



The health and health services utilization of Canadian Veterans in Ontario

Development and early results of the first population-based resource using provincial and national administrative healthcare data

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Why study the health and health services utilization of Canadian Veterans?



- 1. Canadian Armed Forces members are exposed to a number of unique exposures that could impact long-term health**
 - Training, Deployment (combat, peacekeeping)
 - Lifestyle/Organizational culture
- 2. Planning and delivery of healthcare services for Veterans occurs at both federal and provincial levels**
 - CAF health system, transition to civilian life, enter the provincial health system
 - Fragmented policy- services provided by federal and provincial government

- **Very little known about the health and health services utilization of Canadian Veterans**
 - Longitudinal, cohort data do not exist in Canada
 - Veterans Affairs Canada (VAC):
 - > 70% of Veterans report ≥ 1 chronic physical condition
 - 24% report a chronic mental health condition
 - No health services utilization data
- **Could we study Canadian Veterans with existing data in Ontario?**
 - Approximately 31% of Veterans live in Ontario
 - Institute for Clinical Evaluative Sciences (ICES) a great resource of provincial administrative healthcare data

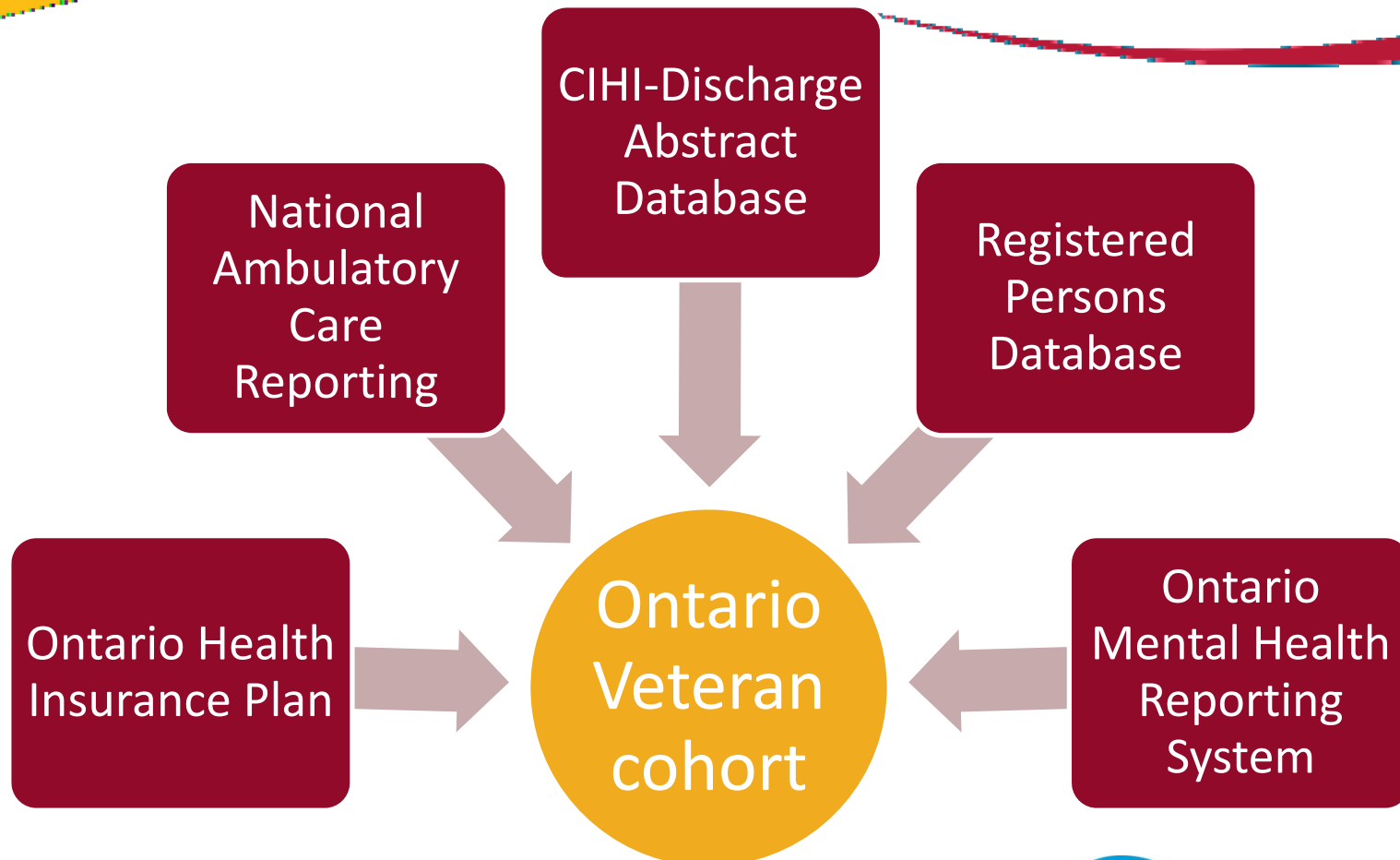
GOAL:

- Create the first ever cohort of Canadian Veterans using administrative healthcare data
 - Ontario Health Insurance Plan coverage application
 - Identifiers for RCMP & Canadian Armed Forces Veterans
 - Linkage with ICES data

B. New or returning residents of Ontario

Where did you move from? (<i>Apartment number, street number and name</i>)		City	
Province/State	Country	When did you leave the above address?	
When did you arrive to Ontario?	When did you take up permanent residence in Ontario? yyyy / mm / dd	How long do you plan to live in Ontario? <input type="checkbox"/> permanently <input type="checkbox"/> temporarily	
If you moved from another part of Canada, were you covered by a government health plan? <input type="checkbox"/> yes <input type="checkbox"/> no	If yes, what was your health number?		
Are you a Canadian citizen returning to Canada? <input type="checkbox"/> yes <input type="checkbox"/> no	Are you an immigrant returning to Canada? <input type="checkbox"/> yes <input type="checkbox"/> no	Are you a new immigrant? <input type="checkbox"/> yes <input type="checkbox"/> no	
Have you recently left the Canadian Forces, RCMP? <input type="checkbox"/> no <input type="checkbox"/> yes (<i>date of discharge</i>) yyyy / mm / dd	Have you recently been released from a Federal penitentiary? <input type="checkbox"/> no <input type="checkbox"/> yes (<i>date of release</i>) yyyy / mm / dd	Are you a student? <input type="checkbox"/> yes <input type="checkbox"/> no	
Are you the spouse or dependant of a Regular Force member of the Canadian Forces? <input type="checkbox"/> yes <input type="checkbox"/> no	Are you a reservist returning from an out-of-country posting? <input type="checkbox"/> no <input type="checkbox"/> yes (<i>date of return</i>) yyyy / mm / dd	Are you the spouse or dependant of a reservist currently deployed by the Canadian Forces into active service? <input type="checkbox"/> yes <input type="checkbox"/> no	

DATA SOURCES



INSTITUTE FOR CLINICAL
EVALUATIVE SCIENCES



CREATION OF THE COHORT



- **Definition of Veteran:** documentation of service history (CAF, RCMP) to the Ministry during Ontario health card registration
- **Study Design:** population-based, retrospective cohort using healthcare administrative data
- **Cohort entry dates:** January 1, 1990- March 31, 2013
- **End follow-up date:** March 31, 2014

OUTCOMES & ANALYSIS



- **Non-mental health related health services use:**

- E.g. primary care visits, emergency department visits, hospitalizations
- Counts, proportions

- **Chronic disease burden:**

- E.g. diabetes, chronic obstructive pulmonary disorder (COPD)
- Validated ICES algorithms
- Prevalence rates

