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interRAI™ CANADA

interRAI Assessment Systems for Mental Health:
Informing cross-sector decision-making

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Professor

School of Public Health and Health Systems

University of Waterloo

Agenda

- Introduction to interRAI
  - Use of interRAI systems in Canada
- Need to think at system level
- Three points of contact in mental health
  - Police
  - Hospital
  - Community Mental Health

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interRAI

- Who
  - International, not-for-profit network of ~100 researchers and health/social service professionals
- What?
  - Comprehensive assessment of strengths, preferences, and needs of vulnerable populations
- How?
  - Multinational collaborative research to develop, implement and evaluate instruments and their related applications

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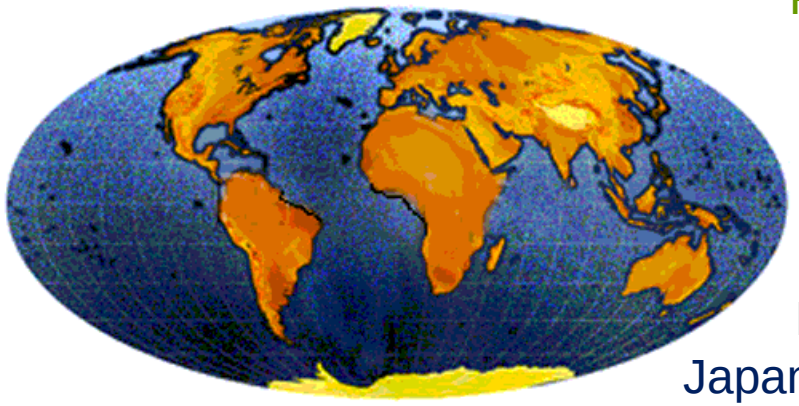
interRAI Countries

North America
Canada
US

Europe
Iceland, Norway, Sweden, Denmark, Finland, Netherlands, France, Germany, Switzerland, UK, Italy, Spain, Czech Republic, Poland, Estonia, Belgium, Lithuania, Russia
Portugal, Austria, Ireland

Central/ South America
Brazil, Chile
Peru



South Asia, Middle East & Africa
India, Israel, Lebanon, Qatar
South Africa, Rwanda

Pacific Rim
Japan, China, Taiwan, Hong Kong, South Korea, Australia, New Zealand
Singapore

interRAI Network for Mental Health (iNMH)

- interRAI organized into three main networks
  - Mental health; aging & integrated care (Chair: Declercq); acute care (Chair: Gray)
- Mental health network
  - Chair: John Hirdes
  - Addictions leads: Chris Perlman, Duncan Laurenson
  - Child/Youth lead: Shannon Stewart
  - Forensics/criminal justice leads: Howard Barbaree, Greg Brown, Ron Hoffman
  - Intellectual disability lead: Lynn Martin
  - Homeless: Coline van Everdingen
- Countries
  - Canada, United States, Brazil, Chile, Iceland, Finland, Netherlands, Belgium, Spain, South Africa, Rwanda, Japan, China & Hong Kong, New Zealand, Australia, Israel

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interRAI: Systems Approach to Mental Health Assessments

Why do we need to think at the system level?

- People with comparable needs receive services in different sectors of health care system
  - Especially true for persons with complex needs
    - Elderly
    - Persons with mental illness
    - End of life care
  - System-level implication:
    - May be able to fine-tune who gets what services where
  - Person-level implication:
    - Must deal with multiple providers
    - Continuity of care important

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The interRAI Family of Instruments

- **Mental Health**
  - Inpatient
  - Community
  - Emergency Screener
  - Forensic Supplement
  - Addictions Supplement
  - Correctional Facilities
  - Brief Mental Health Screener
  - Child & Youth
- **Intellectual Disability**
- **Nursing Homes**
- **Home Care**
  - + Contact Assessment
- **Community Health Assessment**
  - Functional supplement
  - MH supplement
  - Deafblind supplement
  - AL supplement
- **Acute Care**
  - + ED Screener
- **Post-Acute Care-Rehabilitation**
- **Palliative Care**
- **Primary Care**
  - + Clinician version
  - + Self-report
- **Community Rehabilitation**
- **Carer Needs**
- **Subjective Quality of Life**
  - Long term care
  - Home and community care
  - Mental Health
    - Adult
    - Child/Youth

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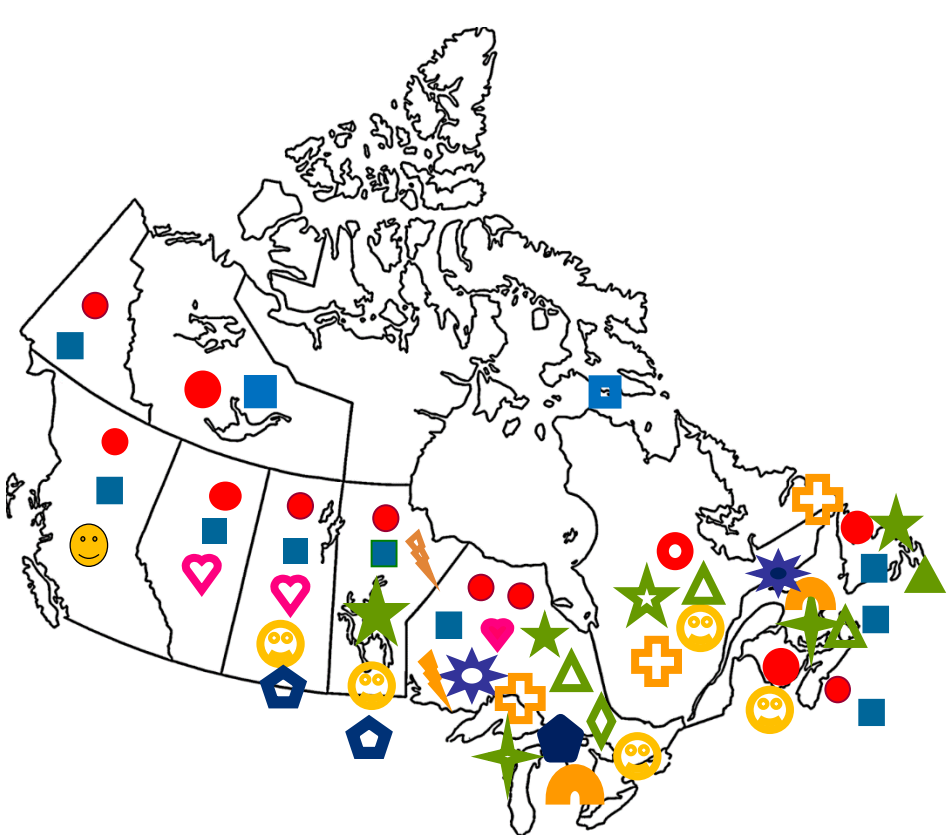
Use of interRAI Instruments in Canada



