ADDRESSING SOCIAL DETERMINANTS OF NTDS IN DEVISING AN INTEGRATED CONTROL STRATEGY

LOOKING BEYOND THE LAMPPPOSTS!

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Which New Approaches to Tackling Neglected Tropical Diseases Show Promise?

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Overcoming Neglect
Reducing Disease Burden
Innovation
Overcoming Barriers
Interdisciplinary
Scaling Up /
Implementation Science
Overview

Context
The constructs
  – NTD: Neglected Tropical Disease
  – SDH: Social Determinants of Health
Trends in use/ interaction
Approaches to control strategies

Integrating NTD + SDH
Approaches
Issues
Application examples

Implications
Re different circumstances
Some suggestions
Paradigms....

Pécoul also realised, however, that sometimes there were simply no drugs at all because of the dearth of research and development (R&D) for neglected diseases. This understanding—and the drive to change the global paradigm—led Pécoul to set up DNDi in 2003.


Reflecting the scope and insights of social epidemiology, the commission [Commission on Social Determinants of Health] advocates a paradigm shift that would expand the current scope of analysis and action to include broader social factors: policies that are good for health, not just health care policies.


...economic paradigms, which have dominated international institutions, are being challenged by social ones.

GROWING ATTENTION.....

Neglected Disease (ND) + Social Determinants of Health (SDH)

Publications* citing key terms
- Neglected Disease / Neglected Tropical Disease

... but minimal overlap!

- Determinants of Health / Social Determinants of Health

*Citations in Google Scholar
(September 19, 2010)
Leishmaniasis research funding
USA, 2007

% of total funding

- Basic Research: 24.4%
- Product discovery/ Preclinical: 13.0%
- Clinical Product development: 24.1%
- Implementation/Operational: 7.1%
- Epidemiological: 3.7%
- Education /capacity building: 17.8%
- Unclassified: 9.8%


Cf. Manderson et al. (2009)
IN CHELM THERE WAS A VERY GOOD ROAD. IT CAME TO A SUDDEN STOP AND BEYOND THERE WAS A PRECIPICE....

MOTHERS WARNED THEIR CHILDREN “BE CAREFUL AND DON’T FALL OVER...

Never, never, never!

WISE MEN OF CHELM

Hmmm! Scratch Scratch Quite stumped!

Wise men – Please do something...

THE WISE MEN THOUGHT ... AND THOUGHT .... AND THEY SAID..........
4 GENERAL QUESTIONS

to contextualize control strategies

1) Do we have an efficacious treatment?;

2) Have clinical trials shown the treatment to be devoid of serious side-effects and effective in practice;

3) Do we have viable health service systems in high burden areas?; and

4) Are the social and environmental conditions that perpetuate the disease being addressed?

Do we have the capability & capacity to SCALE UP & produce impact?
Determinants & Points of Intervention

“NEGLIGENCE” HEALTH SYSTEMS

Underlying
- Interests of wealth/power
- Status of women
- Land tenure
- Debt-SAPs
- Weak governments
- Militarism
- Imperialism

Global-National

Intermediate
- Poverty
- Disparity
- Access to education
- Job conditions
- Gender issues
- Civil strife
- Conflict

Community-National

Proximate
- Malnutrition
- Water
- Sanitation
- Housing
- Health services
- Health behaviors

Family-Community

Diseases
- Diarrhea
- Pneumonia
- Perinatal conditions
- HIV/AIDS
- Injury
- Malaria
- Measles
- NTDs

Individual

Efficacy? – Effectiveness?
Delivery? – Scale-up?

Health Diplomacy

Human Security

Health Diplomacy
Approaches to Managing Health Determinants to Promote Equity – and Evaluate Progress

From a Science of WHAT ...

... to a Science of HOW

Global Forum For Health Research
Havana, Cuba
November 2009

**ECOSYSTEM APPROACH TO HUMAN HEALTH**

- a framework for setting impact objectives -

- Transdisciplinarity
- Equity
- Participation

Source: Forget and Lebel, 2001

[Diagram showing the relationships between socio-cultural, behavioural, global change, economic, and environmental factors leading to improved health through transdisciplinarity, equity, and participation.]

... & process for involving key players to achieve impact
Applying an Ecosystem Approach to Sustainably Prevent and Control Dengue in Central Havana, Cuba
Integrated surveillance system for prevention of dengue at the local level

- (UMHE) Chief of Integrated enviro hygiene program
- Municipal hygiene and epidemiology unit (UMHE) (biologist)
- Hygiene technical staff (UMHE)
- Vice director of hygiene for the health area

