Public Health Ontario | **Santé publique Ontario**

To view an archived recording of this presentation please click the following link:

https://www.youtube.com/watch?v=-fjOvfvrL_4

Please scroll down this file to view a copy of the slides from the session.

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Outline

- The 5 Ws and H of SHED:
  - What is it?
  - Why do we need it?
  - Who is it for?
  - When and where can we access it?
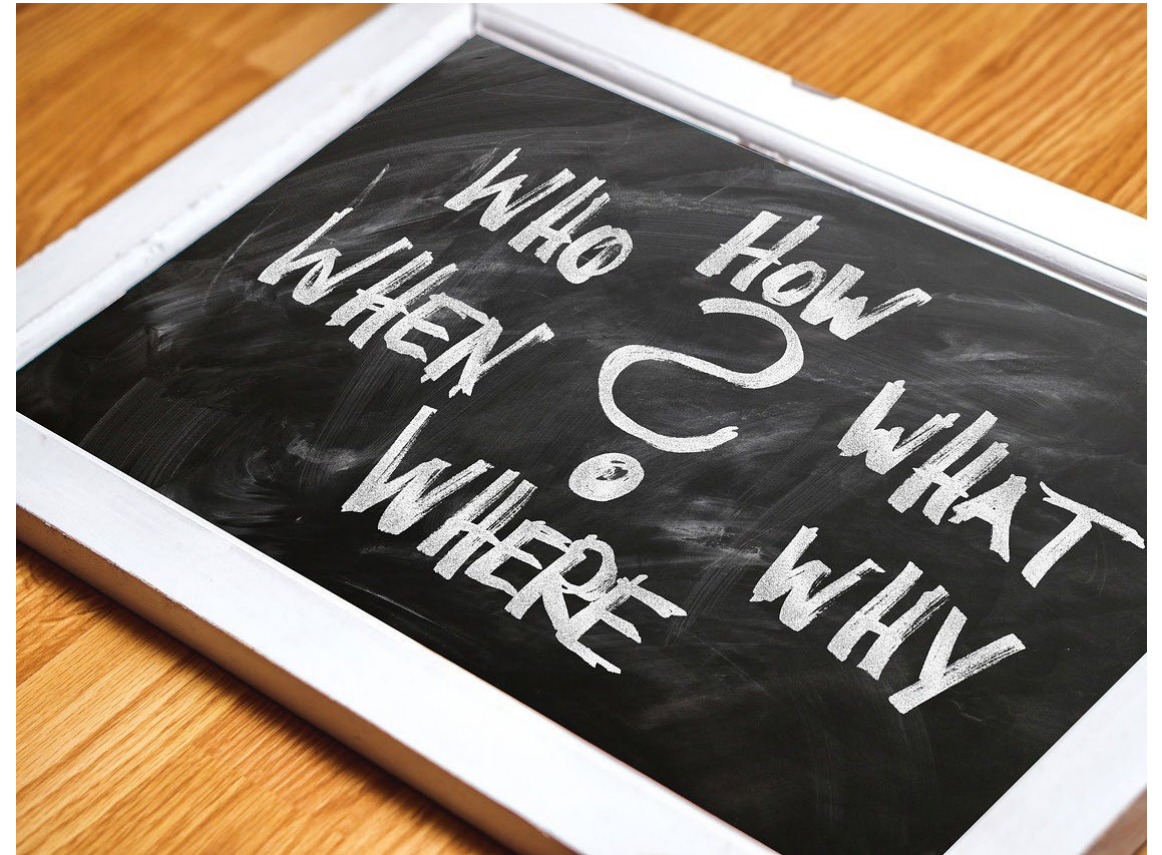 - How was it developed?
- Summary and next steps

