

# BIG Difference BC

Mobilizing Momentum in the Science and Practice of Behavioural Insights



BC BEHAVIOURAL  
INSIGHTS GROUP

Where ideas work

**WORK SAFE BC**

# Improving mental health care in a pediatric emergency department

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# Kahneman's theory of decision making



**SYSTEM 1**

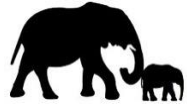


**SYSTEM 2**

# Behaviour change in health



Imparting  
information



Nudging



Boosting



**SYSTEM 1**



**SYSTEM 2**

# Types of intervention: imparting information



Imparting  
information



Nudging



Boosting



**SYSTEM 1**



**SYSTEM 2**

# Types of intervention: Nudges



**SYSTEM 1**



**SYSTEM 2**

# Types of intervention: Training System 1



**SYSTEM 1**

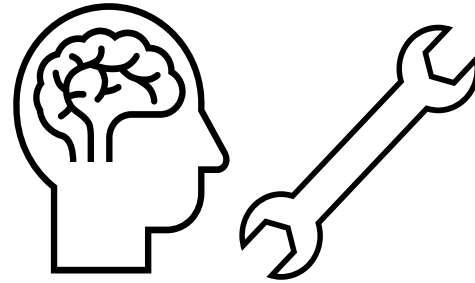


**SYSTEM 2**

(Hertwig & Grüne-Yanoff, 2008)

(Reyna, 2021)

# Types of intervention: Decision tools



**SYSTEM 1**



**SYSTEM 2**



# Decision tool: HEARTSMAP

- Electronic
- Emergency care settings
- Distinguishes between psychiatric and other psychosocial needs
- 76% sensitivity and 65% specificity
- Comprehensive
- **H**ome, **E**ducation and activities, **A**lcohol and drugs, **R**elationships and bullying, **T**houghts and anxiety, **S**afety, sexual health, **M**ood and behaviour, **A**buse, and **P**rofessionals and resources

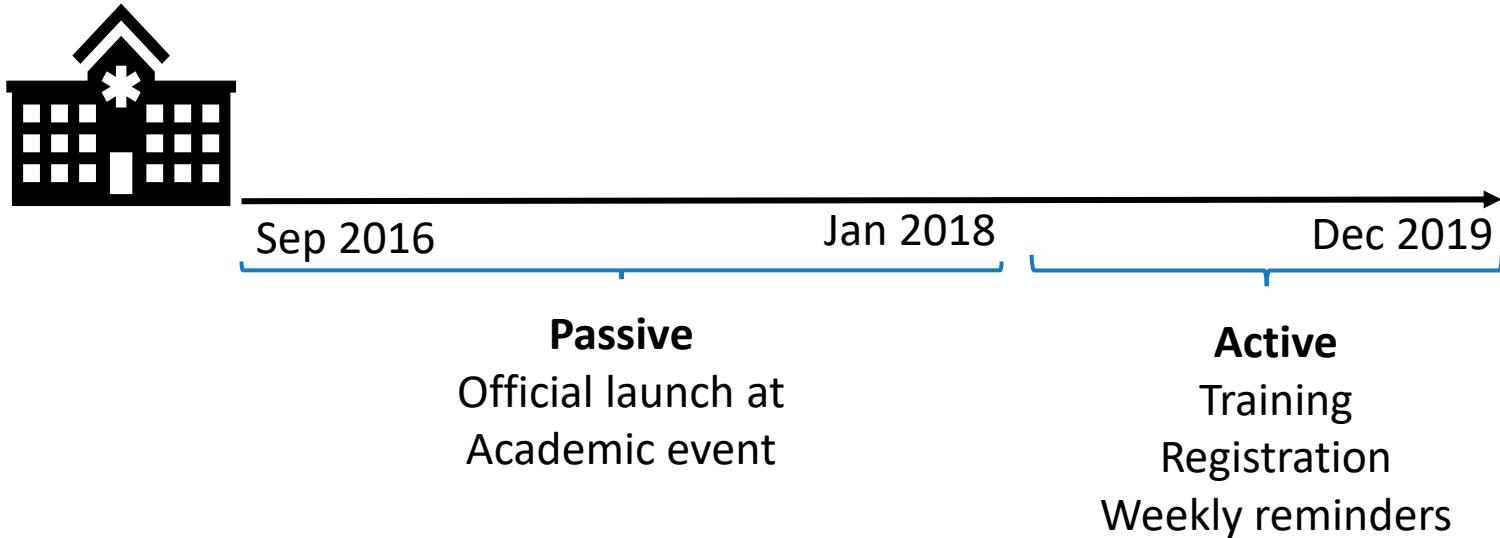
# The policy challenge

Mental health visits to the ED:

