

# RURAL RESILIENCE: What COVID-19 Reveals About Local Healthcare Systems in Northern Ontario



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*Stormy weather (F.H. Varley, 1921)*



# Conflict of Interest declaration

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I have no conflict of interest to declare with regards to the subject matter of this presentation.

# Disclosure of Financial Support

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Marathon's Lake Superior Shoreline



# Rural Communities



# Rural Healthcare



Health Care Providers/Workers

Health Care Organizations

Health Care System - Rural Health Hub Model



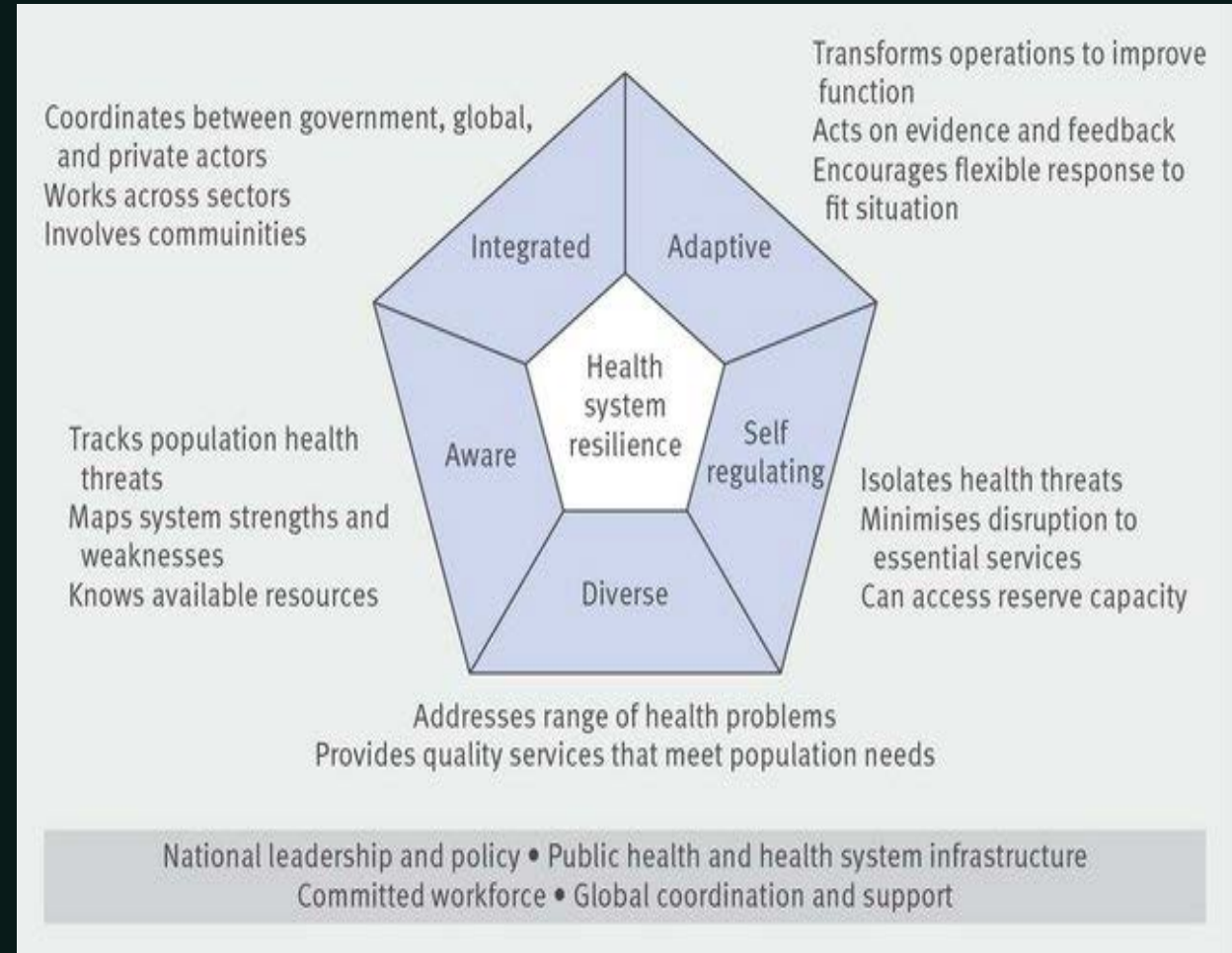
# Resilience

Ongoing capacity building; consisting of positive adaptation in the face of significant adversity





