Data to Policy Program: Orientation

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Ministry of Health & Sports

Bloomberg Philanthropies DATA FOR HEALTH INITIATIVE

D2P Data to Policy

CDC Foundation Together our impact is greater

Vital Strategies

Bloomberg Data for Health Initiative

TO DATE, 20 COUNTRIES HAVE PARTNERED WITH DATA FOR HEALTH, REACHING MORE THAN 1 BILLION PEOPLE IN:

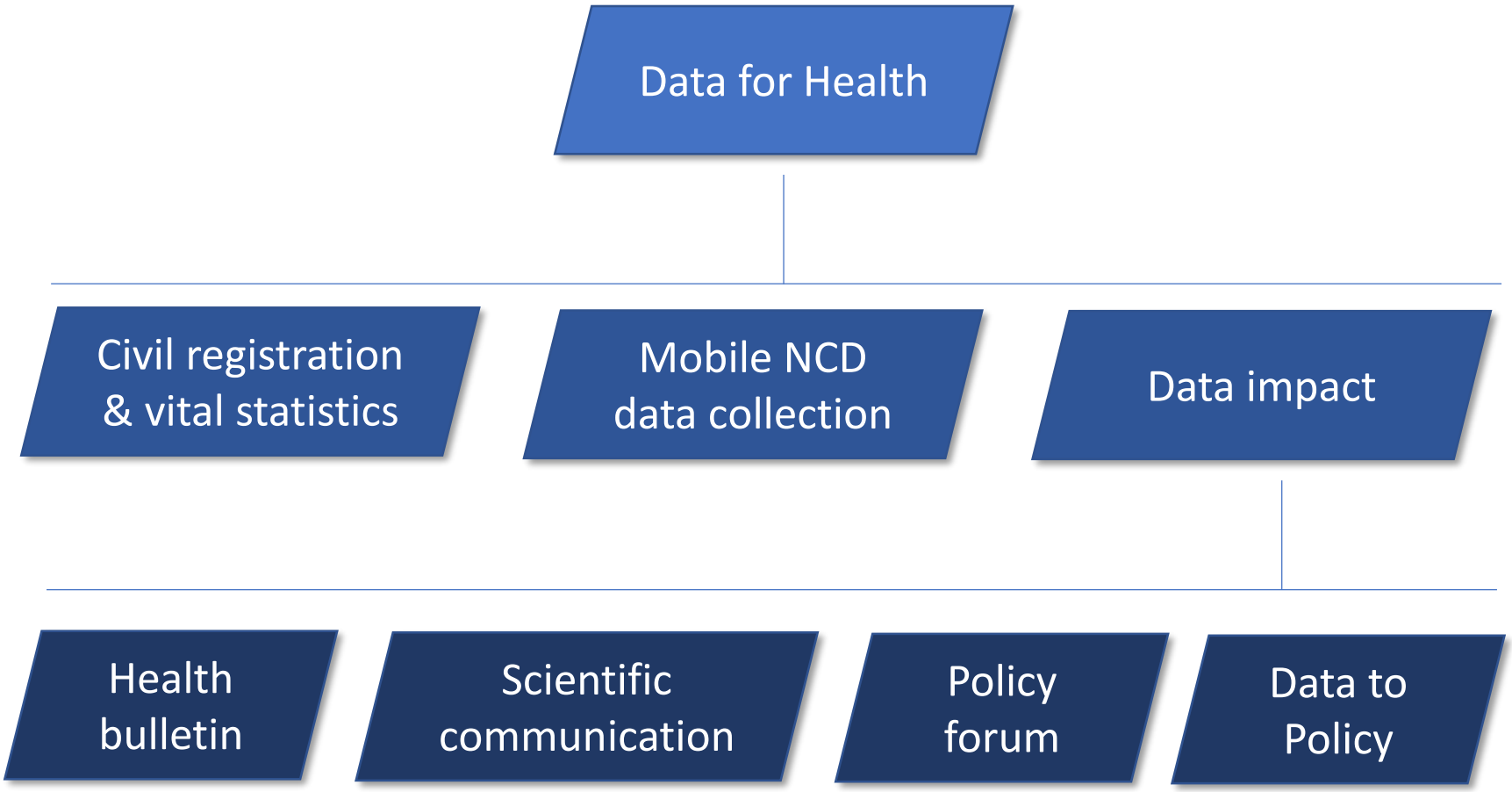
Bangladesh	Brazil	China (focus in Shanghai)	Colombia
Ecuador	Ghana	India (focus in Mumbai)	Indonesia
Malawi	Morocco	Myanmar	Peru
Philippines	Papua New Guinea	Rwanda	Solomon Islands
Sri Lanka	Tanzania	Turkey	Zambia

Vital Strategies

Bloomberg Philanthropies DATA FOR HEALTH INITIATIVE

CDC

Bloomberg Data for Health (D4H) Initiative



Data to Policy (D2P) Program

- **Capacity-building program that equips Ministry of Health and Sports' officers with skills to develop a policy brief**
- **Core competencies:**
  - Literature review
  - Data identification and use
  - Data visualization
  - Stakeholder analysis
  - Policy analysis
  - Policy writing

Public health professionals

Policymakers

What is a Good Policy Topic?

