McMaster University

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David Braley Primary Care Research Collaborative

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Integrated Knowledge Translation with a Health System Partner

Watch a recording of the session here

Melissa Pirrie

December 12th, 2023

Michael G. DeGroote SCHOOL OF MEDICINE

McMaster University

Family Medicine

Integrated Knowledge Translation with a Health System Partner

Melissa Pirrie, PhD,Research Associate

Supervisors:
Dr. Gina Agarwal
Chief Richard Ferron

December 12th, 2023

@mpirrie
@GinaAgarwall
@RickFerron

CIHR IRSC Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

Outline

1. Context: Fellowship Program & KT
2. First project as a fellow
3. Application of Integrated KT
4. Final thoughts

Health System Impact Fellowship

- CIHR Institute of Health Services & Policy Research
- PhD students and postdoctoral fellows
- Embedded scientist in a health system organization (1 or 2 years)
- Training program
- Funded, plus research allowance

Health System Impact Fellowship

- Embedded with Niagara Emergency Medical Services, Sep 2021 to Aug 2023
- Health System Co-Supervisor: Chief Richard Ferron
- Academic Co-Supervisor: Dr Gina Agarwal

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Health System Impact Fellowship

- **Goals**:
  - Support emerging leaders to develop their embedded research experience, **professional competencies**, and potential for impact
  - Grow a strong cadre of embedded researchers positioned to play a key role in **evidence-informed health system improvement** that advances the Quadruple Aim and health equity
  - Develop embedded **research capacity within health system organizations** and catalyze collaborations between academic and health system organizations to contribute to advancing learning health systems across Canada
  - Support diverse and impact-oriented **career pathways** for health system embedded researchers

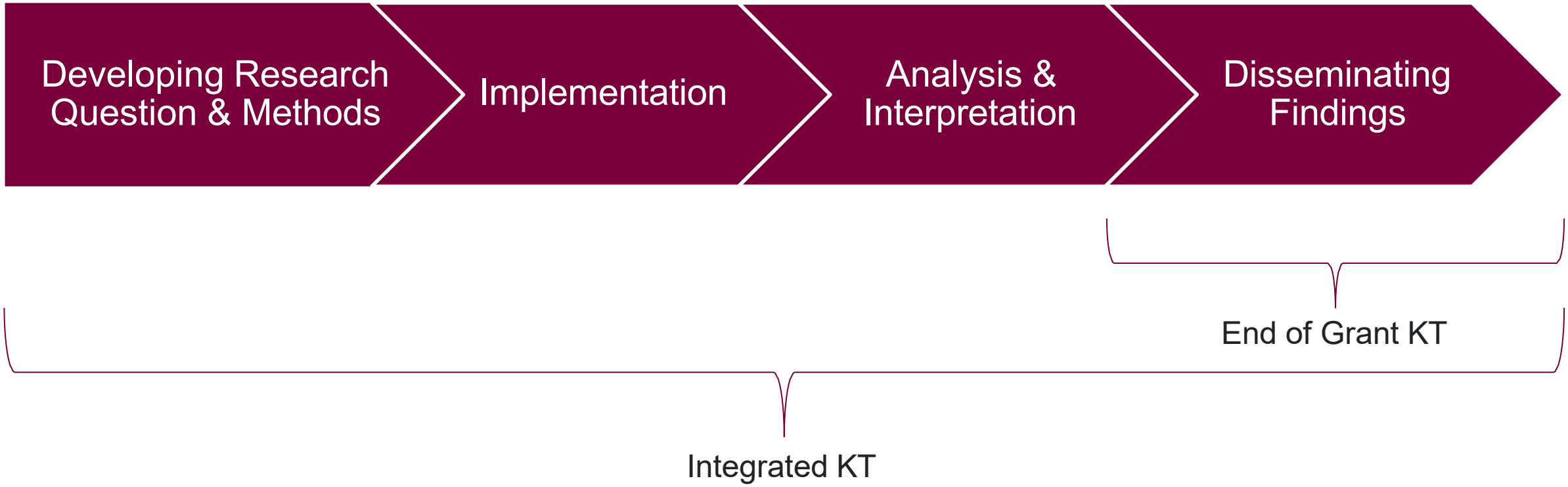
Integrated Knowledge Translation!

Integrated Knowledge Translation

- CIHR Guide to KT Planning: https://cihr-irsc.gc.ca/e/45321.html

- DFM TRAction Toolkit, Knowledge Translation Section: https://traction.fammedmcmaster.ca/traction/knowledge-translation/

Integrated KT vs End of Grant KT



VIP Research Lab

- Dr Agarwal
- Heavily uses Integrated KT
  - Executive committee
  - Advisory committee
  - Team members with lived experience
- Very fortunate!

