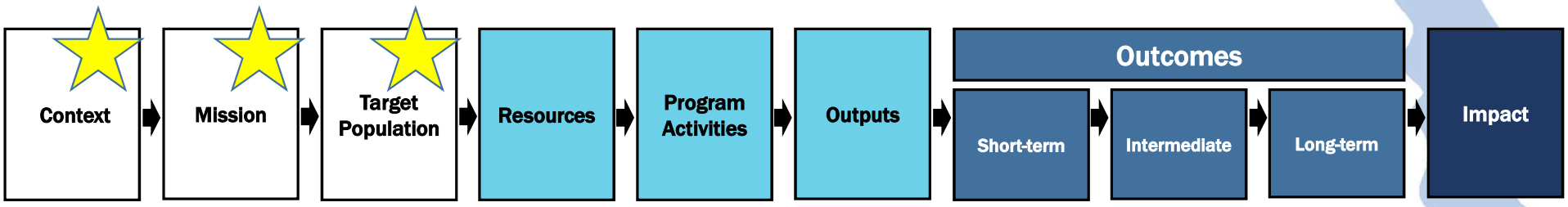
Using community data and mapping tools to learn about your service population

Patrick Needham

Learning Objectives

- Identify questions to ask about clients' communities
- Discuss how public data sets might relate to internal data
- Identify where to search for public data sets
- Learn about tools for analyzing, visualizing, and mapping these data
- Discuss ways to lead conversations about these data


Context
Mission
Target Population
Resources
Program Activities
Outputs
Outcomes
Short-term
Intermediate
Long-term
Impact

Questions to ask about our clients' communities

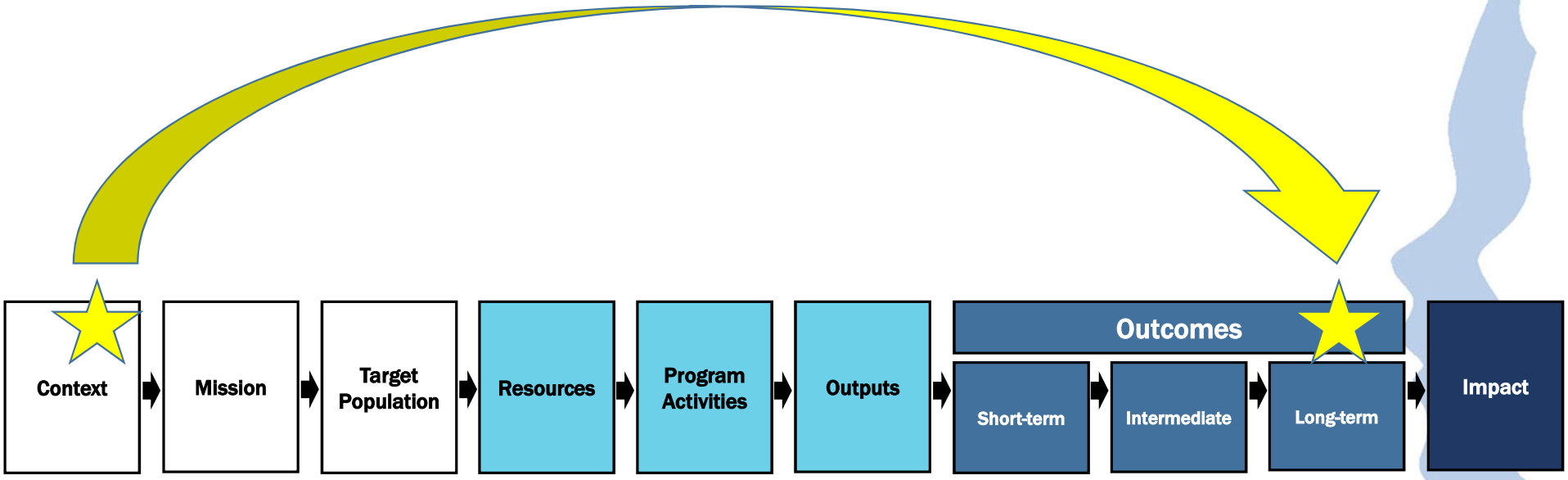
- What questions do you have about your clients' communities? What are you curious to know? What do you think are the major social factors in their communities?

- What data might help answer these questions?

- What have you already done in your workplace to try to answer these questions? Are there any data sets you've accessed?