- Increased by 85% between 2002 and 2012
- Longer length of stay (LOS): a 77 to 100 minute difference
- High rates of return visits: 32% of all visits
- ED clinicians not trained
- Practice variability

# Methods: Design and procedure

Interrupted time series with control

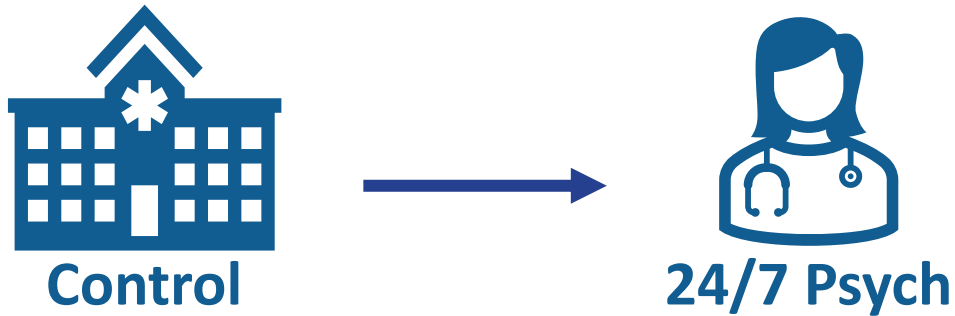
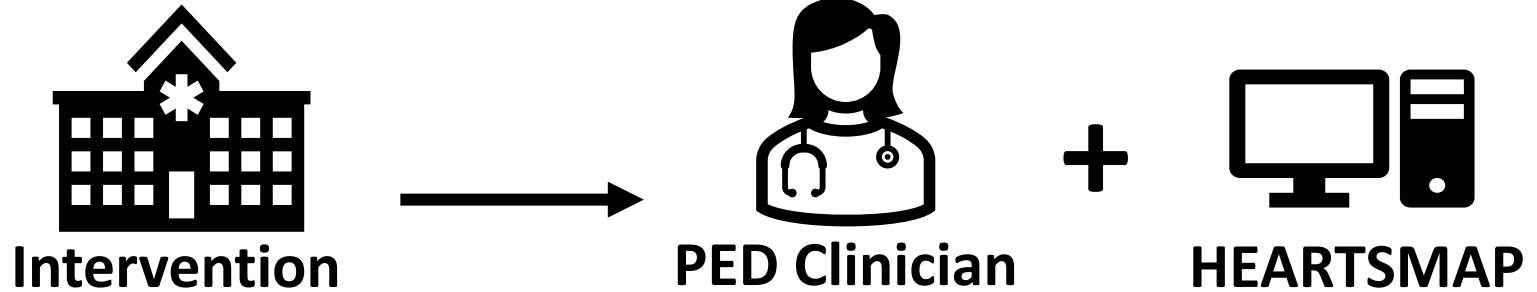