Niagara EMS – orientation

- Needed to present to council
- Major offload delays
- Metrics
  - Time?
  - Costs?

HAMILTON-NIAGARA • HEALTH

Why paramedics are spending more time stuck at hospitals

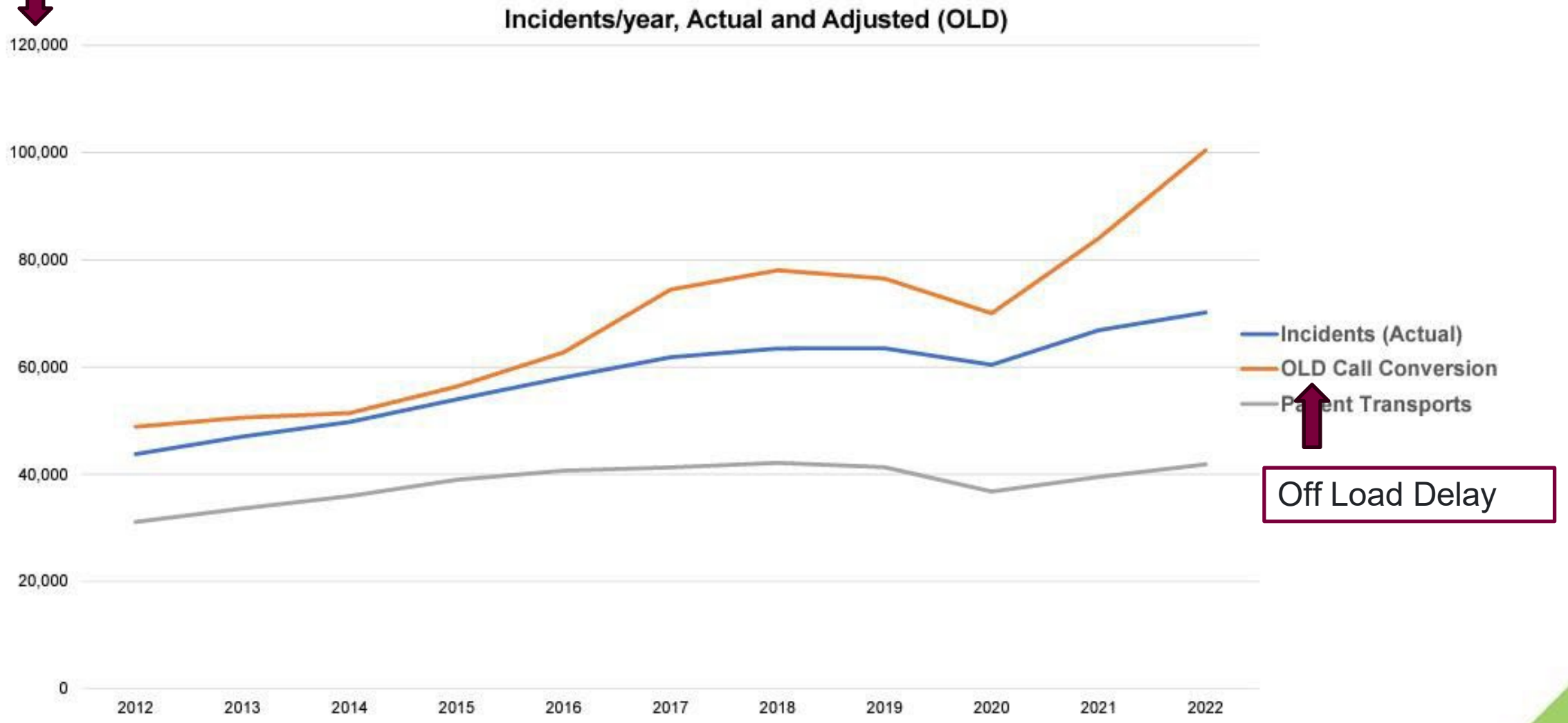
Patients increasingly have to wait on EMS stretchers for “offloading” to hospitals – and the delays are reaching crisis levels

Written by Justin Chandler
Nov 24, 2021

Share

911 calls for EMS

Incidents per Year, Actual and Adjusted (OLD)



Off Load Delay

Niagara Region

#HereForYouNiagara

https://pub-niagararegion.escribemeetings.com/filestream.ashx?DocumentId=28135

Staff Impact

- Forced end-of-shift overtime
  - 2847 incidences representing 1133 hours in 2021
  - 3205 incidences representing 1202 hours in 2022

