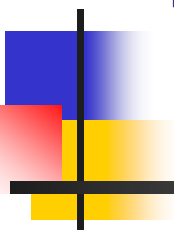


# Impact of telephone triage on medical service use: implications for rural and remote areas



John C. Hogenbirk, Raymond W. Pong &  
Sandra Lemieux

Centre for Rural and Northern Health Research

Laurentian University

5th International Symposium, Future of Rural Peoples  
Saskatoon, SK Oct 21, 2003



# The Triage Service

---

- 24 / 7
- Bilingual service
- Northern Ontario (pilot - 22 months)
- Trained registered nurses
- Clinical guidelines
- Health information topics
- Advise on the most appropriate level of care



# Goals of Telephone Triage

---

- Reduce unnecessary demand on existing health care resources (e.g., EDs, walk-in clinics)
- Promote patient independence and confidence in health decision-making



# Evaluation Components

---

- Description of Pilot Project
- Description of calls and callers
- Program awareness and caller satisfaction
- Audit of the appropriateness of teletriage advice
- **Effect on medical service use**
- **Effect on informal care (self-care and care for others)**
- Compliance
- Economic evaluation
- CQI assessment
- Policy implications



# Methods -1

---

- Mail survey of consenting callers
  - Use of health care services
  - Socio-economic & demographic characteristics
- February – June 2001
- 5475 questionnaires mailed out
- 2389 complete & valid responses (44%)



# Methods -2

## Stage in Decision Process

Patient's intent → Nurse's advice → Patient's action

## Service Use

- Visit ED
- Visit MD office/Clinic
- Informal care (self-care or care for others)
- Use of other health care services

	Intent	Advice	Action
Visit ED			
Visit MD			
Informal			
Other			



# Methods -3

---

- Geographic categories - 1996 Census
- Statistical Area Classification
  - CMA/CA } n=1544
  - CMA/CA Influenced Zones (MIZ)
    - Commuter (worker) flows to CMA/CA
      - Strong MIZ >30% of workers } n=208
      - Moderate MIZ >5% and <30% } n=208
      - Weak MIZ >0% and <5% } n=554
      - No MIZ =0%



# Results

---

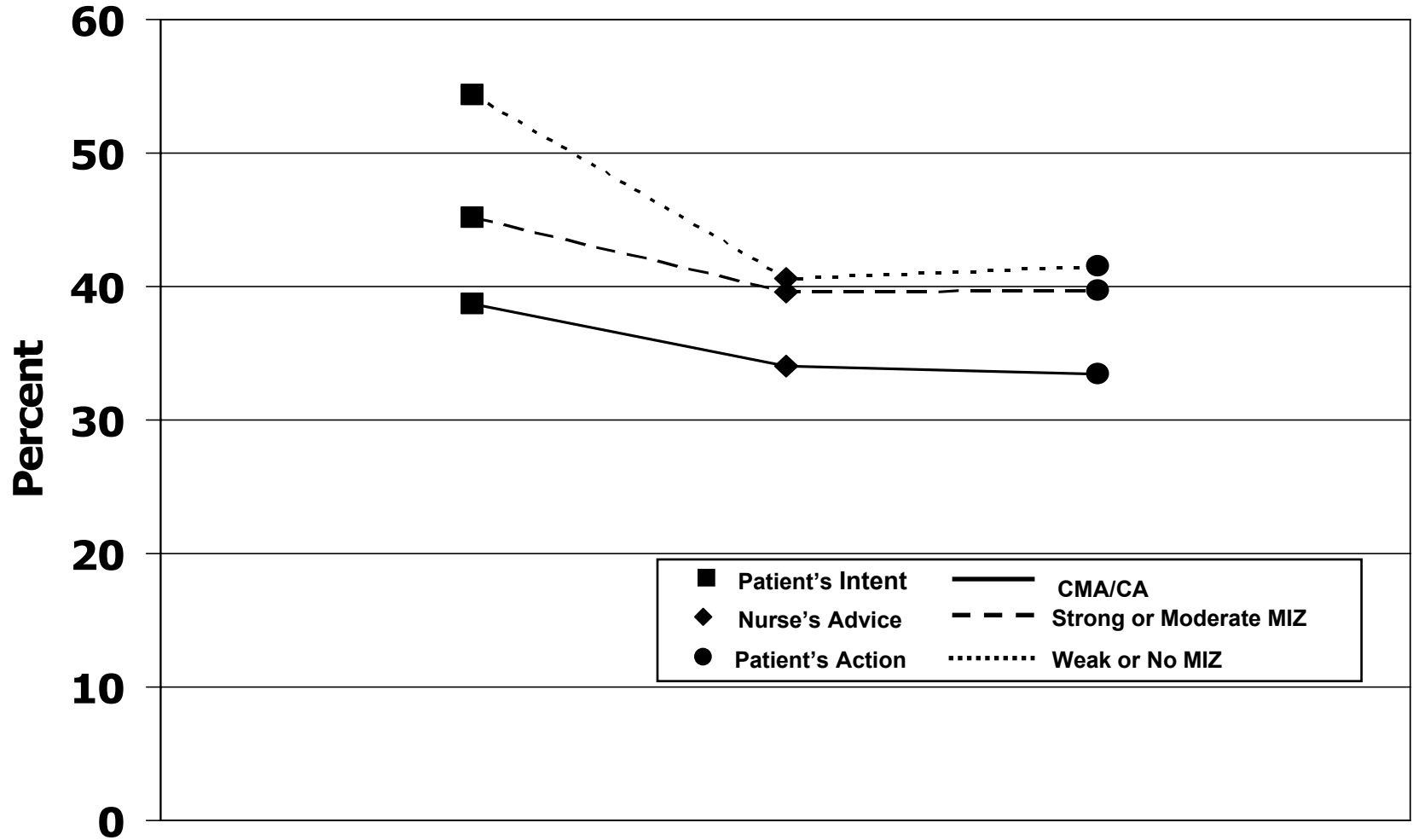
Type of health care used (ED or MD office/clinic or Informal care only)