Solid symbols refer to implentations that have been mandated or recommended by government
Hollow symbols refer to research, pilot studies, or implementation planning underway

- RAI 2.0/ interRAI Long Term Care Facilities
- RAI-Home Care
- RAI-Mental Health
- interRAI Community Mental Health
- interRAI Emergency Screener for Psychiatry
- interRAI Brief Mental Health Screener
- interRAI Child/Youth Mental Health
- interRAI Intellectual Disability
- interRAI Palliative Care
- interRAI Acute Care/Emergency Department
- interRAI Contact Assessment
- interRAI Community Health Assessment
- interRAI Subjective Quality of Life

Over 9.6 million assessments
Over 3.3 million Canadians

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National Reporting Systems

- Canadian Institute for Health Information (CIHI) acts as national data repository

- ***Older reporting systems***
  - Continuing Care Reporting System (CCRS)
    - Based on RAI 2.0
  - Home Care Reporting System (HCRS)
    - Based on RAI-HC and interRAI Contact Assessment (incl ED Screener)
  - Ontario Mental Health Reporting System (OMHRS)
    - Based on RAI-MH
    - Also supports interRAI CMH in NFLD
- ***New reporting system***
  - Integrated interRAI Reporting System
    - Single system for all new interRAI instruments
    - Starting with HC, LTCF, ChYMH

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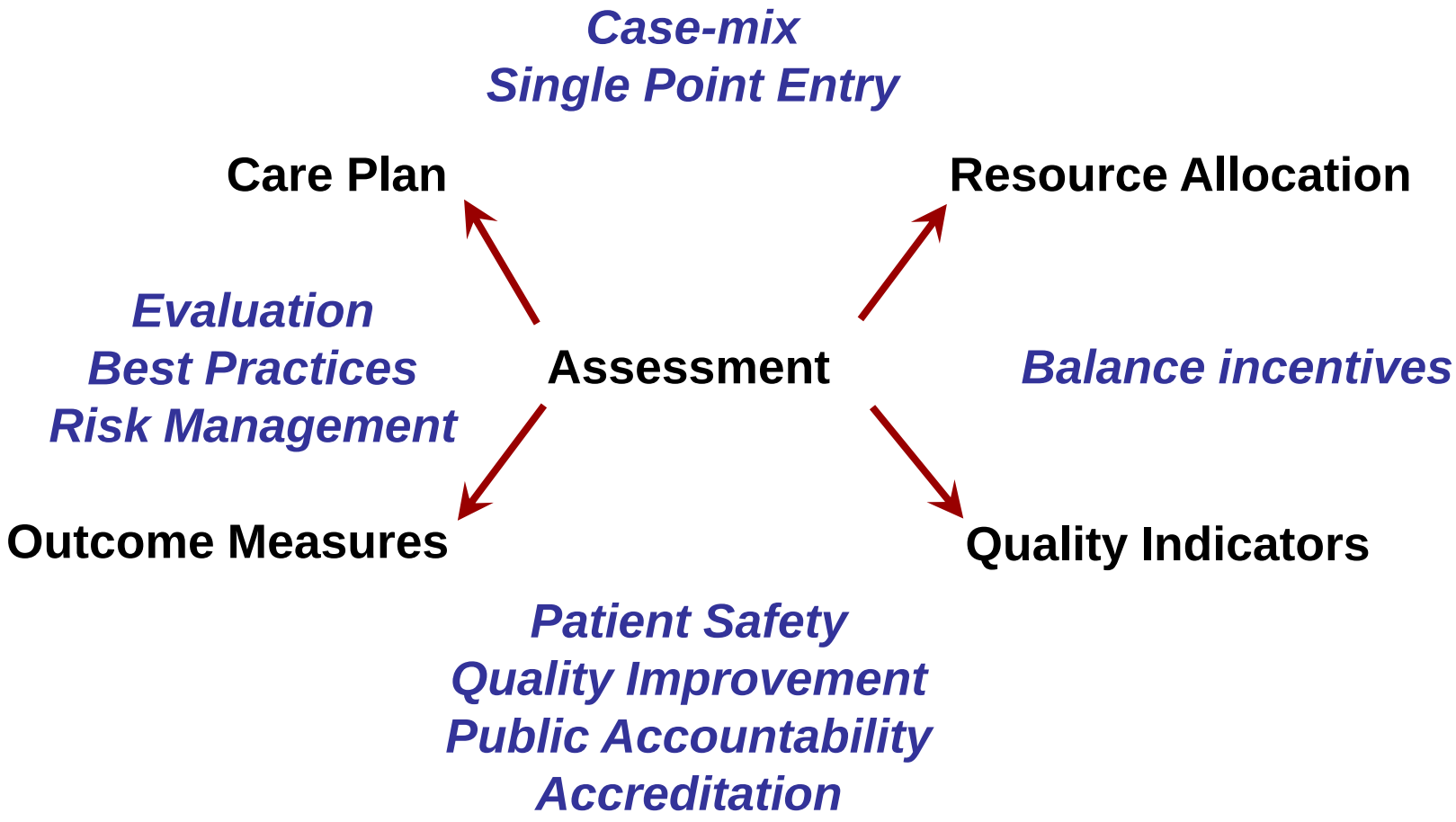
Applications of interRAI's Assessment Instruments:

One assessment … multiple applications



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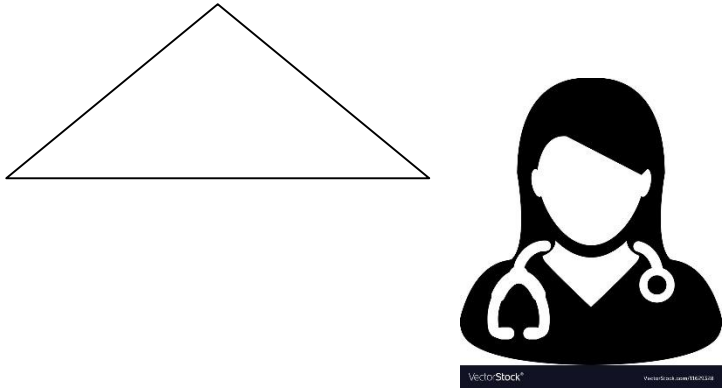
Three Points of Contact for Persons with Mental Health Needs

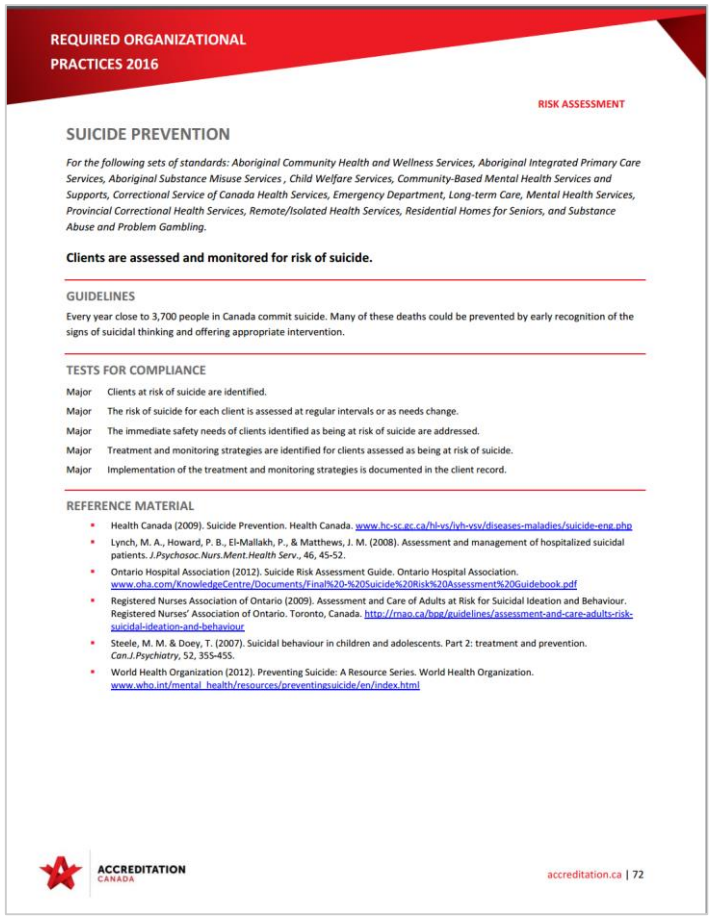
Police



Community Mental Health

Hospital

Suicide Prevention ROP



REQUIRED ORGANIZATIONAL PRACTICES 2016

RISK ASSESSMENT

SUICIDE PREVENTION

For the following sets of standards: Aboriginal Community Health and Wellness Services, Aboriginal Integrated Primary Care Services, Aboriginal Substance Misuse Services , Child Welfare Services, Community-Based Mental Health Services and Supports, Correctional Service of Canada Health Services, Emergency Department, Long-term Care, Mental Health Services, Provincial Correctional Health Services, Remote/Isolated Health Services, Residential Homes for Seniors, and Substance Abuse and Problem Gambling.

Clients are assessed and monitored for risk of suicide.

GUIDELINES

Every year close to 3,700 people in Canada commit suicide. Many of these deaths could be prevented by early recognition of the signs of suicidal thinking and offering appropriate intervention.

TESTS FOR COMPLIANCE

Major	Clients at risk of suicide are identified.
Major	The risk of suicide for each client is assessed at regular intervals or as needs change.
Major	The immediate safety needs of clients identified as being at risk of suicide are addressed.
Major	Treatment and monitoring strategies are identified for clients assessed as being at risk of suicide.
Major	Implementation of the treatment and monitoring strategies is documented in the client record.

REFERENCE MATERIAL

- Health Canada (2009). Suicide Prevention. Health Canada. www.hc-sc.gc.ca/hl-vs/iyh-vsv/diseases-maladies/suicide-eng.php
- Lynch, M. A., Howard, P. B., El-Mallakh, P., & Matthews, J. M. (2008). Assessment and management of hospitalized suicidal patients. *J.Psychosoc.Nurs.Ment.Health Serv.*, 46, 45-52.
- Ontario Hospital Association (2012). Suicide Risk Assessment Guide. Ontario Hospital Association. www.oha.com/KnowledgeCentre/Documents/Final%20-%20Suicide%20Risk%20Assessment%20Guidebook.pdf
- Registered Nurses Association of Ontario (2009). Assessment and Care of Adults at Risk for Suicidal Ideation and Behaviour. Registered Nurses' Association of Ontario. Toronto, Canada. http://rnao.ca/bpg/guidelines/assessment-and-care-adults-risk-suicidal-ideation-and-behaviour
- Steele, M. M. & Doey, T. (2007). Suicidal behaviour in children and adolescents. Part 2: treatment and prevention. *Can.J.Psychiatry*, 52, 355-455.
- World Health Organization (2012). Preventing Suicide: A Resource Series. World Health Organization. www.who.int/mental_health/resources/preventingsuicide/en/index.html

