

Assessing Teletriage in Northern Ontario: Estimating the Impact on Medical Service Use

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Direct Health/TéléSanté

- A teletriage pilot project
- Based in North Bay, covered northern Ontario (705, 807 area-codes)
- Run by Clinidata Corporation
- Started June 1999; ended March 2001
- Continued as Telehealth Ontario - a province-wide telecare service

Telephone health information and triage services

- 24 hours a day / 7 days a week
- Provided by registered nurses
- Services provided in English and French
- Using clinical decision-support protocols

Objectives of pilot project:

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

CRaNHR's Evaluation

- Comprehensive evaluation
- In collaboration with the Institute for Clinical Evaluative Sciences
- With cooperation of Clinidata Corporation
- Funded by The Richard Ivey Foundation

Evaluation components

- Describe calls and callers
- Identify awareness and caller satisfaction
- Assess effect on informal and self-care
- Assess effect on medical service use
- Assess economic implications
- Assess clinical appropriateness of information/advice given
- Document CQI processes of Direct Health
- Discuss policy implications

Data and Methodologies – Overview

- Data from Clinidata Corporation (e.g., statistics on calls)
- Surveys of callers, non-callers in northern Ontario, and people in southern Ontario
- OHIP data from ICES to examine utilization and economic effects
- "Chart audit" - review of taped calls
- CQI self-assessment

Estimating the Impact of Teletriage on Medical Service Use

Medical Service Use

- Focus on visits to:
 - Emergency departments
 - After-hour/walk-in clinics
 - Physician's offices

Data and Methodologies – Medical Service Use

- Data from Clinidata Corporation
 - records from consenting callers
- Surveys of callers and non-callers in northern/southern Ontario
- OHIP claims (handled by ICES)

Call Records

- ~ 59% of callers granted consent during study period
- A subset of these callers were sent questionnaires
- Call records from all consenting callers sent to ICES for matching to OHIP records