Varied with...

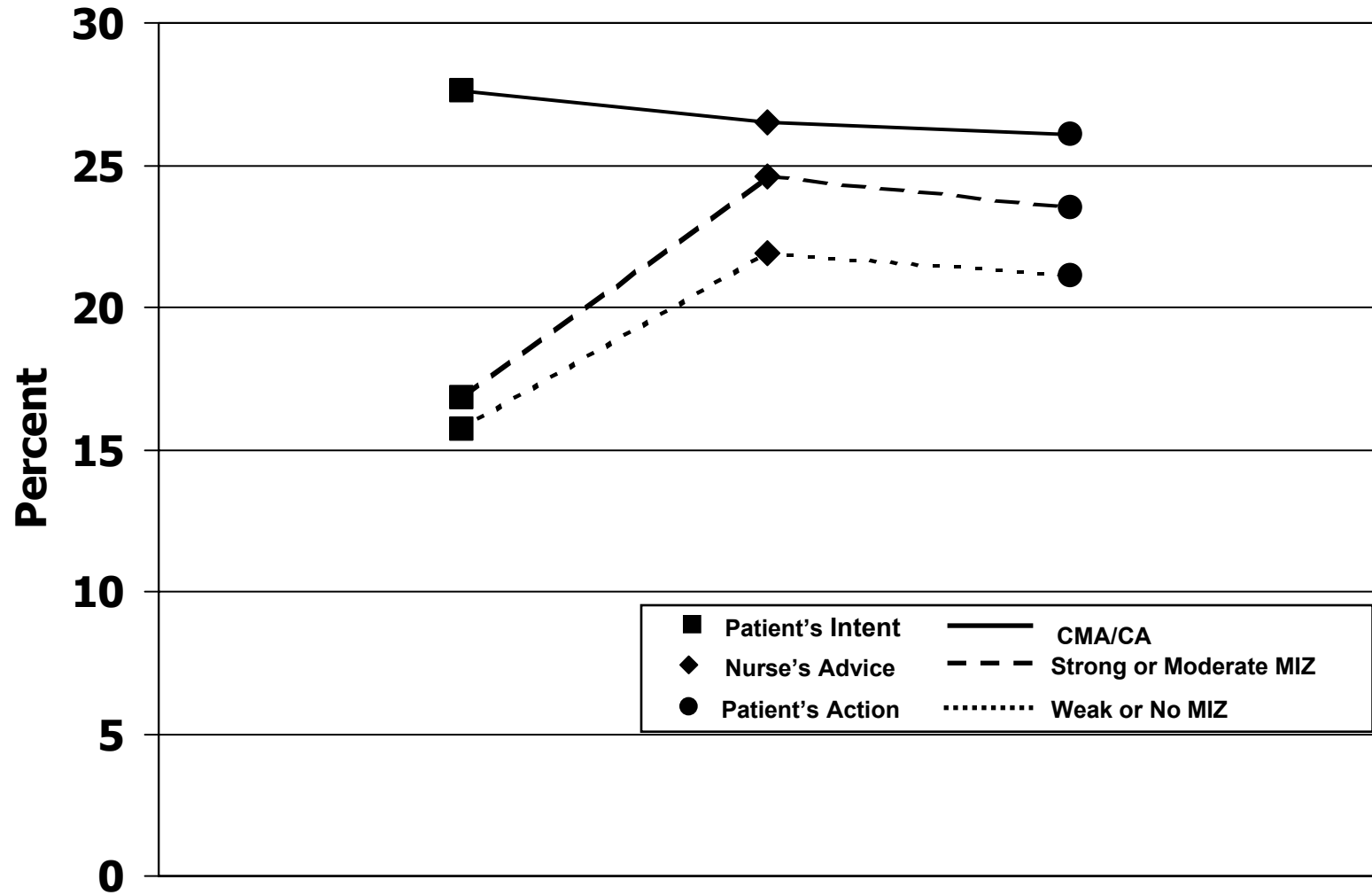
- Stage in Decision Process (intent, advice and action)
- Patient's location (commuter flow category)



