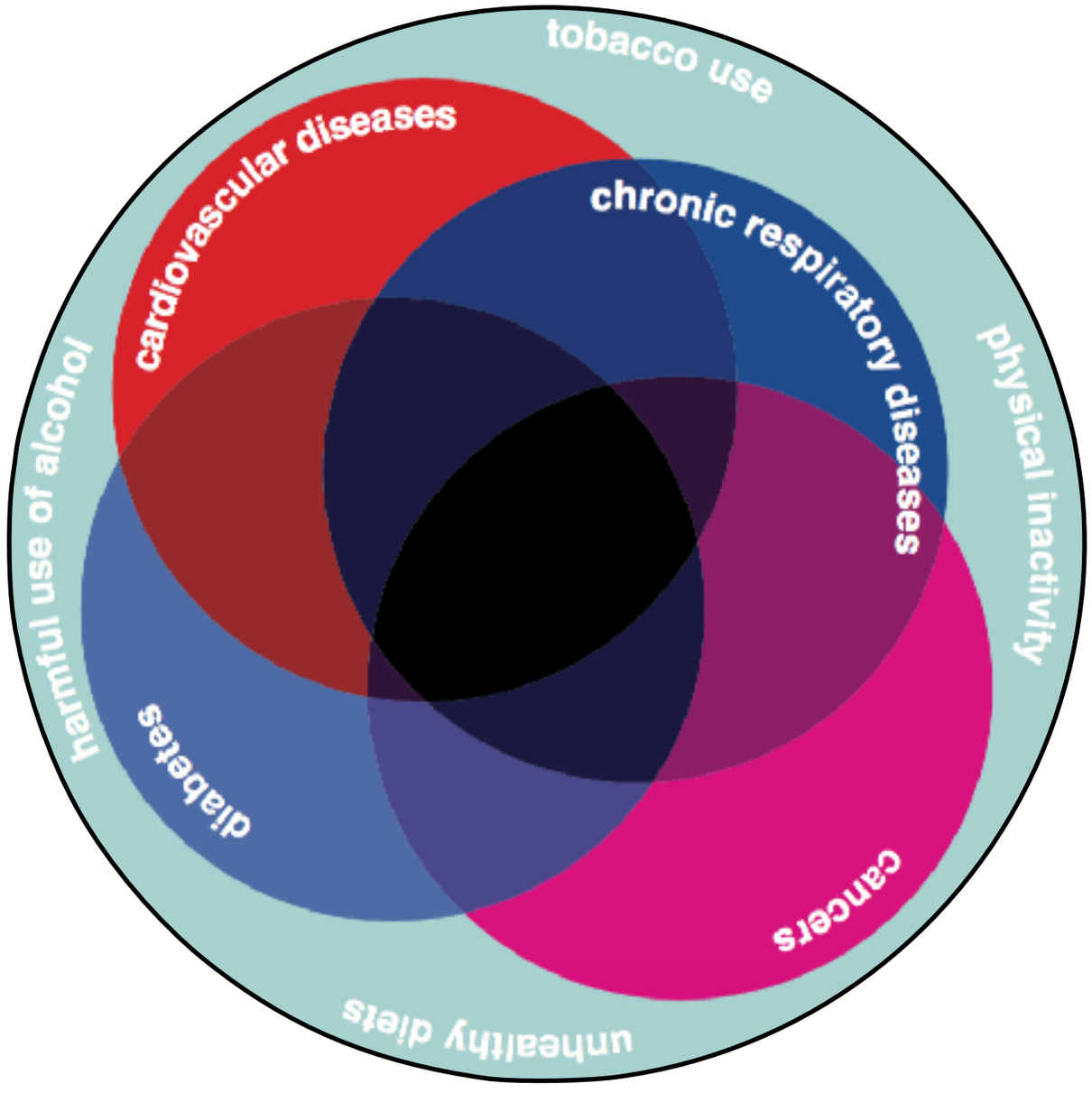
History of Noncommunicable Disease Framing at the WHO

1948 - Present

Nicole Bassoff and Leah Schwartz

How Did This Become Synonymous With "Non-Communicable Disease"?



2008 Global Strategy for the Prevention and Control of Noncommunicable Diseases Logo

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- Relevant unpublished WHO internal documents, records, and correspondence were retrieved and scanned from WHO Archives, Geneva, Switzerland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

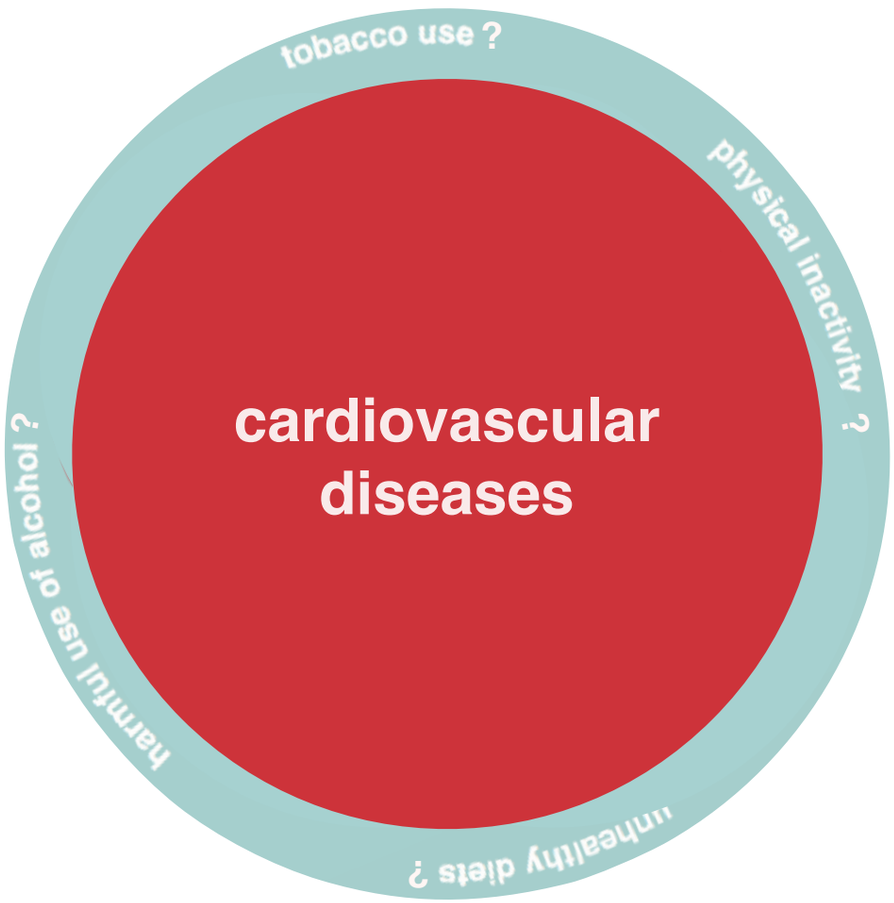
- Finland's WHO-supported North Karelia study (1971) set the standard and provided the template for future studies in nations around the world

