



# THE SCHOOL OF PUBLIC POLICY

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# **SOCIAL POLICY RESEARCH WITH LINKED DATA: BETTER WITH FRIENDS**

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# OUTLINE

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- **Projects**
  - Housing First Cost Savings
  - Dental Care Benefits
  - The Risk of Transitional Shelter Use
- **Data / Strategy**
  - Linkages and Agreements
  - Vulnerable populations are related

# HOUSING FIRST

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| Cost Savings of Housing First in a Non-Experimental Setting

- Collection of HF programs running for years in Calgary.
- Data: CHF HMIS database, CHF Research Team.  
Participants in HF programs delivered by various partner organizations.
- We know some characteristics of people in HF, like the program they are in, when they join, when they exit.

## COSTS PER YEAR, HF

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<b>Program Types</b>	<b>Cost/Client</b>
<b>Assertive Community Treatment</b>	\$ 25,936
<b>Permanent Supportive Housing - High Acuity</b>	\$ 30,528
<b>Supportive Housing - High Acuity</b>	\$ 16,847
<b>Supportive Housing - Mid Acuity</b>	\$ 13,930
<b>Transitional Housing</b>	\$ 20,030

# DOES HF NEED TO SAVE MONEY?

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- HF exists in Canada because it improves housing outcomes for people. Unfair to judge it by other metrics
- But, it's efficient, and that efficiency gets ignored, “wrong pockets problem”. We know social spending can improve health and avoid legal issues.
- Studies have shown cost offsets possible, not that they exist in the wild in Canada.

Tsemberis, S. 2010. *Housing first: the Pathways model to end homelessness for people with mental health and substance use disorders*. Center City, Minnesota: Hazelden Publishing.

Goering, P., S. Veldhuizen, A. Watson, C. Adair, B. Kopp, E. Latimer, T. Aubry, ... G. Powell. 2014. *National Final Report Cross-Site At Home/Chez Soi Project*. Calgary.

Dutton, D. J., P.-G. Forest, R. D. Kneebone, and J. D. Zwicker. 2018. “Effect of provincial spending on social services and health care on health outcomes in Canada: an observational longitudinal study.” *CMAJ* 190(3):E66–E71.

Ly & Latimer, 2015. “Housing First Impact on Costs and Associated Cost Offsets: A Review of the Literature.” *Can J Psychiatry*. 60(11):475-87.

## SAVINGS = SYSTEMS-LEVEL OFFSETS

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- Spend \$1 on HF, save **\$X** in decreased hospital, emergency room, and police interactions.
- All savings accrue to province, major funder.
  - Federal is second funder of importance