# Methods: Measures

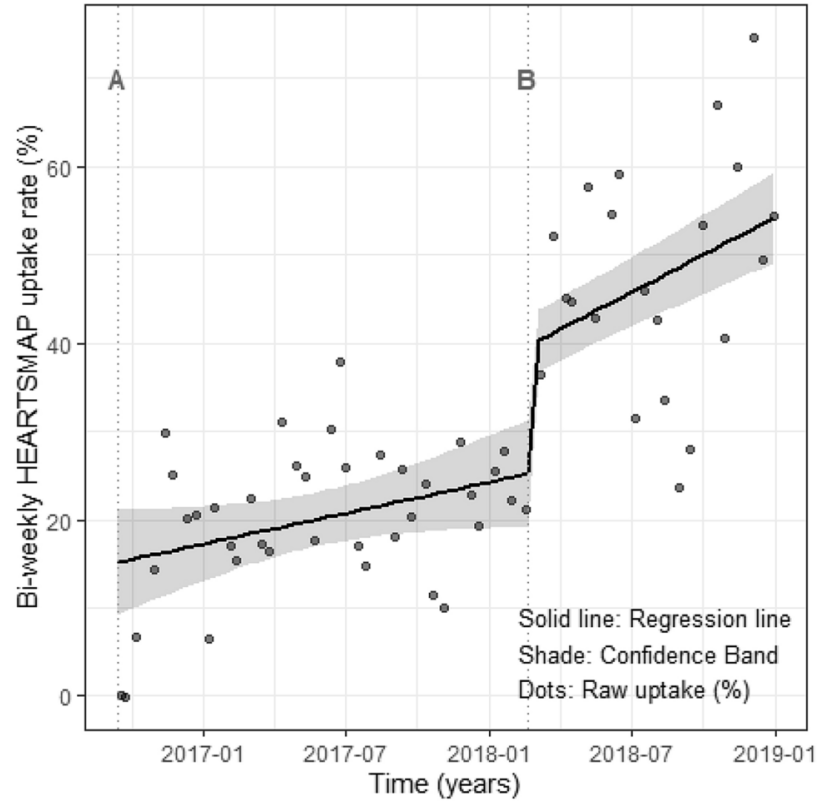
## Bi-weekly measures at the hospital level

- HEARTSMAP uptake %
- Median LOS
- Number of return visits within 30 days

# Methods: Comparison



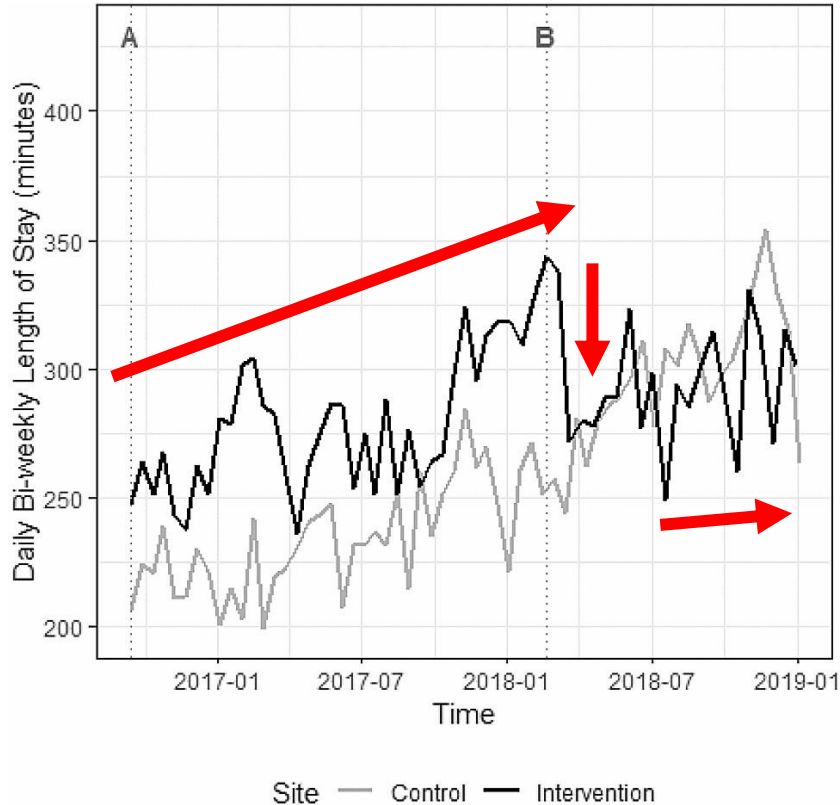
# Results: Bi-weekly uptake of the tool



A . Passive implementation begins.  
B. Active implementation begins

# Results: Bi-weekly Median Length of stay

Exposure: HEARTSMAP UPTAKE  
Outcome: 85 min reduction



- A. Passive implementation begins.
- B. Active implementation begins

# Results: Return visits

**HEARTSMAP uptake → -15.2% incidence of return visits**



# Discussion: Limitations

- Unaccounted: impact on admission, effect of access to mental health services
- Cross-contamination
- Generalizability

# Discussion

- Example a BI intervention to improve quality of health services
- BI interventions at the strategic level can benefit from epidemiology methods
  - Interventions that target groups or populations
  - Measure impact of aggregated measures

# Thank you!

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