Image Source: geralt @ https://pixabay.com/photos/question-mark-board-ask-knowledge-2212771/
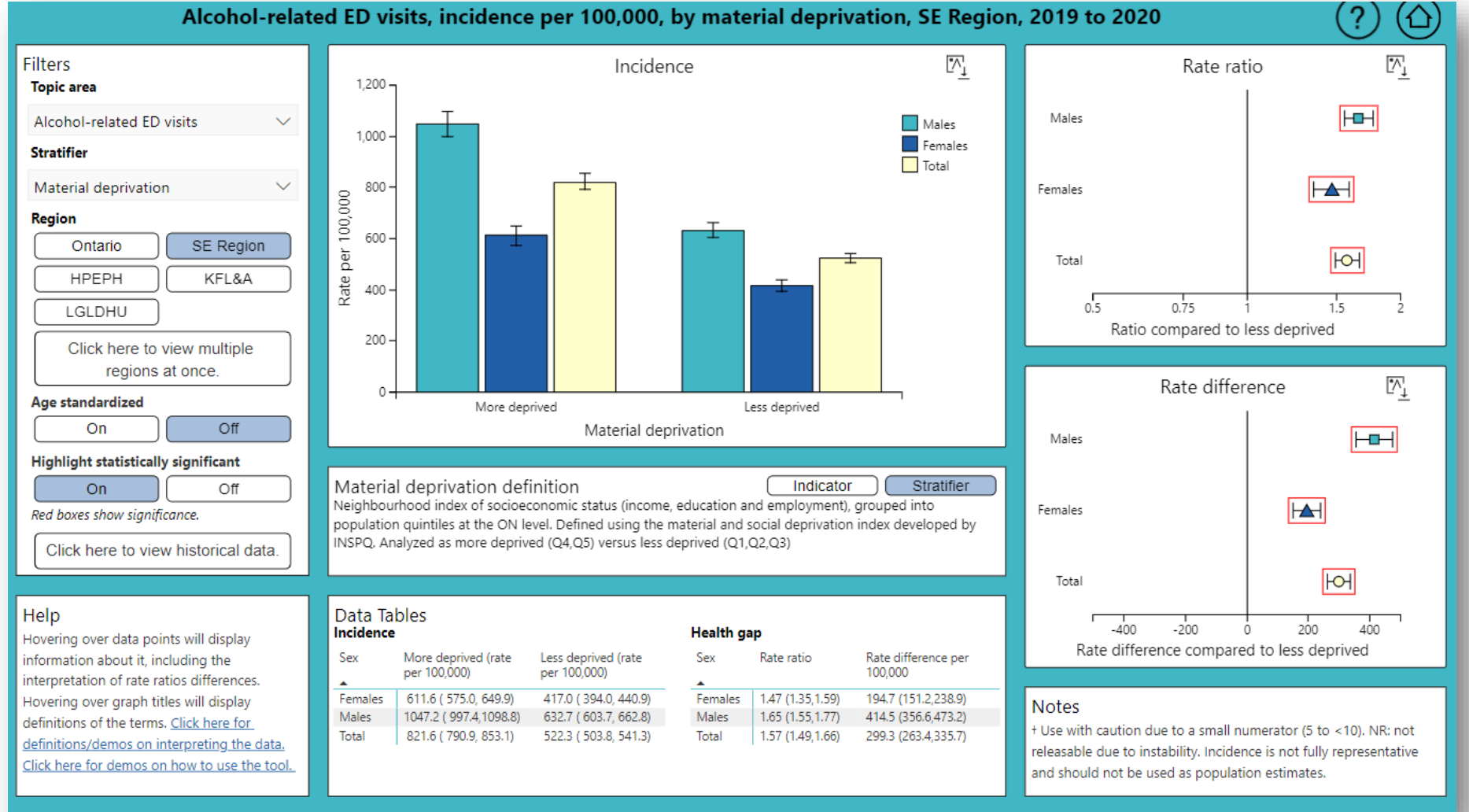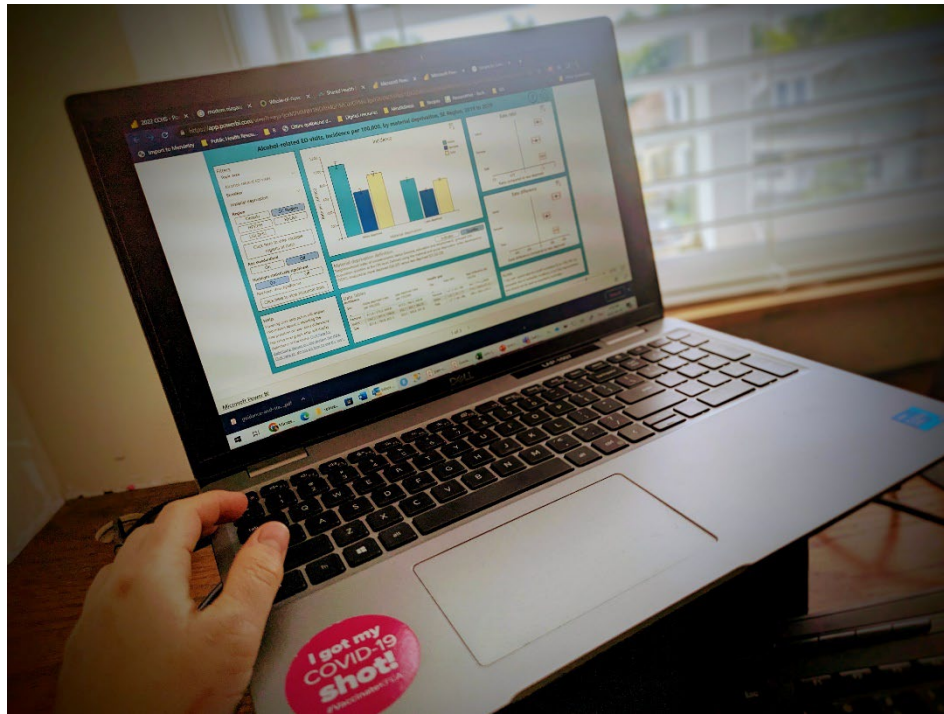
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Why do we need SHED?
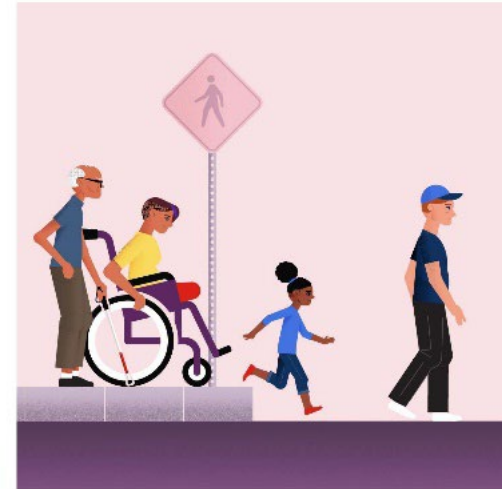
Why do we need SHED?