## NEED TO ESTIMATE OFFSETS (\$X)

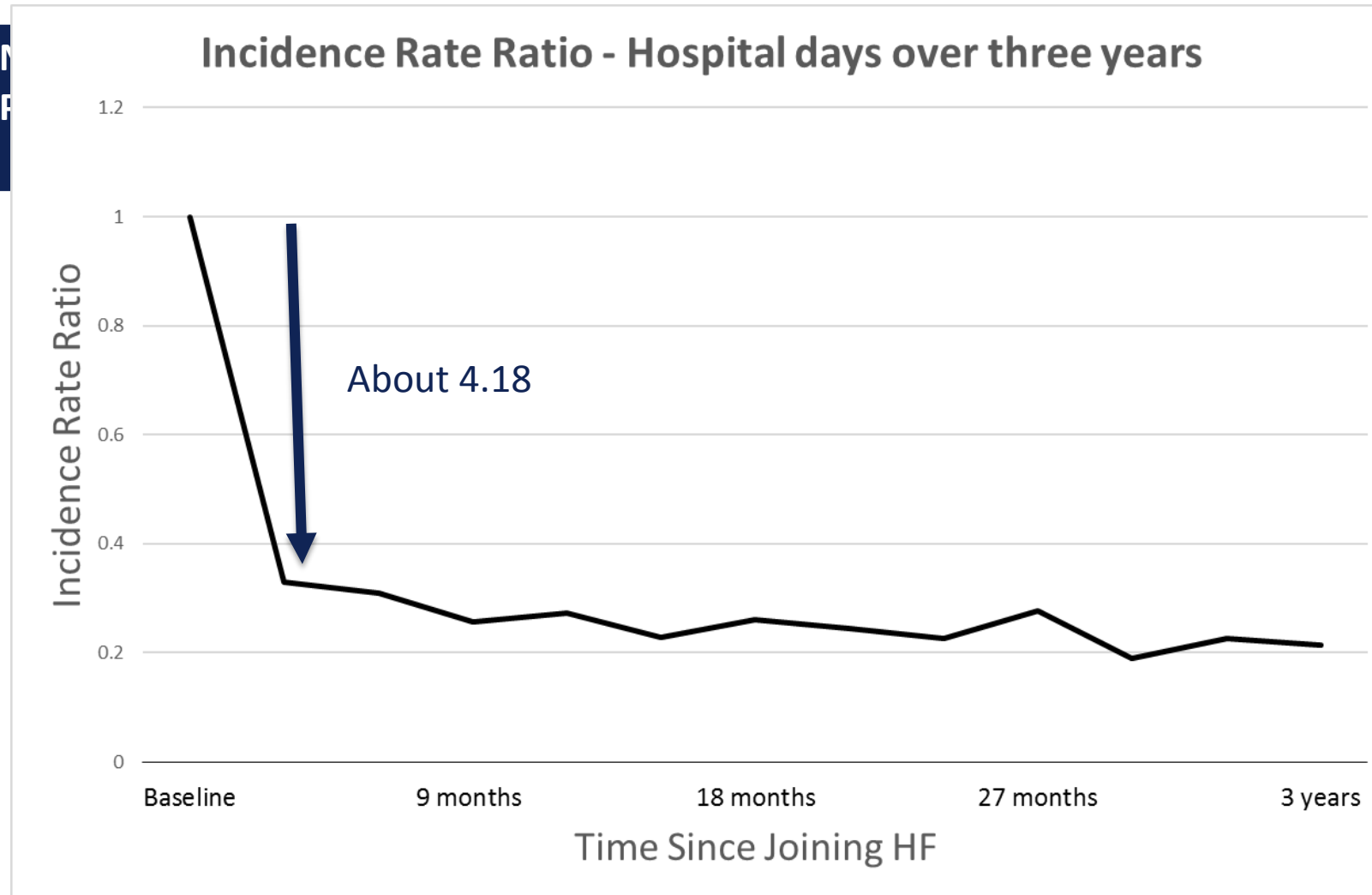
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CHF data gives us up to four years for each participant. Single adults only, no families, no youth.

2 models of effect size: Average continuous (OLS, FE) & Count data (NB, FE). Very similar results. Apply average cost values to estimated effect.



# 3 DIFFERENT SAMPLES / 2 MODELS



## RANGE OF COST OFFSETS

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\$322,113 to \$343,465 (4 years)

Against the cost of the program, \$1 = \$4 offset

That's for the subgroup that provided data we could use in the statistical model.

Deflated: \$1 → \$1.50

A large dental intervention on emergency shelter users shows a decrease in shelter use over time