- **Health policies are developed to address recognized, well-defined problems in public health**
- **Policies should address data that show that:**
  - A problem exists
  - The problem is of high burden and/or public health importance
  - The problem has *modifiable* underlying root causes
  - A specific intervention can mitigate the problem

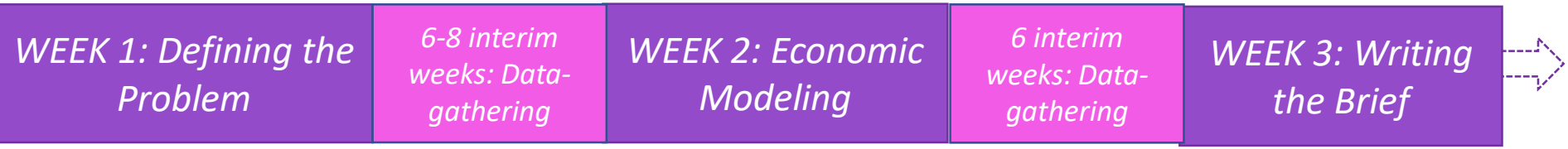
Types of Policies

- **Health-related Laws**
  - Enforced by MOH or other Ministries (taxes, labeling)
  - Applied to the health system (universal health coverage)
- **Regulations**
  - Set by MOH (health worker training, clinical guidelines)
  - Set by other Ministries (environmental, school programs)
- **Strategic decisions**
  - Resource allocations
  - Resource requests (to external funders)
  - Program planning

D2P Program Outcomes

- **Data-driven policy briefs for MoHS priorities**
- **Cohort of staff with increased capacity to develop evidence-based policy recommendations**
- **Institutionalized training**

