HISTORY OF NONCOMMUNICABLE DISEASE FRAMING AT THE WHO

1948 - PRESENT

NICOLE BASSOFF AND LEAH SCHWARTZ
How did this become synonymous with "Non-Communicable Disease"?
METHODS

• Conducted broad searches (by subject) of the WHO’s main databases, IRIS and WHOLIS, using the following search terms: noncommunicable, chronic, cancer, cardiovascular, cancer, diabetes, nutrition

• Consulted WHO’s self-published official histories, spanning 1948-1987, WHO’s Technical Report Series on all relevant topics between 1948-2000, and the first-fourth generations of the WHO’s centralized files

• Relevant unpublished WHO internal documents, records, and correspondence were retrieved and scanned from WHO Archives, Geneva, Switzerland

• Gathered materials were analyzed and coded using the following terms:

  AFRO, alcohol, asthma, blindness, cancer, cardiomyopathy, cardiovascular, chronic, chronic lung disease, chronic respiratory disease, cirrhosis, congenital disease, dental, diabetes, EMRO, epilepsy, EURO, gynecological disorder, hemoglobinopathies, injury, kidney disease, lifestyle, mental health, musculoskeletal, neurological disease, noncommunicable, nutrition, oral health, PAHO, poverty, prevention, renal disease, rheumatic, rheumatic heart disease, risk-factor, SEARO, surgery, tobacco, violence, WHO Europe, WPRO
EURO’S CHRONIC DISEASE EXPERIENCE HAS DRIVEN WHO’S NCD POLICIES

• Since the first 1957 EURO Symposium on chronic diseases, WHO EURO has set the global agenda on NCDs

• Finland’s WHO-supported North Karelia study (1971) set the standard and provided the template for future studies in nations around the world

• Even during the “health for all” era, when the interests of developing countries were given more attention and priority at WHO, integrated NCD programming in those countries was modeled on European data and experience

• Throughout the twentieth century, the interests of developing countries and the idea of a looming NCD “epidemic” were utilized as rhetorical justification for continuing research and programmatic efforts on NCDs in developed countries
1948 - 1978: Disease-specific Programming

The Case for Community-Based Prevention Grows
(CHD Cohort Studies and the North Karelia Project)

- Cardiovascular diseases
- Diabetes
- Rheumatic diseases
- Congenital abnormalities
- Mental health
- Occupational health
- (mal)nutrition
- Renal diseases
- Chronic respiratory diseases
- Environmental health
1978 - 1998: Emergence of Shared Modifiable Risk Factor Framework

Integrated NCD Programming Develops: Community-Based Prevention, Community Health Promotion

- Chronic respiratory diseases
- Cardiovascular diseases
- Cancer
- Diabetes

Risk factors:
- Tobacco use
- Unhealthy diets
- Physical inactivity
- Psychosocial factors
- Harmful use of alcohol
- Blood pressure
- Body weight

Conditions:
- Congenital abnormalities
- Renal diseases
- Rheumatic diseases
- Mental health
- Diseases of the sense organs
1998 - 2008: Emergence of 4x4 NCD Framework

“Noncommunicable Diseases”

- cardiovascular diseases
- chronic respiratory diseases
- physical inactivity
- harmful use of alcohol
- diabetes
- cancers
- unhealthy diets
- tobacco use

- occupational health
- congenital abnormalities
- mental health
- diseases of the sense organs
VISUALIZING NCDs SINCE 2008
Little new resources mobilized post-UN High Level Meeting

PRELIMINARY CONCLUSIONS

• NCDs have been a part of a framework in which populations are striving toward Western standards of health; interventions are accordingly directed at that transition
• “Modifiable shared risk-factor” framing, which emerged from CVD efforts, defined the NCD category in a way that excluded the interests of the poorest billion
• Reframing NCDs requires a recognition that “modifiable shared risk-factor” framing never did and still does not explain NCDs among the poorest billion
APPENDIX

WORKS CITED


• Relevant WHO Executive Board Reports: 1948-2001

• The First, Second, Third, and Fourth Ten Years of the World Health Organization

• WHO Archives: 1st-4th generations of the “Centralized Files”

• Relevant WHA Resolutions: 1948-Present
Richard Horton: Where is the social movement?