Questions to ask about our clients' communities

- Of these, which are most salient to what we do as an organization? Which might be most relevant to our participants achieving outcomes?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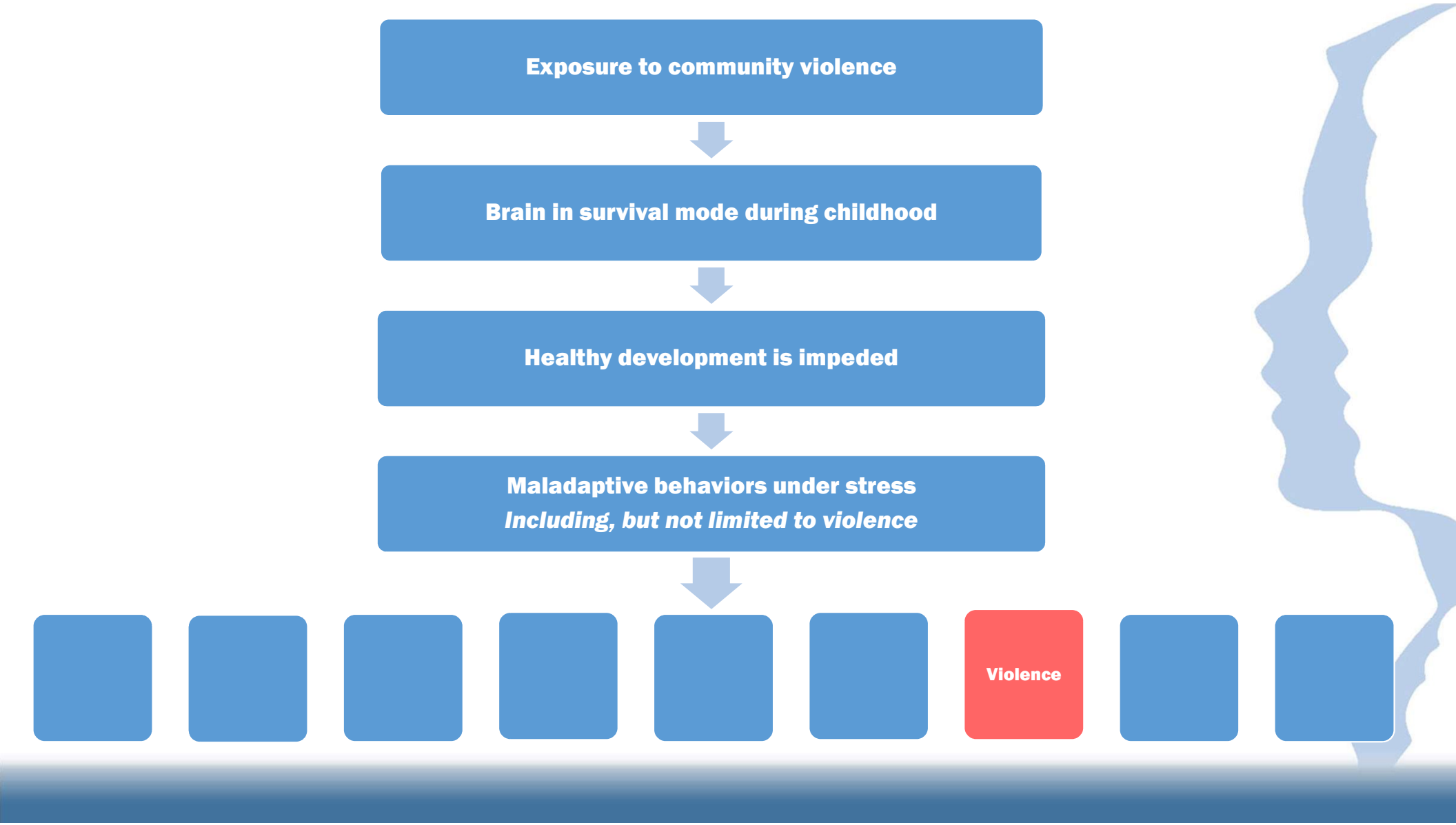
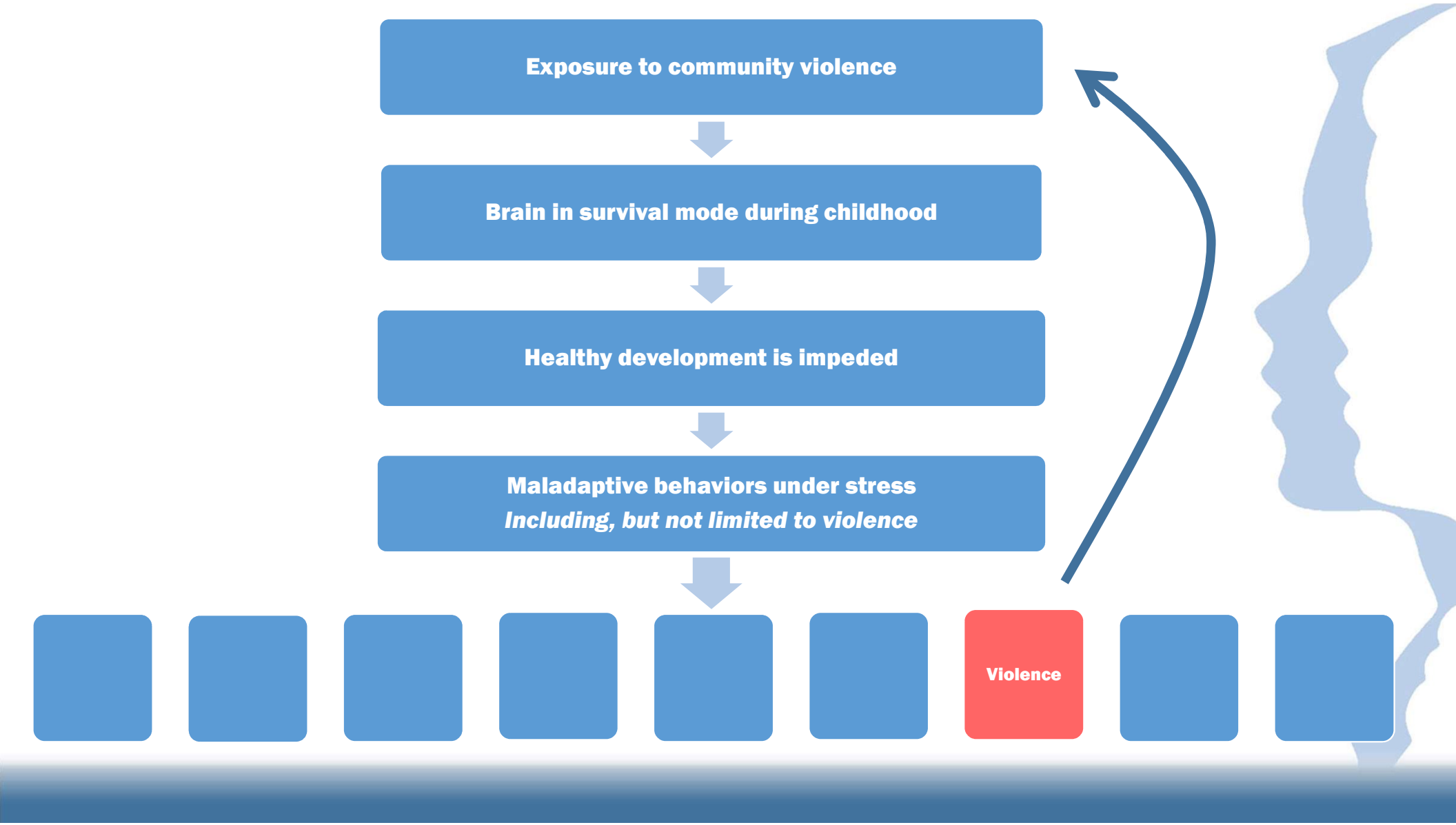
Questions to ask about our clients' communities