- Missed meal breaks
  - 3.6% representing 1102 missed meal breaks in 2021
  - 5.8% representing 1679 missed meal breaks in 2022

https://pub-niagararegion.escribemeetings.com/filestream.ashx?DocumentId=29051

The ‘Toll-free Phone Number’ Project

Background

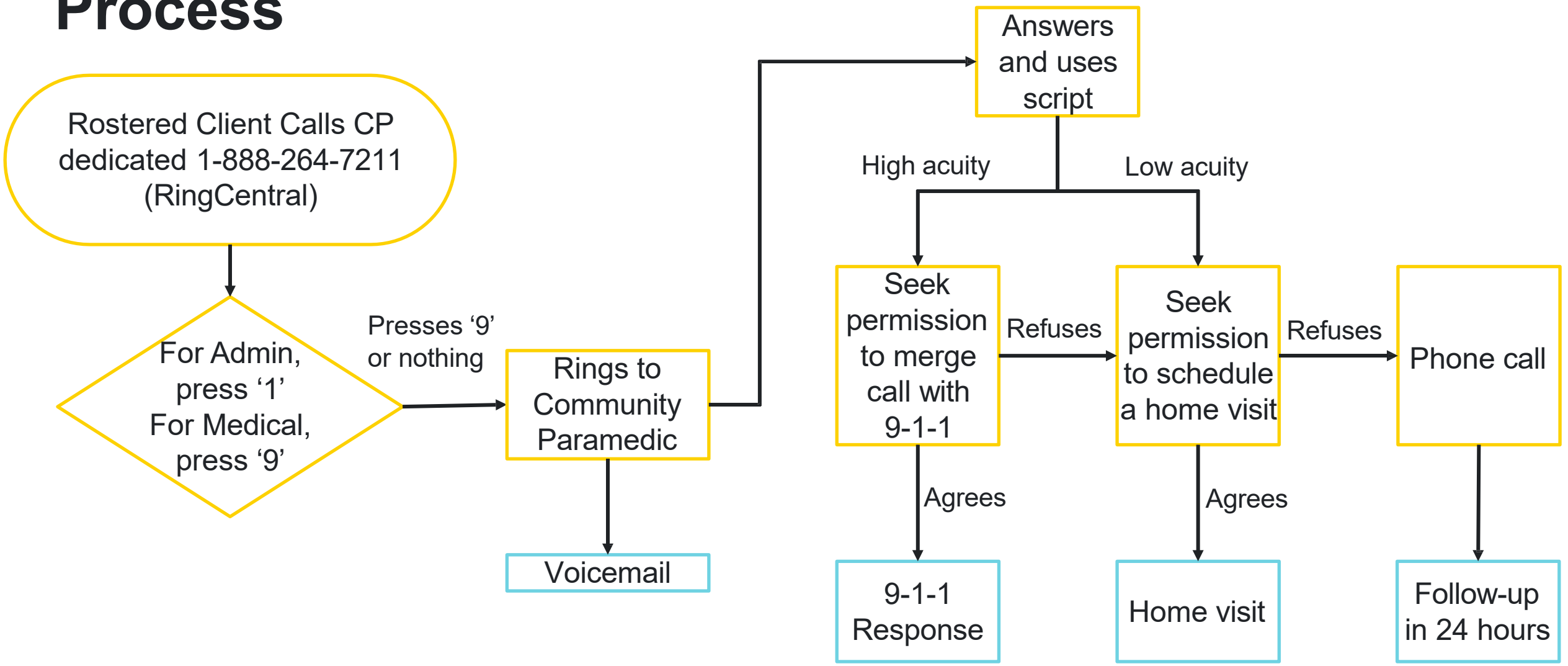
Niagara EMS received funding from provincial ministry for ‘Community Paramedicine for Long-Term Care’ (CPLTC)

Available & Accessible 24/7 for rostered clients

Toll-free number for CPLTC & two other MIH programs

Community Paramedics (CPs) answering the phone

Process


Rostered Client Calls CP dedicated 1-888-264-7211 (RingCentral)
For Admin, press '1'
For Medical, press '9'
Presses '9' or nothing
Rings to Community Paramedic
Voicemail
Answers and uses script
High acuity
Low acuity
Seek permission to merge call with 9-1-1
Refuses
Seek permission to schedule a home visit
Refuses
Phone call
Agrees
Agrees
9-1-1 Response
Home visit
Follow-up in 24 hours

Background

Emergency Communication Nurses (ECNs)

a highly-qualified resource in dispatch centre

use validated script (‘LowCode’) for triaging low acuity calls

ECNs may be a more appropriate resource for the incoming calls from CP clients, but <u>many</u> unknowns

Integrated KT

1. Right questions
2. Right measures
3. Right interpretation
4. Right recommendations
5. Right communication strategy

Integrated KT

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Consider:

- Who is at the table?
- What is the gap? What do they need to know to make the decision? This can change!
- What is highest priority?

