



UNIVERSITY OF
PORTSMOUTH

Economic growth, uncertainty, (ir)rational behavior and their impact on health and health equity

Nikolaos Antonakakis

Webster Vienna Private University & University of Portsmouth

GÖG-Colloquium, January 28, 2019



Gesundheit Österreich
GmbH ● ● ●

Outline

Economic models cannot still adequately capture human behavior and uncertainty



Measures of economic well-being need rethinking



Policy measures on distorted measures of well-being lead to unintended policy outcomes



Inter-sectoral aspect of economic policy outcomes including those on health and health equity



There is a need to re-prioritize objectives and re-think ways to alleviate market failures

Economic models vs human behavior & uncertainty

Key flows: Rational expectations and efficient market hypothesis

Rational models cannot not encompass, predict and optimize the dynamic complexity of collective human behavior.

Human action cannot be predicted with any certainty.

Modern big-picture economics (macroeconomics) also “largely ignored the operations of the financial system and in particular the role of banks”.

Consistently failed to predict financial crises

“The stock market has predicted 9 of the past 5 recessions” ~ Paul Samuelson



Should we pay attention to economists?

Economics is not a hard science as physics.

Done properly, it takes account of culture, history, geography, institutions, individual and group psychology.

“A man is not likely to be a good economist if he is nothing else” ~ John Stuart Mill

“An economist should be mathematician, historian, statesman and philosopher in some degree” ~ John Maynard Keynes

Economics is, at best, a multidimensional, evidence-based craft, alert to all the influences on human behavior, at once ambitious in scope and modest in its claims for what we can ever predict in human affairs.

Measures of economic well-being need rethinking

- Gross Domestic Product (GDP) most widely used proxy
- **Advantages:**
 - Broad indicator of development
 - Easy to measure growth in percentage
 - Easy to compare to itself and other countries
 - It is a cardinal ranking
 - Cheap and easy to collect
 - Calculated from a formula which all countries use, therefore it is reliable indicator.
 - Good way for governments to know whether economic policies have been successful, and to what extent they have or have not been?
 - Can be broken up into GDP per capita which accounts for the population of the country when it is calculated.

Measures of
economic
well-being
need
rethinking

- **Disadvantages:**
 - Narrow indicator that fails to show quality of life, standard of living, happiness, health care, political freedom, unemployment and quality of goods and services.
 - Doesn't account inequality
 - Doesn't account for environmental impacts of the economic policies
 - Doesn't include the informal sector activity or the activity on the 'black' market.
 - Country may have high productivity but not able to afford the goods

Alternatives indicators of welfare and well-being?

Alternative national indicators of welfare and well-being

Indicator	Explanation	Coverage
Index of Sustainable Economic Welfare (ISEW) & Genuine Progress Indicator (GPI) Type: GDP modification Unit: dollar	Personal consumption expenditures weighted by income distribution, with volunteer and household work added and environmental and social costs subtracted.	<ul style="list-style-type: none"> • 17 countries, several states and regions • 1950 - various years
Genuine savings Type: Income accounts modification Unit: dollar	Level of saving after depreciation of produced capital, investments in human capital, depletion of minerals, energy, and forests, and damages from local and global air pollutants are accounted for.	<ul style="list-style-type: none"> • 140 countries • 1970 - 2008
Inclusive Wealth Index Type: Capital accounts modification Unit: dollar	Asset wealth including built, human, and natural resources.	<ul style="list-style-type: none"> • 20 countries • 1990-2008
Australian Unity Well-Being Index Type: Survey based index Unit: Index	Annual survey of various aspects of well-being and quality of life.	<ul style="list-style-type: none"> • Australia • 2001-present
Gallup-Healthways Well-Being Index Type: Survey based index Unit: Index	Annual survey in taking into account five elements: purpose (employment, etc), social, financial, community and physical (health).	<ul style="list-style-type: none"> • 50 states of the USA, expanded to 135 countries in 2013. • 2008-present

Alternatives indicators of welfare and well-being?

<p>Gross National Happiness</p> <p>Type: Survey based index</p> <p>Unit: Index</p>	<p>Detailed in-person survey around nine domains: psychological well-being, standard of living, governance, health, education, community vitality, cultural diversity, time use, and ecological diversity.</p>	<ul style="list-style-type: none">• Bhutan• 2010
<p>Human Development Index</p> <p>Type: Composite index</p> <p>Unit: Index</p>	<p>Index of GDP per person, spending on health and education, and life expectancy.</p>	<ul style="list-style-type: none">• 177 countries• 1980 - present
<p>Happy Planet Index</p> <p>Type: Composite index</p> <p>Unit: Index</p>	<p>A calculation based on subjective well being multiplied by life expectancy divided by ecological footprint.</p>	<ul style="list-style-type: none">• 153 countries• 3 years
<p>OECD Better Life Index</p> <p>Type: Composite index</p> <p>Unit: Index</p>	<p>Includes housing, income, jobs, community education, environment, civic engagement, health, life satisfaction, safety, and work-life balance.</p>	<ul style="list-style-type: none">• 36 OECD countries• 1 year

Policy
measures on
distorted
measures of
well-being lead
to unintended
policy
outcomes

- *“What we measure affects what we do. If we focus only on material wellbeing – on, say, the production of goods, rather than on health, education, and the environment – we become distorted in the same way that these measures are distorted; we become more materialistic.” ~ Joseph E. Stiglitz*

Examples of unintended outcomes

Range of policies focused narrowly on GDP and fiscal prudence => fueled insecurity and lowered trust

Pension “reforms” => force individuals to bear more risk

Labor market changes that, in the name of boosting flexibility => weaken workers’ bargaining position by giving employers more freedom to fire them, leading in turn to lower wages and more insecurity.

Better metrics would, at the minimum, weigh these costs against the benefits, possibly compelling policymakers to accompany such changes with others that enhance security and equality.

Since the GFC of 2008 many Eurozone periphery countries, experienced increased budget deficits and debts.

Leadership Duo ...

Economic indicators 2011



— **Sovereign debt**
in percent of GDP

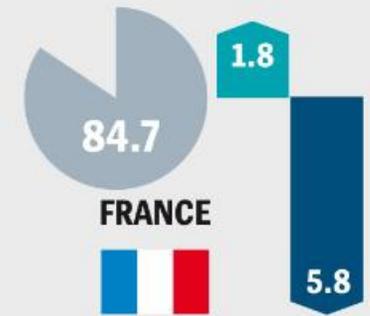


— **Economic growth**
in percent relative to 2010

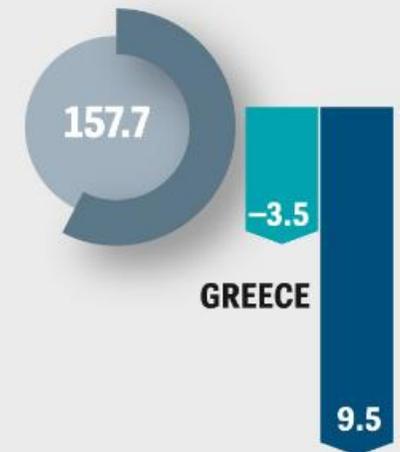
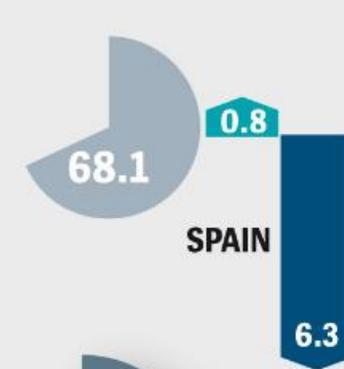


— **Budget deficit**
in percent of GDP

Forecast: European Commission



... Crisis Countries



These developments initiated a European sovereign debt crisis
Has resulted in large financial interventions by individual governments and the EC, ECB
and the IMF in the Eurozone peripheral countries.
Policy interventions occurred in an attempt to avert potential bankruptcies of highly
indebted countries in the Eurozone periphery, potential contagion and ultimately the
collapse of the Eurozone itself.



European sovereign debt crisis

- Resulted in large financial interventions by individual governments and the EC, ECB and the IMF
- Policy interventions occurred in an attempt to avert potential bankruptcies of highly indebted countries in the Eurozone periphery, potential contagion and ultimately the collapse of the Eurozone itself.