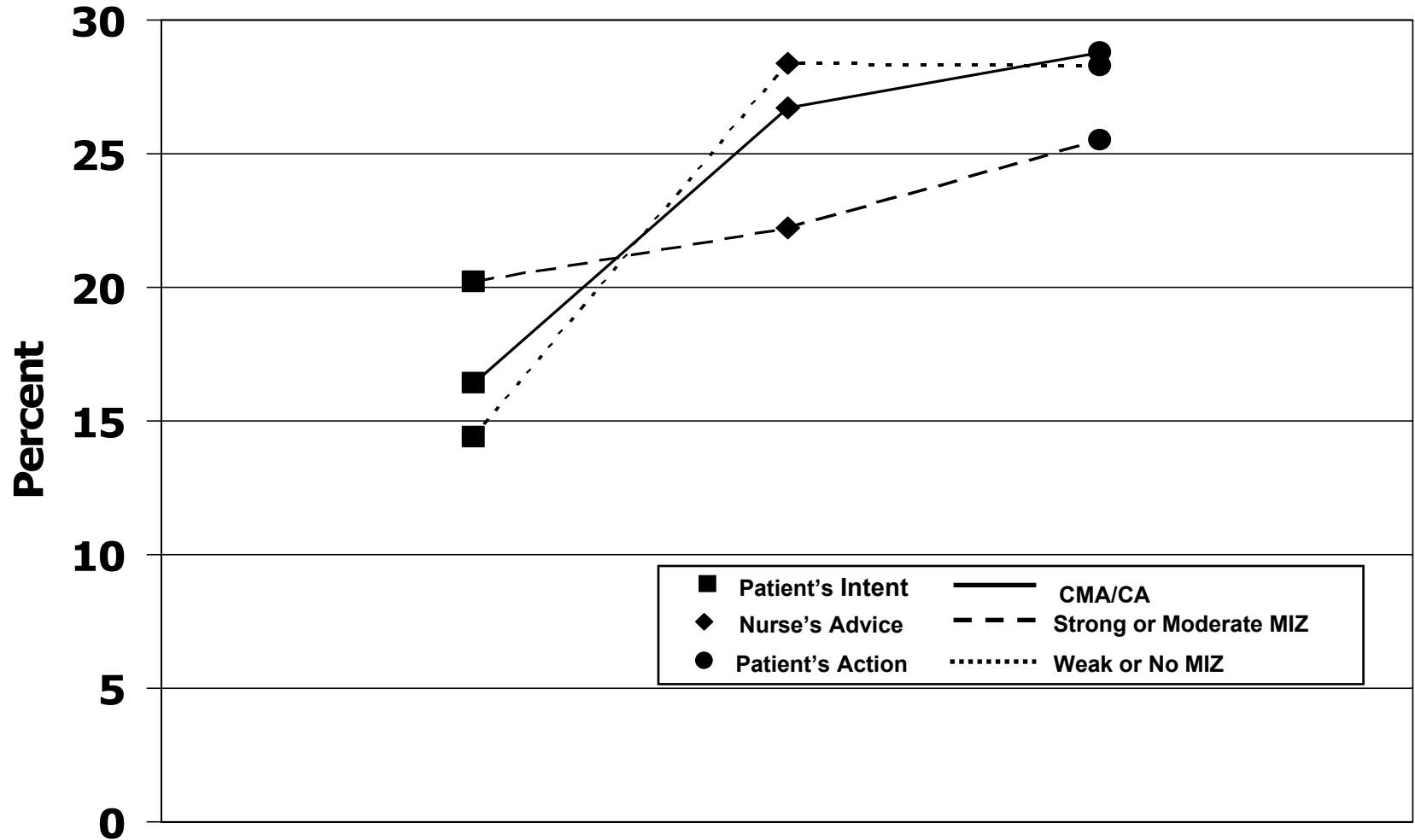
# Visit ED



# Visit MD office/clinic



# Informal Care Only



# Trends -1

intent --> advice --> action

---

- Visit the ED
  - Decrease
  - Strongest in rural areas
- Visit the MD
  - Increase
  - Strong in rural areas
  - Strongest in intermediate areas

# Trends -2

intent --> advice --> action

---

- Informal care only
  - Increase
  - Strongest in rural areas
  - Strong in urban areas
  - Intermediate in intermediate areas

Statistical significance of trends??



# Comparing MIZ

---

- Visit the ED
  - Significantly higher for rural callers
- Visit the MD office/clinic
  - Significantly lower for rural callers
- Informal care only
  - NSD
- Use other types of health care
  - NSD



# Summary

---

- Triage may be directing callers...
  - away from ED visits
  - towards visits to MD office/clinics or
  - towards informal care
- Effect may be strongest for rural callers



# Conclusions

---

- Triage is one of several factors influencing medical service use
- Results suggest that triage may be directing rural callers away from ED visits towards MD office/clinic visits or towards informal care





# Acknowledgements

---

- The Richard Ivey Foundation
- Clinidata Corporation
- Ontario Ministry of Health and Long-Term Care
- Institute for Clinical Evaluative Sciences
- Centre for Rural and Northern Health Research
- Laurentian University