- 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

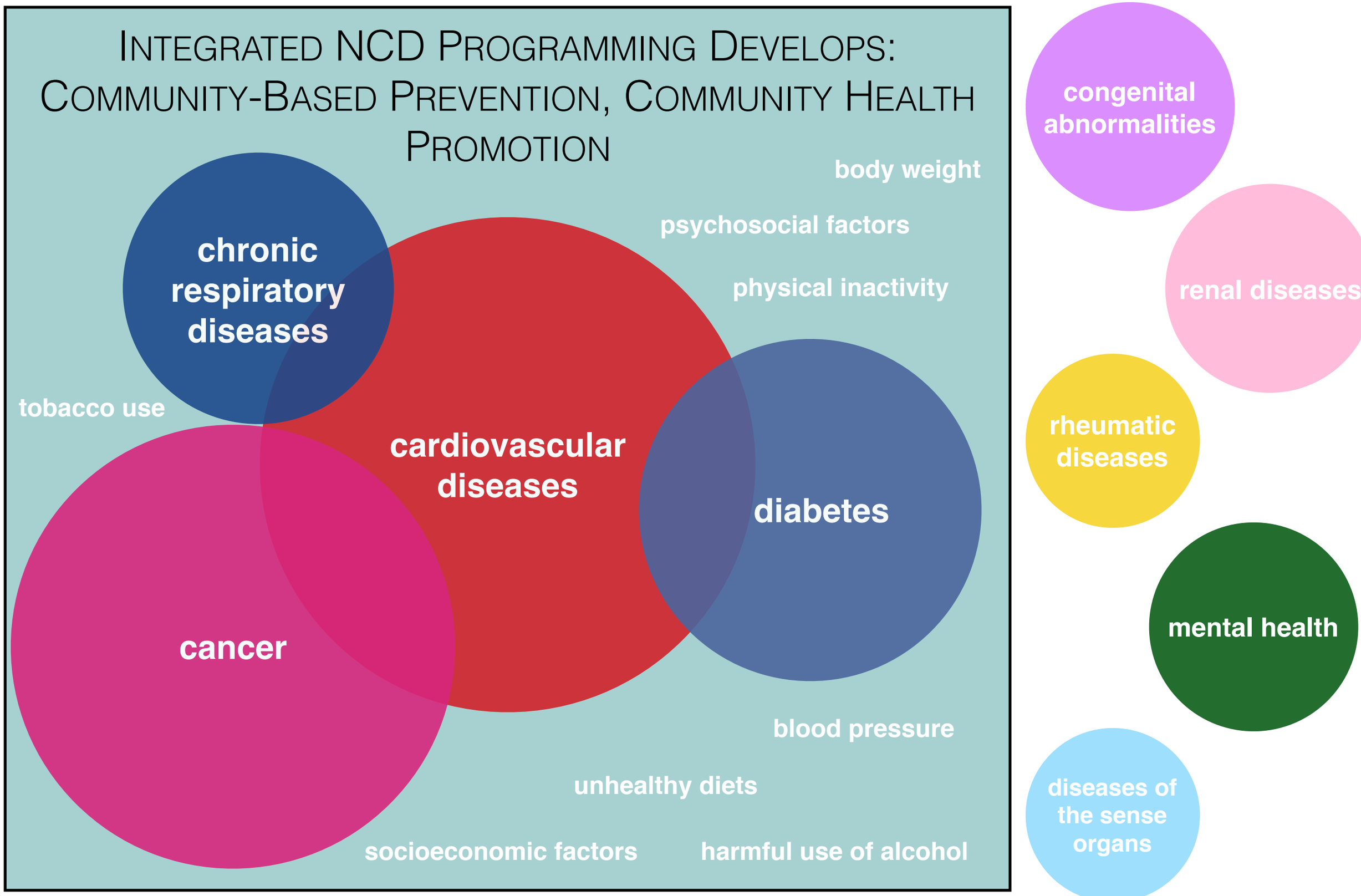
- Throughout the twentieth century, the interests of developing countries and the idea of a looming NCD "epidemic" were utilized as rhetorical justification for continuing research and programmatic efforts on NCDs in developed countries

1948 - 1978: Disease-specific Programming

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

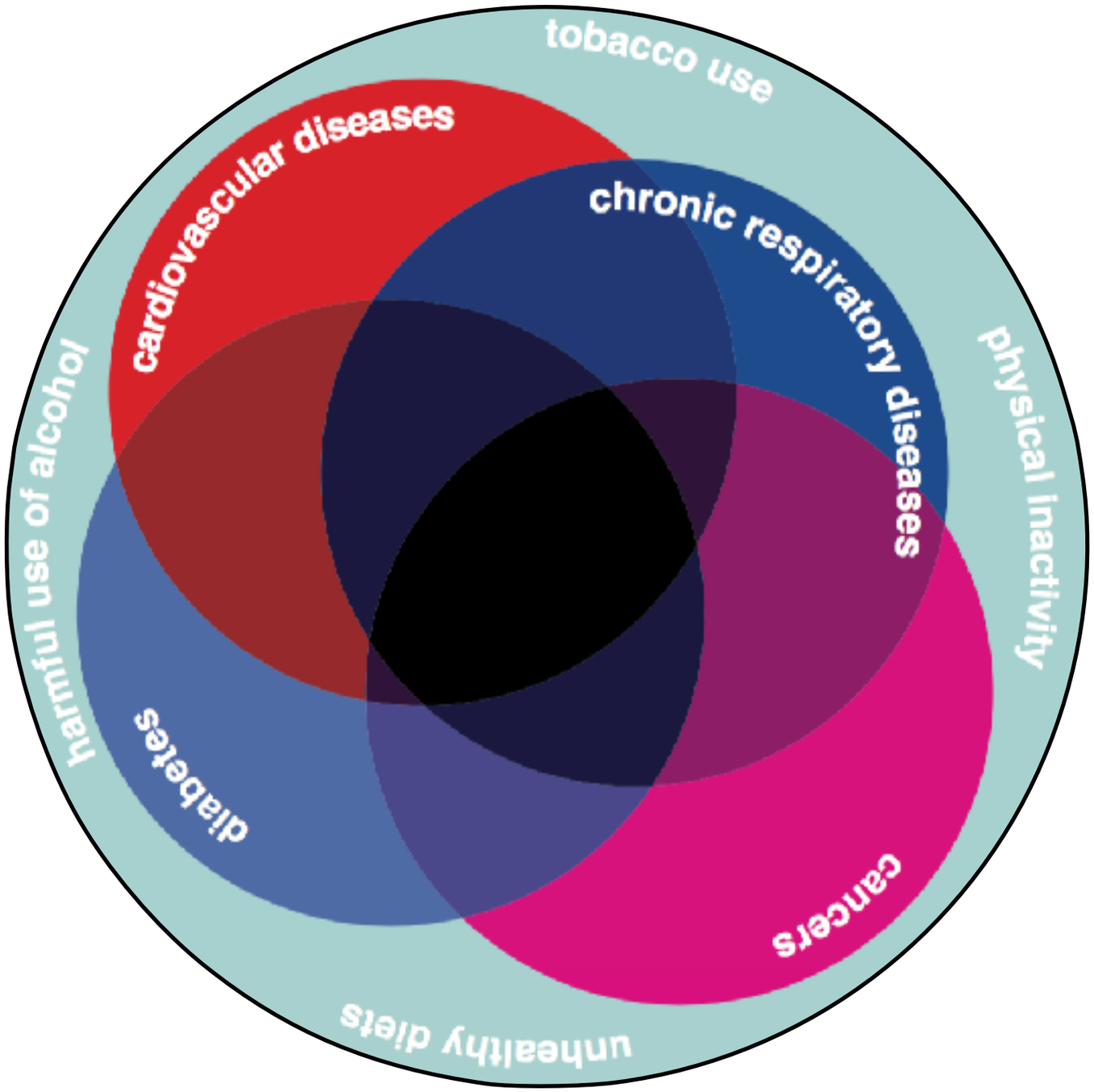


1978 - 1998: Emergence of Shared Modifiable Risk Factor Framework



1998 - 2008: Emergence of 4x4 NCD Framework

"Noncommunicable Diseases"