- What questions do you have about your clients' communities?
  - *Mercy:* How prevalent is gun violence in the communities our youth come from?
- What data might help answer these questions?
  - *Mercy:* Youth addresses, crime data
- What have you already done in your workplace to try to answer these questions? Are there any data sets you've accessed?
  - *Mercy:* Not much so far

Questions to ask about our clients' communities

- Of these, which are most salient to what we do as an organization? Which might be most relevant to our participants achieving outcomes?
  - *Mercy:* 1) Trauma lens, 2) Our outcomes domains


Exposure to community violence
Brain in survival mode during childhood
Healthy development is impeded
Maladaptive behaviors under stress
Including, but not limited to violence
Violence

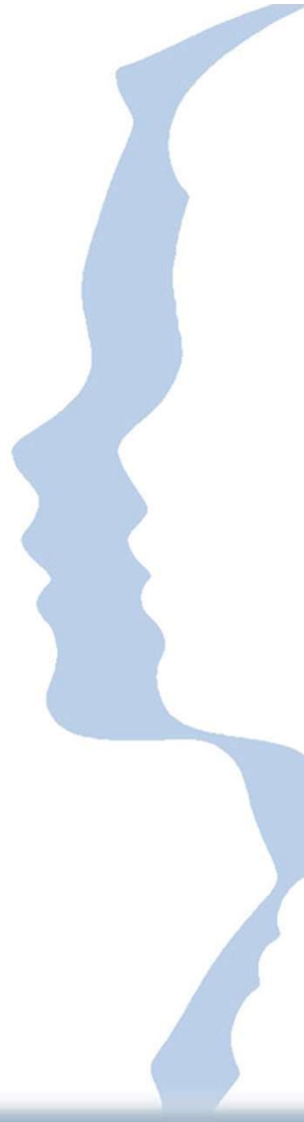

Exposure to community violence
Brain in survival mode during childhood
Healthy development is impeded
Maladaptive behaviors under stress
Including, but not limited to violence
Violence

