children and adults, 1970-2010

Over time, the gap began to widen, as child deaths decreased and adult deaths increased.
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![Bar chart showing trends in numbers of global deaths between 1970 and 2000. The gap between child deaths (under age 5) and adult deaths (age 15-60) widened over time.](chart-image)
Trends in numbers of global deaths, children and adults, 1970-2010

Now, there are more than three times as many deaths among adults as there are among children.
Tobacco is now the world’s leading single agent of death

Global Deaths per Year (millions)

- Tobacco: 5.4
- Acute Resp Infect: 3.9
- Diarrheal Disease: 2.2
- AIDS: 2.0
- TB: 1.8
- Traffic Injuries: 1.2
- Malaria: 0.9
- Measles: 0.2

Tobacco kills more people worldwide each year than HIV, TB, and malaria combined

World Health Organization
Mpower tobacco use and prevention policies

Protect people from tobacco smoke

Offer help to quit tobacco use

Warn about the dangers of tobacco

Enforce bans on tobacco advertising, promotion and sponsorship

Raise taxes on tobacco
Evidence-based tobacco control interventions in NYC

- **Protect people from tobacco smoke**: 19.2% in 1993, 18.3% in 1994, 17.5% in 2000.
- **Warn about the dangers of smoking**: 18.9% in 1993, 17.5% in 1994, 16.9% in 2000.
- **Raise taxes on tobacco (City & State)**: 15% in 1993, 14% in 1994, 13% in 2000.
- **Monitor youth smoking**: 11% in 1993, 10% in 1994, 9% in 2000.

- **350,000 fewer adult smokers**
- **>100,000 fewer smoking-related deaths in future years**
MPOWER interventions reduced smoking prevalence in Uruguay

- One of the sharpest declines ever reported
- Coordinated package of interventions
  - Smoking ban (first country in Americas to go 100% smoke-free)
  - Comprehensive ad ban
  - Large pictorial warning labels
  - Cessation services
  - High taxes

Data: Global Adult Tobacco Survey

1 in 4 smokers quit
Road Traffic Safety

- Large and growing burden
  - Road traffic accidents kill >1.2 million, injure up to 50 million annually worldwide
  - Epidemic is still increasing in most parts of the world – deaths will double by 2030

- Effective interventions
  - Relatively inexpensive and highly cost-effective
Only 15% of world has comprehensive road safety laws for 5 main safety risk factors

*Enforcement often inconsistent*

- **Drunk driving** – BAC limit
- **Seatbelts** – drivers and passengers
- **Child restraints** – age/weight limits; safety standards
- **Helmets** – riders and passengers (also bicycles); safety standards
- **Speed limits** – under 50 km/h in urban areas
Sodium is a leading contributor to high blood pressure

- After tobacco control, most cost-effective intervention may be reduction of sodium intake
- Reducing salt content of processed food could prevent ~14 million deaths globally over 10 years

High salt intake increases risk of death

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<tr>
<th></th>
<th>CHD Death</th>
<th>CVD Death</th>
<th>All Death</th>
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<tbody>
<tr>
<td>Hazard Ratio</td>
<td>1.75</td>
<td>1.50</td>
<td>1.25</td>
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Global Health Initiative targets

- **HIV**: Prevent 12 million new infections, treat >4 million
- Reduce **under-five mortality** 35% to save ~3 million lives
- Reduce **maternal mortality** 30%
- **TB**: Reduce 50% to save ~1.3 million lives
- **Malaria**: Reduce burden 50% for 450 million people
- **NTDs**: Reduce 7 neglected tropical diseases 50% among affected populations
- Prevent 54 million unintended pregnancies
- Reduce child undernutrition by 30%
- Strengthen host country institutions, including ministries of health and other public health institutions, and improve national and local systems and capacity to monitor and improve health outcomes
Much progress has been made...

...but we must continue to be accountable to the evidence
Challenges and means to address

- Money
- Politics
- Microbes
- Economic interests
- Technical excellence including in surveillance
- Good management
- Effective communication
- Strategic action
Despite fiscal crisis, UK to increase global development assistance
Dichotomies

Challenges that define the scope of NPHI activities

Separation of functions

- Which at MOH; which at NPHI?

Degree of independence from Ministry

- NPHI must be independent, technically expert agency
- NPHI must be shielded from political influence and transitions
- But if seen as too independent, may not be called on to address important health challenges

Regulation vs. guidance/recommendations

More like CDC or more like NIH?
NPHIs must adapt to changes in the public health landscape

Evolve over time to meet new challenges

- Increasing complexity of health care
- Budgetary constraints
- New and emerging infectious disease threats
- Growing burdens of non-communicable diseases and injuries

Success depends on accurate collection, analysis, and dissemination of data to improve health
Success is possible

- Problems clear
- Many solutions clear
- To succeed
  - Political will
  - Adequate funding
  - Technical excellence
  - Effective communications
  - Support for long-term investments that create sustainable capacity
Prioritize and do the hard stuff first.
Fight and win winnable battles
Key winnable battles

• Tobacco
• Nutrition, physical activity, obesity, and food safety
• Healthcare-associated infections
• Motor vehicle injury prevention
• Teen pregnancy prevention
• HIV prevention
Winnable battles in global health

• Achieve and sustain global immunization initiatives, including polio eradication
• Substantially reduce mother-to-child HIV transmission and congenital syphilis globally
• Eliminate lymphatic filariasis in Americas
• Tobacco control
• Motor vehicle injury prevention
Hire great people and protect them so they can do their job
Address communicable disease and environmental health…

... or you won’t be able to address anything else
Don’t cede the clinical realm
Learn the budget cycle

Proposal → Budget hearing → Legislative review → Passage → Budget hearing → Proposal
Manage the context
Never surprise your boss
Thank you!