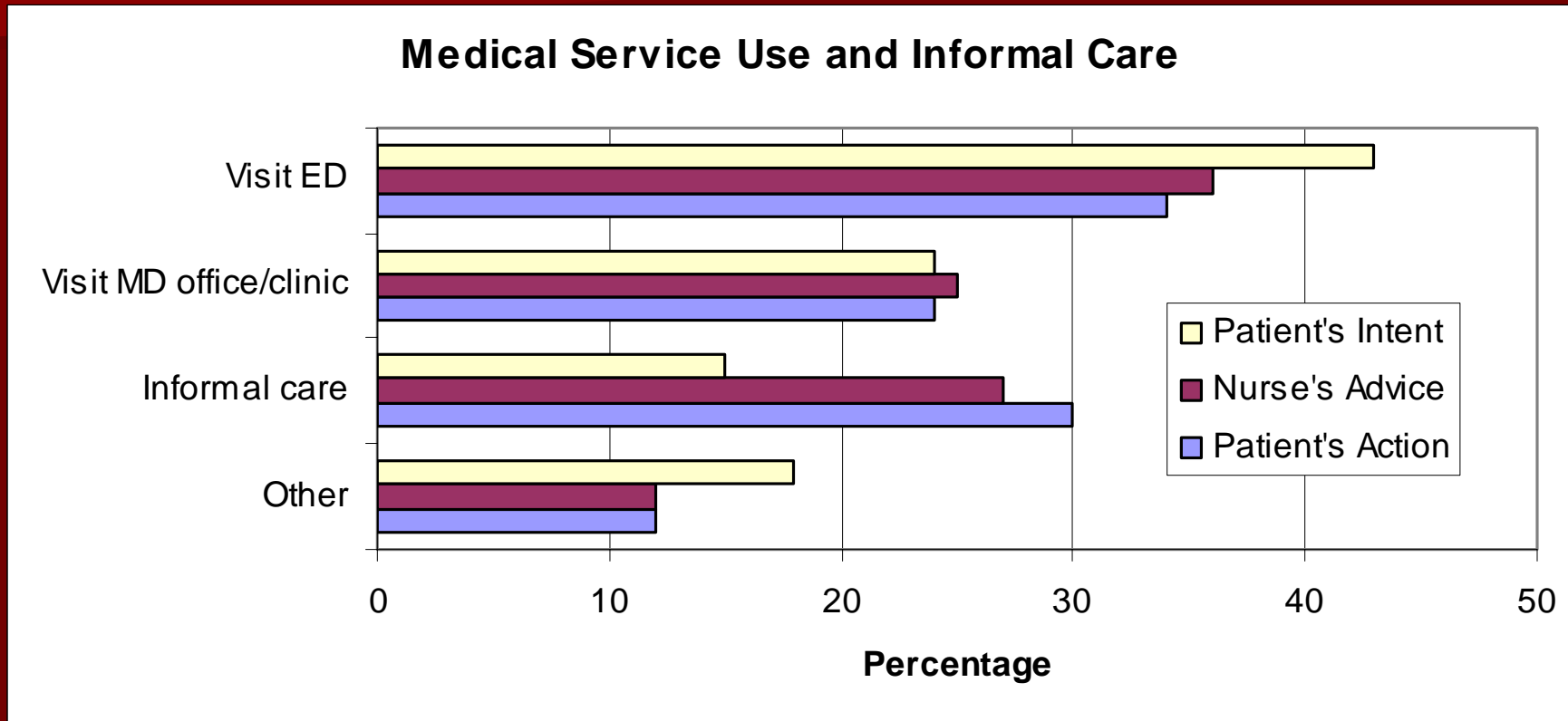
Survey Methods and Data

- Surveys were mailed February to June 2001
- Callers in northern Ontario (self-selecting callers who consented)
 - ~ 44% response rate (n=2389)
- Self-reported information on:
 - Caller intent
 - Nurse's advice
 - Caller's action
- Plus additional questions on...
 - Socio-economic and demographic data
 - Awareness, satisfaction, informal care, costs, etc.

OHIP Methods and Data

- ~ 28,000 calls made by ~ 20,900 distinct patients
- ~ 96% of call records were matched to OHIP database
- ICES developed algorithms to look for visits to
 - Emergency Departments
 - Physician's offices and After-hours/Walk-in clinics