What gets measured can be more systematically actioned and progress monitored. What isn't measured, may not get enough attention.
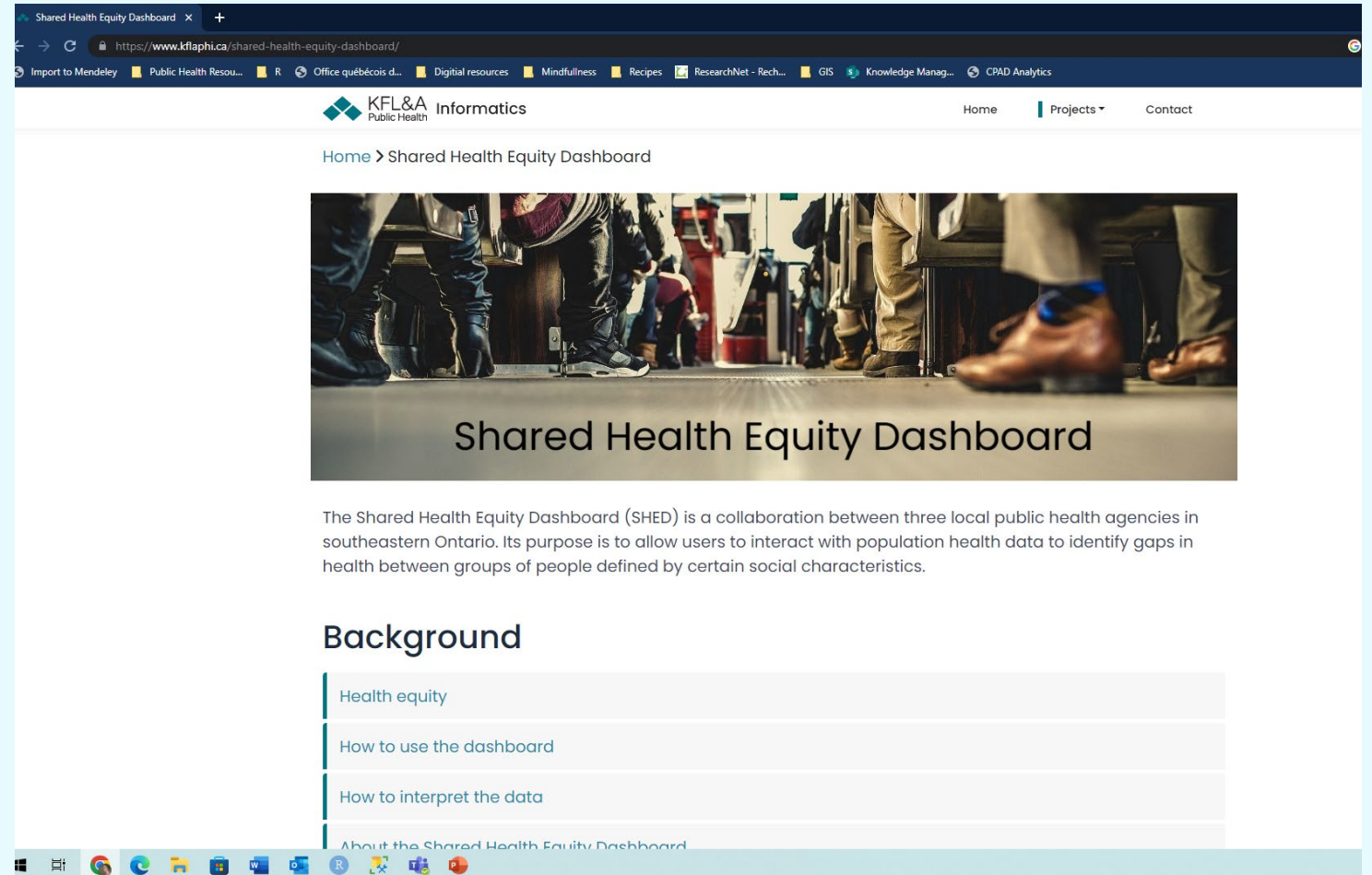
Who is SHED for?

- For data analysts, public health units and community organization staff comfortable with technology and interpreting data.

When and where can I find it?