Data to Policy (D2P) Timeline

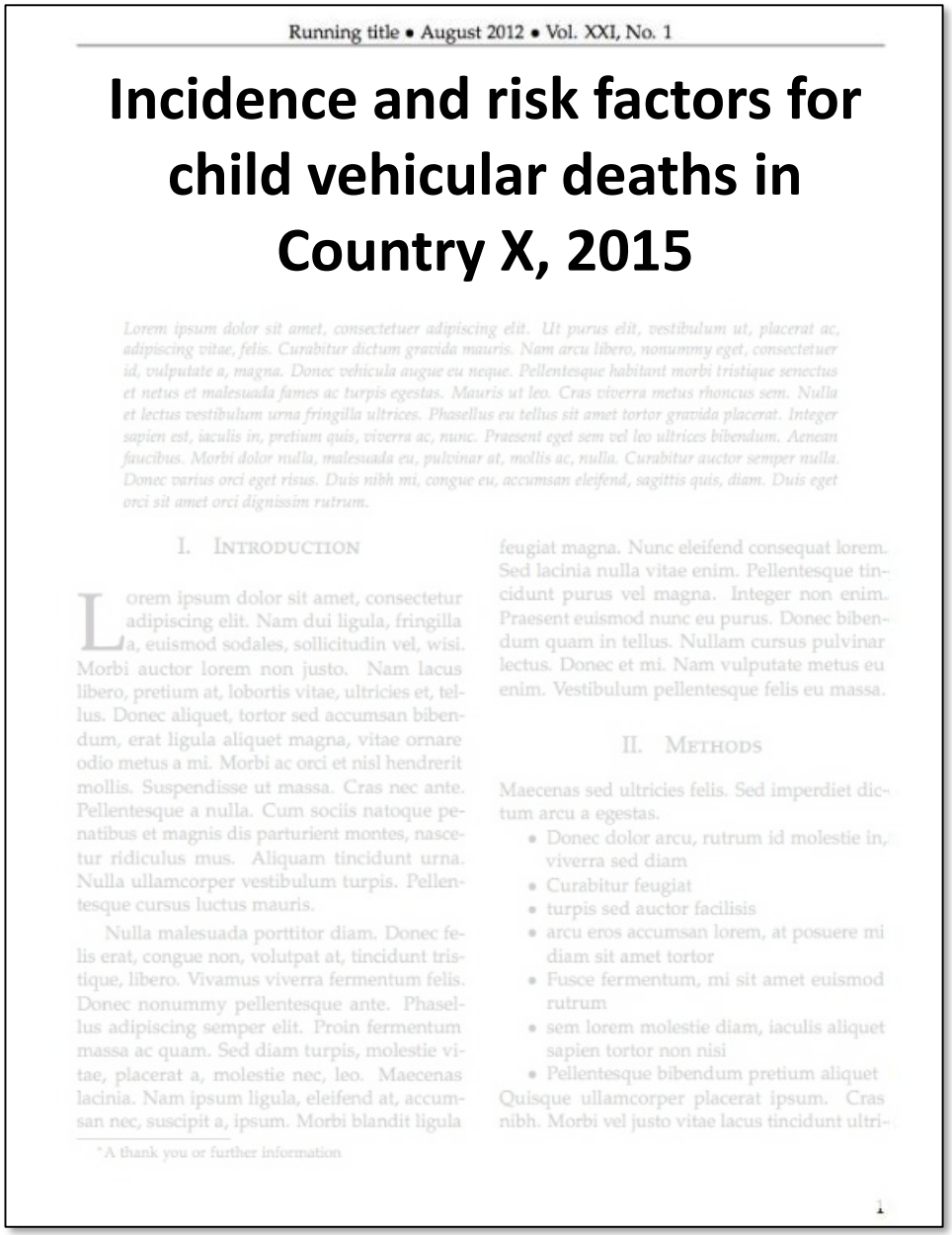


- *Policy & policy briefs*
- *Identifying data sources*
- *Framing the problem*
- *Identifying root causes*
- *Identifying stakeholders*
- *Developing policy options*

- *Determining costs*
- *Economic evaluations*
- *Choosing evaluation type*
- *Building economic evaluations*
- *Selecting best option*

- *Effective writing*
- *Writing each section of brief*
- *Advocacy for policy*
- *Presenting the brief*

How and Why are Health Policies Made?



Running title • August 2012 • Vol. XXI, No. 1

Incidence and risk factors for child vehicular deaths in Country X, 2015

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I. Introduction

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II. Methods

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*A thank you or further information

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SUMMARY OF ARTICLE

BURDEN

- 4,500 children <10 years die in car crashes yearly in Country X
- 15,000 require hospitalization for crash-associated injuries

RISK FACTORS

- Lack of seat belts in vehicles / low use if present
- Low use of carseats
- No laws regulating these

RECOMMENDATIONS

- Require manufacturer to put in seat belts to all vehicles
- Require carseat use
- Implement and enforce laws

Policy Brief Developed in D2P Zambia

D2P conducted
in early 2017

Example: Lack of HIV Testing in Zambian Children

- **36,000 HIV-infected children in Zambia unaware of their HIV status (2015)**
- **Despite national recommendation to test all children at clinic visits, only 3% were tested**
- **If HIV-infected children are not treated, 75% will die before 5 years**

- ***WHAT CAN WE DO ABOUT THIS?***

1. Spectrum Zambia 2013/2014, http://www.avenirhealth.org/software-spectrum.php

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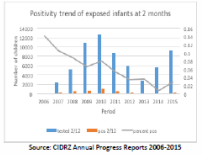
Keep Our Future Generation Alive:

Reinforcing Routine HIV Testing & Treatment Among Children in Zambia

Key Messages

- **Only 3% of children visiting clinics are tested for HIV, despite Ministry of Health recommendations to test and treat ALL children.**
- **If unidentified and left untreated, 75% of HIV positive children die by the age of 5 years.**
- **Reinforcement of routine HIV testing and treatment of children will increase testing up to 90 - 95%, and importantly reduce mortality by 52%.**
- **Adding Integrated Primary School Screening will reach 5-10 year olds who were not previously tested.**

The Problem



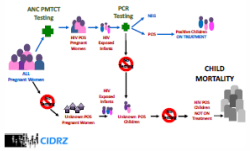
Source: CIDRZ Annual Progress Reports 2006-2015

Zambia has made great strides in tackling the HIV/AIDS epidemic, initiating 58% of HIV infected people on treatment[1], prescribing more effective drugs, and delivering these services "closer to home". Over the past 10 years the prevention-of-mother-to-child-transmission (PMTCT) of HIV has changed from single dose anti-retroviral prevention to full Anti-Retroviral Treatment (ART), reducing the percentage of HIV infected children being born of HIV positive mothers from 7% to 2%. **However, despite these efforts, there are approximately 36,000 HIV positive children not being identified through HIV testing annually, according to national estimate[1].**

To address this child testing gap a team from the Centre for Infectious Disease Research in Zambia (CIDRZ) developed a model to estimate the number of unidentified positive children in the catchment population of 338 CIDRZ-supported facilities in the Lusaka, Western, and Eastern Provinces of the Zambia.