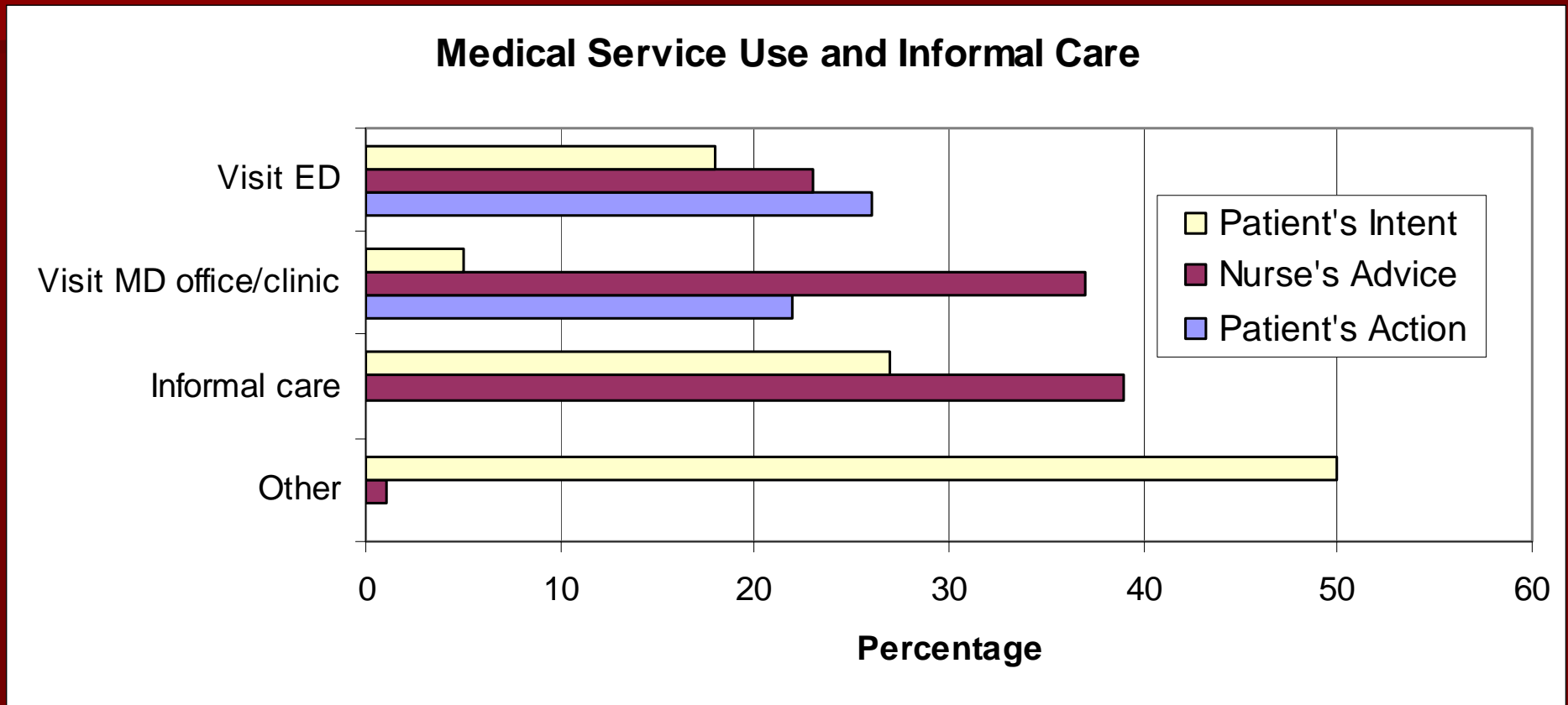
Results - Survey



Source: CRaNHR survey

Results

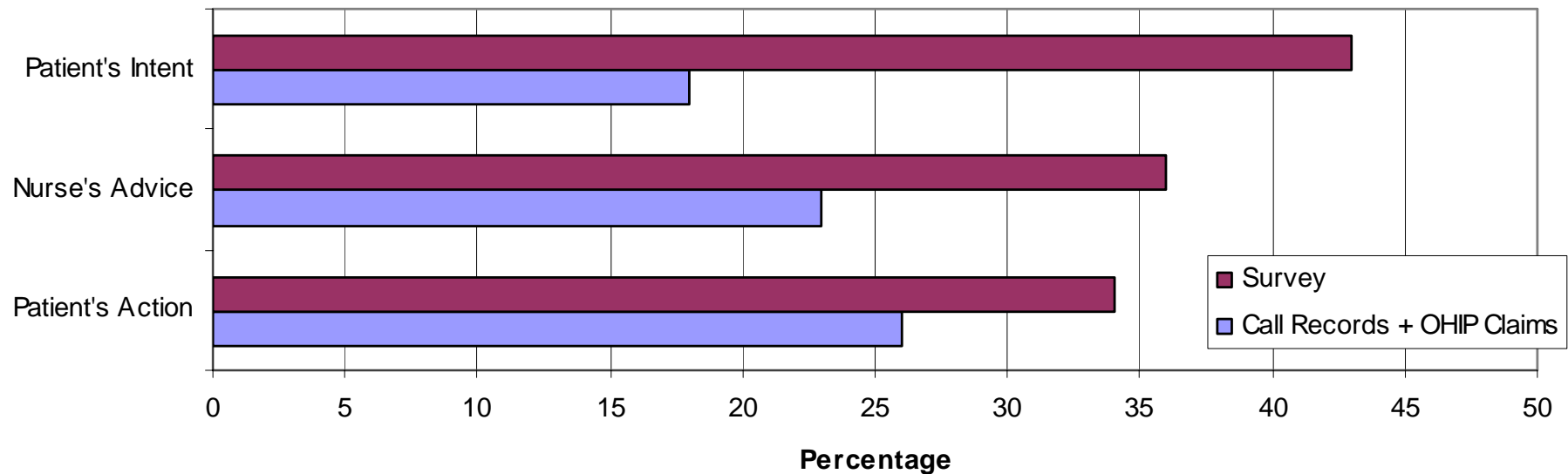
- Call Records & OHIP Claims



Source: Clinidata call records and OHIP Claims records

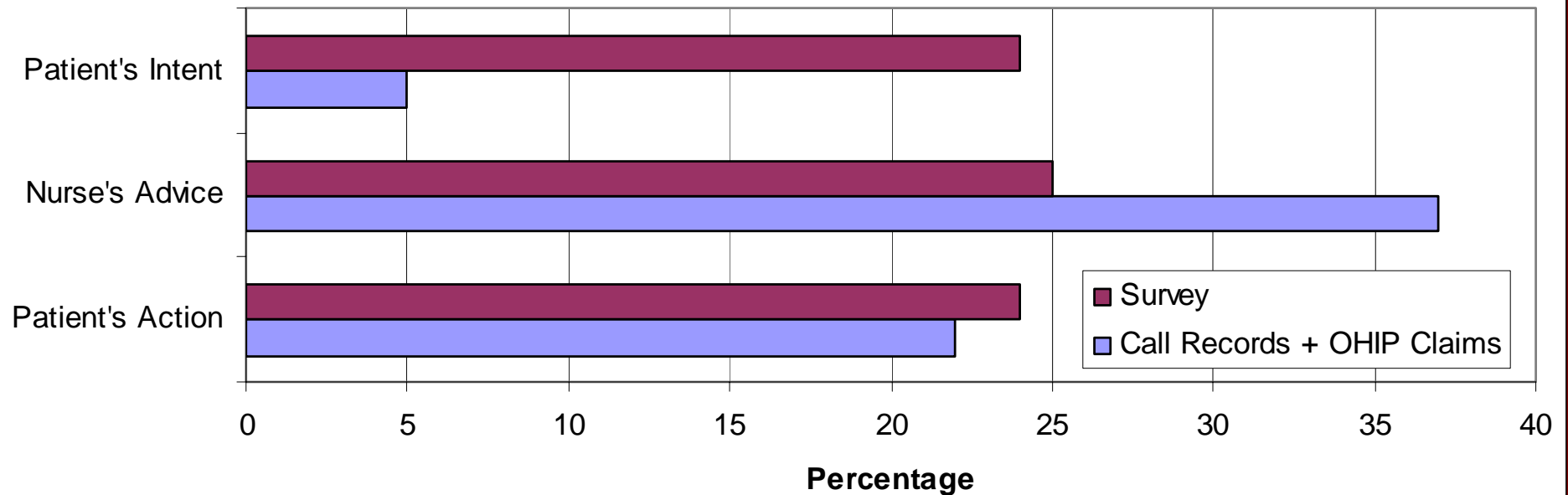
Comparing Results – ED visits

Visit ED



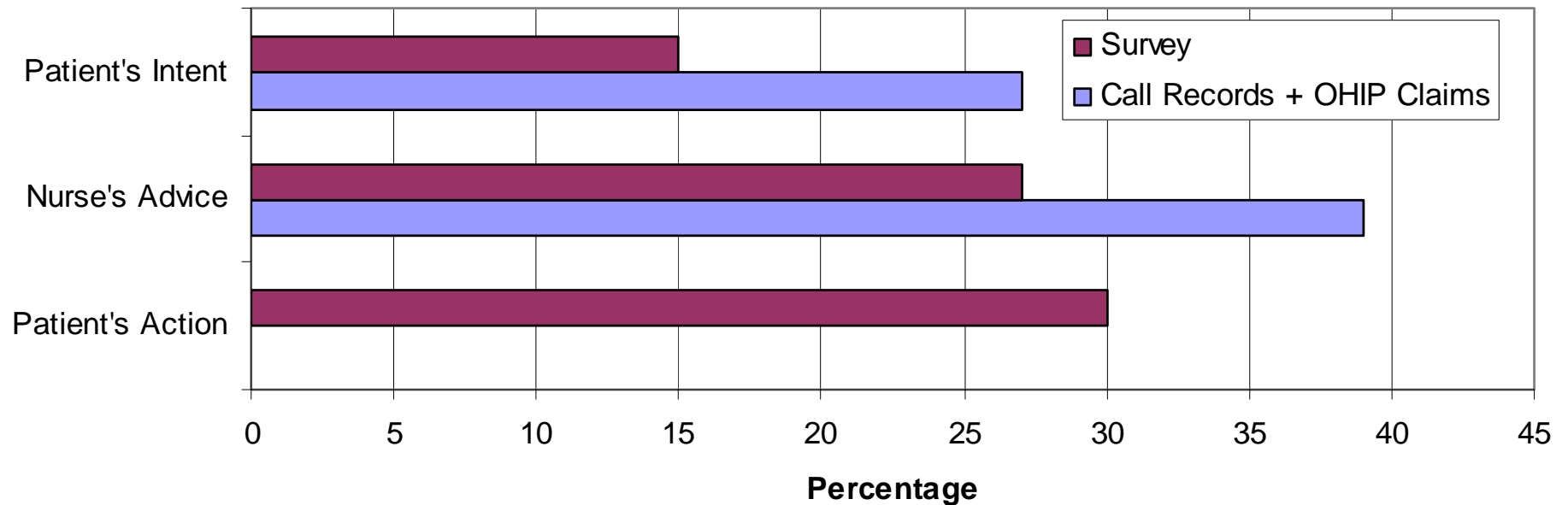
Comparing Results – MD visits

Visit MD Office/Clinic



Comparing Results - Informal Care

Informal Care



Net Change Vs. Individual Behaviours

- Previous figures showed net change
 - Percent who intended to go to the ED
 - Percent who were advised to go to the ED
 - Percent who did go to the ED
- What about the behaviour of the individual?
 - Transition matrix