ACCREDITATION CANADA

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- **Accreditation Canada ROP-Suicide**
- Multiple sectors required to assess and monitor for suicide risk
  - Identify clients at risk of suicide
  - Risk of suicide assessed at regular intervals
  - Immediate safety needs addressed
  - Treatment and monitoring strategies
    - Implementation of those documented in record
- ***How can interRAI help?***

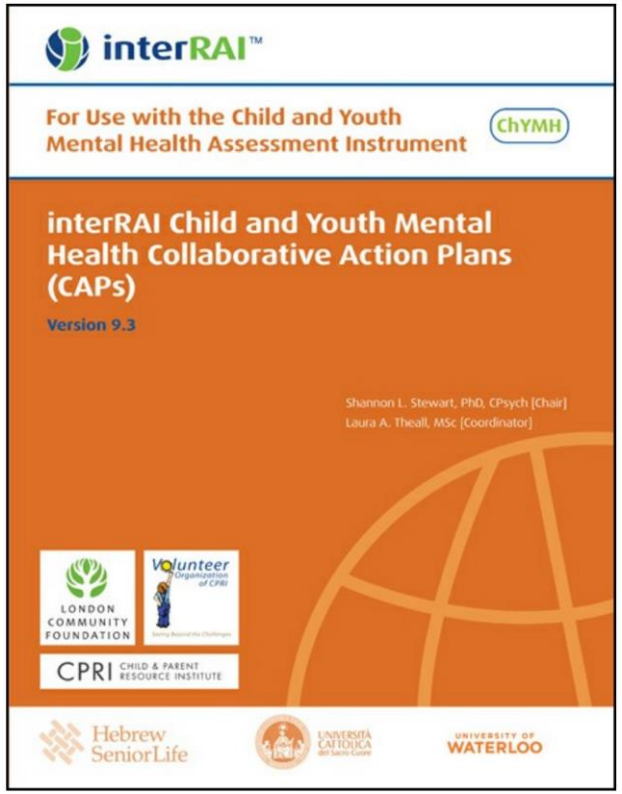
Assessment of suicide risk

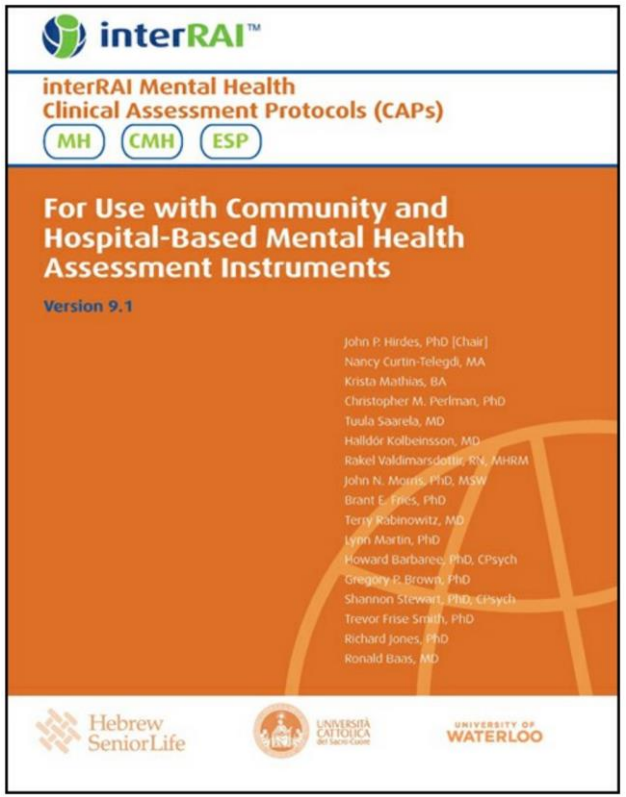
- Directly measured
  - Emergency screener for psychiatry (ESP)
  - Mental health (MH)
  - Community mental health (CMH)
  - Child/Youth Mental Health (ChYMH)

- Less directly measured
  - Long term care facility (LTCF)
  - Home Care (HC)
  - Community Health Assessment (CHA)