The model results indicated that from 2006 through to the end of 2015, there were 30,203 HIV positive children that had died from HIV-related conditions. In addition, there was an estimated 14,348 HIV-infected children that remained untested, unidentified, and therefore untreated.

When HIV-Infected Children are Left Undiagnosed and Untreated



December 2016: For more information contact: Dr Thea Savory, Dr Mwanza Wa Mwanza, Mwansa Lumpa, Masuzyo Chitala at DAP@cidrz.org +26 0979 869087 or +26 0973 496726

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Recent literature from sub-Saharan African indicates that 75% of those unidentified HIV infected children will die by the age of 5, while up to 80% will die by the age of 10, if they remain without HIV treatment[2].

Since 2008, Zambia has recommended routine HIV testing at immunization clinics for those children born to HIV-positive mothers who attended antenatal clinics. This has increased the testing of HIV-exposed infants to 98%. But after the HIV-exposed child reaches one year of age they no longer receive regular testing. Children, of mothers who did not attend antenatal clinics and have unknown HIV status, are missed and do not receive routine HIV testing.

Though the Ministry of Health has promoted Provider Initiated Testing and Counseling (PITC) in Out-Patient departments, the uptake of child testing is very low at only 3% compared to the 40% of adult testing found in most clinics. Healthcare staff are reluctant to ask permission to test a child, especially when the accompanying adult is not the parent. Non-parent caregivers are also reluctant to give permission for testing. Mothers tend to refuse having their child being tested if they don't have the father's or the spouse's permission. This results in an "Opt-In" approach that presents many missed opportunities for child testing.

How can we find un-identified HIV positive children who will die if they don't receive ART?

No Intervention in 2015			
Age (yrs)	NEW on ART	NOT on ART	Died
1	132	915	1081
2	324	1411	317
3	195	2154	239
4	124	1869	221
5	107	1323	159
6	116	1360	94
7	117	1253	87
8	151	1570	110
9	115	1283	89
10	119	1209	85
Total	1500	14348	2483

Reinforcing Routine HIV Testing in 2015		
NEW on ART	NOT on ART	Died
1265	425	439
1415	538	98
1055	1379	153
860	1219	135
635	858	95
638	876	56
601	804	51
760	1007	64
609	825	53
589	775	49
8429	8707	1195

Calculated Estimated Impact of 1 Year of Option 1 in 338 Facilities in 2015:
6,929 more children on treatment, and 1,288 (52%) deaths avoided.

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Policy Options

In order to find all children living with HIV, reinforcement of routine HIV testing with community sensitization on the importance of HIV testing in children is essential. Proposed policy options to achieve these include: (1) Reinforcing Routine HIV testing; (2) Introducing Pre- and Primary School Screening Drives; and (3) Introducing Primary School Entry Screening.

1. **Reinforcing Routine HIV Testing Strategy**
   WHAT: Routinely test all children for HIV, regardless of their age and condition as long as they visit a health facility with adequate information provided to the caregiver.
   WHY: 80% of children up to 2 years of age, and 50% of children up to 5 years of age visit a health facility, but currently only 3 out of every 100 children are tested for HIV in Outpatient Departments. Routine testing removes the responsibility for the decision of testing from healthcare workers and parents/caregivers. According to literature in Zimbabwe[3] and Tanzania[4] this strategy has increased child testing up to 90%. **In our model, applying reinforcing routine HIV testing in 2015 for 0-10 year olds would have identified an additional 39% untested HIV-positive, and would have prevented 52% of child deaths.**
   FEASIBILITY: MEDIUM to HIGH This strategy builds on the government's decision to identify HIV positive children. It will require a reinforced legal framework, community sensitization, placement of more trained counselors, and an increase in HIV test kits.

2. **Introducing Screening Drives at Pre- and Primary Schools**
   WHAT: Conduct integrated screening drives for Pre-School and Primary School children, assessing development, eyes, ears, and dental, immunization status, and testing for malaria, TB and HIV.
   WHY: 80% of children in Zambia attend Pre or Primary school. This strategy will find the 5 to 10 year old HIV positive children that have been missed during usual health services. **In our model, applying School Screening Drive in 2015 for school-goers would have identified, 50% of untested HIV-positive children (5-10-year-old), and will reduce 5-10-year child deaths by 54%.** Additional benefits of school screening include reducing absenteeism and improve school performance[5].
   FEASIBILITY: HIGH This strategy will require community sensitization, funds, transport, and human resource, including orientation in school screening for nurses in collaboration with Ministry of Education and other key stakeholders.