Health Outcome Data Collection



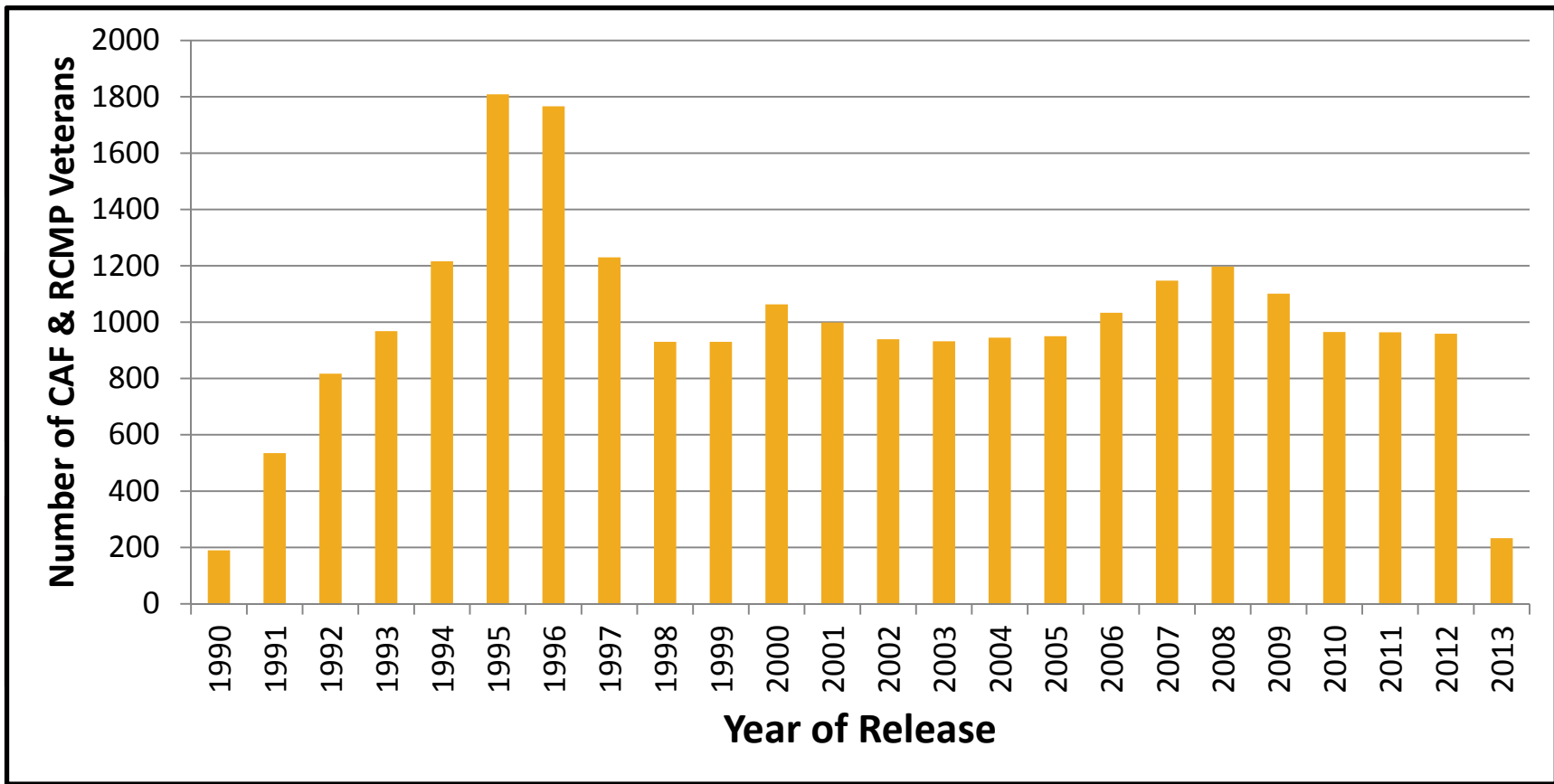
- **Descriptive statistics**

- Stratified by years following