Intervention and Monitoring

- Clinical Assessment Protocol: Purposeful Self Harm



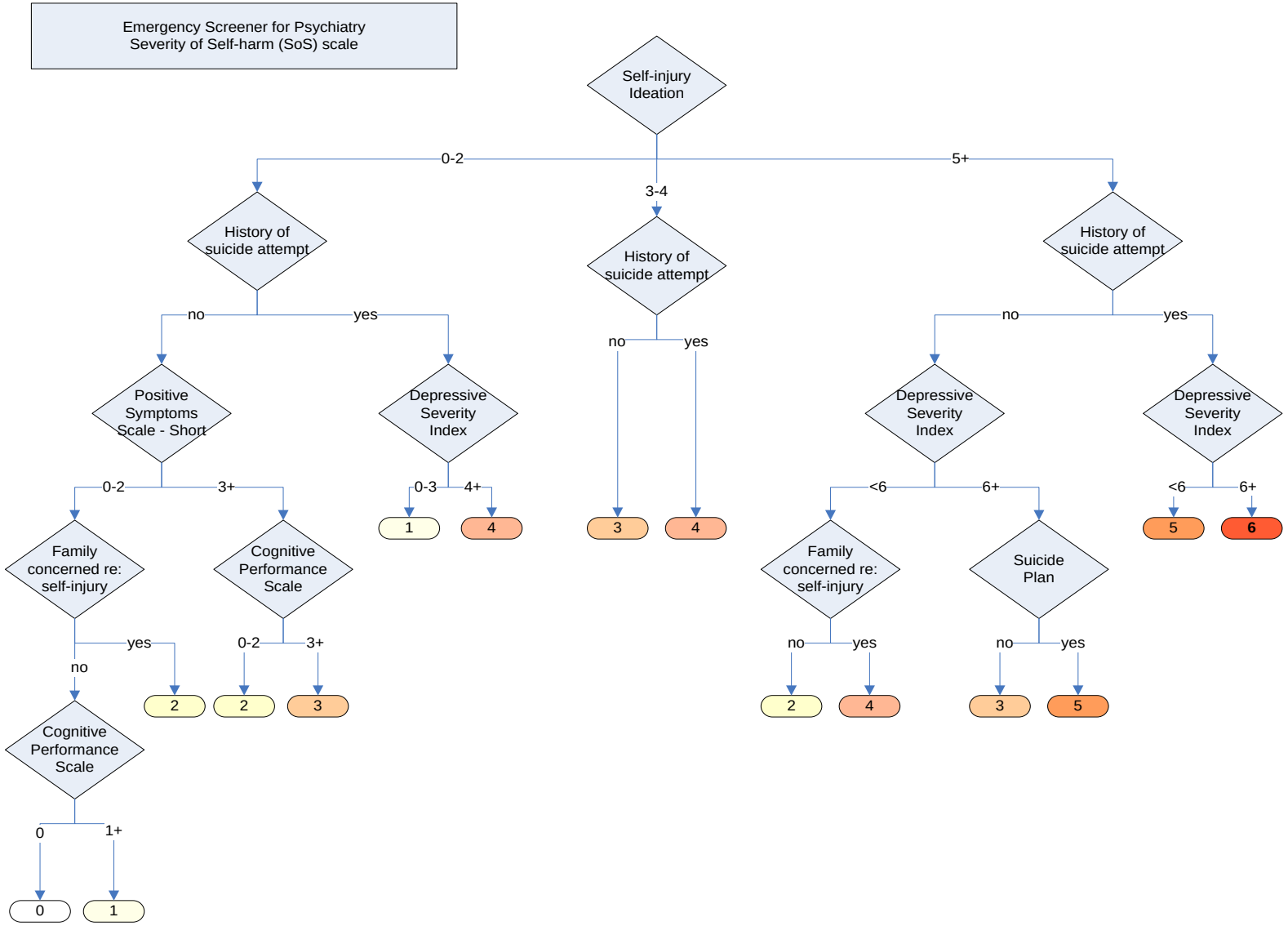


Severity of Self-harm scale

Items and scales used:

- Self injury ideation
- History of suicide attempts
- Family concerned re: self injury

- Depressive Severity Index
- Positive Symptoms Scale
- Cognitive Performance Scale



So what do we know about the self-harm CAP?

- It predicts
  - Clinical opinion of risk
  - Reason for admission
  - Inpatient self-harm attempts
  - Inpatient deaths by suicide
- CAP guidelines developed by multinational team of experts
  - Demonstrated predictive validity of triggers
  - International best practice guidelines for intervention and monitor

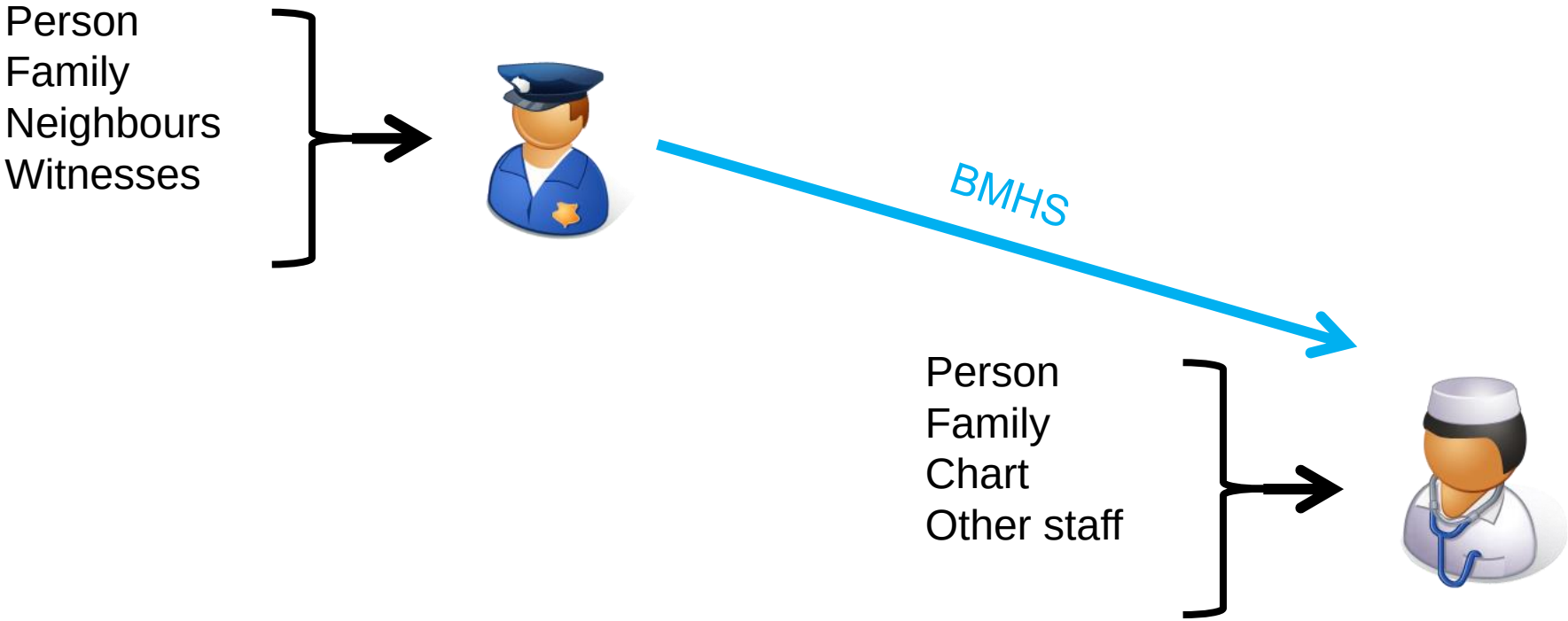
interRAI Emergency Screener for Psychiatry (ESP)

- Design parameters for interRAI ESP
  - Compatible with interRAI MH and CMH
  - 24 hour observation period
  - Additional response categories for presence of indicator “now”
  - Emphasis on risk appraisal
    - Care planning focuses on safety (e.g., harm to self, others)
  - Decision support for placement, bed utilization

interRAI Brief Mental Health Screener (BMHS)