“…where is the anger and the activism in response to its own diagnosis of a “global scandal”? Where is the urgency? Where are the Presidents and Prime Ministers corralled by WHO to lead nations in their fight against NCDs? The NCD movement is too quiet, too pedestrian, and too polite to make the impact it deserves. It has allowed process to kill action.”

- Richard Horton*
Editor-in-Chief, The Lancet

## A Hypothesis:
The NCDIs community is in the midst of a “framing conflict”

We observe two explanatory “frames” for NCDIs amongst the poorest populations globally:

<table>
<thead>
<tr>
<th>4x4</th>
<th>NCDI Poverty</th>
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<tbody>
<tr>
<td>- 4 main NCDs</td>
<td>- Long tail</td>
</tr>
<tr>
<td>- Behavioral / Metabolic Causes</td>
<td>- Infectious / Environmental Causes</td>
</tr>
<tr>
<td>- Development</td>
<td>- Extreme Poverty</td>
</tr>
<tr>
<td>- Urban</td>
<td>- Rural</td>
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<tr>
<td>- Older Adults</td>
<td>- Children and Young Adults</td>
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<tr>
<td>- Prevention</td>
<td>- Treatment</td>
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<td>- Epidemic</td>
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A Hypothesis:
The NCDI community is in the midst of a “framing conflict”

Chronic diseases and development
Published: November 10, 2010

THE LANCET

4x4 Framework:

<table>
<thead>
<tr>
<th></th>
<th>Tobacco Use</th>
<th>Unhealthy diets</th>
<th>Physical Inactivity</th>
<th>Harmful Use of Alcohol</th>
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</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
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<tr>
<td>Diabetes</td>
<td>☑</td>
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<td>Cancer</td>
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<td>☑</td>
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<tr>
<td>Chronic Respiratory</td>
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NCDs (especially amongst the very poor) are mostly unexplained by the 4x4 framework.

Four major NCDs (e.g. in Malawi) explain less than 40% of the disease burden.

Less than 20% of total NCD burden explained by behavioral risk factors.

Our empirical strategy to test this “frame conflict”

<table>
<thead>
<tr>
<th>Key Questions</th>
<th>Methodologies</th>
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<td>• CivicScience Public Opinion Poll</td>
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<td>opportunities for investment?</td>
<td>• Two questions: What drives non-infectious diseases amongst the world’s</td>
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<tr>
<td></td>
<td>poorest? What should be a priority for USG development assistance?</td>
</tr>
<tr>
<td></td>
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<tr>
<td>2. How does the global health community “frame” NCDIs, their drivers, and the</td>
<td>• Online survey of global health students, practitioners, professors, and</td>
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<td>researchers.</td>
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<td></td>
<td>• Measure the overall and heterogeneity of dominant framing across the global</td>
</tr>
<tr>
<td></td>
<td>health constituency.</td>
</tr>
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<td></td>
<td>• &gt;1,000 respondents in the U.S.</td>
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<td>• Semi-structured interviews with global health academics, practitioners, and</td>
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<tr>
<td>amongst the poorest?</td>
<td>global health leaders.</td>
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<tr>
<td></td>
<td>• Focused on gaining their views on the burden, risk factors, interventions,</td>
</tr>
<tr>
<td></td>
<td>and development assistance for NCDIs.</td>
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See Appendices for more details on methodological and analytical considerations.
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- >50 phone calls, recorded, transcribed, coded for emergent themes. |

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Public Opinion Poll:
We asked online respondents two questions:

1. What drives non-infectious diseases (such as heart disease or cancer) among the poorest people in the world, such as in Sub-Saharan Africa and India?

   A: (Entirely systemic poverty, including limited access to healthcare and clean water and exposure to pollution; Mostly systemic poverty, but also unhealthy, but controllable, behaviors such as smoking, lack of exercise and poor diet; Both equally; Mostly unhealthy behaviors, but also systemic poverty, including limited access to healthcare and clean water and exposure to pollution; Entirely unhealthy, but controllable, behaviors such as smoking, lack of exercise and poor diet)

2. Funding which of the following development programs for the world's poorest countries should be priorities for the United States? (Please select all that apply.)