Bailout packages

- In particular, consisted of bailout packages accompanied by draconian and unprecedented fiscal adjustment measures.
- The controversy associated with austerity policies many governments adopted relates to whether they made the downturn far deeper and longer than necessary, with long-lasting consequences not only for wealth, but also for health.
- Important question is whether fiscal austerity will hurt economic performance and health conditions over time



What we know so far?

- Economic Effects

What we didn't know?

- Health Effects?

Economic Effects

Conventional wisdom suggests that reduction of debt into sustainable levels has long-run benefits (Afonso and Sousa, 2012).

However, no consensus regarding the short-run, or even the medium-run effects of fiscal consolidation/austerity:

- Keynesians: spending cuts and tax hikes will reduce economic activity in the short-run (Blanchard and Perotti, 2002).
- Others: fiscal consolidation may be expansionary even in the short-run, 'expansionary fiscal contraction' (Giavazzi and Pagano, 1990, 1996; Alesina and Perotti, 1995; Giudice et al., 2004; Afonso, 2010; Alesina and Ardagna, 2010; Alesina, 2010).

Increasingly, the pursuit of fiscal consolidation is being recognized by some economists as ineffective & prolonging the economic crisis unnecessarily (IMF, 2013)

Economic Effects

IMF predicted that the proposed austerity policies would:

- reduce GDP by 5.5%
- based on their estimate of a fiscal multiplier = 0.5

By 2013, the Greek economy had contracted by 17%, and

the negative impacts of austerity on GDP in other European countries were also higher than expected.

When austerity significantly reduces GDP,

- that leads to lower overall tax revenues,
- thus offsetting the deficit-reducing benefits of lower government spending.

Not only does this imply that austerity reduces GDP more than expected, but it also means that austerity policies are less effective in reducing government debts.

Due the wrong IMF's estimates of the fiscal multiplier, concluding that the actual value was somewhere between 0.9 and 1.7.

Nobel Prize-winning economist Joseph Stiglitz wrote in September 2013:

“The wave of economic austerity that has swept Europe in the wake of the Great Recession is at risk of doing serious and permanent damage to the continent’s long-cherished social model”

Economic Effects

Finally, in November 2014 the IMF's Independent Evaluation Office published a report evaluating the IMF's recommendations during the financial crisis. The report concludes that:

"The call for fiscal consolidation [austerity] proved to be premature, as the recovery turned out to be modest in most advanced economies and short-lived in many European countries. ... The policy mix pursued by advanced economies had destabilizing spillover effects on emerging markets, exacerbating volatility in capital flows and exchange rates. Also, the IMF did not sufficiently tailor its advice to countries based on their individual circumstances and access to financing when recommending either expansion or consolidation." (IEO, 2014, p. Ch. 5, p. 26)

Health Effects: Is austerity bad for your health?

According to Stuckler and Basu (2013) the harms we have found include:

- HIV and malaria outbreaks,
- shortages of essential medicines, lost healthcare access, and
- An avoidable epidemic of alcohol abuse, depression and suicide.

E.g. in Greece:

- HIV infection rose by more than 200% from 2011 as prevention budgets were cut
- intravenous drug use grew as youth unemployment reached 50%.
- Experienced its first malaria outbreak in decades after budget cuts to mosquito-spraying.

But they argued that such costs were not inevitable and that, in some countries, *countermeasures* such as *active labour market schemes* had softened the blow from cuts.

The 'Health' multiplier

Short-run 'health' multiplier:

- 1% reduction in Gov. Spend. => $\uparrow 1.38\%$ ($= -0.8\% - 0.58\%$) in suicide rates of males 65-89 ages
- Actual Gov. Spend. in EZ periphery $\downarrow 4.486\%$ in $t=2011$ (from 2010 to 2011), and $\downarrow 4.137\%$ in $t - 1=2010$ (from 2009 to 2010) => $\uparrow 11.901\%$ ($= 8.624\% \times 1.38\%$) in suicide rates
- $\overline{Pop}_{2011_EZp_65-89} = 2,064,061$ => 246 suicides in every EZ periphery country on average in 2011 solely due to fiscal austerity
- Following the same approach, fiscal austerity caused 219 suicides in 2012
- Or 54.07% ($= \frac{465}{456+404} \times 100$) of suicides in 2011-12 due to austerity
- 2325 ($= 5 \times 465$) male suicides 65-89 due to austerity in the EZp

The 'Health' multiplier

Medium-run 'health' multiplier:

- Sustained 1% *reduction* in Gov. spend. => ↑2.42% in suicide rates of males 65-89 ages
- Gov. spend. in the EZp declined by 15.401% between 2010 and 2014
- This translates to a ↑37.27% (= 15.401% x 2.42%) in suicide rates of males 64-89 ages
- 911 suicides in every EZ periphery country on average in 2010-14 solely due to fiscal austerity
- 4555(=5 x 911) male suicides 65-89 due to austerity in the EZp

The 'Health' multiplier

Long-run 'health' multiplier:

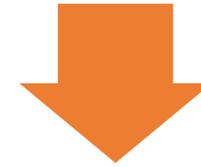
- Sustained 1% *reduction* in Gov. spend. => ↑3.32% in suicide rates of males 65-89 ages
- Actual Gov. Spend. in EZp ↓8.624% (4.137% in $t - 1 = 2010$ and 4.486% in $t = 2011$)=> ↑28.63% (=8.624% x 3.32%) in suicide rates
- 2020 projection scenario of fiscal austerity
- 674 male 65-89 suicides in every EZp country or 3370 in the whole EZp
- in the LR, people will be able to 'adjust' to the situation more efficiently (e.g. via migration, or, given the life expectancy of this age group, death, due to natural causes) compared to the SR or MR.
- In the short- or medium-run, resources and flexibility are limited, leaving little or no space to manoeuvre.

The role of labor market institutions

- Theoretically, this can occur in the following ways:
- stricter labor market regulations and higher unemployment benefits could help mitigate the negative effects of income loss of workers in the case of unemployment during periods of negative economic activity
- they will be comparable to a social security system for employees in a private market, acting as safety nets in the risk of unemployment.

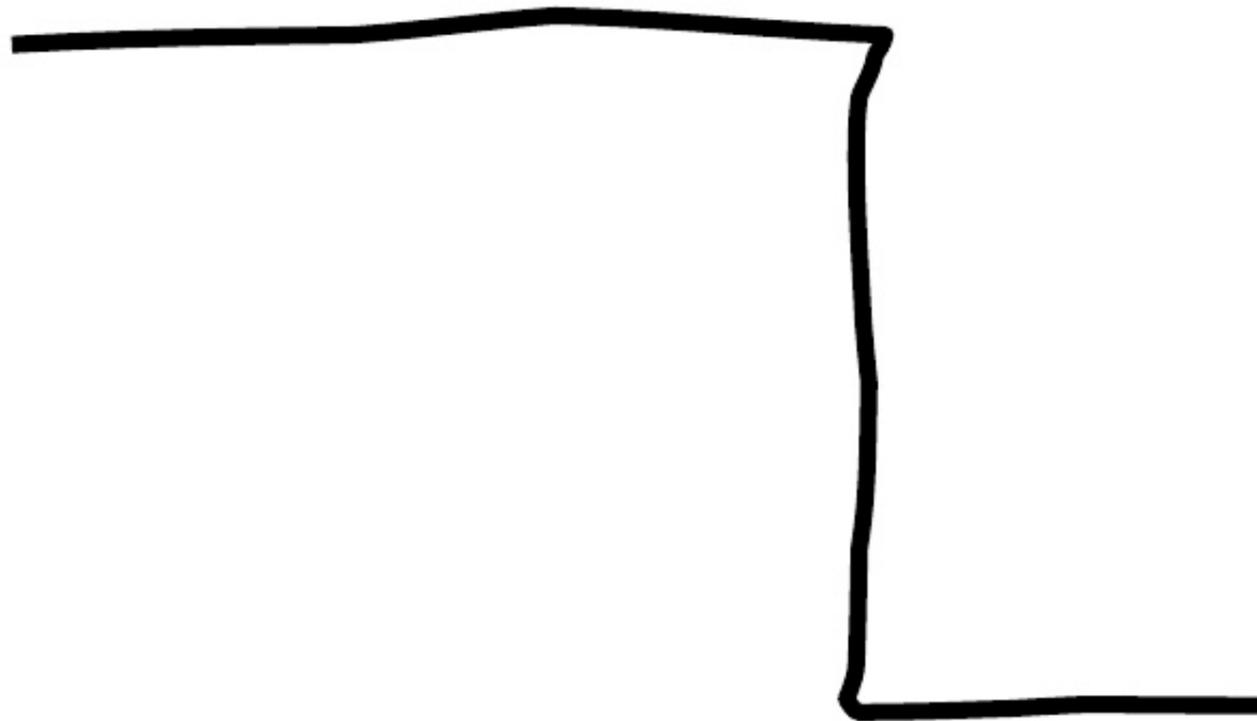
Inter-sectoral
aspect of
economic
policy
outcomes
including
those on
health and
health equity