## DENTAL

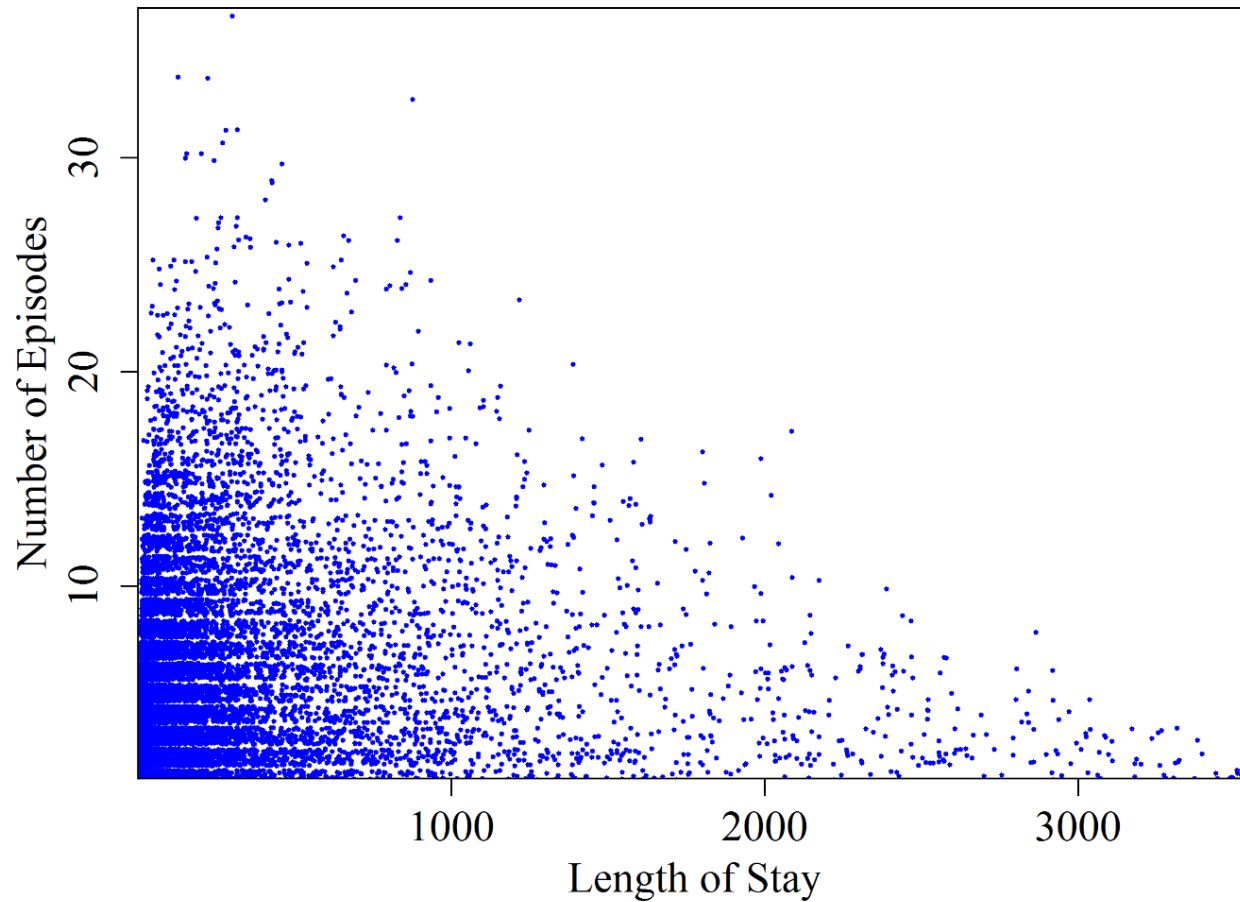
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Ali Jadidzadeh and Daniel Dutton

- **IDEA: People who receive appropriate health care (e.g., dental) spend less time in shelter and have an easier time leaving. Submitted.**
- **Shelter users data linked with wellness program**
- **Some shelter users took advantage of free dental care program**
  - **Matched with five who did not, same shelter entry date, user type, age, sex, and ethnicity.**

# SHELTER USE CAN VARY DRASTICALLY

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We use M-estimation

## FEWER NIGHTS OVER 4 YEARS

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- Difference-in-differences between dental and non-dental

Time since Dental Care	Substantial Dental Care	Basic Dental Care
Year 1	-18.8	-28.6
Year 2	13.3	12.5
Year 3	16.2	15.3
Year 4	17.0	16.9
Net	27.8	16

## MORE LEAVE SHELTERS PERMANENTLY

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- Difference in proportions not returning to shelter
  - Substantial. The basics have Controls > Participants in all years.

Time since Dental Care	Participants	Controls
Year 1	8%	26%
Year 2	38%	31%
Year 3	49%	42%
Year 4	58%	51%

## NEEDS VERSUS PROVIDED SERVICES

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Dental care in Canada is not covered by public insurance like primary or emergency care and the dental needs of the homeless can be more extreme than the rest of the population due to historical neglect, trauma, or substance abuse.

The substantial dental care was motivated by a specific interest in replacing mercury amalgam with resin, but the incidental care the participants received would be far beyond what they could normally access.

# THE CROSS-CITY RISK OF SHELTER USE

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**IDEA:** The main drivers of shelter use are macro-level influences, not personal level characteristics. Can only observe by comparing cities.

**Data:** Singles shelter contacts, like dental, combined with CANSIM demographics for incidence. Shared from City of Toronto's Shelter, Support & Housing Administration.

Beth Hayward and Laural Raine, key contacts.

“The incidence of homelessness in Canada is a population-level phenomenon: a comparison of Toronto and Calgary shelter use over time.” Dutton and Jadidzadeh, *Canadian Studies in Population*, forthcoming.