- Design parameters for interRAI BMHS
  - Compatible with interRAI ESP, MH and CMH
  - 24 hour observation period
  - Used by police officers to record observations related to mental health apprehensions
    - Standardized
    - Terminology consistent with mental health professionals

Using All Sources of Information to Complete interRAI Assessments



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Risk Scales for the BMHS

- Scales for same three dimensions as used in ESP
  - Used by police to determine need to bring person to hospital/divert to CMH
- BMHS has more limited set of items and compressed response set
- Key issues for police:
  - Will hospital will take responsibility for person?
  - Should we divert to community MH services?
- Risk scales should:
  - Predict reasons for admission
  - Help police communicate urgency to clinical staff
  - Be consistent with clinician's risk appraisal

- Initial scale derivation for BMHS
  - Used 160,602 inpatient admissions
  - Convert MH data to match BMHS item set and response levels
  - Modelled reasons for admissions using decision tree analyses

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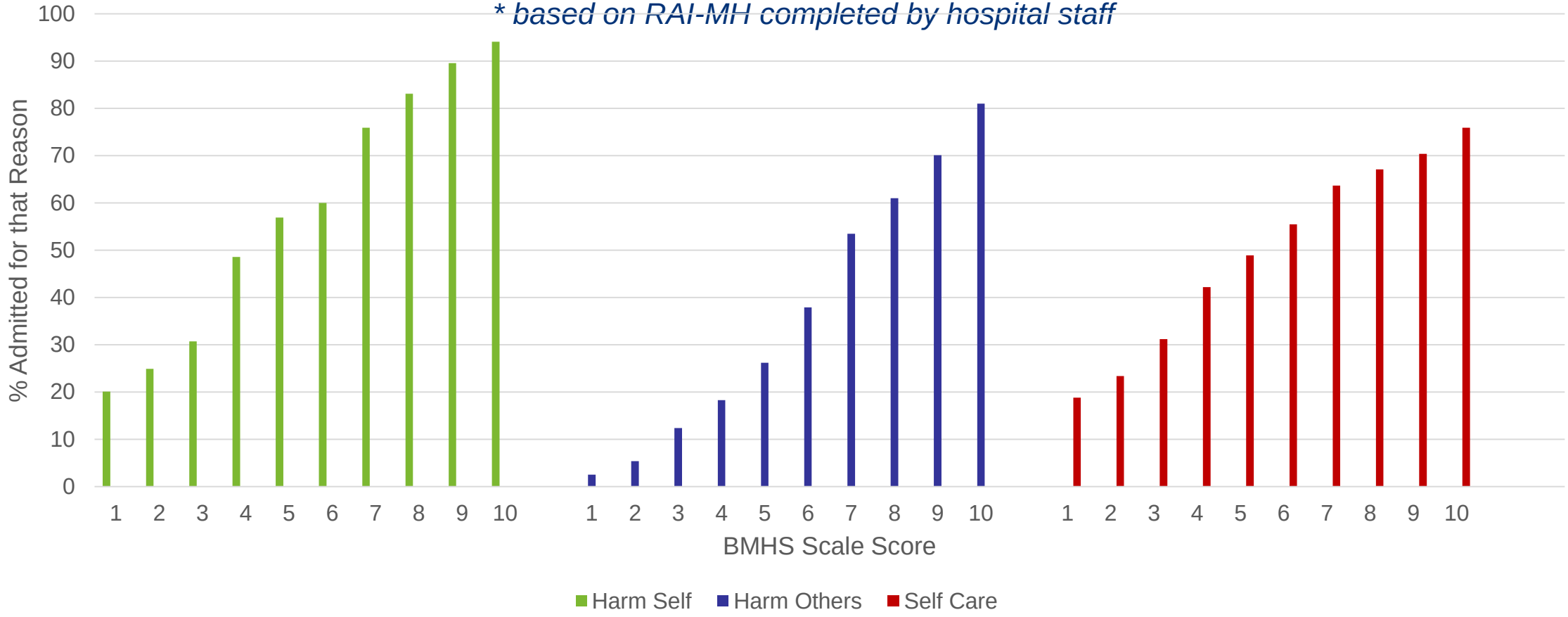
Rates of Corresponding Reasons for Admission by BMHS Scale (n=160,602)

** based on RAI-MH completed by hospital staff*



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Performance of BMHS algorithms compared with clinician-derived risk measures

	BMHS_Harm Self (0-10)	BMHS_Harm Other (0-10)	BMHS_Self Care (0-10)
Comparisons with Full MH/CMH Risk Scales			
MH/CMH Scale	Severity of Self Harm (SoS)	Risk of Harm to Others (RHO)	Self Care Index (SCI)
Correlation w/ full scale	0.74	0.77	0.78
Association with reason for admission			
Odds Ratio	1.55	1.71	1.37
c Statistic	0.80	.84	0.71