Collective analysis
By work team*

- Health Area (Polyclinic) Direction Council
- Council of Popular Power
- Neighborhood delegate
- Supervisor of health area
- Chief of Brigade
- Field worker
- CMF (primary care centres)
- Neighborhood groups
Identification of “hot spots” (and trends)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Case %</th>
<th>Control %</th>
<th>OR (crude)</th>
<th>OR (adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex household head</td>
<td>Female/male</td>
<td>66.8</td>
<td>58.1</td>
<td><strong>1.45</strong> (1.07-1.96)</td>
<td><strong>1.13</strong> (0.80-1.59)</td>
</tr>
<tr>
<td>Age household age</td>
<td>&lt;35 / 65+</td>
<td>10.1</td>
<td>9.8</td>
<td>0.86 (0.52-1.45)</td>
<td><strong>0.36</strong> (0.14-0.92)</td>
</tr>
<tr>
<td>Educational level/</td>
<td>≤9th grade/&gt;9th</td>
<td>52.4</td>
<td>43.7</td>
<td><strong>1.42</strong> (1.06-1.89)</td>
<td>1.14 (0.79-1.64)</td>
</tr>
<tr>
<td>household head</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economically inactive proportion in HH</td>
<td>&gt;.5 / ≤ .5</td>
<td>49.8</td>
<td>36.3</td>
<td><strong>1.74</strong> (1.30-2.34)</td>
<td><strong>1.64</strong> (1.25-2.35)</td>
</tr>
<tr>
<td>Spiritual practice vases</td>
<td>yes</td>
<td>41.5</td>
<td>21.1</td>
<td><strong>2.65</strong> (1.99-3.82)</td>
<td><strong>1.93</strong> (1.23-2.89)</td>
</tr>
<tr>
<td>Pets in the house</td>
<td>Yes / no</td>
<td>35.0</td>
<td>23.8</td>
<td><strong>1.72</strong> (1.26-2.36)</td>
<td><strong>1.65</strong> (1.15-2.36)</td>
</tr>
<tr>
<td>House condition</td>
<td>Poor / good</td>
<td>45.9</td>
<td>27.4</td>
<td><strong>2.24</strong> (1.66-3.03)</td>
<td>1.64 (1.15-2.32)</td>
</tr>
<tr>
<td>Lid / toilet water tank</td>
<td>No / yes</td>
<td>47.3</td>
<td>34.5</td>
<td><strong>1.71</strong> (1.27-2.29)</td>
<td><strong>1.45</strong> (1.02-2.05)</td>
</tr>
<tr>
<td>Larvicide in tanks</td>
<td>No / yes</td>
<td>33.9</td>
<td>22.0</td>
<td><strong>1.94</strong> (1.40-2.70)</td>
<td><strong>2.21</strong> (1.48-3.31)</td>
</tr>
</tbody>
</table>

Dengue Conceptual Framework

- Population density (urban/rural)
- Urbanization
- Migration
- Housing
- Habits/"Culture" related to water (storage)
- Type and abundance of "public spaces" including land use
- Public/private water supply
- Individual/family/household
- Social context
- Community
Eco-bio-social research on dengue
Common conceptual framework
DPSEEA framework for interventions

**Driving Force**
- Urbanization; Poverty, climate

**Pressure**
- Housing conditions
- Water handling practice

**State**
- Presence of containers with water,

**Exposure**
- Aedes Aegypti foci

**Effect**
- Dengue; DHF

**Actions**
- Improved housing & infrastructure
- Community empowerment
- Environmental surveillance
- Environmental controls
- Entomological surveillance
- Isolation
- Clinical-Epidemiological surveillance
- Treatment

**Capabilities**
- For intervening

**Interpretation Evaluation**
BARRIERS

- Technical Cure-alls
- False Economies
- Cultural Insensitivity / Gross Oversimplification
- Geographical
- Political

Whether or not knowledge is global, the use of knowledge is always local

BRIDGES

- Adaptation to changing mosquito behaviour
- Adapt education to public
- Regional & local focus
- Transdisciplinarity
- Empowerment
- Scalability
- Adaptability
- Sustainability
So what does this mean for “Integrated Control Strategies”?

1) WHERE EFFICACIOUS TREATMENTS EXIST… ?
   - e.g. Potential for integrated chemotherapy initiatives
   - BUT- ARE THERE CAPABILITIES & CAPACITIES FOR SCALE-UP?
     - A health system & “social science”/determinants agenda!
     - A serious effort for comprehensive primary care?
     - Will we rely on treatment alone (Risk of resistance)

2. WHERE EFFICACIOUS TREATMENTS DO NOT EXIST… ?
   - WILL PREVENTIVE EFFORTS BE SUPPORTED?
     - Will primary care infrastructure be strengthened?
     - Will intersectoral collaborations be strengthened
     - Scale up question again

3. CROSSCUTTING
   - WILL THERE BE COHERENT EMPHASIS ON STRENGTHENING INFRASTRUCTURE?
     - including G8 /macro-economic policies & human resources crisis
SOCIAL OFFSETS can be harnessed

In relation to Drug Development

which remains the strategy with greatest financial incentive.

1) Do we have an efficacious treatment?;

2) Have clinical trials shown the treatment to be devoid of serious side-effects and effective in practice;

3) Do we have viable health service systems in high burden areas?; and

4) Are the social and environmental conditions that perpetuate the disease being addressed?

% of funds to acquire knowledge in “valued” sector should be directed to research on other contributors to reducing ND disease burden
CONCLUSION

STRIKING THE RIGHT BALANCE
FOR AN INTEGRATED CONTROL STRATEGY

Financial incentives to redirect drug development funding to NTDs (e.g. the proposed Health Impact Fund) can modify the observed Neglected Disease paradigm….

Contribution of ALL interventions that contribute to outcome should be eligible for financial incentives.

A Social offset allotment will stimulate consideration of neglected opportunities for producing positive impact and warrants special support – but be carefully monitored and managed in an ongoing way.

Global “systemic” pressures/policies need to be considered.

SCALING UP! CAPACITY-STRENGTHENING needs