   A: (Comprehensive healthcare for the poor, including non-infectious conditions; Water and Sanitation; Infectious Diseases; Primary Education; Roads and Infrastructure; Microfinance)
More Americans view NCDs of the poorest as primarily the result of systemic poverty, *rather* than due to unhealthy behaviors.

What drives non-infectious diseases (such as heart disease or cancer) among the poorest people in the world, such as in Sub-Saharan Africa and India?

- Entirely/mostly systemic poverty: 1,145 (42%)
- Both equally: 875 (32%)
- Entirely/mostly unhealthy behaviors: 679 (25%)
Those who see NCDs as a matter of systemic poverty are more likely to support funding comprehensive health care for the poor.

What drives non-infectious diseases (such as heart disease or cancer) among the poorest people in the world, such as in Sub-Saharan Africa and India?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entirely/mostly systemic poverty</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>Both equally</td>
<td>14%</td>
<td>86%</td>
</tr>
<tr>
<td>Entirely/mostly unhealthy behaviors</td>
<td>13%</td>
<td>87%</td>
</tr>
</tbody>
</table>

Should funding development programs for comprehensive healthcare for the poor, including non-infectious conditions for the world’s poorest countries be a priority for the United States?
### Key Questions

1. **How does the American public view NCDIs amongst the poorest and the opportunities for investment?**
   - CivicScience Public Opinion Poll
   - Two questions: What drives non-infectious diseases amongst the world’s poorest? What should be a priority for USG development assistance?
   - 2500, nationally-representative responses per question

2. **How does the global health community “frame” NCDIs, their drivers, and the most important interventions?**
   - Online survey of global health students, practitioners, professors, and researchers.
   - Measure the overall and heterogeneity of dominant framing across the global health constituency.
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   - Focused on gaining their views on the burden, risk factors, interventions, and development assistance for NCDIs.
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Survey of the U.S. Global Health Community

How does the global health community frame NCDIs amongst the poorest billion?

We developed a survey with 21 Likert-scale questions on views about NCD burden and causation, questions about past work experience, education, personal experience with a severe NCD, and views on foreign aid.

We ran a factor analysis on the 21 Likert-scale questions to explore “latent variables” that these items correlate with.
Distribution of Variables NCDI Poverty (P) and 4x4 (F)

We see an overall slight bias towards agreement with 4x4 and slight disagreement with NCDI Poverty.

Mean: 4.774, C.I (4.83, 4.71)  
Mean: 3.952, C.I (4.02, 3.87)
NCDI Framing seems to be politically relevant

4x4 framing is associated with a slightly negative view on growth of foreign aid for NCDIs.

NCDI Poverty is associated with a more solidly expansionary view.
# NCDI Framing Archetypes in our Sample

<table>
<thead>
<tr>
<th>Archetype</th>
<th>Explanation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4x4 Committed</strong></td>
<td>F+, P- Favors 4x4, disfavors NCDI Poverty</td>
<td>63</td>
</tr>
<tr>
<td><strong>Agreeable</strong></td>
<td>F+, P+ Favors both framings</td>
<td>251</td>
</tr>
<tr>
<td><strong>Disagreeable</strong></td>
<td>F-, P- Disfavors both framings</td>
<td>7</td>
</tr>
<tr>
<td><strong>NCDI Poverty Committed</strong></td>
<td>F-, P+ Disfavors 4x4, favors NCDI Poverty</td>
<td>2</td>
</tr>
<tr>
<td><strong>Neutral</strong></td>
<td>F, P Fairly neutral about 4x4 and NCDI Poverty</td>
<td>24</td>
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| amongst the poorest?                                                          |                                                                                                                                              |

See Appendices for more details on methodological and analytical considerations.
Data Summary: 40 total semi-structured interviews