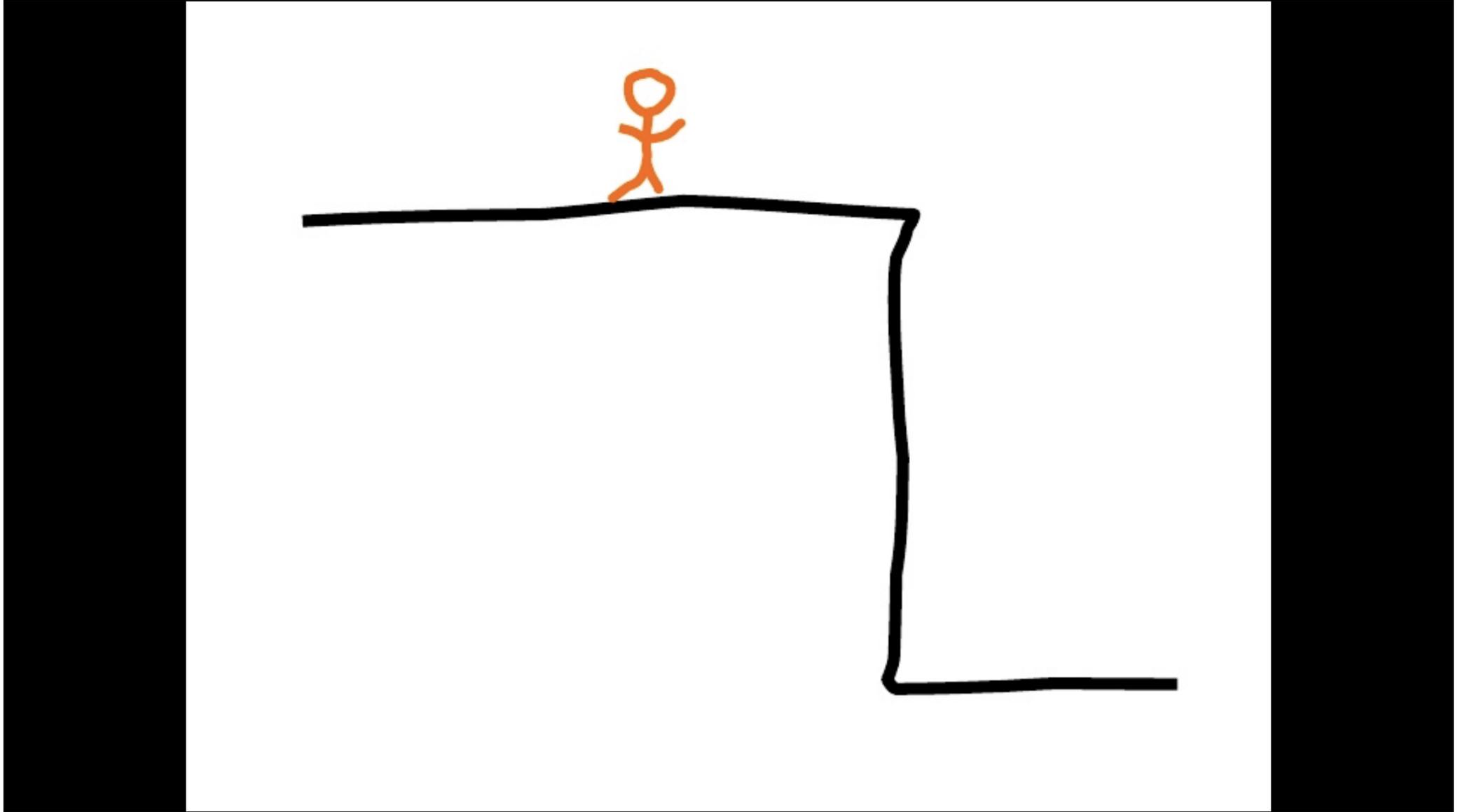
Intersectoral Action for Health:

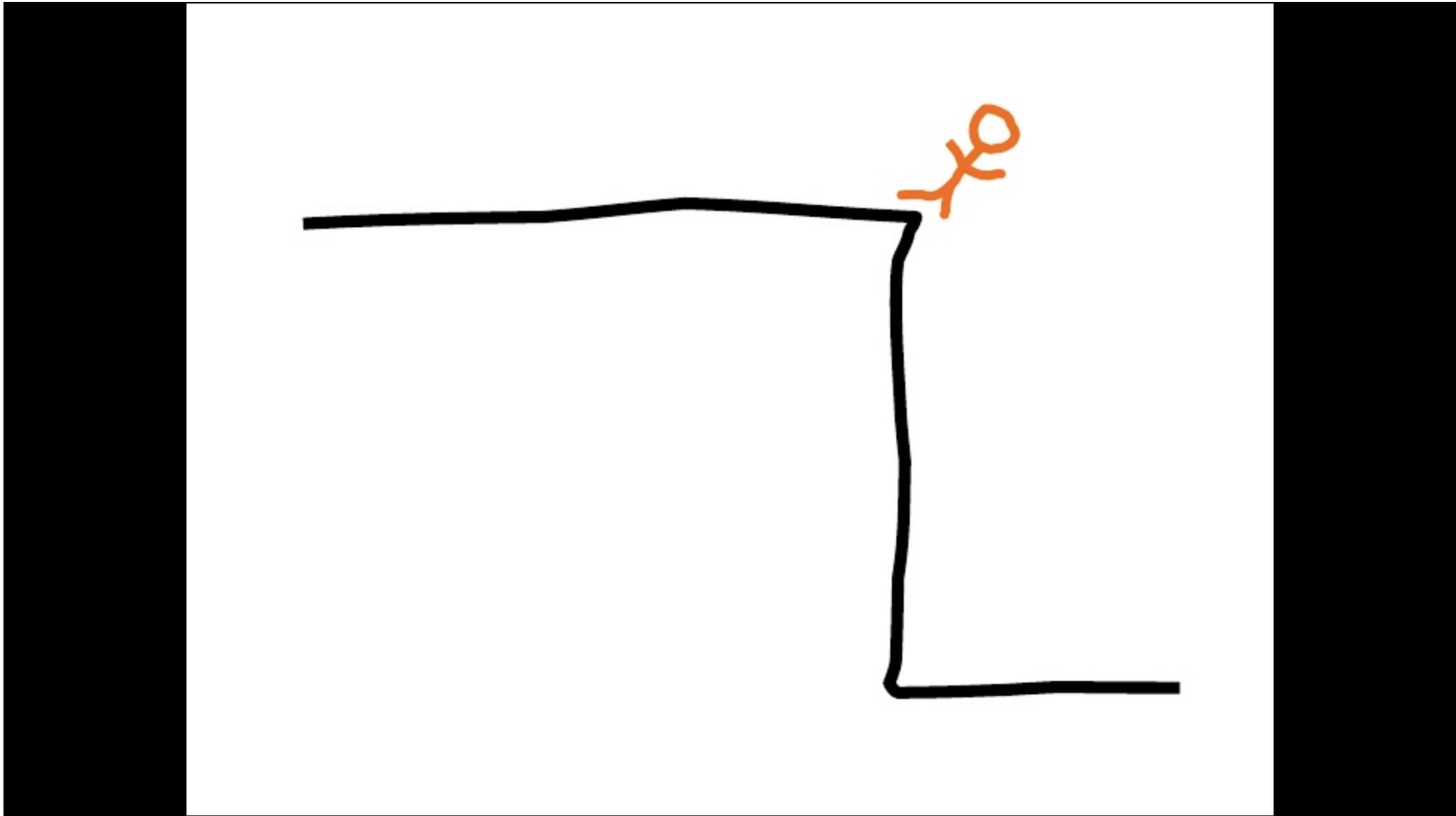


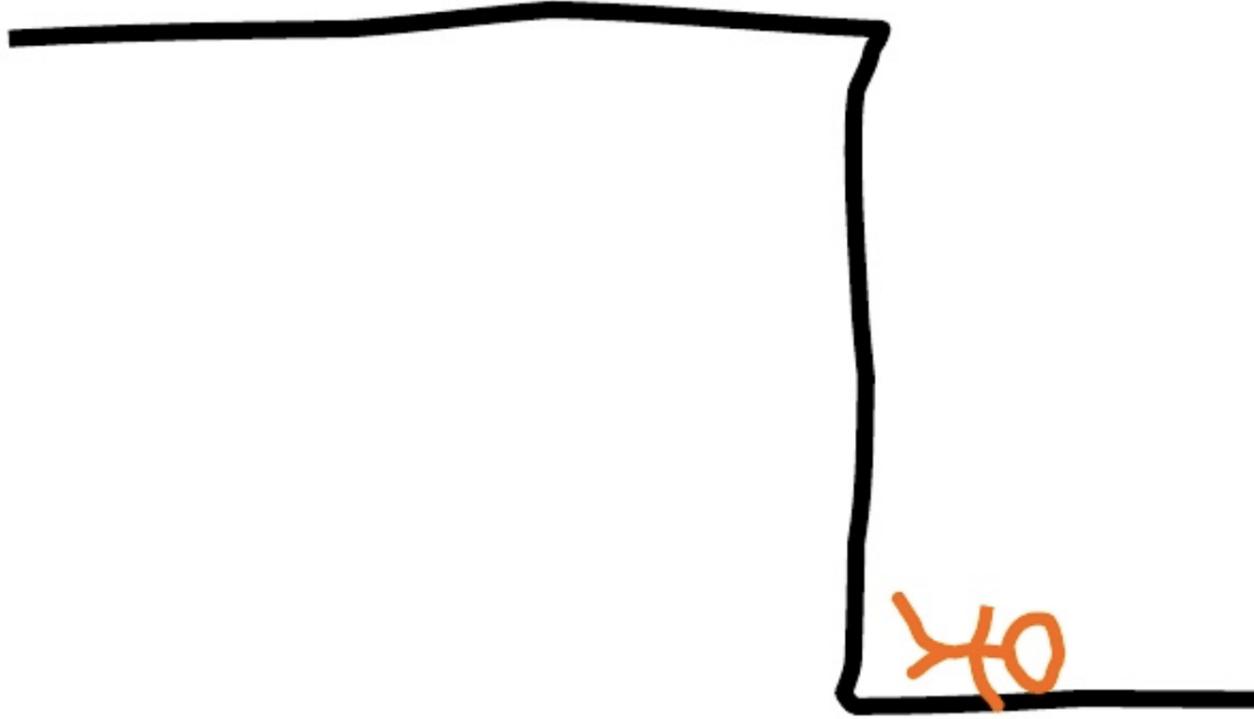
“actions undertaken by sectors
outside the health sector, possibly,
but not necessarily, in collaboration
with the health sector, on health or
health equity outcomes or on the
determinants of health or health
equity.” ~WHO