- Available now at: kflaphi.ca/shared-health-equity-dashboard
  - Links to dashboards for specific data sources and indicators
  - Demos, explanations and definitions
  - Technical documentation
  - New indicators will be added

How was SHED developed?

Our inspiration for SHED came from the Government of Canada's Health Inequalities Data Tool

- Supports Canada's pledge under WHO Rio Declaration (2012) to take action to promote health equity.
- Critical to strengthening capacity to monitor and report on health inequalities in Canada.
- Collaboration between Public Health Agency of Canada, the Pan-Canadian Public Health Network (PHN), Statistics Canada, and the Canadian Institute for Health Information (CIHI).
- Builds on a set of indicators of health inequalities proposed by the PHN in 2010.

Choosing indicators

- Considered the PHN 2010 framework from the Health Inequalities Data Tool.

- Wanted to start small (n=10) then build.

- Cover many different data sources available to us in the first iteration
  - Surveys like Canadian Community Health Survey (CCHS), data only available to PHUs (e.g., reportable disease data from iPHIS), administrative hospital data from CIHI such as the Discharge Abstract Database (DAD), National Ambulatory Care Reporting System (NACRS).

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Defining indicators

- Standardize as much as possible
  - APHEO Core Indicators
    - apheo.ca/temporary-core-indicators-table
  - PHO Snapshots
    - publichealthontario.ca/en/Data-and-Analysis/Commonly-Used-Products/Snapshots
  - CIHI Indicator Library
    - cihi.ca/en/access-data-and-reports/indicator-library

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Current indicators

Hospital usage and mortality	Infectious diseases	Self-reported health and behaviour (CCHS)
• 100% related alcohol emergency department (ED) visits	• COVID-19 infections	• Overall health, mental health
• Cannabis-related ED visits	• Gonorrhoea infections	• Life satisfaction, stress
• Mental health-related ED visits	• Lyme disease infections	• Sense of community belonging
• Non-traumatic oral health ED visits		• Substance use (e.g.,alcohol, smoking, cannabis)
• Chronic obstructive pulmonary disease hospitalizations		• Has a healthcare provider
• Cardiovascular disease hospitalizations		• Physical activity, sedentary activity
• Premature mortality		• Vegetable and fruit intake

Future ➢ maternal and infant-related from BORN (Better Outcomes Registry and Network)

Choosing and defining equity stratifiers

- CIHI's "Measuring Health Inequalities Toolkit"

    cihi.ca/en/measuring-health-inequalities-a-toolkit

    - Equity Stratifier Inventory
    - Guidance on definitions
    - Guidance on using the PCCF and PCCF+ (postal code conversion file)

- Health Inequalities Data Tool

In Pursuit of Health Equity: Defining Stratifiers for Measuring Health Inequality

A Focus on Age, Sex, Gender, Income, Education and Geographic Location

April 2018

Canadian Institute for Health Information
Institut canadien d'information sur la santé

Measuring Health Inequalities: A Toolkit

Area-Level Equity Stratifiers Using PCCF and PCCF+

Canadian Institute for Health Information

Current stratifiers

Administrative and PHU data sources	CCHS (individual-reported)
• Sex at birth	• Sex at birth
• Material deprivation (Pampalon Index) – postal code	• Education level
• Social deprivation (Pampalon Index) – postal code	• Immigrant status
• Urban/Rural – postal code	• Income
	• Language
	• Sexual orientation
	• Urban/Rural

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Race-based analysis

- No race-based variables yet available in health administrative and PHU data sources.

  - Area of advocacy by PHUs and other partners.

- CCHS includes a population group variable based on Statistics Canada's Census and Employment Equity questions

  - Consultation with APHEO/PHU epis and local groups to determine how best to define and analyze cihi.ca/sites/default/files/document/guidance-and-standards-for-race-based-and-indigenous-identity-data-en.pdf

Guidance on the Use of Standards for Race-Based and Indigenous Identity Data Collection and Health Reporting in Canada