congenital abnormalities

occupational health

mental health

diseases of the sense organs

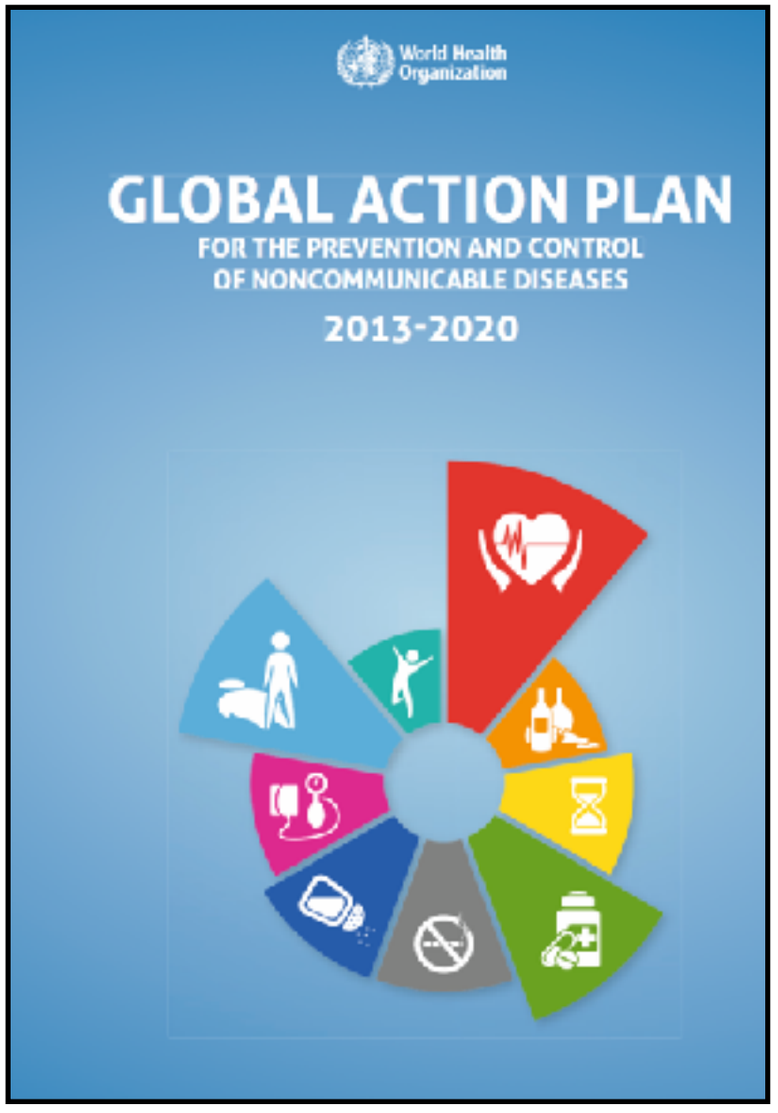
Noncommunicable Diseases

4 Diseases, 4 Modifiable Shared Risk Factors

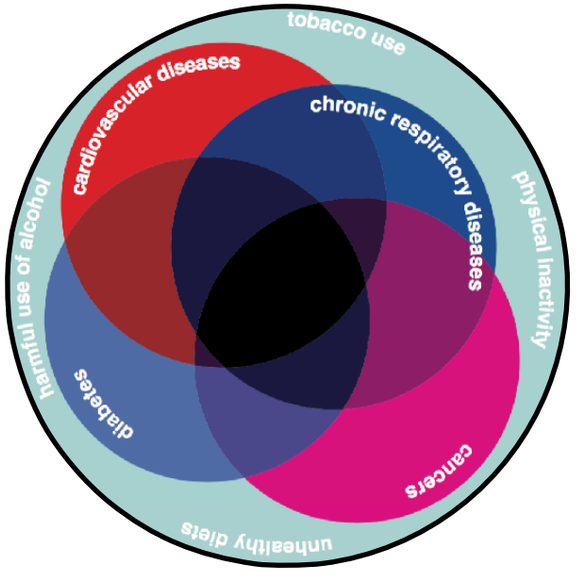
	Tobacco Use	Unhealthy diets	Physical Inactivity	Harmful Use of Alcohol
Cardio-vascular	✓	✓	✓	✓
Diabetes	✓	✓	✓	✓
Cancer	✓	✓	✓	✓
Chronic Respiratory	✓			

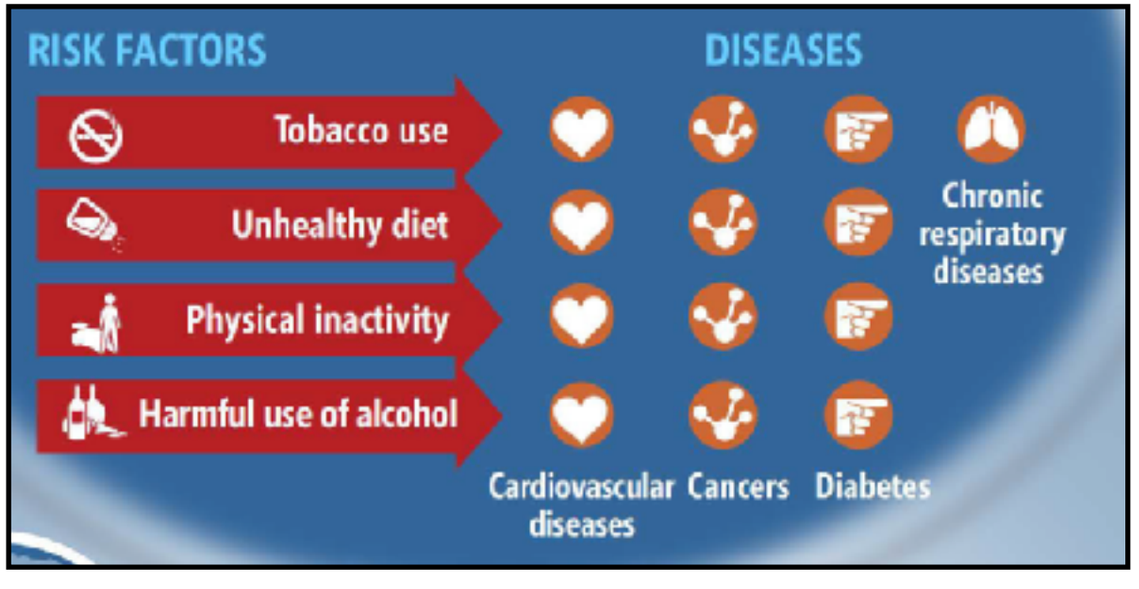
Noncommunicable Diseases
World Health Organization