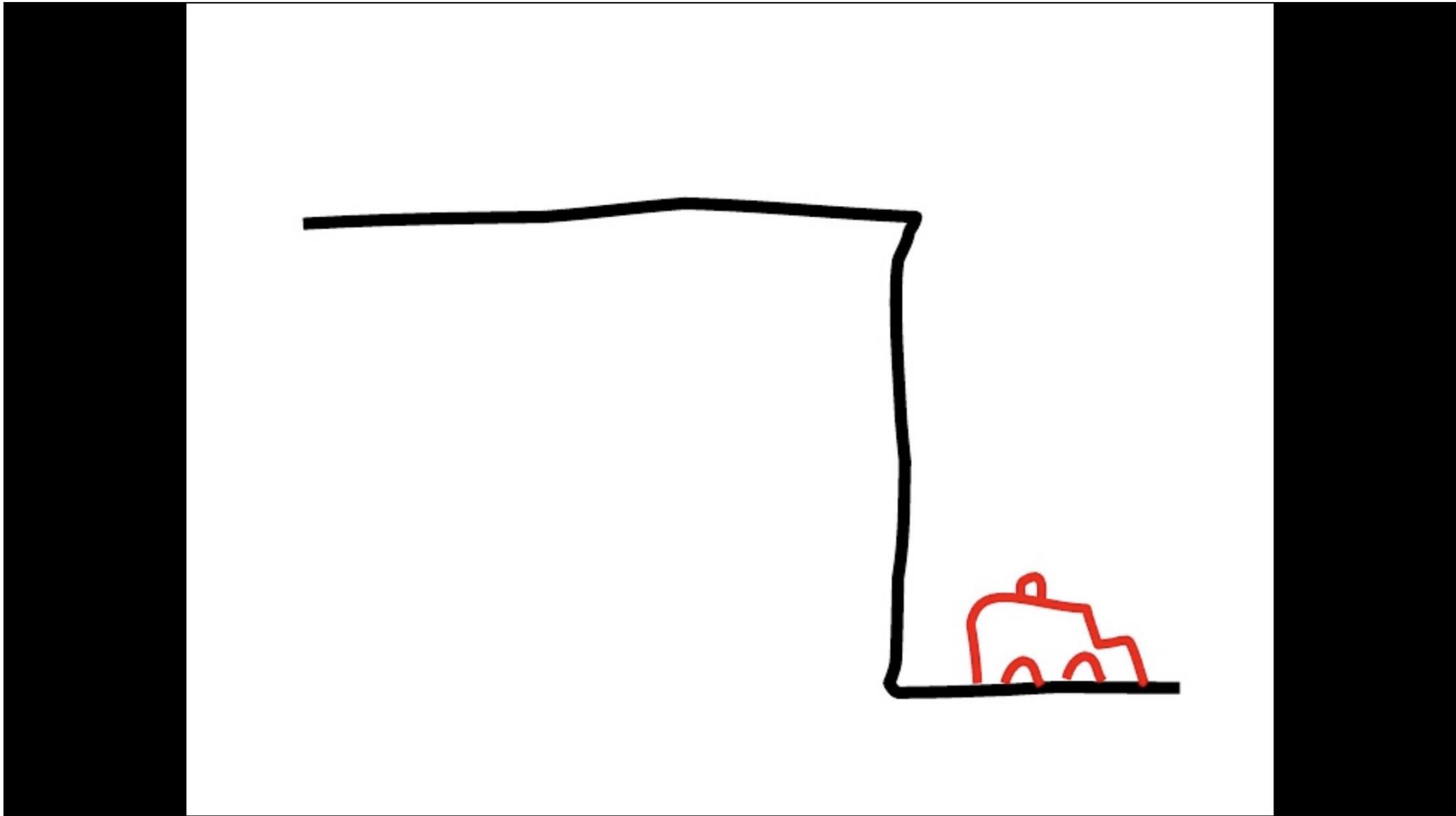
Levels of health intervention

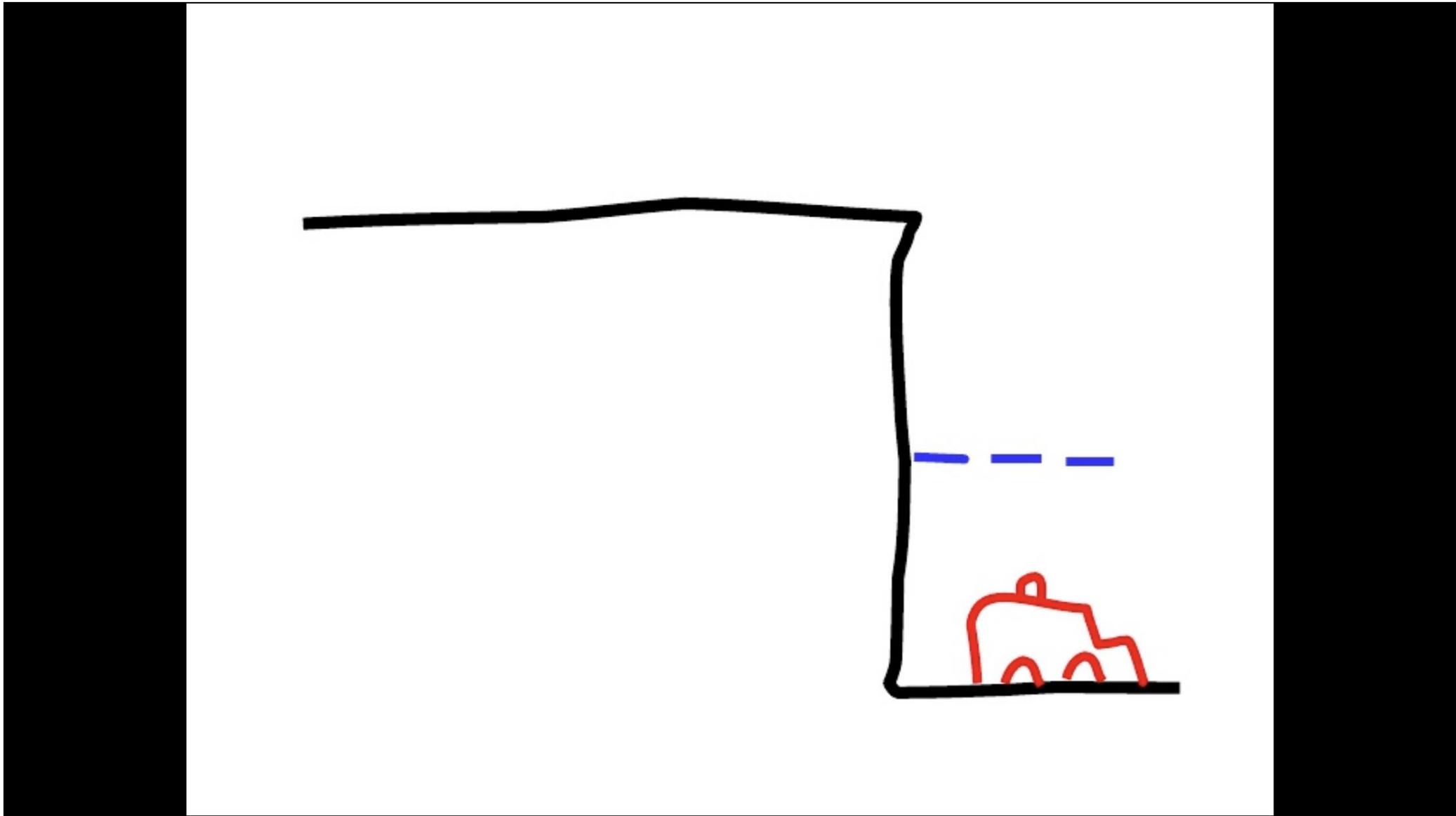


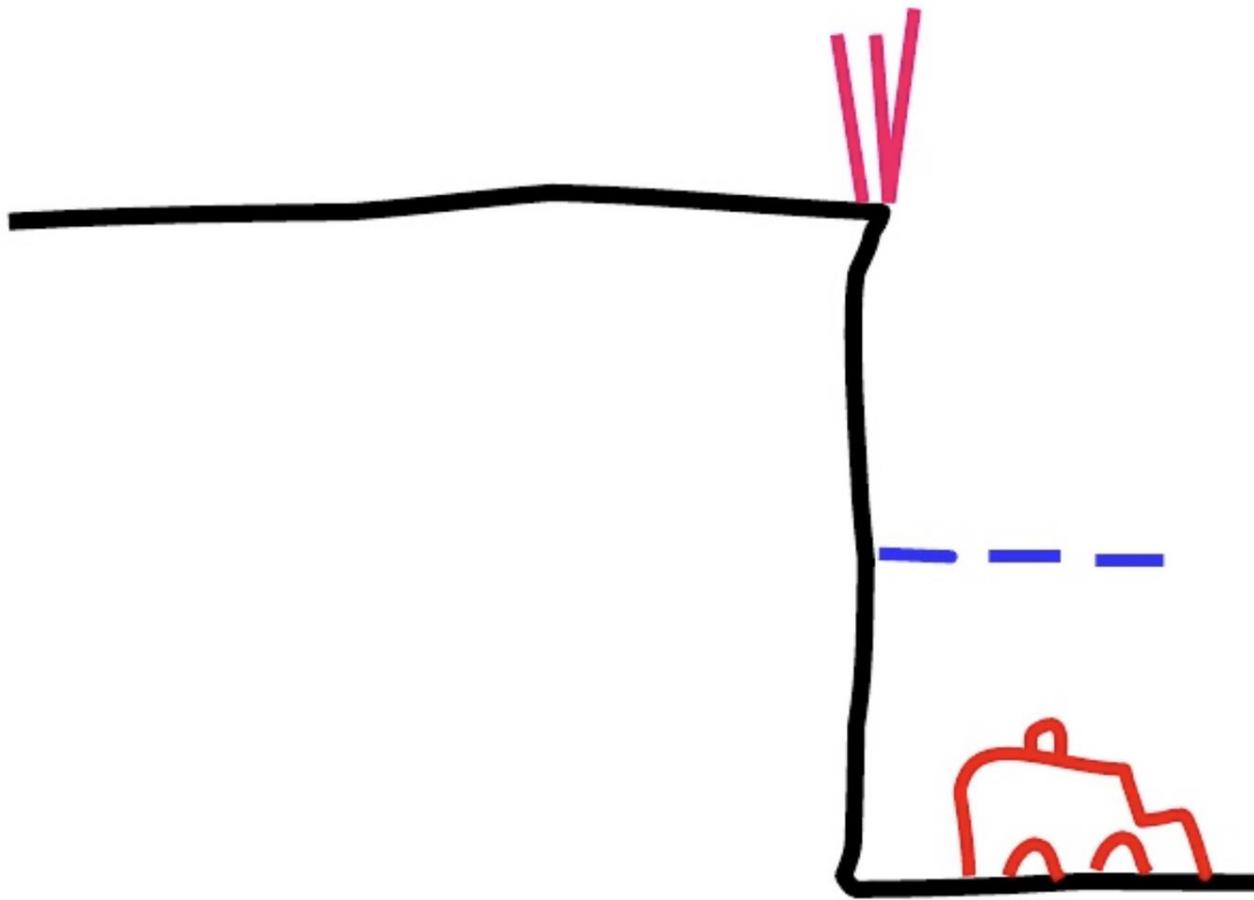


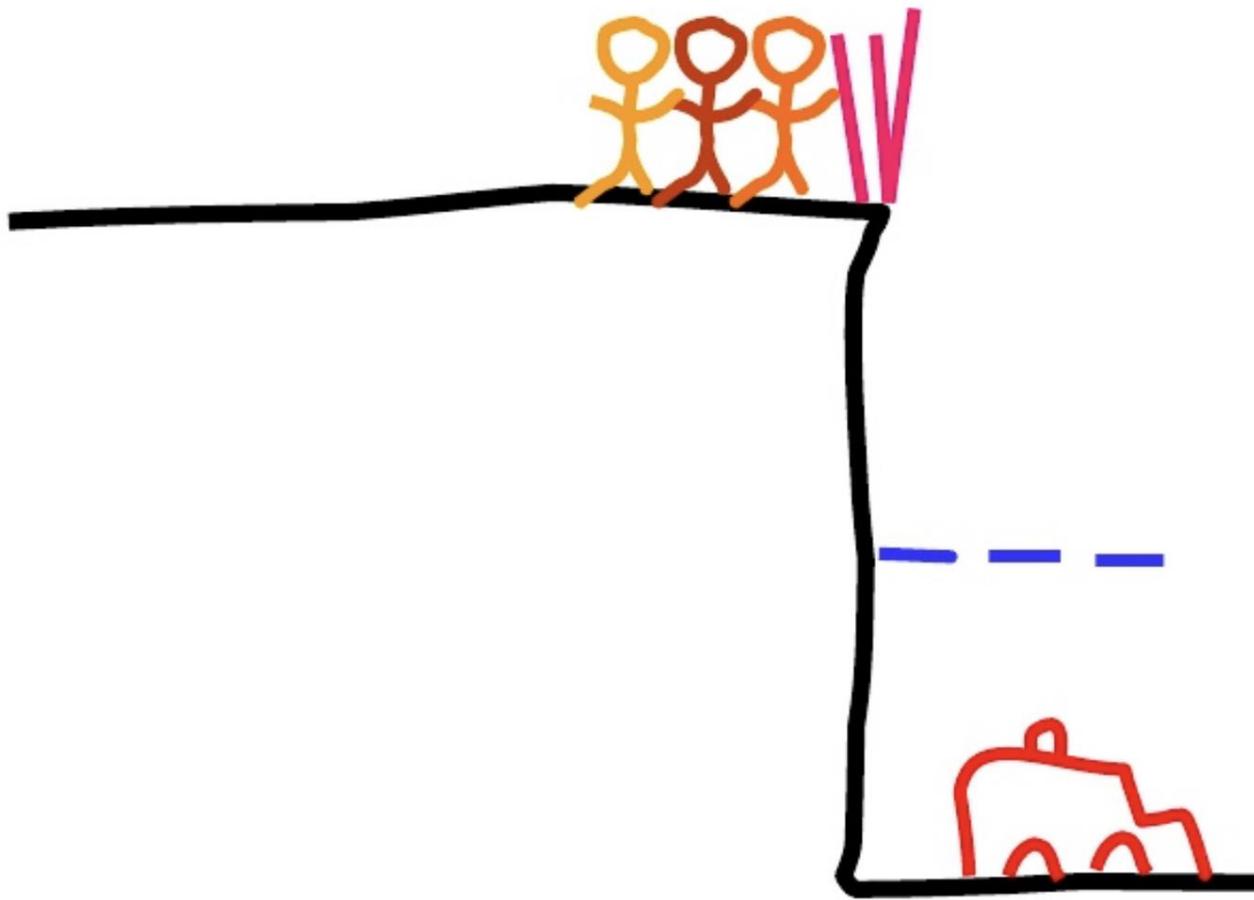












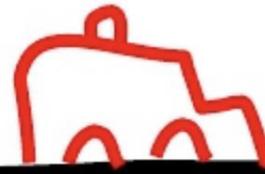


Addressing the
social determinants of health



Primary prevention

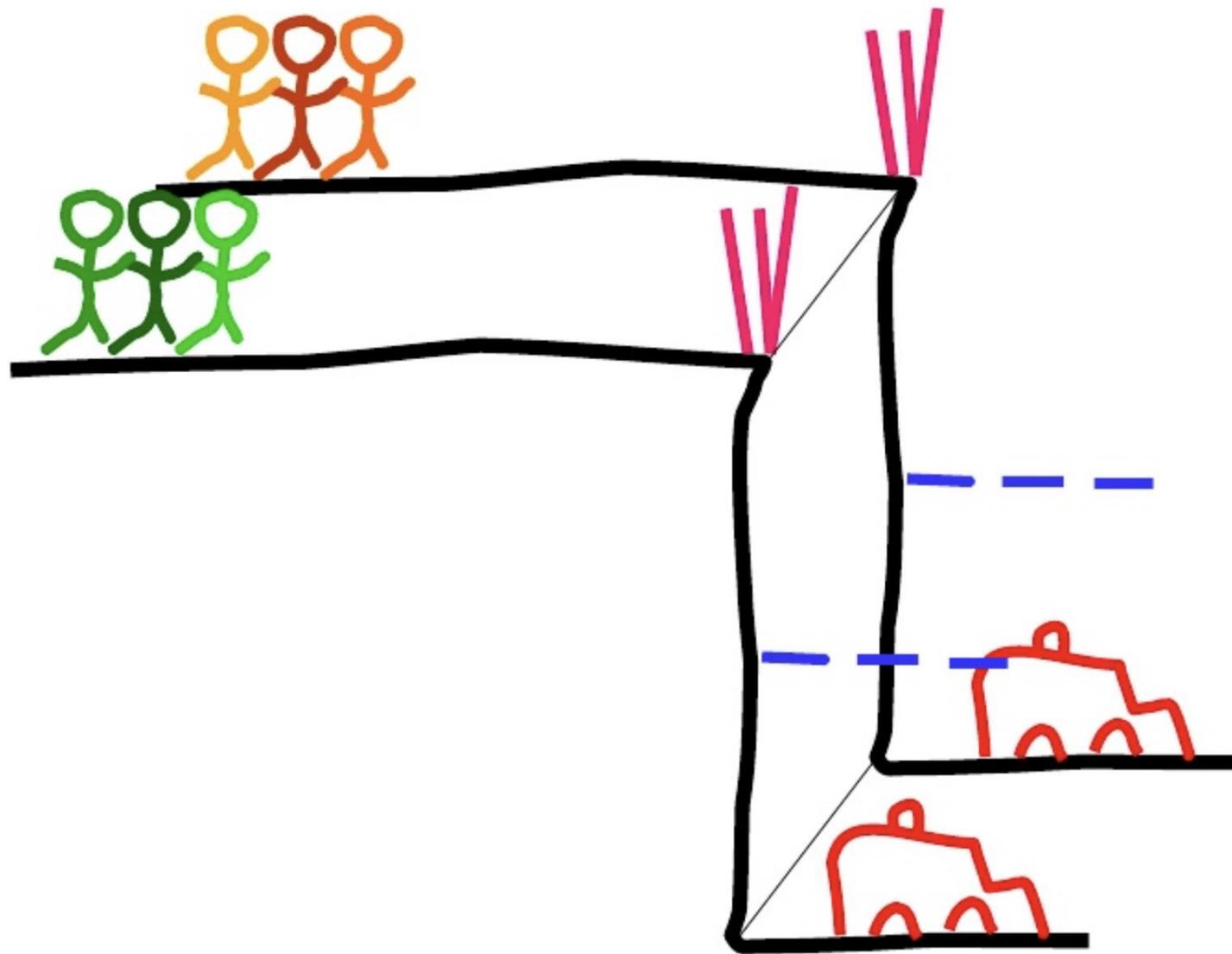
— — —
Safety net programs and
secondary prevention

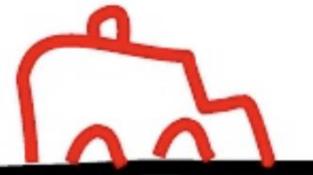
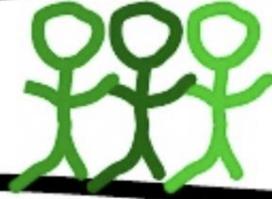


Medical care and
tertiary prevention

But how do disparities arise?

- Differences in the quality of care received within the health care system
- Differences in access to health care, including preventive and curative services
- Differences in life opportunities, exposures, and stresses that result in differences in underlying health status