Outcomes Domains

Socio-emotional Wellness

Education and Vocation

Independent Living



Searching for public data sets

- Governmental sources
  - City of Chicago Data Portal (https://data.cityofchicago.org/)
    - Shapefiles
  - FBI Uniform Crime Reporting (https://www.ucrdatatool.gov/)
  - American Communities Survey (https://www.census.gov/acs/www/data/data-tables-and-tools/)

Searching for public data sets

- Research/Academic sources
  - University of Chicago Crime Lab (http://urbanlabs.uchicago.edu/labs/crime)
  - UIC Great Cities Institute (https://greatcities.uic.edu/)
  - DePaul Institute of Housing Studies (https://www.housingstudies.org/dataportal/)

Searching for public data sets

- Community partners/special publications
  - Eg, Thrive, Opportunity Youth Initiative

- Consultancies
  - Eg, Rob Paral (http://www.robparal.com/ChicagoCommunityAreaData.html)

Data considerations

- What is the geographic level?
  - Zip Code? Neighborhood? Community area? Municipality? Address? Coordinates?

- How is the data structured? Need to reshape?

Data considerations

- Turn addresses into coordinates

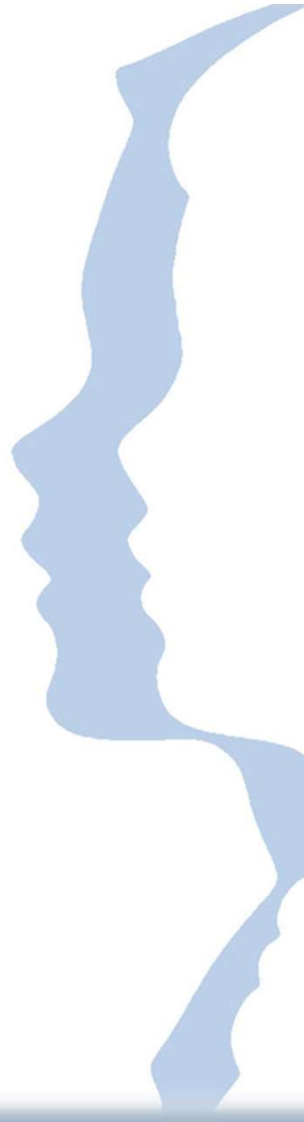
1140 W Jackson Blvd, Chicago, IL 60607

geocode(as.character(mercy_locations$full_address))

(41.8779878,-87.6581264)