Canadian Institute for Health Information
Institut canadien

Health gap (equity) measures

- Focused on simplicity, useability, and ease of understanding.
- Just two measures - rate ratio and rate difference – but also visually shows incidence or prevalence of indicator by subgroup.
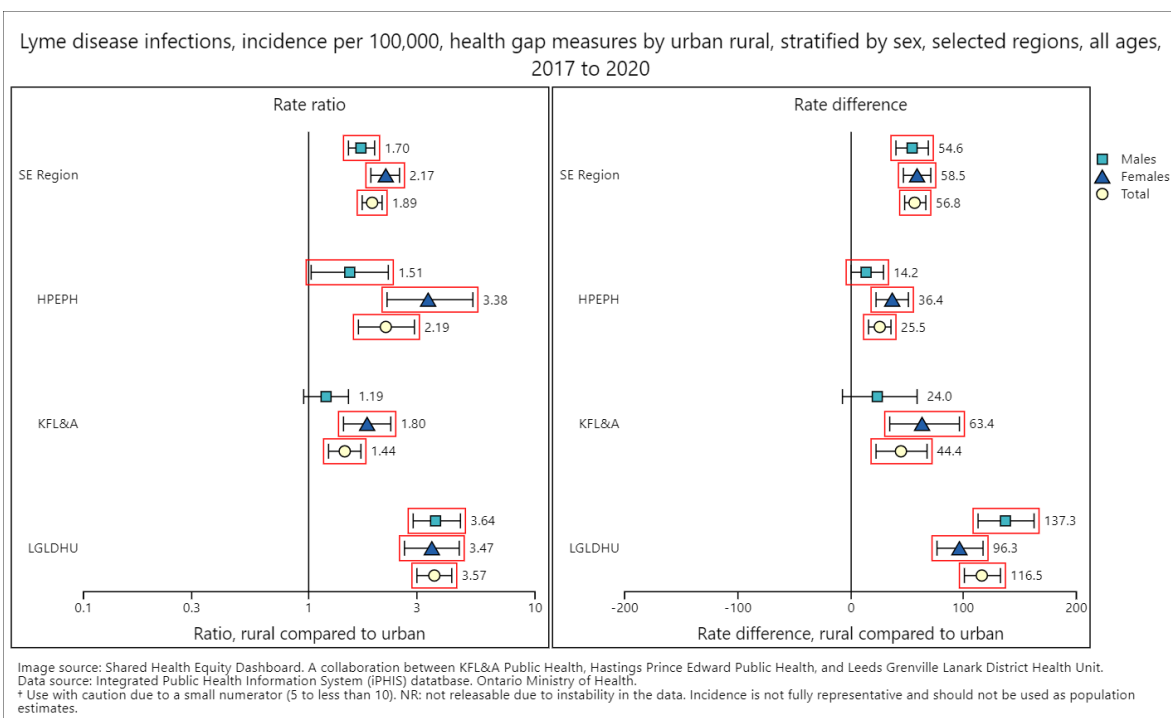
Health gap (equity) measures – Rate Ratio and Rate Difference
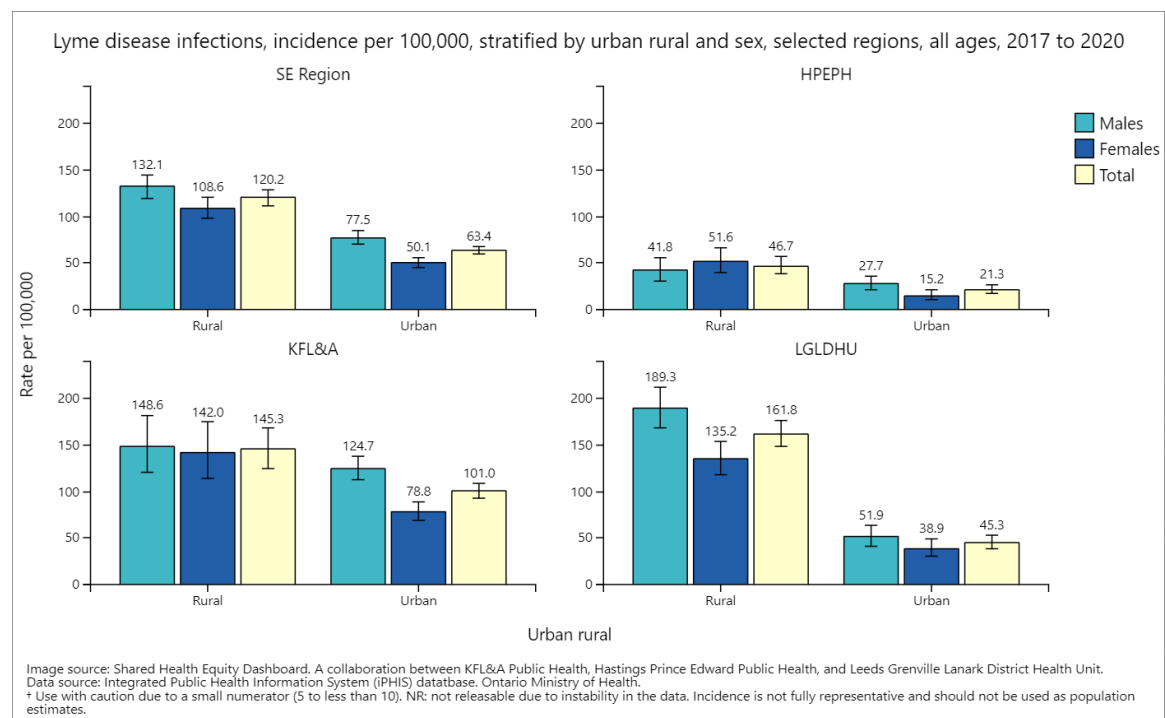
Incidence/Prevalence

Health gap measures

- Rate Ratio (RR): a **relative** measure of the health gap between two groups of people.
  - RR > 1: implies the rate in the comparison group is higher than the rate in the reference group.