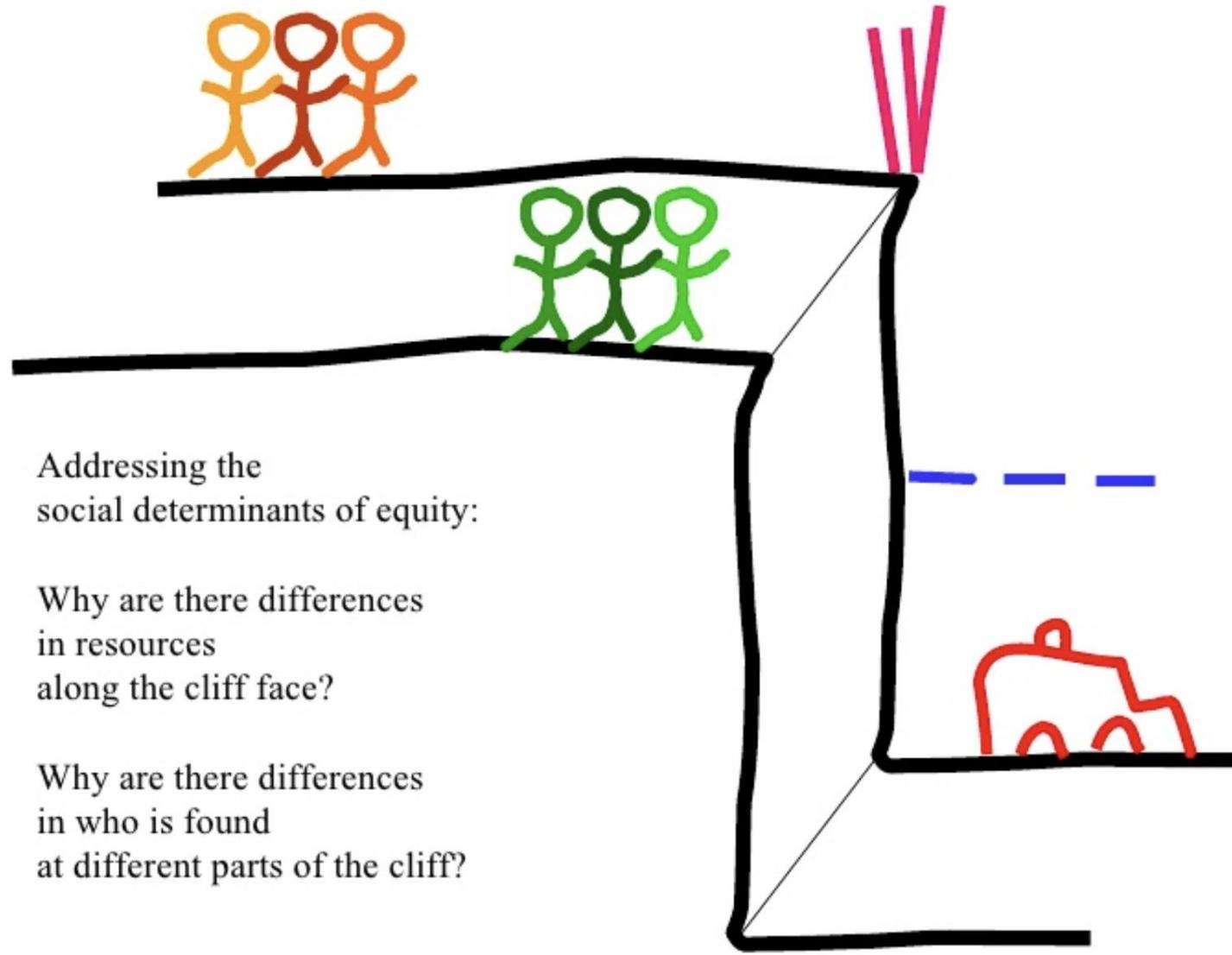




Differences in exposures and opportunities

Differences in access to care

Differences in quality of care
(ambulance slow or goes the wrong way)



Addressing the social determinants of equity:

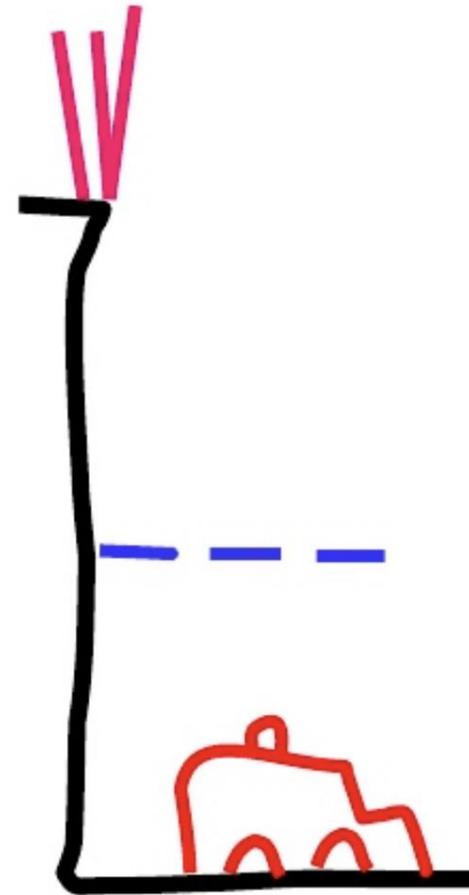
Why are there differences in resources along the cliff face?

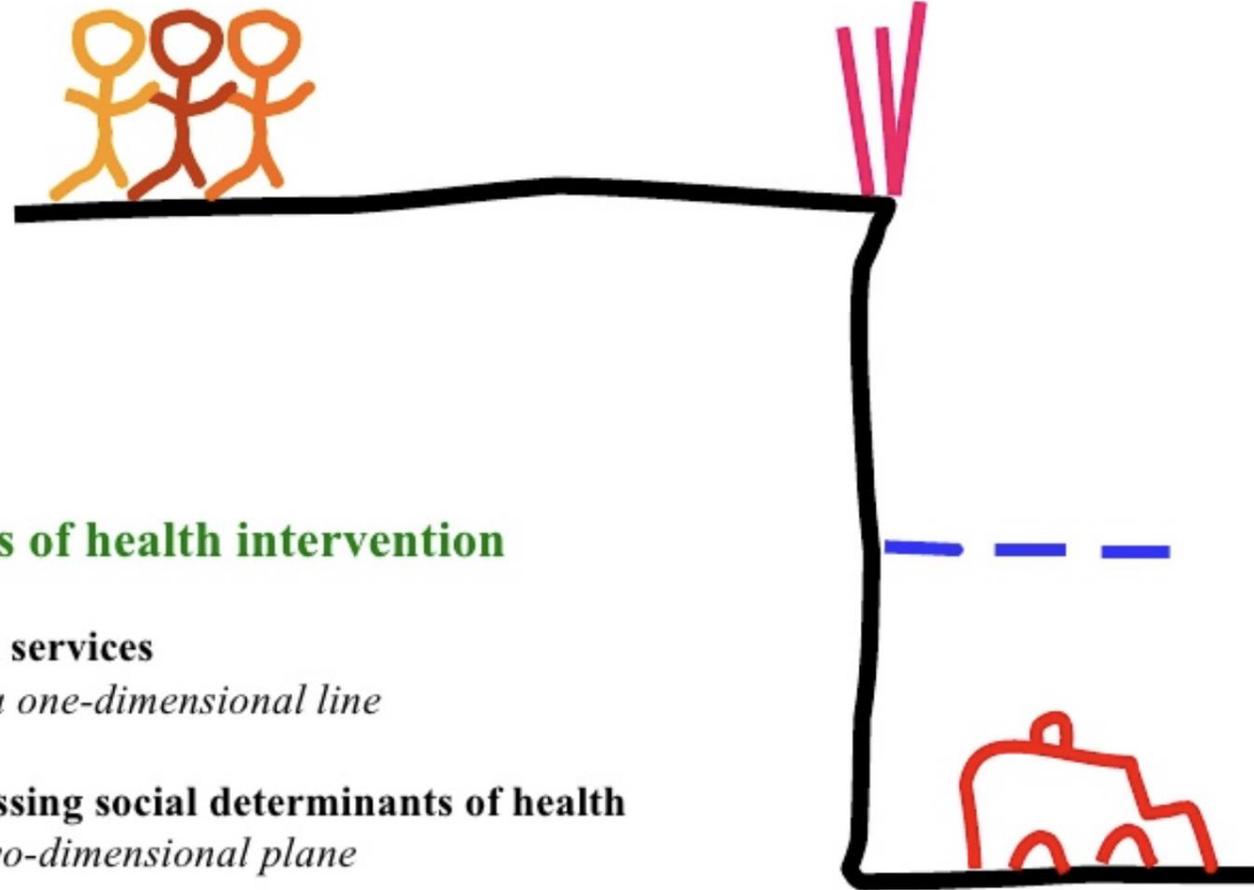
Why are there differences in who is found at different parts of the cliff?

Levels of health intervention

Health services

along a one-dimensional line





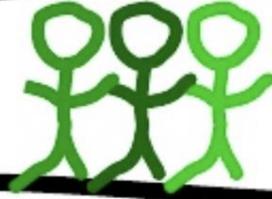
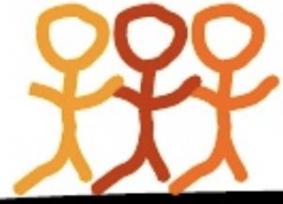
Levels of health intervention