World Health Organization



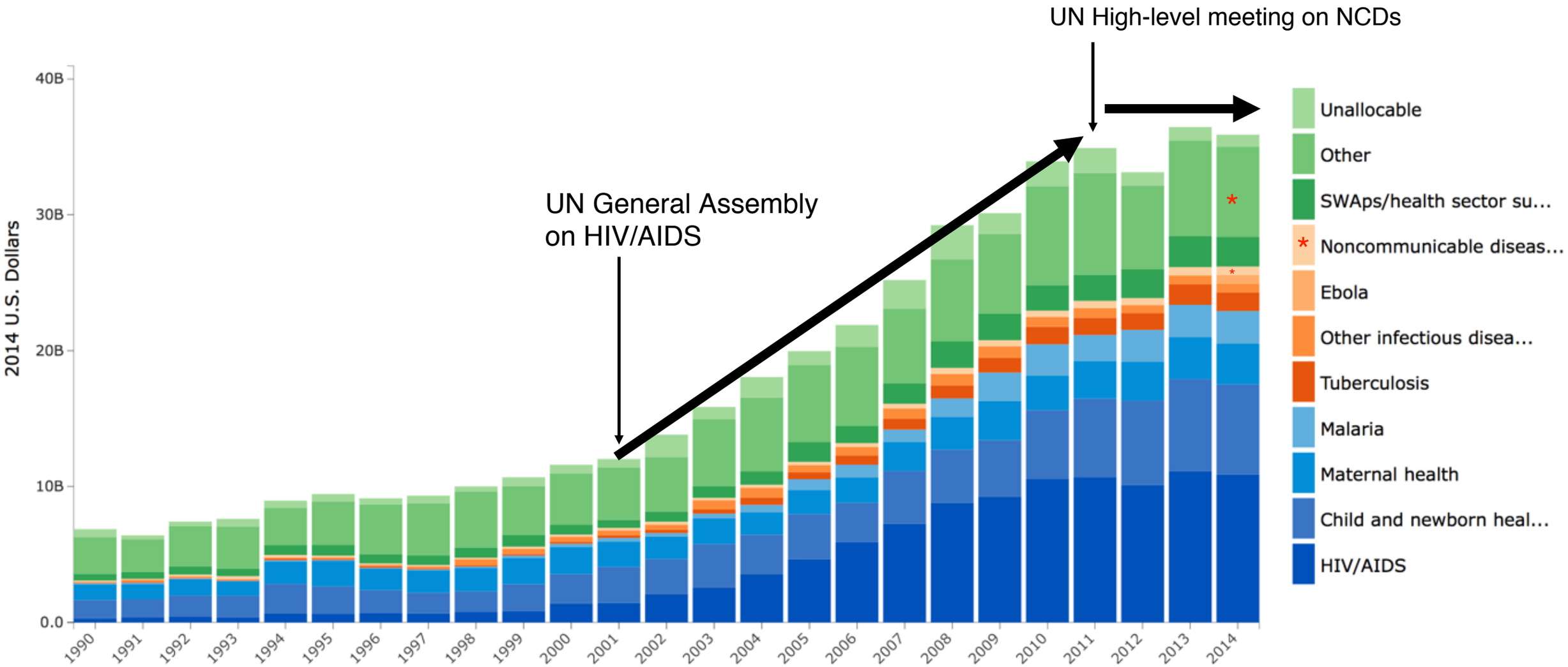
VISUALIZING NCDS SINCE 2008






September, 2011

Little new resources mobilized post-UN High Level Meeting



Source: IHME. http://vizhub.healthdata.org/fgh/

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

- *Technical Report Series*: 16, 44, 72, 78, 97,117, 126, 143, 149, 157, 168, 182, 192, 213, 230, 231, 232, 245, 251, 258, 270, 276, 295, 301, 302, 310, 314, 322, 340, 342, 362, 377, 441, 509, 628, 646, 678, 686, 697, 715, 726, 727, 732, 764, 797, 804, 844

- 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

Assessing the Opportunity to Reframe NCDIs for the Poorest Billion

Working Paper

September 28, 2016

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

*Horton, R. (2015). Offline: Chronic diseases - The social justice issue of our time. The Lancet, 386(10011), 2378. http://doi.org/10.1016/S0140-6736(15)01178-2

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:

4x4

- 4 main NCDs
- Behavioral / Metabolic Causes
- Development
- Urban
- Older Adults
- Prevention
- Epidemic

NCDI Poverty

- Long tail
- Infectious / Environmental Causes
- Extreme Poverty
- Rural
- Children and Young Adults
- Treatment
- Endemic

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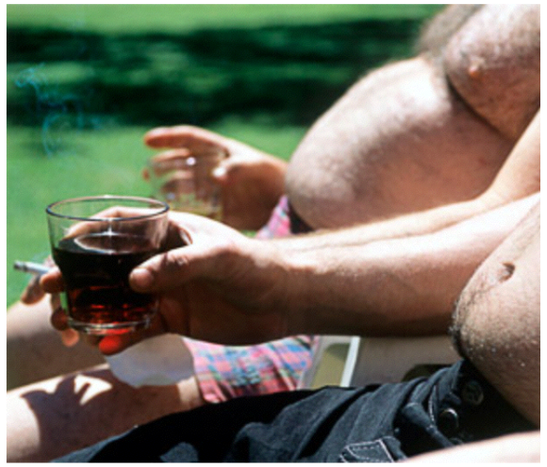


VS

4x4 Framework:

	Tobacco Use	Unhealthy diets	Physical Inactivity	Harmful Use of Alcohol
Cardio-vascular	✓	✓	✓	✓
Diabetes	✓	✓	✓	✓
Cancer	✓	✓	✓	✓
Chronic Respiratory	✓			

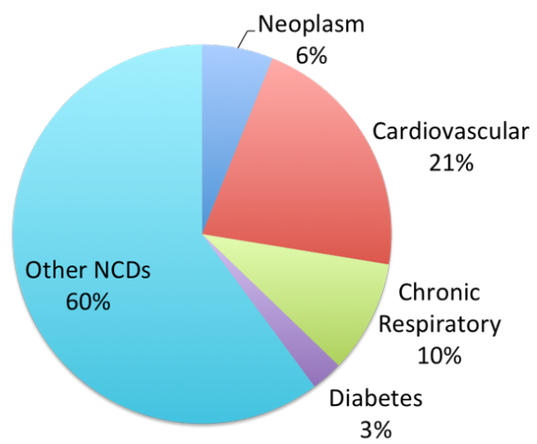
Noncommunicable Diseases
World Health Organization

World Health Organization

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.



Institute for Health Metrics and Evaluation. Global Burden of Disease Data Visualizations. http://vizhub.healthdata.org/gbd-compare/

Our empirical strategy to test this "frame conflict"

Key Questions	Methodologies
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. • >1,000 respondents in the U.S.
3. How do academic and global health organizational leaders view NCDIs amongst the poorest?	• Semi-structured interviews with global health academics, practitioners, and global health leaders. • Focused on gaining their views on the burden, risk factors, interventions, and development assistance for NCDIs. • >50 phone calls, recorded, transcribed, coded for emergent themes.

See Appendices for more details on methodological and analytical considerations.