OHIP registration, age at release

Creation of the Veteran Cohort



27,773 Individuals with a service code



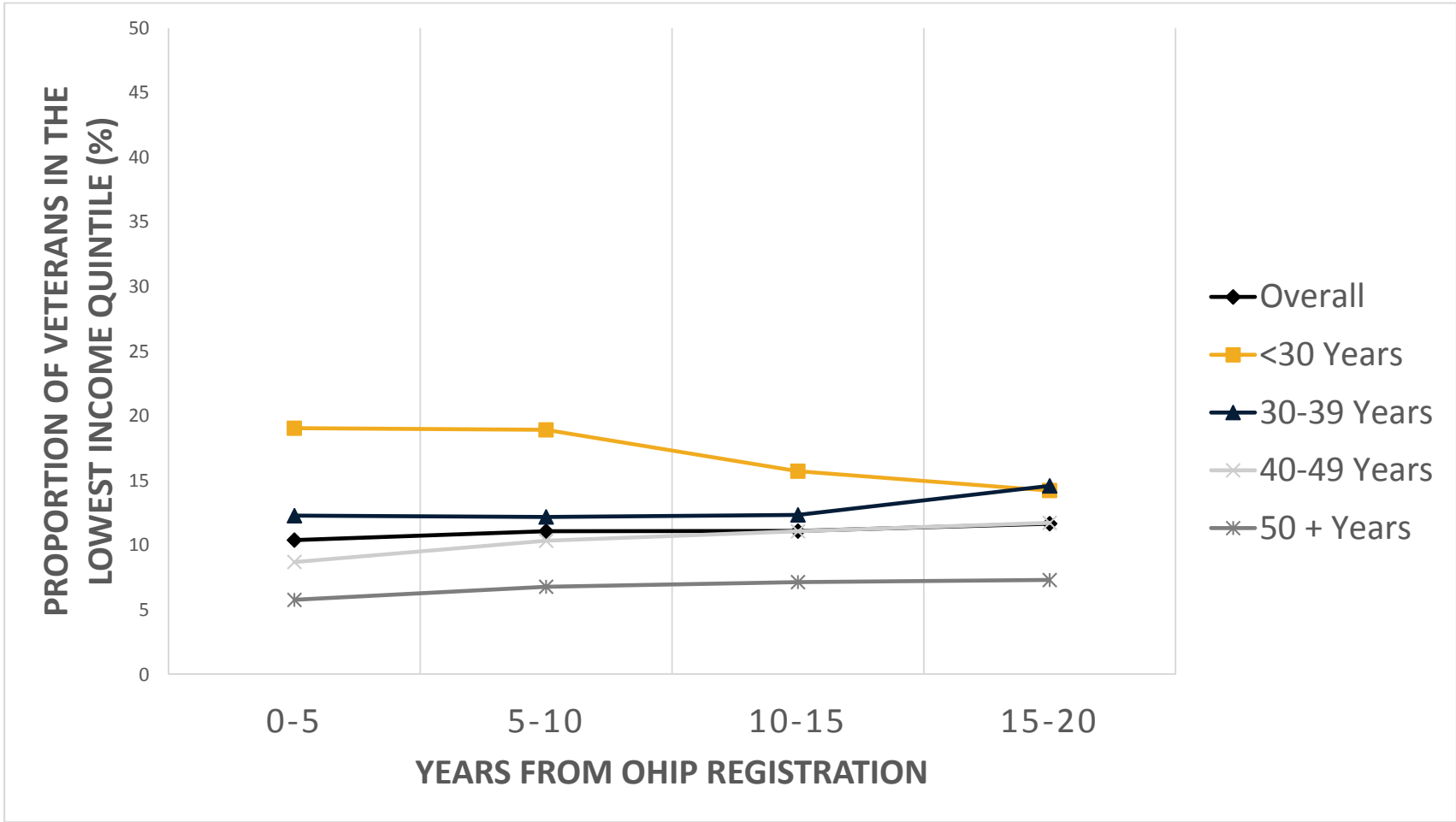
DESCRIPTION OF COHORT



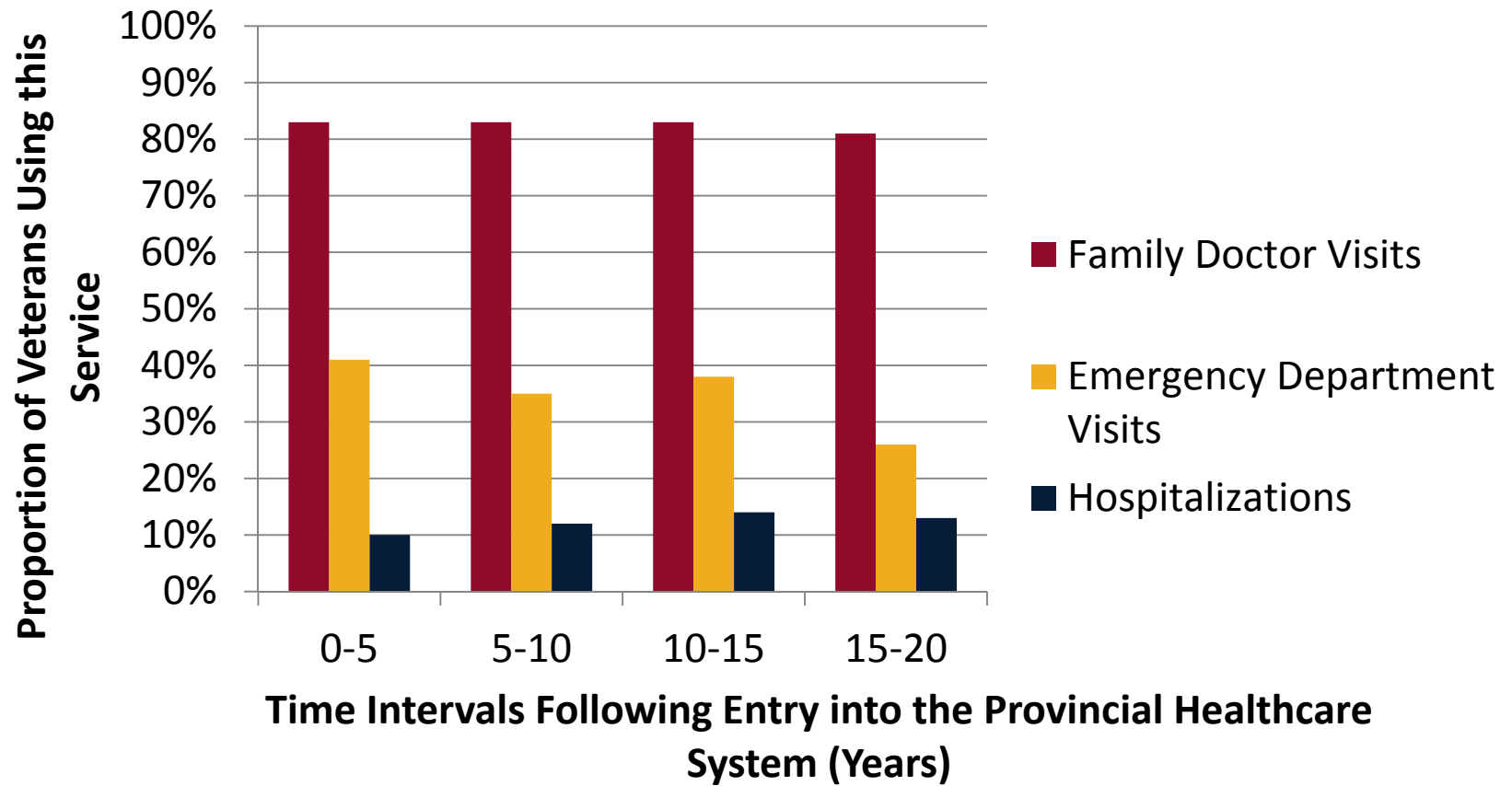
Proportion of Veterans in the Category (%)