- Rate Difference (RD): an **absolute** measure of the health gap between two groups of people.
  - RD > 0: implies that there are more cases of the outcome in the comparison group compared to the reference group.

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SHED structure

- On all pages
  - Indicator filter
  - Selection buttons for region (up to five), age standardization, page, statistical significance
  - Graphs, including tooltips (interpretation for health gaps) and ability to download graphs as images
  - Data tables for the graphs (bottom of screen).

Graph tooltip

Indicator: Lyme disease infections, incidence per 100,000

Region: HPEPH

Age standardized: No

Interpretation: For females, the rate for individuals living in rural environments is 3.38 (2.21,5.28) times the rate for individuals living in urban environments. This represents a higher rate.

Statistically significant: Yes
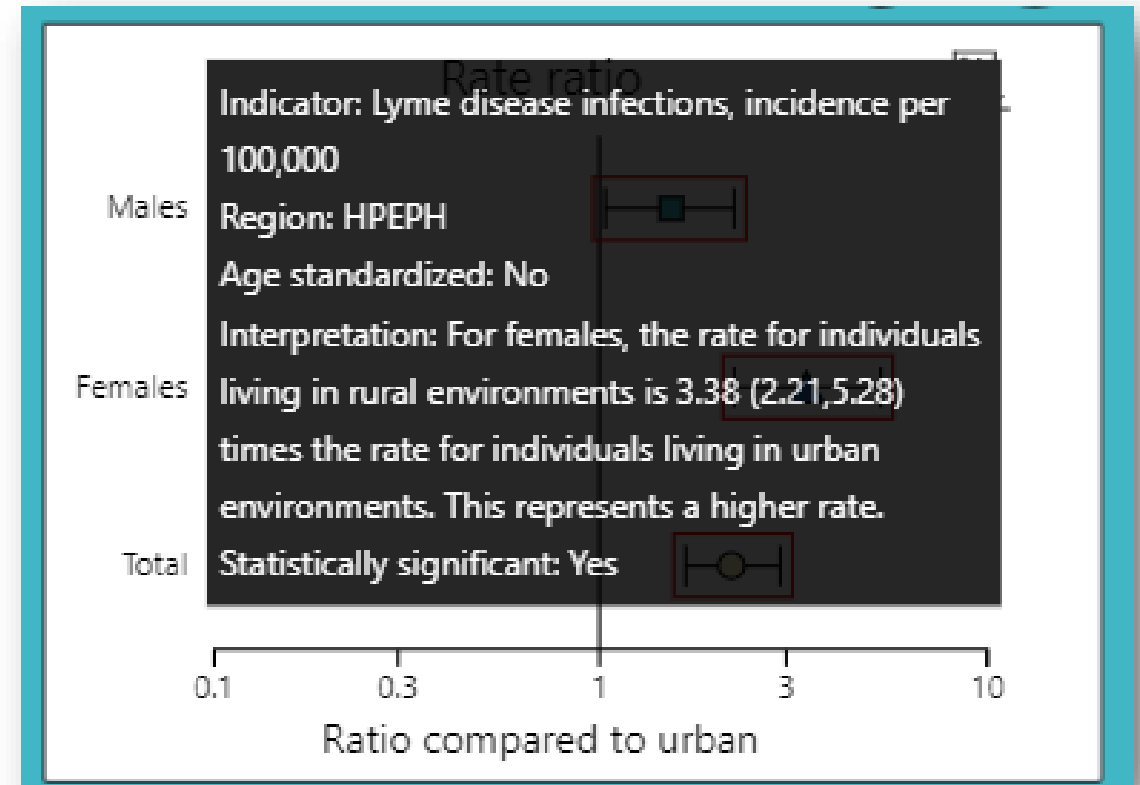
SHED Page 1

Cannabis-related ED visits, incidence per 100,000, by material deprivation, KFL&A, 2019 to 2020

Filters

Topic area

Cannabis-related ED visits ⌄

Stratifier

Material deprivation ⌄

Region

Ontario	SE Region
HPEPH	KFL&A
LGLDHU	

Click here to view multiple regions at once.

Age standardized

| On | Off |

Highlight statistically significant

| On | Off |

Red boxes show significance.

Click here to view historical data.