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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)

Public Opinion Polling

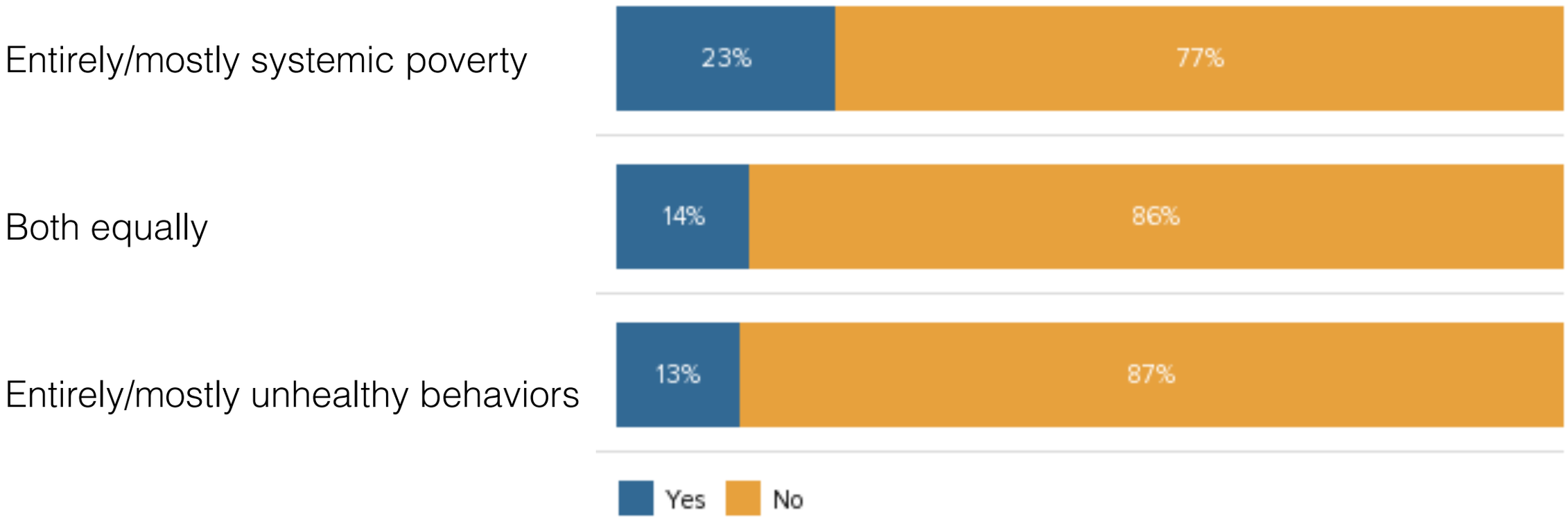
More Americans view NCDs of the poorest as primarily the result of systemic poverty, *rather* than due to unhealthy behaviors.

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?

1,145 (42%)	Entirely/mostly systemic poverty
875 (32%)	Both equally
679 (25%)	Entirely/mostly unhealthy behaviors

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?



Should funding development programs for comprehensivee healthcare for the poor, includingng non-infectious conditions for the world's poorest countries be a priority for the United States?

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Survey of the U.S. Global Health Community

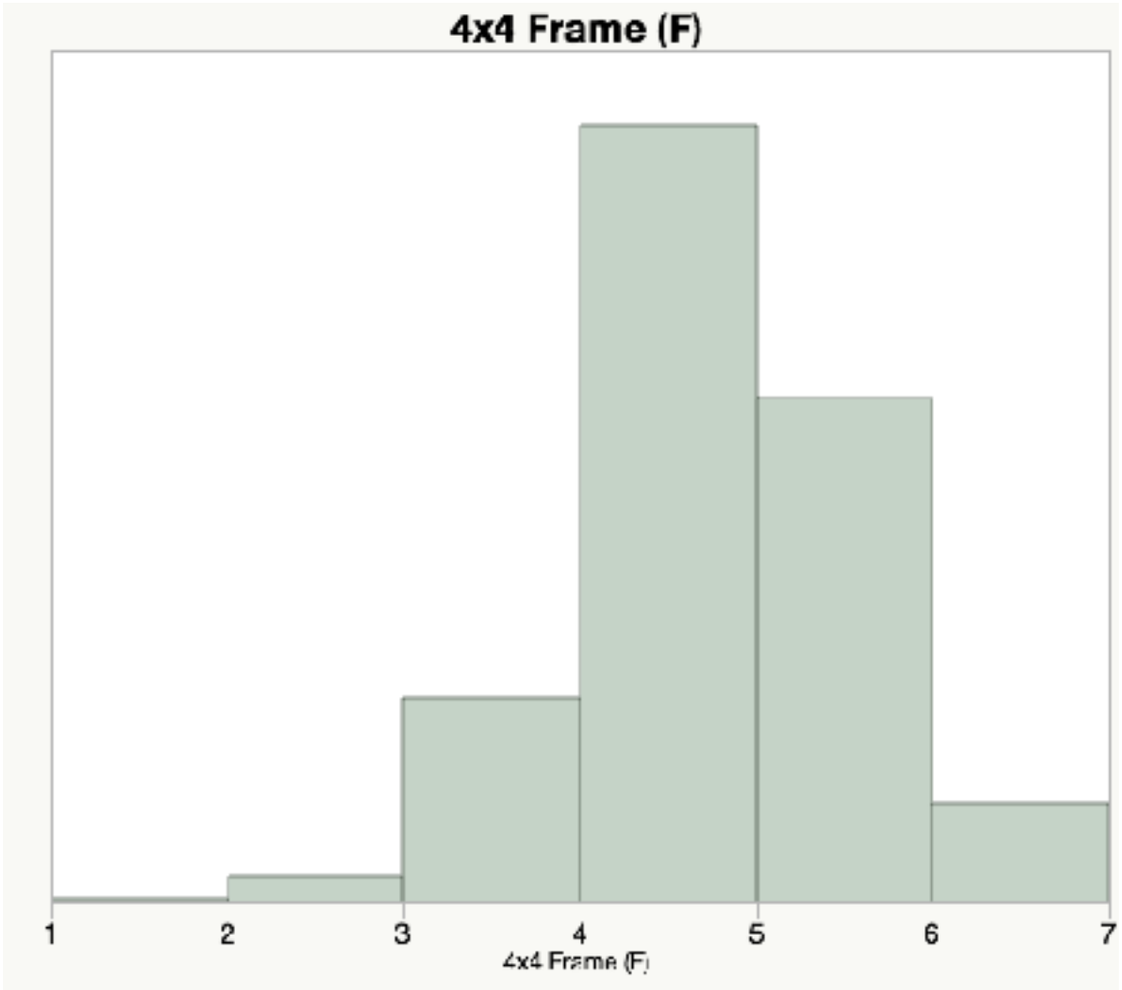
How does the global health community frame NCDIs amongst the poorest billion?

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.