3. **Introducing Primary School Entry Screening**
   WHAT: Conduct integrated screening for new children entering Primary School, assessing development, eyes, ears, and dental, immunization status and test for malaria, TB and HIV before the child is enrolled.
   WHY: 80% of children in Zambia attend Pre- and Primary School. **In our model, this strategy will identify 35% of the 5-year-old HIV positive children who were missed in the health facilities, and will prevent 40% of death among 5 year olds.** Additional benefits of school screening include reducing absenteeism and improve school performance.
   FEASIBILTY: HIGH This strategy builds on health services already available at the clinic for children.

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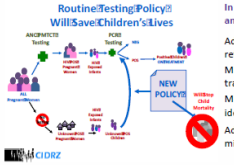
Children can visit the clinic for school entry testing. Nurses will require orientation on screening activities, and collaboration will be needed with the Ministry of Education and other key stakeholders.

ESTIMATED COSTS BY OPTION	Option 1 Routine Testing	Option 2 Pre & Primary School Drives	Option 3 Pre School Entry Screening
Positive Children Found in 1 yr	6,929	4,311	528
Lives Saved in 1 yr	1,288	336	64
Annual Testing Cost (testing, HR, training, community sensitization)	$1,289,722	$2,375,951	$493,476
Testing Cost Per Positive Child	$186	$551	$934
Annual Treatment Cost (testing, HR, training, community sensitization)	$1,216,060	$1,133,911	$138,967
Treatment Cost Per Positive Child	$176	$263	$263
Political Feasibility			
Operational Feasibility			

Recommendations

Reinforcing Routine HIV testing is the most cost effective and feasible option to increase HIV testing among children with unknown status, as recommended by the WHO[6] and the CDC[7]. Implementation of routine HIV testing will identify the majority of HIV-positive children in Zambia, reduce HIV-related mortality and promote long-term control of the epidemic.



In addition to a legal framework and collaboration amongst stakeholders this strategy will require:

Additional test kits, more trained counsellors, and a robust referral system to link children to treatment.

Ministry of Health to intensify community sensitization and trainings for healthcare providers.

Ministry of Finance to ensure sufficient resources so all identified children can be placed on treatment.

Additional school screening will identify children who were missed at the health institutions.

References:
1. Spectrum Zambia 2013/2014, http://www.avenirhealth.org/software-spectrum.php
2. Renaud Becquet,' Children who acquire HIV inf perinatally are at higher risk of early death than those acquiring inf through breastmilk: a meta-analysis', source PLoS One, 2012
3. Rashida Abas Ferrand, Jamilah Meghji. The effectiveness of Routine Opt-Out HIV testing for children in Harare, Zimbabwe, Aquire Immune Deficiency Syndrome, 2016
4. Kathy Baisley, Aoife Doyl, Uptake of voluntary counselling and testing among young people participating in an HIV prevention trial: comparison of opt-out and Opt-in strategies, Plos One, 2012
5. Tobi Bandason, Lisa Langkaug, Burden of HIV among primary school children and feasibility of primary school-linked HIV testing in Harare, Zimbabwe: A mixed methods study, Aids Care, 2014
6. World Health Organization May 2007, Provider-Initiated Testing and Counseling in Health Facilities
7. CDC 2006, Revised Recommendation for HIV testing of adults, adolescents and pregnant women in Health Care setting: home/HIV/AIDS Basics/Prevention: HIV Testing: Opt-Out Testing
8. Zambian Demographic Health Survey 2013/2014