Data considerations

- Lookup table



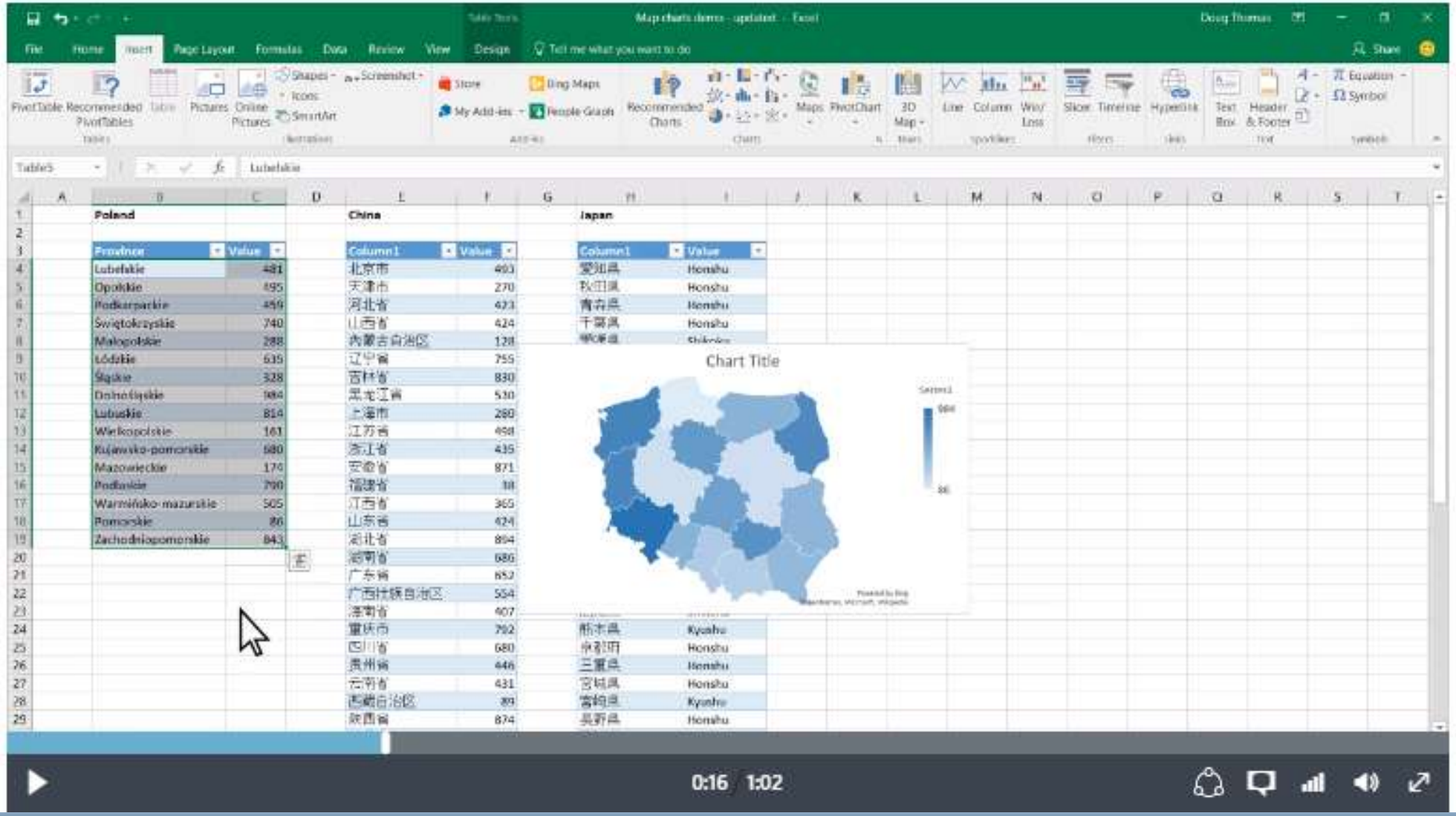
Data considerations

- Totals v. rates

Community Area	Homicides	Homicides per 100,00
Austin	87	87.3
Englewood	49	179.5

Tools

- Excel
  - Insert → Maps (in the Charts section)


Map charts demo - updated - Excel
Poland
China
Japan
Province
Value
Column1
Value
Lubelskie 481
Opolskie 495
Podkarpackie 459
Świętokrzyskie 740
Małopolskie 288
Łódzkie 635
Śląskie 328
Dolnośląskie 984
Lubuskie 814
Wielkopolskie 161
Kujawsko-pomorskie 680
Mazowieckie 176
Podlaskie 798
Warmińsko-mazurskie 505
Pomorskie 86
Zachodniopomorskie 843
北京市 493
天津市 270
河北省 423
山西省 424
内蒙古自治区 128
辽宁省 755
吉林省 830
黑龙江省 530
上海市 280
江苏省 498
浙江省 435
安徽省 871
福建省 38
江西省 365
山东省 424
河北省 894
河南省 686
广东省 652
广西壮族自治区 554
海南省 407
重庆市 792
四川省 680
贵州省 446
云南省 431
西藏自治区 89
陕西省 874
Chart Title
0:16 1:02

Tools

- Tableau (or other BI tool)

Chicago in 2016

764 homicides

- 58% increase from 2015
- 52% are concentrated in the 10 most affected Community Areas
- Driven primarily by gun violence
- 4,367 shooting victims

But, violence is only one way of looking at our communities

Introduction

- Questions
  - Where do our youth come from?
  - What can we understand about their communities to better inform ourselves?
- Data sources
  - Youth addresses (2012 – 2016)
  - American Communities Survey
  - Rob Paral and Associates
  - UIC Great Cities Institute
  - UChicago Urban Labs
  - Institute for Housing Studies at DePaul University
  - City of Chicago

Tools

- R
  - Mapping packages
    - Leaflet
    - sp
  - Shapefiles

Facilitating conversations

- How can this help us understand our youth better from a trauma perspective?
- What trauma might our youth not explicitly name as part of their story?
- How can we further discuss discrimination and systemic injustices from a trauma perspective?
- How can this information help us on a personal level? Program level? Agency level?