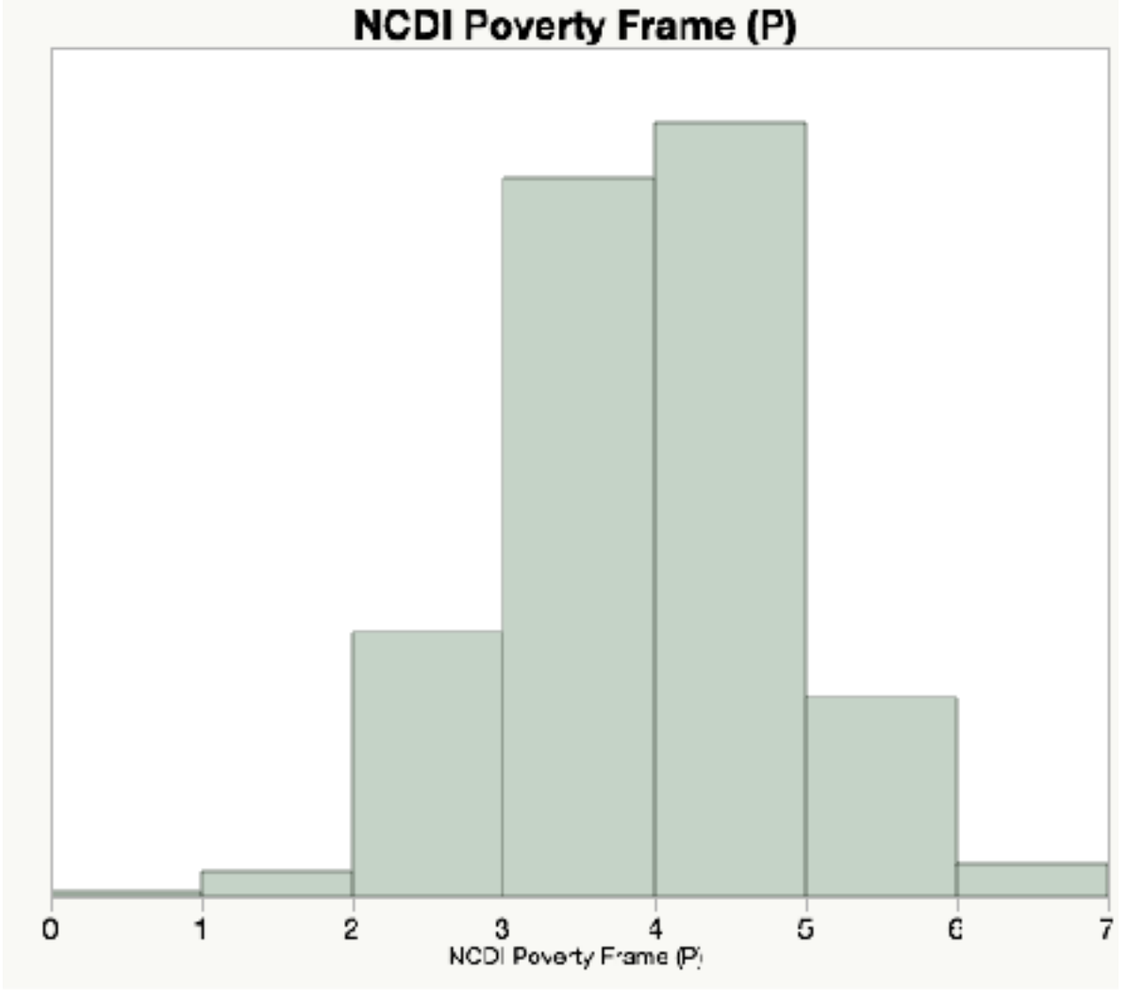
Distribution of Variables NCDI Poverty (P) and 4x4 (F)

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



Strongly Disagree Strongly Agree

Mean: 4.774, C.I (4.83, 4.71)