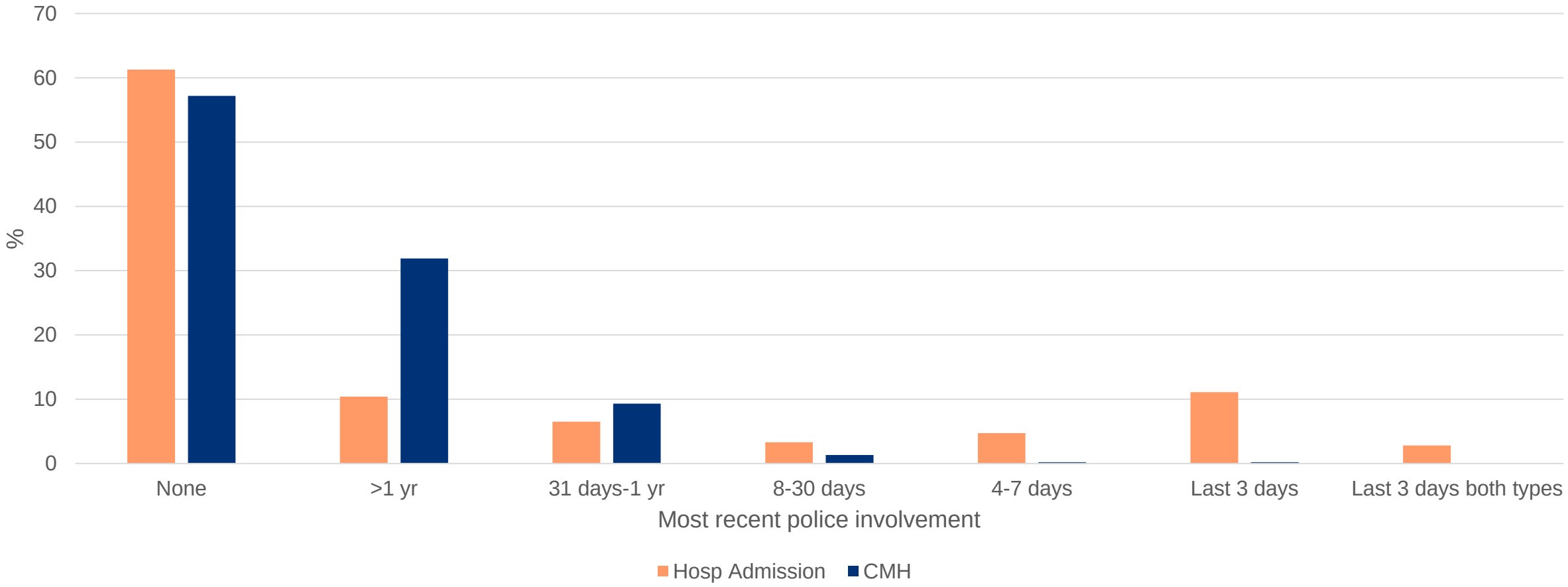
Percentage distributions of age, gender & diagnosis by mental health care setting

Variable	Hospital Admissions (n=301,093)	Community Mental Health (n=3,899)
Age Group		
• 18-24	14.8	6.6
• 25-44	38.0	38.0
• 45-64	34.5	43.5
• 65+	12.8	11.9
Male	50.4	58.7
Provisional Diagnosis		
• Schizophrenia	37.6	65.9
• Mood	51.2	38.7
• Substance Use	24.0	13.8
• Cognitive	6.2	4.8

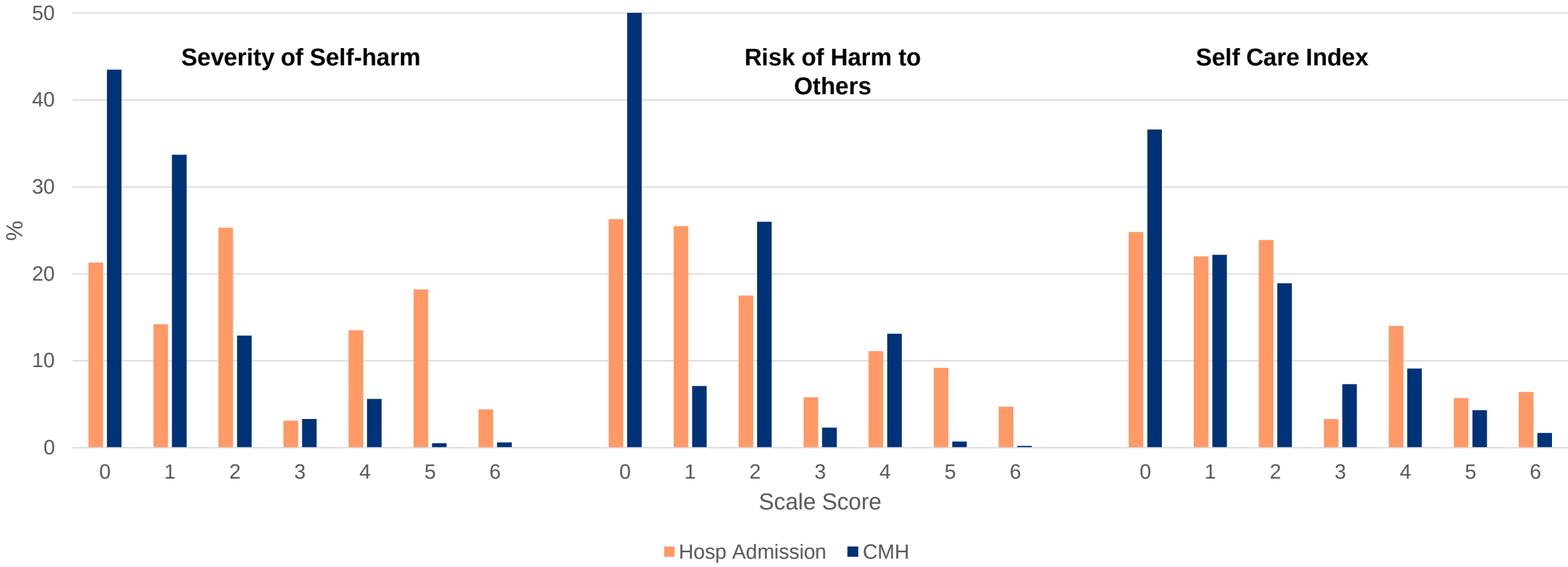
Percentage distributions of previous contact with mental health services by care setting

Variable	Hospital Admissions (n=301,093)	Community Mental Health (n=3,899)
Lifetime psychiatric admissions		
0	27.4	19.1
1-3	36.6	40.2
4-5	14.6	16.8
6+	21.4	23.8
Previous Contact with CMH	38.9	
	18.4	
	42.7	
Hospitalization last 90 days		22.4

Percentage distribution of recency of contact with police, by mental health setting