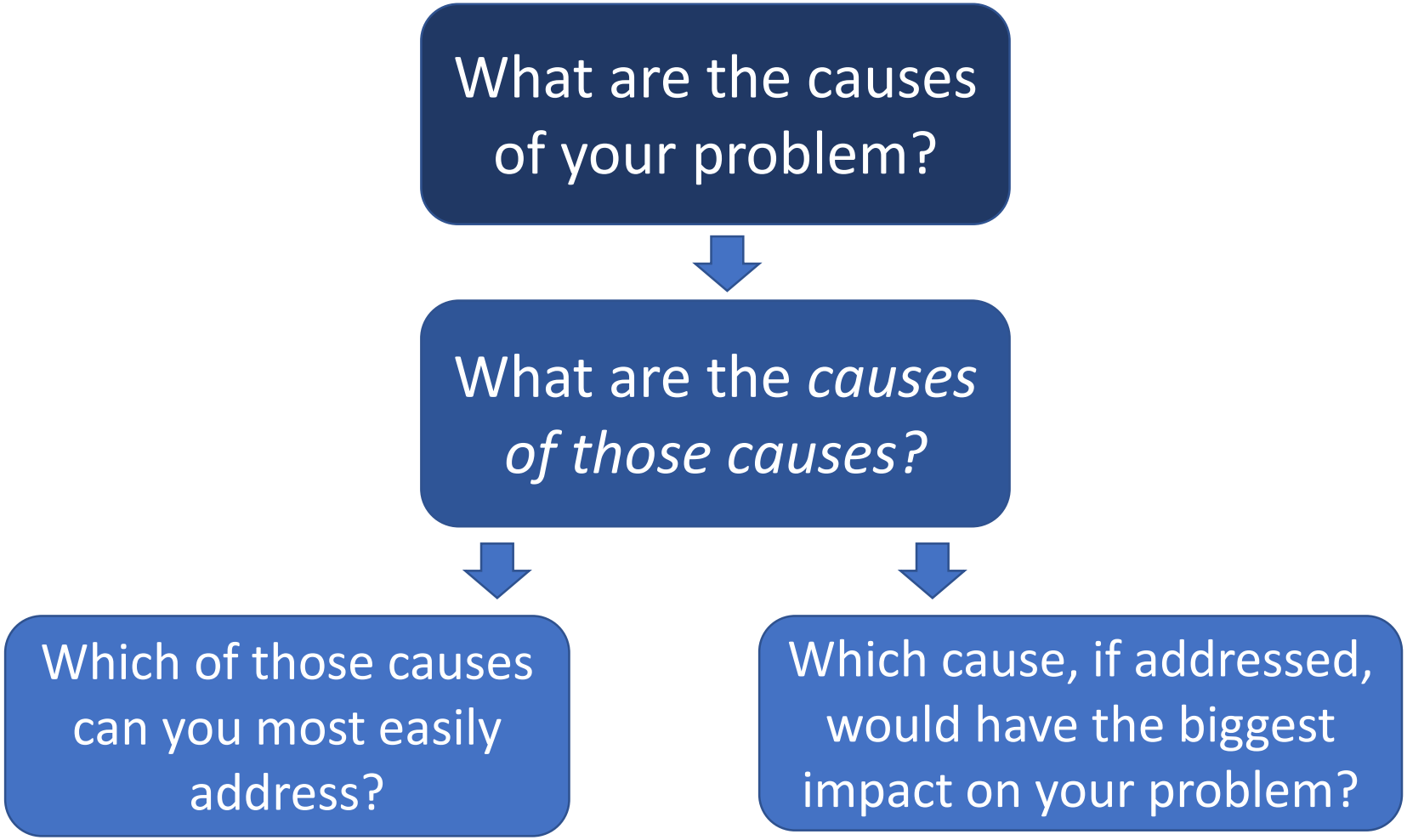
1. Writing a Problem Statement

- **Describes the problem**
  - How big it is
  - Where it is
  - Who it's happening to
  - *Primary cause* for problem

Health problem

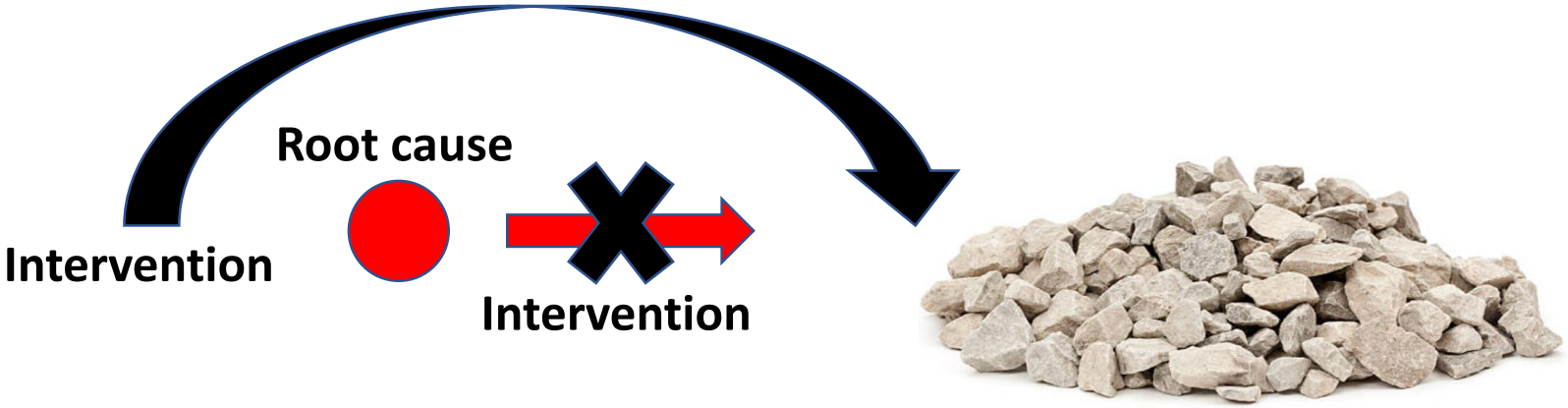
- **Primary opportunity to convince audience to *engage***
  - Emphasize importance of your problem
  - Tell policymakers *why they should care*!!!