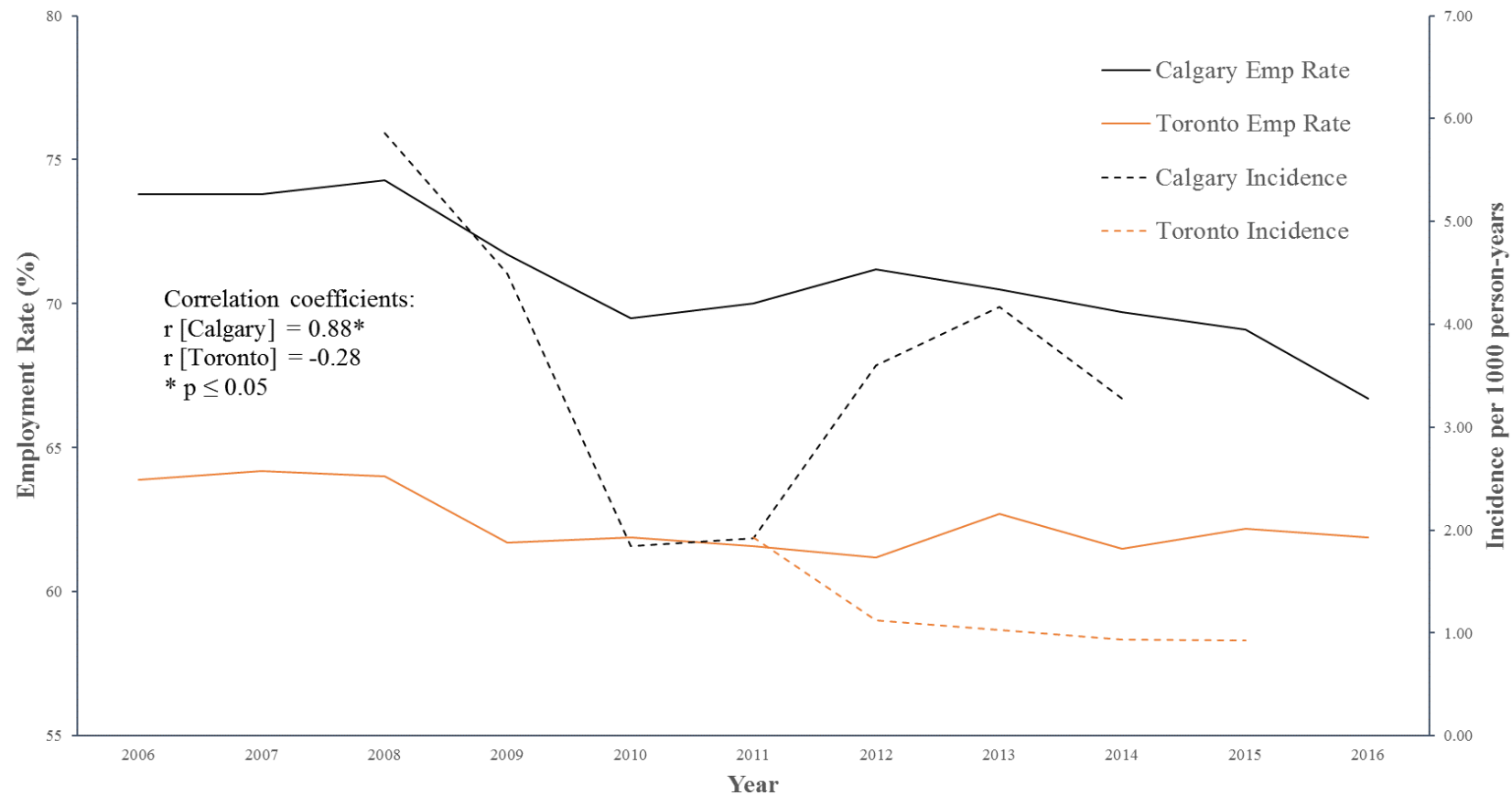
# RISKS

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- Males > Females (4.4 Calgary, <3 Toronto)
- middle age > youth or senior
- Flat risk in Toronto over time, fluctuates in Calgary
- Nearly 4x risk of being chronic in Toronto
  
- Calgary > Toronto

# RECESSIONS, MACROECONOMICS

Figure 2 - Employment Rate and Emergency Shelter Incidence, Calgary and Toronto



## AT SOME POINT NO NEW INFO STUDYING ONE CITY

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- When everyone has the same exposure, those at high risk are simply the most susceptible.
- Linking data our main advantage, phenomena are not global.
  - Through privacy agreements, SPP housing Alberta data.
  - Linkages require networking with agencies that own the data, we do not need to see identifiers but someone has to for linkage.

## LINKAGE NECESSARY

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- “Vulnerable populations” writ large do not appear from nowhere.
- Social services data, health data, shelter data, are part of a life course continuum. Prevention of homelessness requires thoughtful social programs.



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# WARRANT CYCLE - CPS