Description of cohort



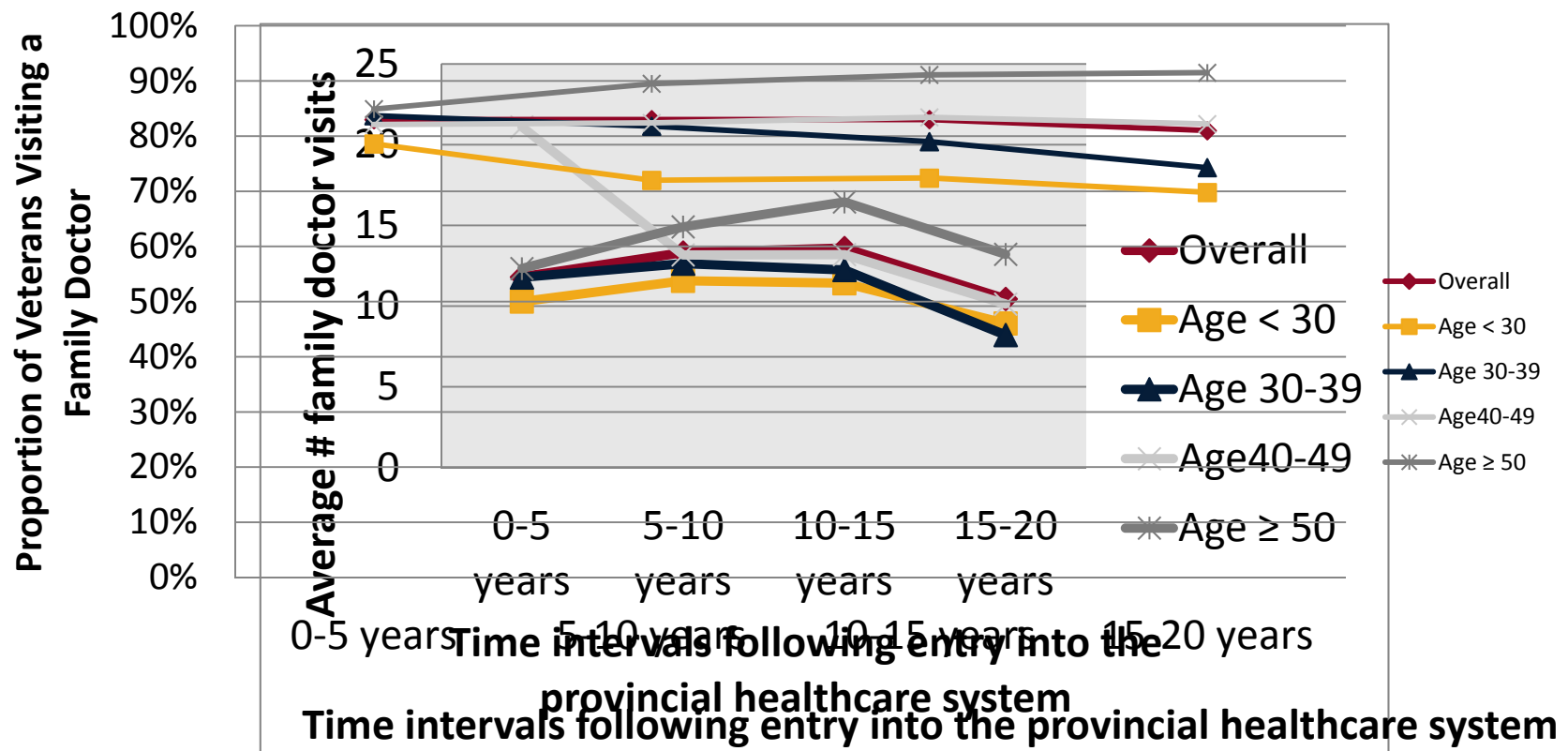
EXAMPLES: HEALTH CARE UTILIZATION



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Family