Health services

along a one-dimensional line

Addressing social determinants of health

on a two-dimensional plane



Levels of health intervention

Health services

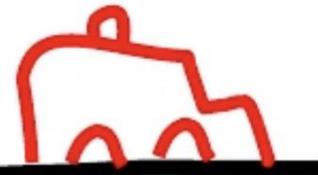
along a one-dimensional line

Addressing social determinants of health

on a two-dimensional plane

Addressing social determinants of equity

in three-dimensional space



Determinants of health

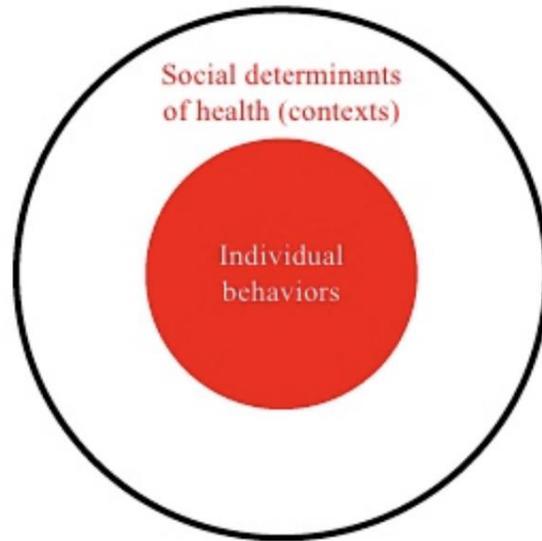


Determinants of health

**Determinants
of health and
illness that are
outside of the
individual**

Beyond genetic
predispositions

Beyond individual
behaviors



**The contexts in
which
individual
behaviors arise**

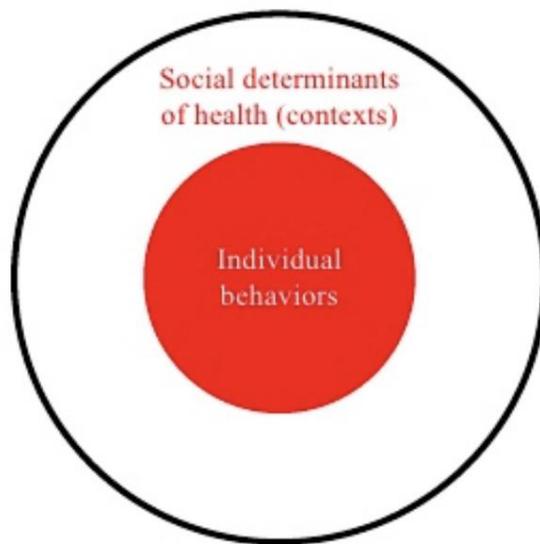
Determinants of health

Individual resources

Education, occupation, income, wealth

Neighborhood resources

Housing, food choices, public safety, transportation, parks and recreation, political clout



Hazards and toxic exposures

Pesticides, lead, reservoirs of infection

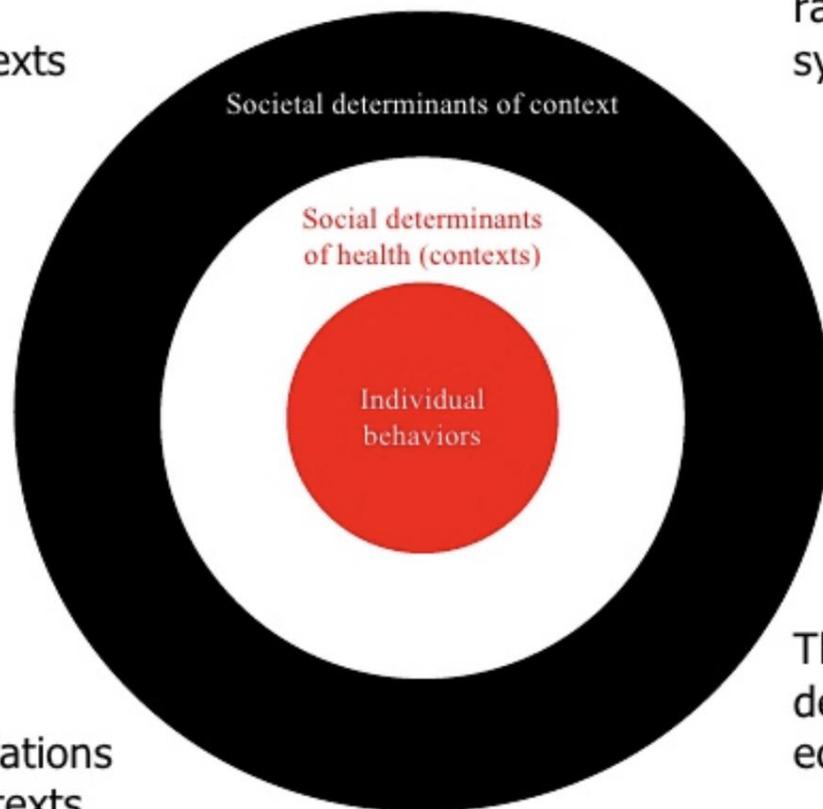
Opportunity structures

Schools, jobs, justice

Determinants of health

Determine the range of observed contexts

Include capitalism, racism, and other systems of power



Determine the distribution of different populations into those contexts

The social determinants of equity

Addressing the social determinants of health

- Involves the medical care and public health systems, but clearly extends beyond these
- Requires collaboration with multiple sectors outside of health, including education, housing, labor, justice, transportation, agriculture, and environment

Addressing the social determinants of equity

- Involves monitoring for inequities in exposures and opportunities, as well as for disparities in outcomes
- Involves examination of structures, policies, practices, norms, and values
- Requires intervention on societal structures and attention to systems of power

Beyond individual behaviors

- Address the social determinants of health, including poverty, in order to achieve large and sustained improvements in health outcomes
- Address the social determinants of equity, including racism, in order to achieve social justice and eliminate health disparities

What is [*inequity*]?

A system of structuring opportunity and assigning value based on [*fill in the blank*], which

- Unfairly disadvantages some individuals and communities
- Unfairly advantages other individuals and communities
- Saps the strength of the whole society through the waste of human resources

Health equity

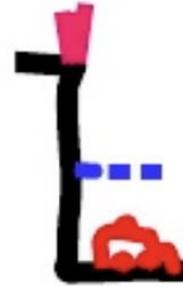
Health equity is the realization
by ALL people
of the highest attainable
level of health.

Achieving health equity

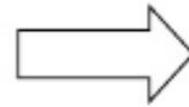
- Requires valuing all individuals and populations equally
- Entails focused and ongoing societal efforts
 - To address avoidable inequalities
 - By assuring the conditions for optimal health for all groups
 - Particularly for those who have experienced historical or contemporary injustices or socioeconomic disadvantage.

Main Goal: To expand the conversation

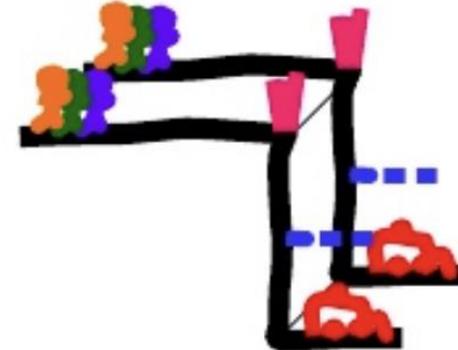
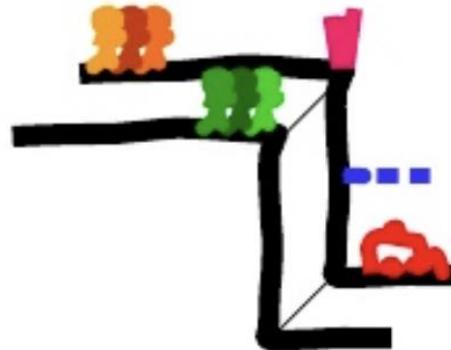
Health services



Social determinants of health



Social determinants of equity



Measuring differences

- Outcomes
- Health services
 - Quality
 - Access
- Social determinants of health (contexts)
 - Individual resources
 - Neighborhood resources
 - Hazards and toxic exposures
 - Opportunity structures

Measuring differences

- Social determinants of equity (systems of power)
 - Structures (*who, what, when, where*)
 - Policies (written *how*)
 - Practices and norms (unwritten *how*)
 - Values (*why*)

Need to re-prioritize objectives and re-think ways to alleviate market failures

Theories are incomplete and in need of reformulation and elaboration (particularly in regard to behavior over time under conditions of uncertainty)

Policy makers should put wellbeing at the center of their agenda will redirect their budgets accordingly

Better metrics would also become an important diagnostic tool, helping countries both identify problems before matters spiral out of control and select the right tools to address them.

Closing remarks

If we want to put people first, we have to know what matters to them, what improves their wellbeing, and how we can supply more of whatever that is.

Given that economic and social policy decisions have profound effects for health and its fair distribution, health equity should perhaps be considered an important measure of the effectiveness of social and economic policy making, in addition to wealth equity.

Thank you very much for
your attention!