Help

Hovering over data points will display information about it, including the interpretation of rate ratios differences. Hovering over graph titles will display definitions of the terms. Click here for definitions/demos on interpreting the data. Click here for demos on how to use the tool.
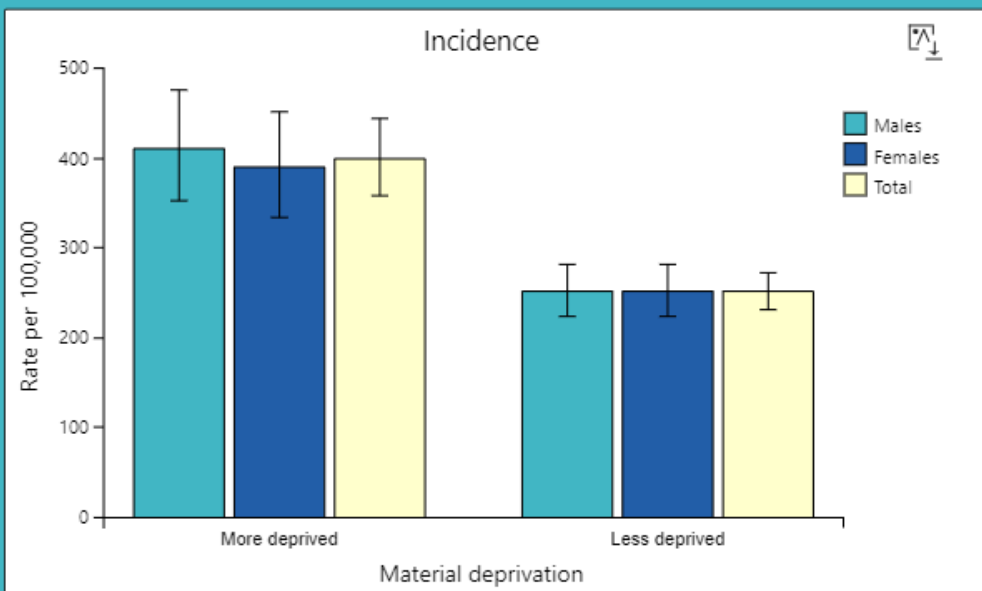
Incidence

Legend: Males, Females, Total

Y-axis: Rate per 100,000 (0–500)
X-axis: Material deprivation (More deprived, Less deprived)

Material deprivation definition

| Indicator | Stratifier |

Neighbourhood index of socioeconomic status (income, education and employment), grouped into population quintiles at the ON level. Defined using the material and social deprivation index developed by INSPQ. Analyzed as more deprived (Q4,Q5) versus less deprived (Q1,Q2,Q3)

Data Tables

Incidence

Sex	More deprived (rate per 100,000)	Less deprived (rate per 100,000)
Females	389.2 (334.3,450.6)	251.7 (224.7,281.1)
Males	410.7 (352.3,476.1)	251.8 (223.9,282.2)
Total	399.6 (359.1,443.4)	251.8 (232.2,272.5)

Health gap

Sex	Rate ratio	Rate difference per 100,000
Females	1.55 (1.29,1.86)	137.7 (76.3,203.3)
Males	1.63 (1.35,1.96)	159.2 (94.2,228.7)
Total	1.59 (1.39,1.81)	148.0 (102.9,195.2)

Rate ratio

X-axis: Ratio compared to less deprived (0.5, 0.75, 1, 1.5, 2)
Rows: Males, Females, Total

Rate difference

X-axis: Rate difference compared to less deprived (-200, -100, 0, 100, 200)
Rows: Males, Females, Total
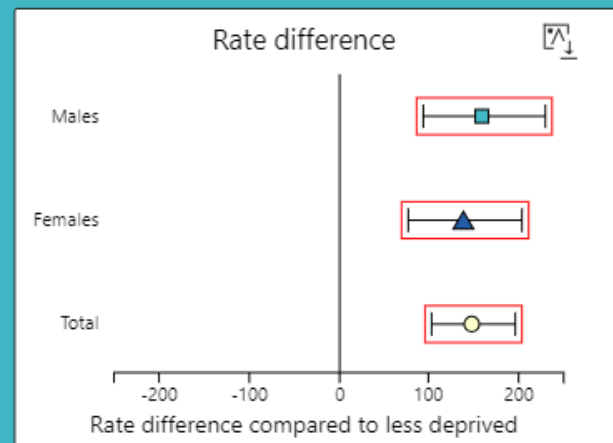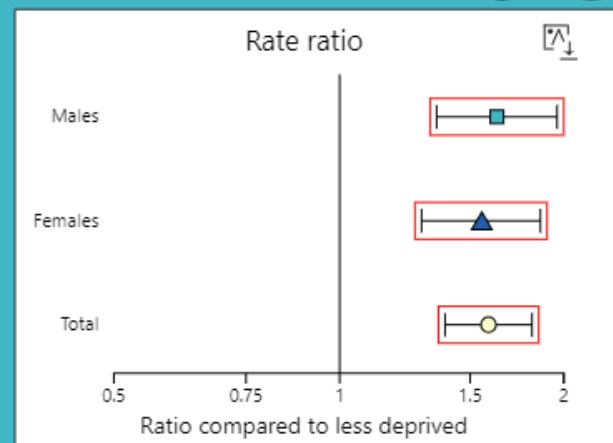
Notes

+ Use with caution due to a small numerator (5 to <10). NR: not releasable due to instability. Incidence is not fully representative and should not be used as population estimates.

Lyme disease infections, incidence per 100,000, stratified by urban rural and sex, selected regions, all ages, 2017 to 2020

SE Region

HPEPH

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LGLDHU

Image source: Shared Health Equity Dashboard. A collaboration between KFL&A Public Health, Hastings Prince Edward Public Health, and Leeds Grenville Lanark District Health Unit.
Data source: Integrated Public Health Information System (iPHIS) datatbase. Ontario Ministry of Health.
+ Use with caution due to a small numerator (5 to less than 10). NR: not releasable due to instability in the data. Incidence is not fully representative and should not be used as population estimates.