2. Identifying the Root Causes of Your Problem



3. Identifying Policy Options

- **Understanding root causes allows us to identify policy options**
- **Policy options *must reduce the influence of root causes* on the problem**



4. Evaluating Policy Options

Health Impact

Budgetary Impact (Cost)

Economic Impact (cost-effectiveness)

Feasibility (operational, political)

Finding Data

- **The burden of the problem**
- **Affected populations, locations**
- **The root causes of the problem**
- **The costs of policy options**
- **The impact of policy options**
- **The feasibility of policy options**

Published literature

Unpublished reports

Surveillance or other local data

Stakeholder interviews

….many other sources!

Benefits of D2P for Participants

Opportunity to have a large-scale impact on the health of your fellow citizens!

Recognition in your department as someone with specialized training; possibly enhance career opportunities

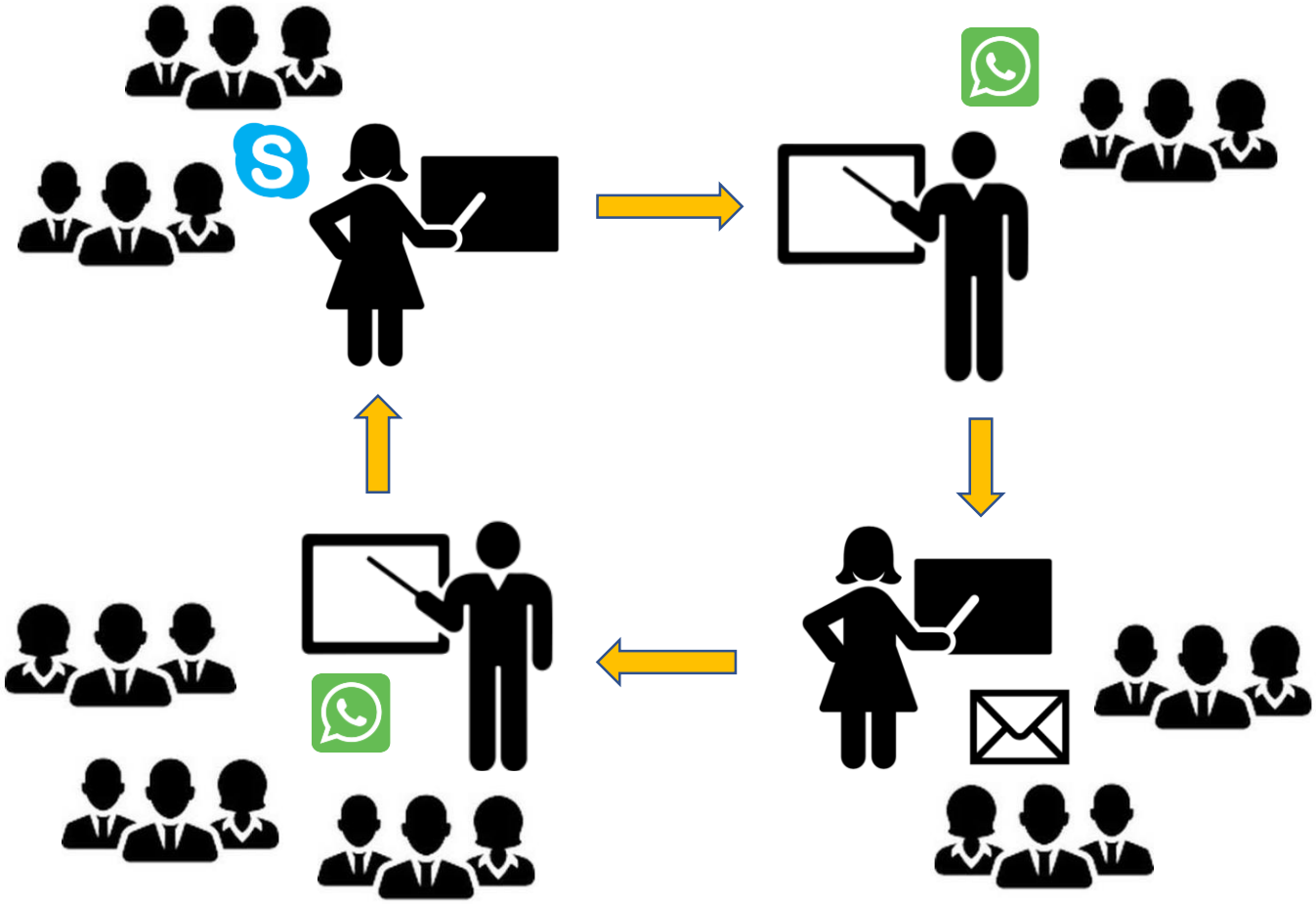
Enhanced ability to identify and use data across multiple sources; conduct economic modeling