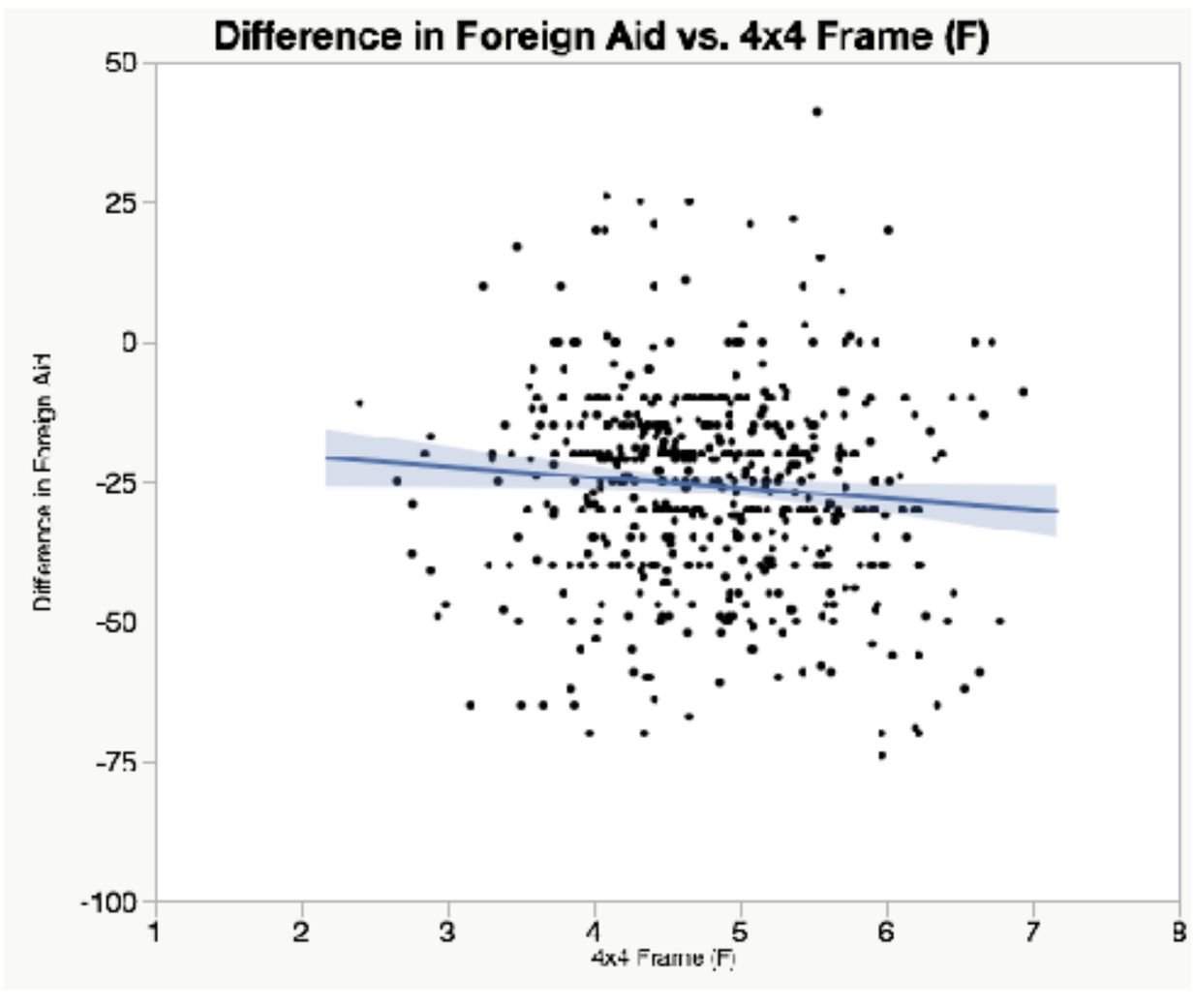
Strongly Disagree Strongly Agree

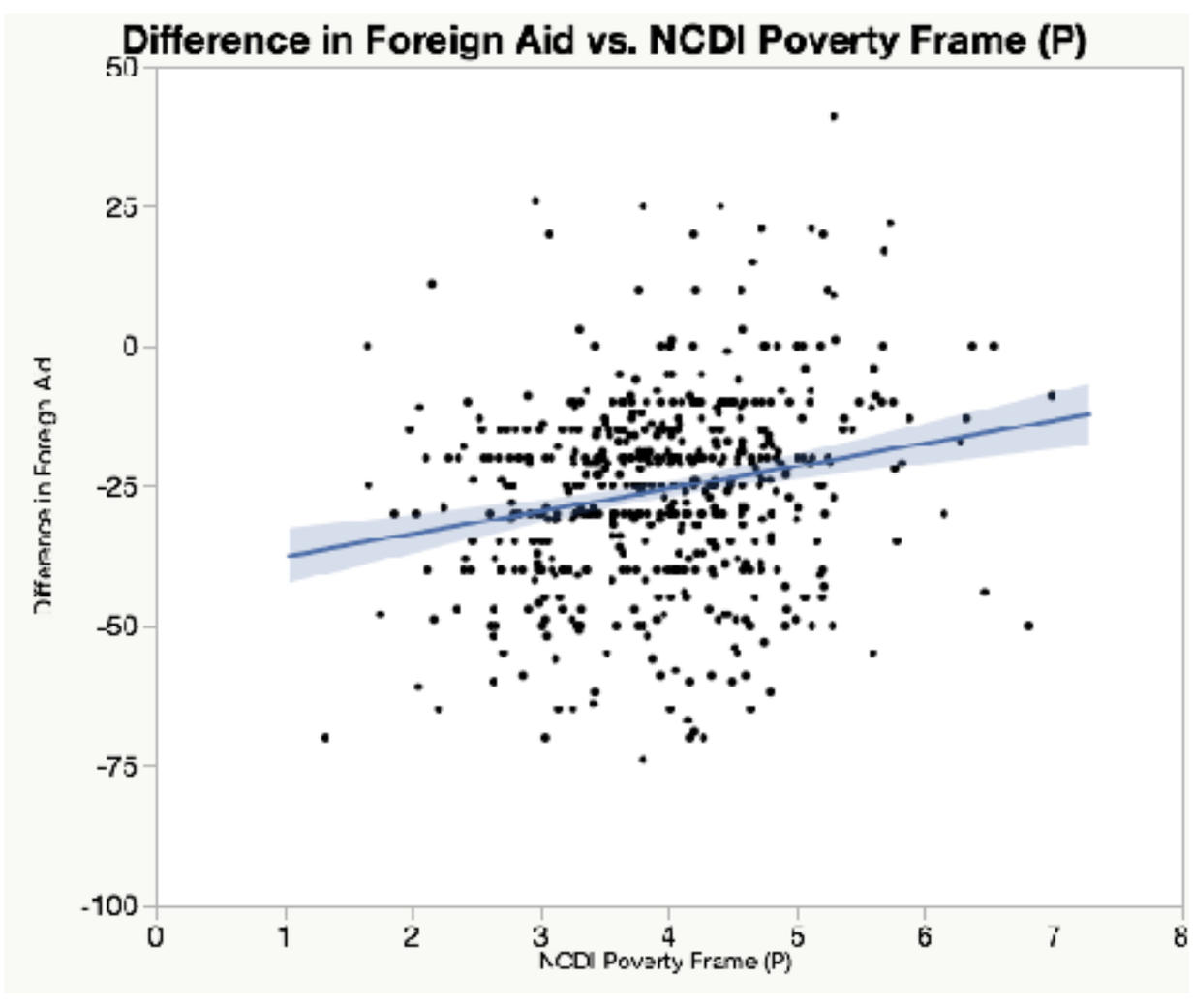
Mean: 3.952, C.I (4.02, 3.87)

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

	Archetype	Explanation	Frequency
4x4 Committed	F+, P-	Favors 4x4, disfavors NCDI Poverty	63
Agreeable	F+, P+	Favors both framings	251
Disagreeable	F-, P-	Disfavors both framings	7
NCDI Poverty Committed	F-, P+	Disfavors 4x4, favors NCDI Poverty	2
Neutral	F, P	Fairly neutral about 4x4 and NCDI Poverty	24

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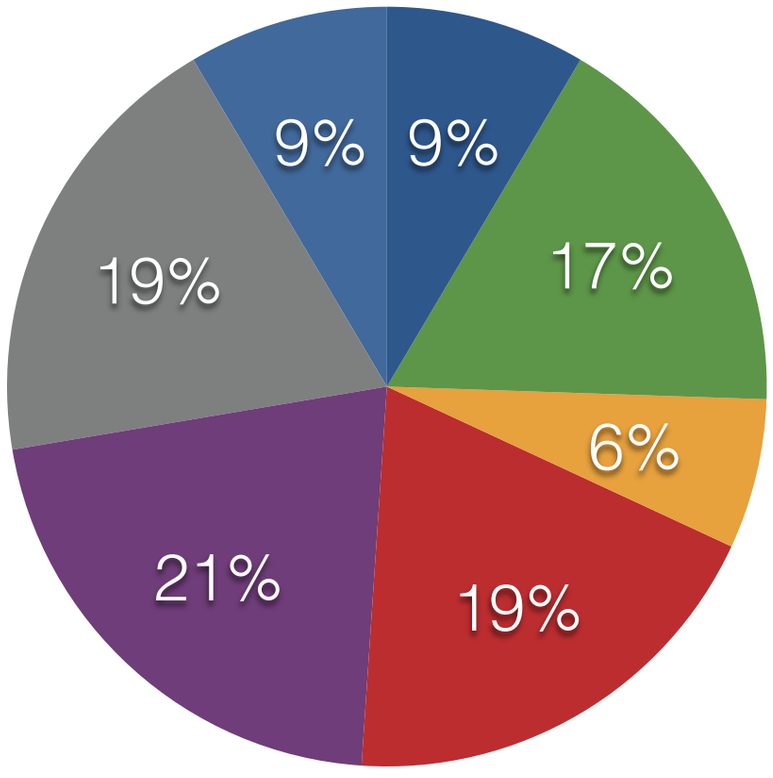
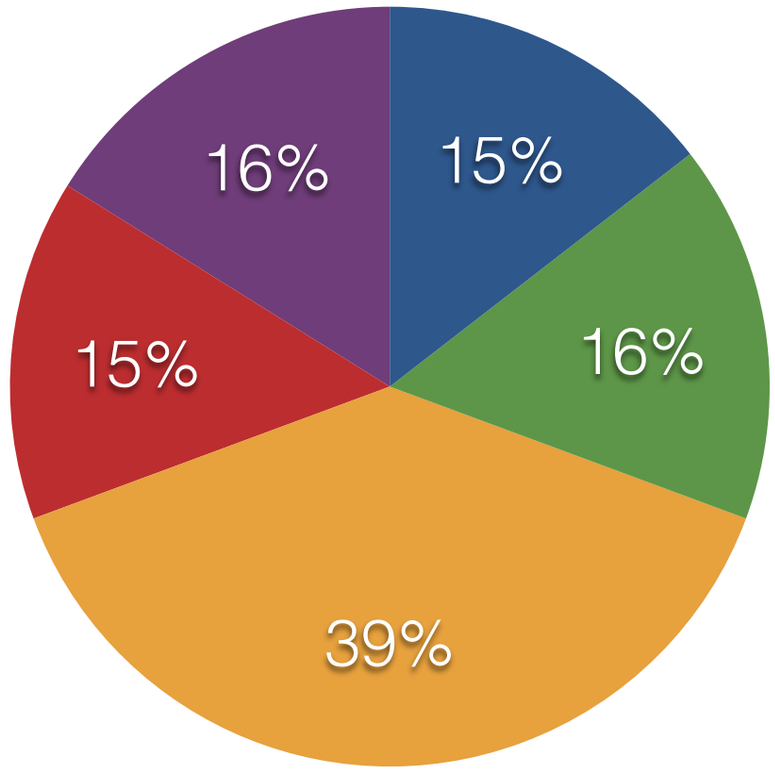
Data Summary: 40 total semi-structured interviews