Doctor Visits- Proportion & Counts by Age at Release

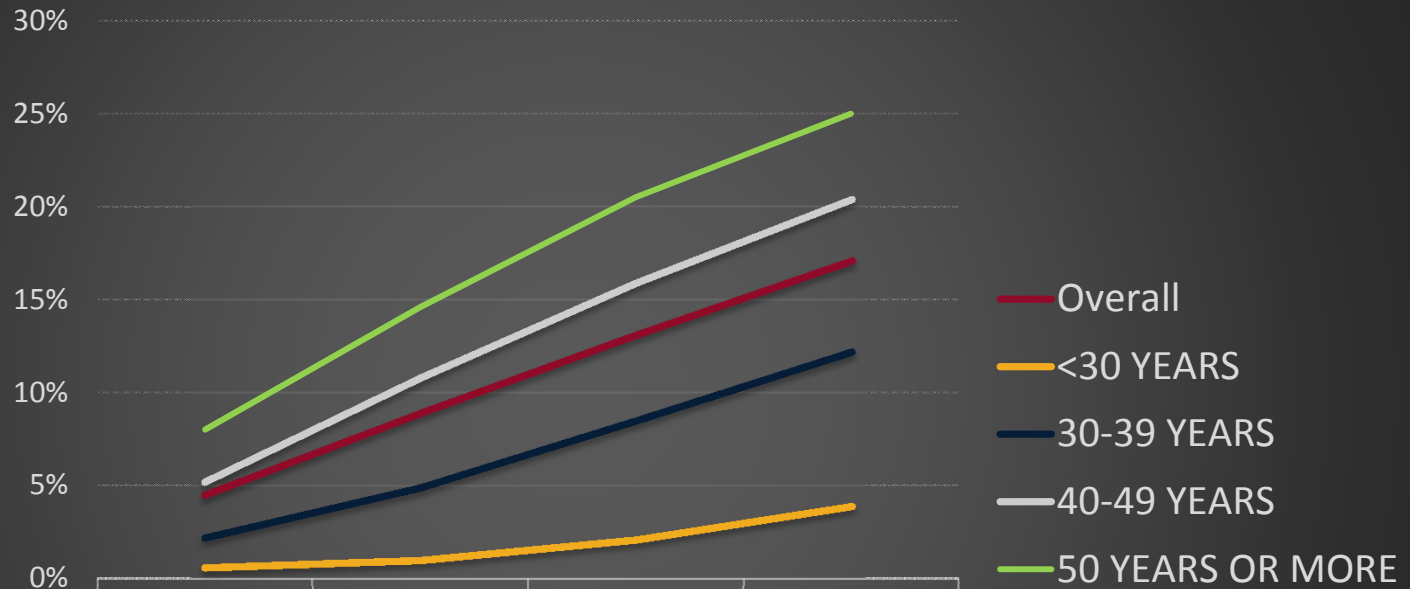


EXAMPLE: PHYSICAL DISEASE



PROPORTION WITH DIABETES (%)