Transition Matrix - Survey

CRaNHR Survey Advice	<i>Subtotal</i>	Action		
		<i>Visit ED</i>	<i>Visit MD Office/Clinic</i>	<i>Other Advice</i>
<i>Visit ED</i>	859 (37%)	792 92%	13 2%	54 6%
<i>Visit MD Office/Clinic</i>	577 (25%)	6 1%	545 94%	26 5%
<i>Other Advice</i>	905 (39%)	6 1%	4 < 1%	895 99%
<i>Subtotal</i>	2341	804	562	975

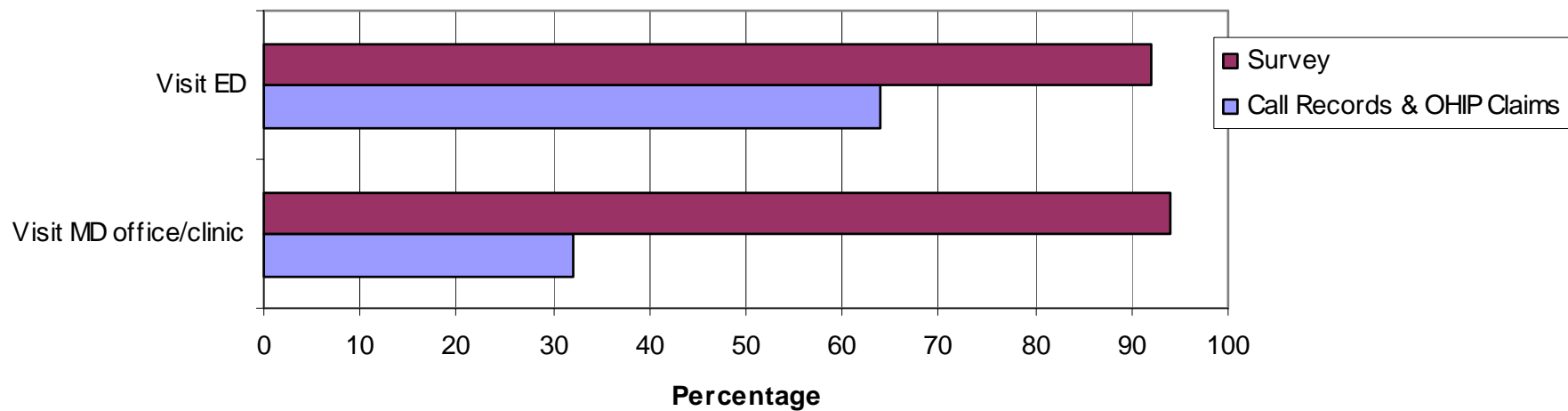
Transition Matrix

- Call Records & OHIP Claims



Call Records & OHIP Claims	Subtotal	Action		
		Visit ED	Visit MD Office/Clinic	Other Advice
Advice				
<i>Visit ED</i>	5205 (22%)	3316 64%	554 11%	1335 26%
<i>Visit MD Office/Clinic</i>	8572 (36%)	1836 21%	2759 32%	3977 46%
<i>Other Advice</i>	9822 (42%)	941	1849	7032
<i>Subtotal</i>	23599	6093	5162	12344

Compliance

Compliance with Nurse's Advice





Summary – Visit ED


Action vs. Intent	Use	Compliance
<i>Survey</i>	 9 percentage points	92%
<i>Call Records & OHIP Claims</i>	 8 percentage points	64%

Summary

- Visit MD Office/Clinic

Action vs. Intent	Use	Compliance
<i>Survey</i>	 1 percentage point	94%
<i>Call Records & OHIP Claims</i>	 17 percentage points	32%

Summary – Informal Care

Action vs. Intent	Use	Compliance
<i>Survey</i>	 15 percentage points (2X)	99%
<i>Call Records & OHIP Claims</i>	Not available	Not available

Conclusions - 1

- Usage rates and compliance rates differ with methodological approach
- Possible reasons
 - Survey data may not be representative of call records
 - Survey and call record categories were similar but not identical
 - Survey - social desirability bias, recall bias
 - Call record intent - systematic bias
 - OHIP claims were those made within 5 days of the call whereas survey results had no time limit.

Conclusions - 2

■ Methodological Improvements

- Longer time period for OHIP claims
 - MD offices/clinics (was 5 days long enough?)
- Compare communities
 - Community with teletriage vs. community without
- RCT
 - Group Health Centre in Sault Ste. Marie

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