Disease Focus



- Child, maternal, reproductive health
- HIV, TB, Malaria
- NCDs, General
- Cancer
- Diabetes
- Hypertension, heart disease, stroke
- NCDs, other

Global Health Work

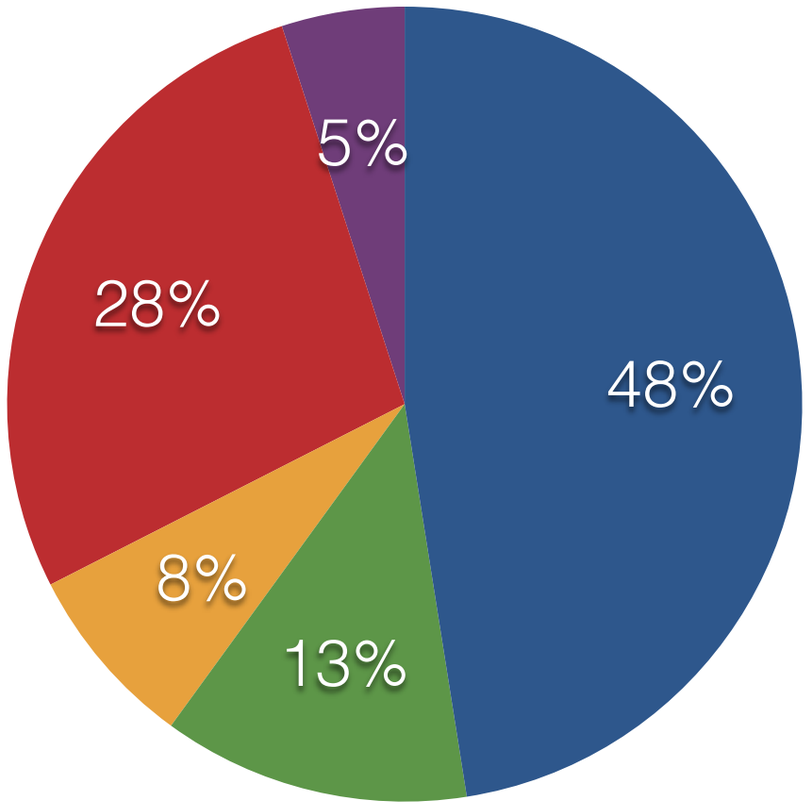


- Advocacy, activism
- Policy
- Research
- Service delivery
- Teaching, education

Note: charts based on 36 total interviews

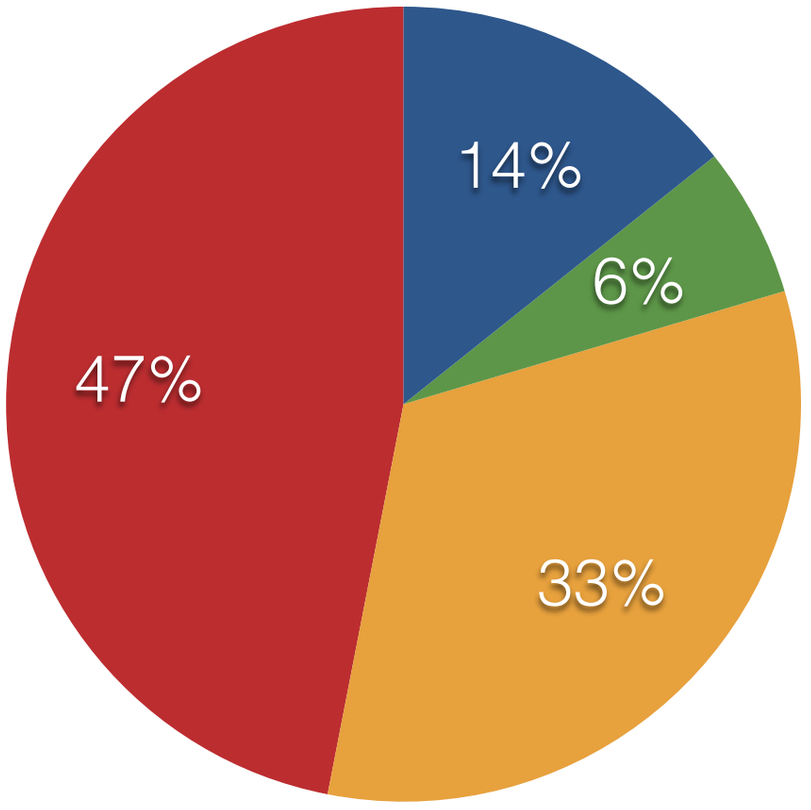
Data Summary: 40 total semi-structured interviews

Primary Employment



- Academia
- Hospital or clinic
- Private sector or business
- Government
- Nonprofit

Field



- Social Sciences
- Life Sciences
- Clinical
- Public Health / Epidemiology

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 *t**he 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)

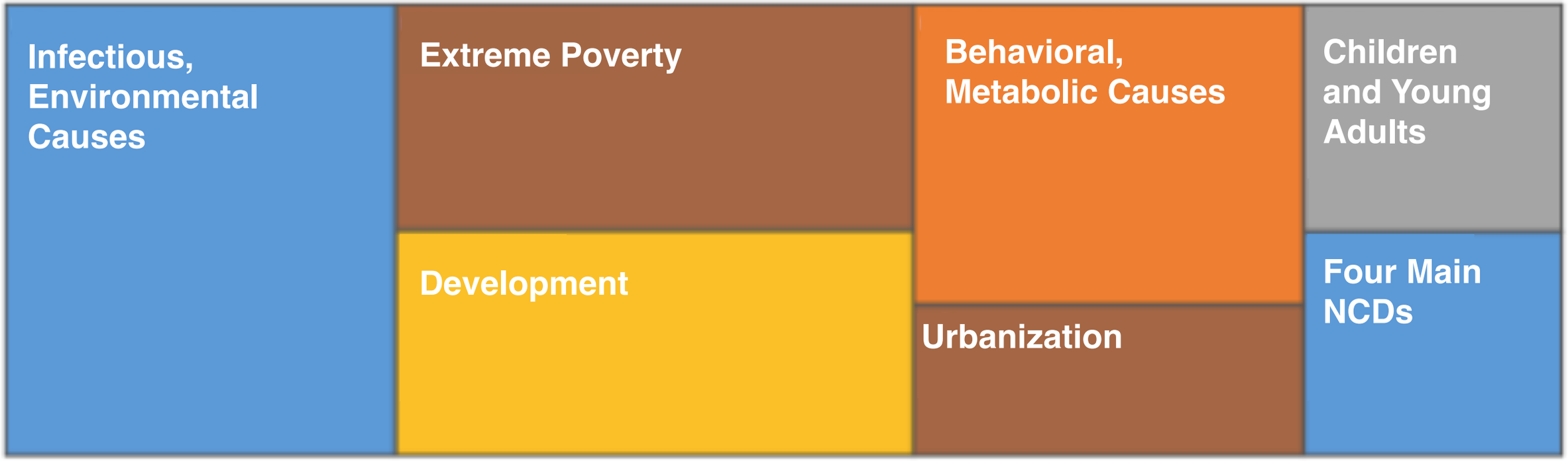
Focus on Lifestyle-Modifiable Risks:

"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



A US-based Global Health Professor

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.