Diabetes Prevalence

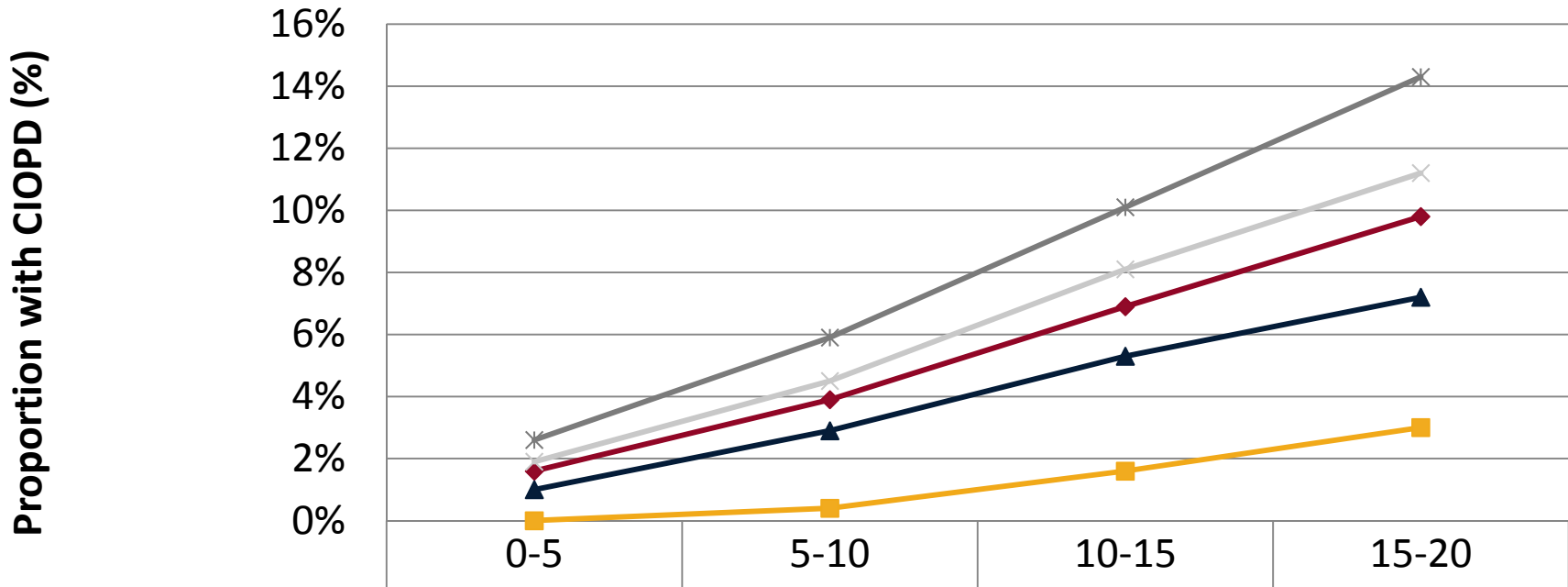


	0-5	5-10	10-15	15-20
Overall	4.50%	8.90%	13.10%	17.10%
<30 YEARS	0.60%	1.00%	2.10%	3.90%
30-39 YEARS	2.20%	4.90%	8.50%	12.20%
40-49 YEARS	5.20%	10.80%	15.90%	20.40%
50 YEARS OR MORE	8.00%	14.60%	20.50%	25.00%

EXAMPLE: PHYSICAL DISEASE



Prevalence of Chronic Obstructive Pulmonary Disease



◆ Overall	1.60%	3.90%	6.90%	9.80%
■ <30 Years	0.00%	0.40%	1.60%	3.00%
▲ 30-39 Years	1.00%	2.90%	5.30%	7.20%
× 40-49 Years	1.90%	4.50%	8.10%	11.20%
* 50 Years or More	2.60%	5.90%	10.10%	14.30%

CONCLUSIONS



- Creation of this resource will allow purposeful, population-based research to answer questions related to Veteran health in the future.
- Studying the health and health service use of Canadian Veterans will:
 - Identify potential long-term outcomes associated with a career in the military service
 - Inform the development of new policy and support decision-making
 - Create an understanding of provincial healthcare costs

THANK YOU!!



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