# Building resilient health systems: a proposal for a resilience index (Kruk et al., 2017)





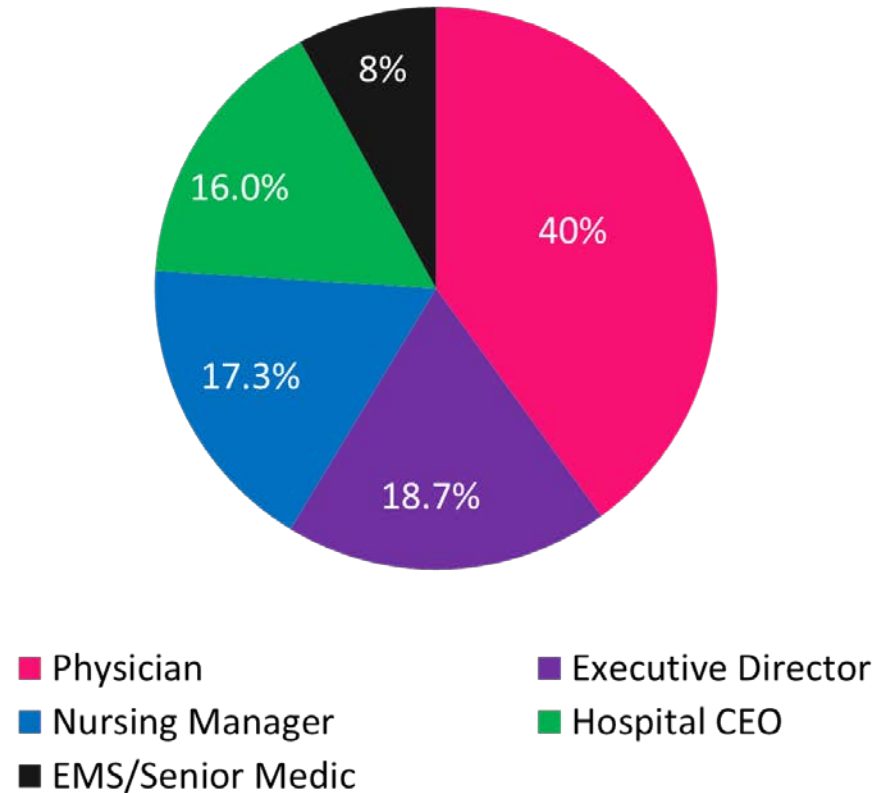
# Methodology

- Target Group
  - 99 healthcare workforce leaders
  - In 15 Rural Northern Physician Group Agreement (RNPGA) communities
- Survey questionnaires
  - mailed after 1<sup>st</sup> wave of COVID-19
  - items related to COVID-19's local and personal impact
  - items adapted from Kruk et al. (2017)

# Results

- Questionnaire response rate 77%
- 70.8% female
- 29.2% male

Respondents by Profession



# Results

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82.7% rated their organization's resilience during COVID-19 to be strong, or very strong

89.5% believed their organization was more prepared for the 2nd wave than the 1st

# Resources affecting resilience:

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Strengthened by  
adequate:

1. Healthcare  
Providers
2. Supplies
3. Communication  
modalities/tools

Weakened by  
lack of:

1. Healthcare  
Providers
2. Infrastructure
3. Equipment



# Elements affecting resilience:

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Strengthened by  
good:

1. Communication  
among local  
healthcare  
organizations
2. Local leadership
3. Public Health

Weakened by poor:

1. Ministry of Health
2. Provincial  
Government
3. Public Health

# Rural Local Healthcare Systems Resilience Score (SRS)

- During COVID-19,
  - SRS increased (4 fold)
  - Moderate correlation between SRS and wave two preparedness ( $r=0.416$ ,  $p<0.001$ )
  - Moderate correlation ( $r=0.415$ ,  $p<0.001$ ) between perception of rural local healthcare system's resilience and the SRS (Pre-Covid  $r=0.342$ ,  $p=0.003$ )

# Conclusions

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- Rural healthcare resilient
- Human healthcare resources foundational
- Local Public Health has influence
- Rural local healthcare SRS reasonable tool

# Contribution

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Furthered understanding  
of rural health care  
system resilience and  
proposed a novel model  
of analysis.

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