1. Right Questions

Who	Highest Priority	Need to know
Organizational - Chief		
Operational - Superintendent - Supervisors		

1. Right Questions

Who	Highest Priority	Need to know
Organizational - Chief	- Liability	- Nature of the calls
Operational - Superintendent - Supervisors		

1. Right Questions

Who	Highest Priority	Need to know
Organizational - Chief	- Liability	- Nature of the calls
Operational - Superintendent - Supervisors	- Operational planning	- How many calls? - What time of day? - How long are the calls?

Objectives

1) To track the **number of calls** received daily from rostered clients and **duration** of those calls.

2) To track the **nature of calls** from rostered clients and **types of responses**.

3) To determine the **most appropriate staff** to answer incoming phone calls from rostered clients.

Things can change…

- Missed calls
  - Paramedic log: answered live & voicemail
  - Missed calls w/ no voicemail = undocumented
  - Extent had been unknown until looking at Ring Central

- Took back to stakeholders to determine the role this should play

1. Right Questions

Who	Highest Priority	Need to know
Organizational - Chief	- Liability	- Nature of the calls - Missed phone calls
Operational - Superintendent - Supervisors	- Operational planning	- How many calls? - What time of day? - How long are the calls?

Integrated KT

1. Right questions
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Consider:

- What data is already available?
- Who can access that data and for what purposes?
- Can this data answer the questions?
  - If other data is needed, can it be seamlessly integrated?
  - If applicable, is this something that will continue being available?

Data Sources

1) Ring Central – frequency, duration, time of day
2) Paramedic documentation – nature of the call & outcome
3) Patient charts - Reason for calling = not feasible!

Integrated KT

1. Right questions
2. Right measures
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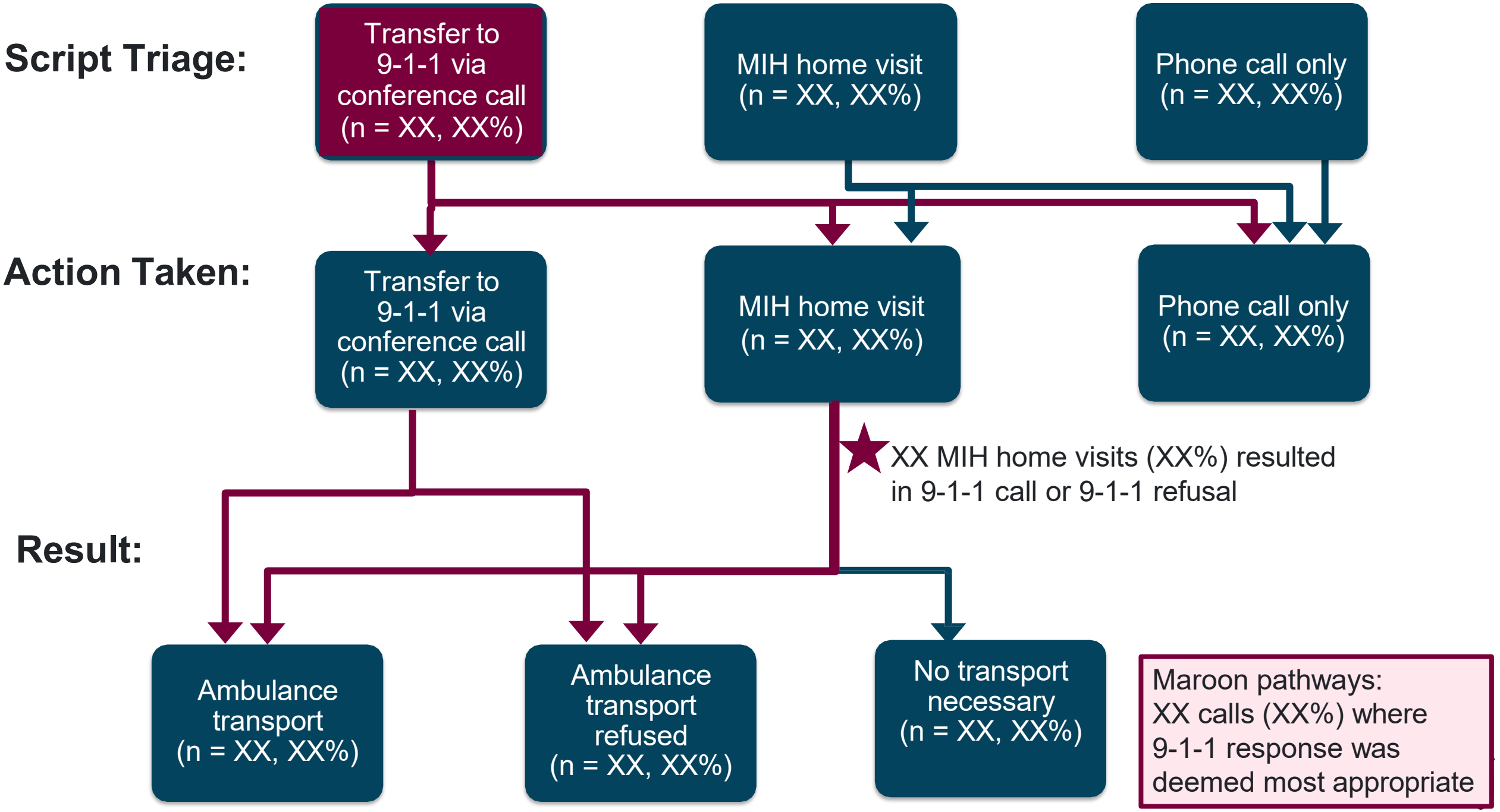
Consider:

- NOT: What do you want this data to say?
- INSTEAD:
  - This finding was unusual/unexpected, is there any context I may be missing?
  - What divisions or categories are meaningful?

Data Cleaning/Analysis Decisions

- Very short calls
  - Connection was unclear and so they hung-up and called right back
  - Don’t want to double-count!
- Collapsing time periods
  - Too many, what are meaningful divisions?
  - ECNs work two shifts: 7am – 3pm, 3pm – 11pm


Script Triage:
Transfer to 9-1-1 via conference call (n = XX, XX%)
MIH home visit (n = XX, XX%)
Phone call only (n = XX, XX%)
Action Taken:
Transfer to 9-1-1 via conference call (n = XX, XX%)
MIH home visit (n = XX, XX%)
Phone call only (n = XX, XX%)
XX MIH home visits (XX%) resulted in 9-1-1 call or 9-1-1 refusal
Result:
Ambulance transport (n = XX, XX%)
Ambulance transport refused (n = XX, XX%)
No transport necessary (n = XX, XX%)
Maroon pathways:
XX calls (XX%) where 9-1-1 response was deemed most appropriate

Integrated KT

1. Right questions
2. Right measures
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4. Right recommendations
5. Right communication strategy

Consider:

- What was the decision to be made?
- Stay within reality, be pragmatic

Recommendations

- Needed to consider:
  - Union job descriptions
  - Training
  - Equipment or Software
- Ideal vs feasible
  - Dispatch nurse on 24/7 and always answering calls
  - Dispatch nurse answering calls during current shifts (7am to 11pm) and it switches back to paramedics at night - don’t have scheduled home visits

Integrated KT

1. Right questions
2. Right measures
3. Right interpretation
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5. Right communication strategy

Consider:

- Communicate about communication
  - What is needed? [Content]
  - How do they need it? [Format]
  - **Who should know and when?**

Outputs

- Little value in a fully written report – *for this project!*
- PowerPoint presentation
  - Already in bite-sized pieces!
  - Can grab pieces for other reports
  - Can present a few slides within other presentations
- Poster for sharing at professional conferences

Dissemination (who & when)

- Four presentations!
  - Chief Richard Ferron
    - Is this on target?
  - CPLTC program supervisors
    - Am I missing anything that you would want communicated?
    - Is anything being misrepresented?
  - **** Critical Issues Team (senior decision makers) ****
  - Staff (with Chief & supervisors)

- Slight variations in content, but without changing the research

Final Thoughts

- Common desire to have “impact” and see change within the health system
- DFM has an advantage!
- Integrated KT strategies still tend to be researcher focused
  - e.g., “feasibility” is whether the partner can follow through with the researcher’s project
  - Sustainability science is trying to fix this

Final Thoughts

- Being very deliberate in that engagement, especially with external partners can lead to:
  - More efficient use of research resources
  - Increased participation and active interest in the study
  - Reduced research fatigue
  - Greater impact
  - End users were more confident in the findings

Acknowledgements

- Mobile Integrated Health Team at Niagara EMS:
  - Community Paramedics
  - Program Specialists
  - Supervisors
  - Commander
- Supervisors:
  - Dr. Gina Agarwal
  - Chief Richard Ferron

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Family Medicine

Thank you!

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