Disease Focus

- Child, maternal, reproductive health: 21%
- HIV, TB, Malaria: 19%
- NCDs, General: 17%
- Cancer: 16%
- Diabetes: 15%
- Hypertension, heart disease, stroke: 15%
- NCDs, other: 14%

Global Health Work

- Advocacy, activism: 39%
- Research: 16%
- Policy: 15%
- Service delivery: 15%
- Teaching, education: 16%

Note: charts based on 36 total interviews
Data Summary: 40 total semi-structured interviews

Primary Employment
- Academia: 48%
- Hospital or clinic: 28%
- Private sector or business: 13%
- Government: 8%
- Nonprofit: 5%

Field
- Social Sciences: 47%
- Life Sciences: 33%
- Clinical: 14%
- Public Health / Epidemiology: 6%

Note: charts based on 36 total interviews
Semi-structured interviews answered three key questions:

1. How would you describe the NCDI burden amongst the poorest billion?

2. What are the most important drives / risks associated with the NCDI burden amongst the poorest billion?

3. What are the most important types of interventions for this burden?
Semi-Structured Interviews: Key Findings

1. Elements of 4x4 framing were more frequently discussed and more strongly emphasized throughout the interviews.

2. Interviewees did not strictly adhere to one “frame” or another—they mixed 4x4 and NCDI Poverty in complex and sometimes contradictory ways.

3. Most interviewees described NCDs of the poorest billion as a “rapidly growing epidemic” rather than endemic conditions.

4. Interviewees saw NCDs as mainly affecting older populations.

5. Strong tendency to view NCDs as an urban problem rather than existing amongst the rural poor.
Combined Framing:

“[you have] communicable diseases that lead to chronic disease... rheumatic heart disease and even HIV/AIDS can lead to NCDs. So the communicable nature of NCDs probably affects the bottom billion more than any other population... as well as the traditional risk factors—alcohol, poor diets, lack of physical activity, and smoking coming into even the poorest of the poor.” (NCD Researcher)

Older Populations:

“I think most countries still feel like tackling those, whether its infectious agents to disease or things that are affecting mothers and children early on in life are still a heck of a lot more important that addressing something that is typically more chronic in nature and is hitting people certainly in our case after the age of 50. So the understanding of having a long life, there’s not a lot of appetite for that I think on the global level just yet... I think that there’s still a lack of understanding that this is actually impacting younger and more vibrant populations.” (NCD Activist / Researcher)

Focus on Lifestyle-Modifiable Risks:

“We’ve had a lot of value in behavioral risk factors that was protective of areas of the world that are maybe less economically advantaged. We need to go back to those roots because those are part of what has been lost instead of actually importing those values into the high socioeconomic status counties. We’ve done the opposite. We have made things that are unhealthy available in low resource areas instead of taking advantage of what was good about their lifestyle, imported to more industrial life societies.” (Senior Global Health Professor)

Urbanization:

“What you see in many settings is if then that undernourished fetus moves then to an urban center, where people are wealthy, that’s where you see the explosion of NCDs.” (NCD Researcher)
A Leading NCD Funder and Practitioner

Infectious, Environmental Causes

Extreme Poverty

Behavioral, Metabolic Causes

Development

Children and Young Adults

Urbanization

Four Main NCDs

A US-based Global Health Professor

Epidemic

Development

Behavioral, Metabolic Causes

Four Main NCDs
Preliminary Conclusions

1. The history of emergence of the “NCD” category at WHO—closely connected to CVD epidemiology—has been biased towards and focused on the N. American and European burden/experience.

2. This history has measurably, but imperfectly, shaped the framing of global health experts and practitioners.

3. *We have a chance to change the narrative* through this Commission’s work to mobilize better data about the true NCD burden, stories of actual patients, and evidence of successful interventions.
Possible Next Steps

1. Work with Country Commissions to gauge in-country framing and political opportunity to advance integrated and comprehensive NCDI treatment and prevention.

2. Conduct Social Network Analysis (SNA) of scholarly citations and organizational actors in the global NCDI field.

3. Conduct message testing of new framing to begin to use the NCDI Poverty Commission findings in potential advocacy campaigns.