Networking with / presenting to major stakeholders in your field

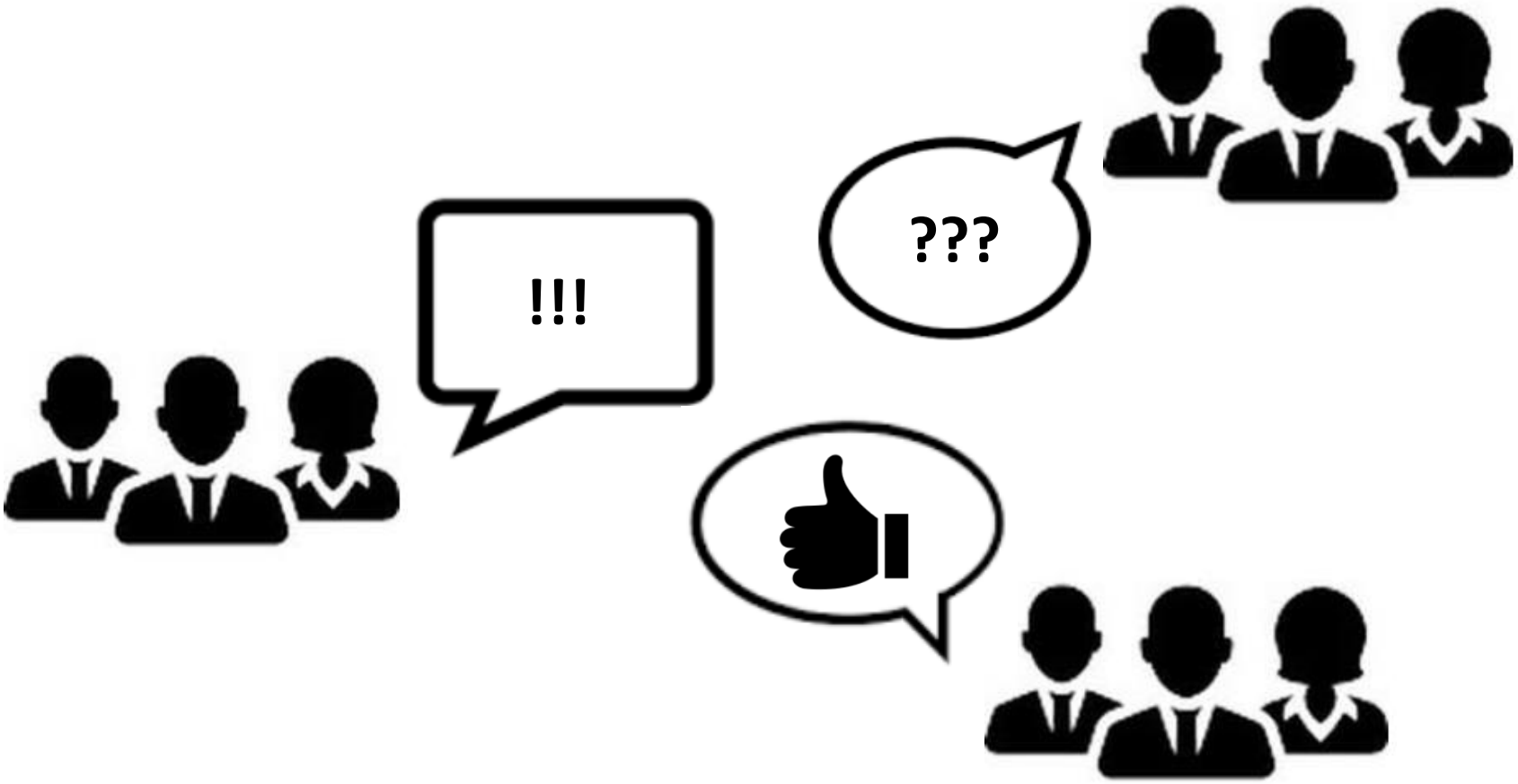
Opportunity to work as a team, share skills with others you might not work with normally

..... What do *you* think you'll gain from this course?

Mentor/Mentee Relationships



Exchange Information with Classmates!



Committing to the D2P Course

- **<u>Active engagement vs passive learning</u>**
  - Includes work between Sessions I and II

- **Mentor engagement from beginning to end**
  - YOU will be responsible for making sure you understand the material and take the initiative to ask questions when you need help.

- **We look forward to working with you and your team to produce data-driven policy briefs to improve public health!**

Welcome!

Bloomberg Philanthropies | DATA FOR HEALTH INITIATIVE | D2P Data to Policy | CDC Foundation Together our impact is greater | Vital Strategies