Page 2: **Multiple regions** for most recent time period only. Ability to select and unselect regions.

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Page 3: **Multiple time points** for one region only. Ability to select/unselect time points.

≫≫≫

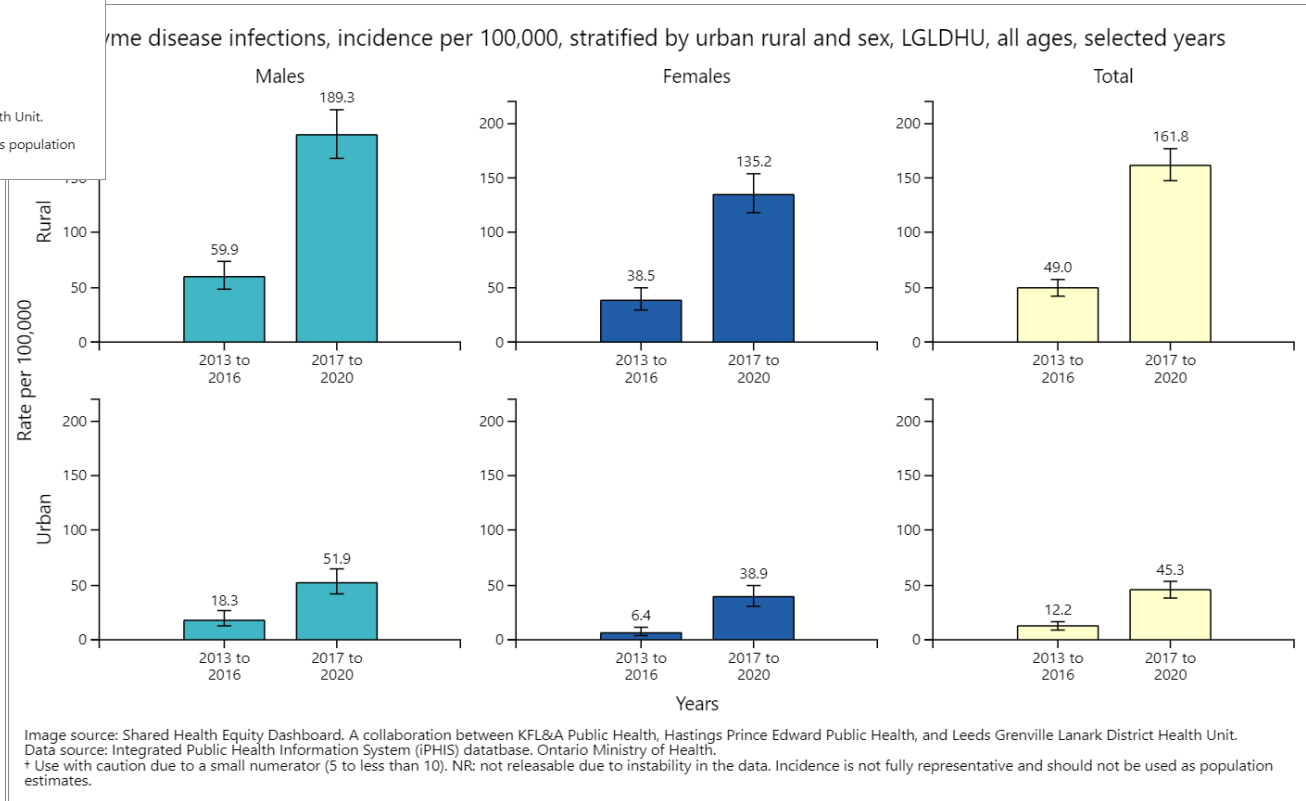Lyme disease infections, incidence per 100,000, stratified by urban rural and sex, LGLDHU, all ages, selected years

Males

Females

Total

Image source: Shared Health Equity Dashboard. A collaboration between KFL&A Public Health, Hastings Prince Edward Public Health, and Leeds Grenville Lanark District Health Unit.
Data source: Integrated Public Health Information System (iPHIS) datatbase. Ontario Ministry of Health.
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Iterative development process

- Calculation of metrics and storage in SQL Server
- Design whiteboarding then PowerPoint mock-ups
- Power BI page drafts by data source type
- Expert review by working group
- UI/UX testing with public health staff - task based with follow-up questions
- Power BI page edits and refinements
- Landing page content
- Expert review by working group
- Launch – evergreen

Summary and next steps

- Data dashboard to measure and monitor health inequities in southeastern Ontario.

- Targeted to data analysts, tech savvy staff at PHUs and community organizations.

- Several indicators available, new ones to be added.

- Ongoing consultation with users – staff and community partners.

'Levi's 501XX 1966 climbing stairs 2' by Perry Goh | Flickr | CC BY 2.0

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