Distributions of risk scale scores by mental health setting



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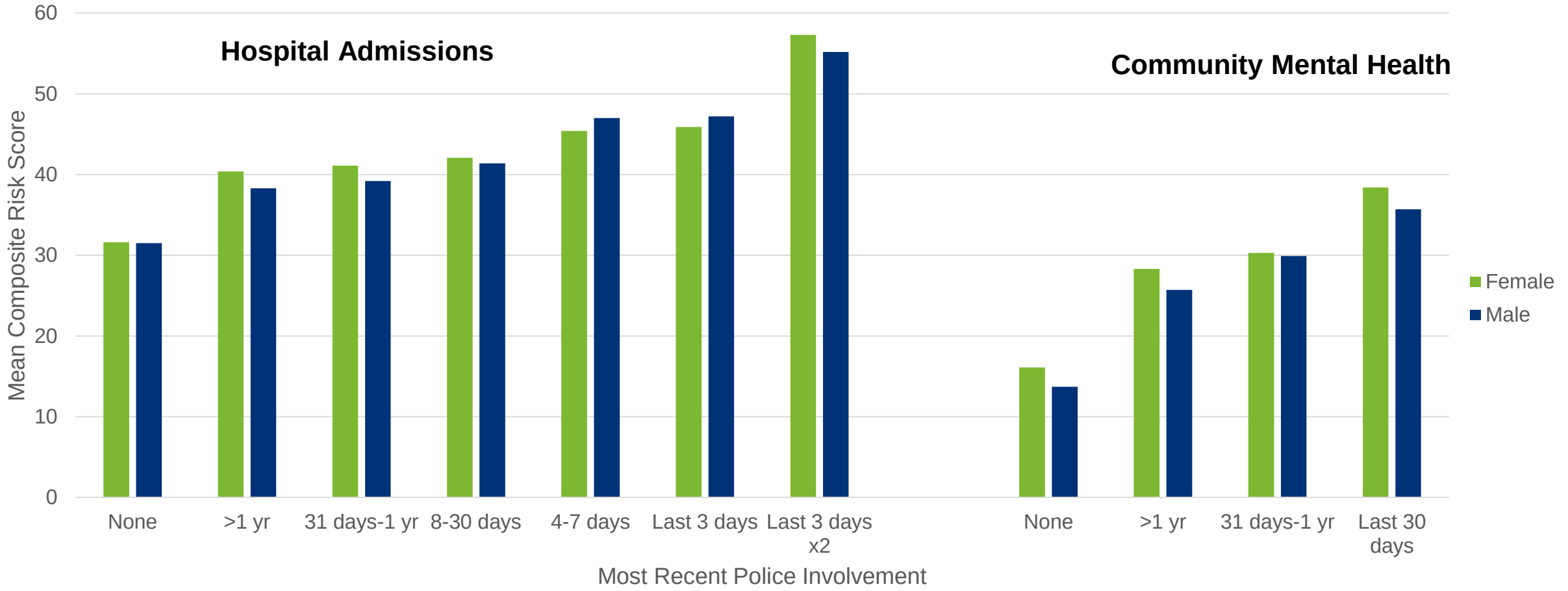
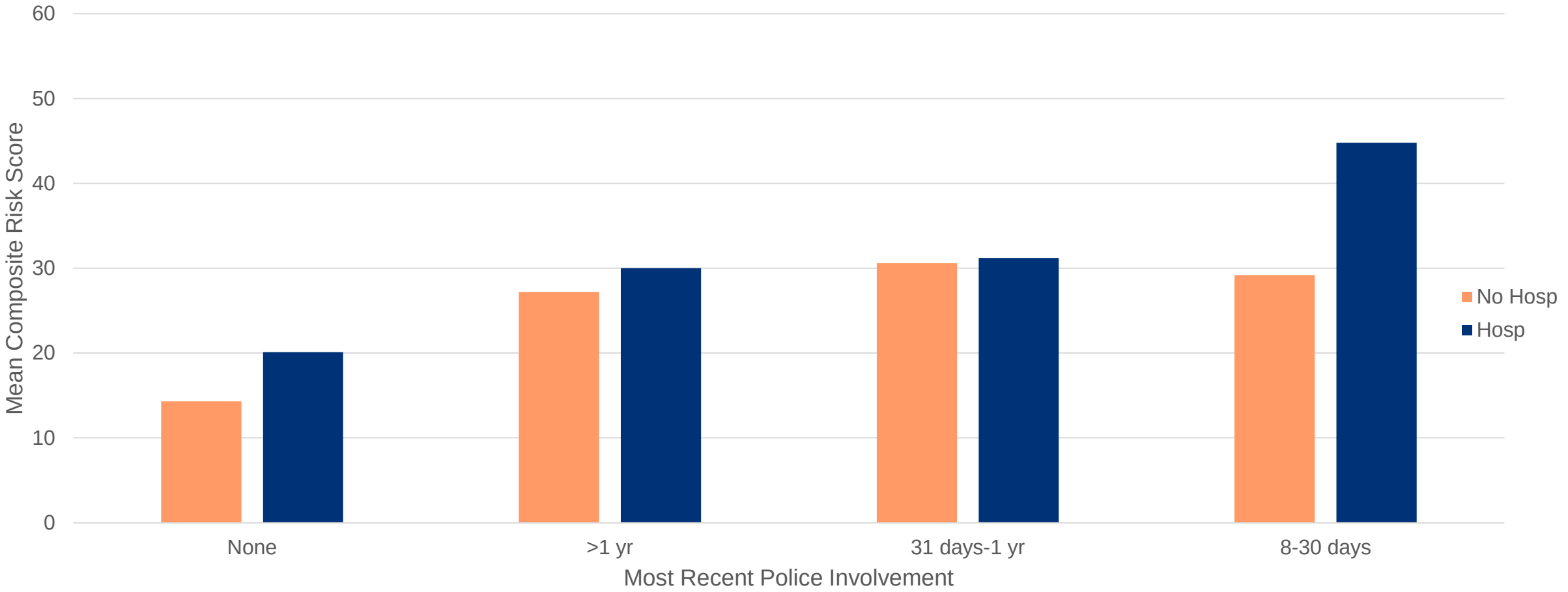
Mean Composite Risk scores by gender and recency of contact with police by mental health care setting



Mean Composite Risk scores by recency of contact with police AND hospitalization in last 90 days, community mental health



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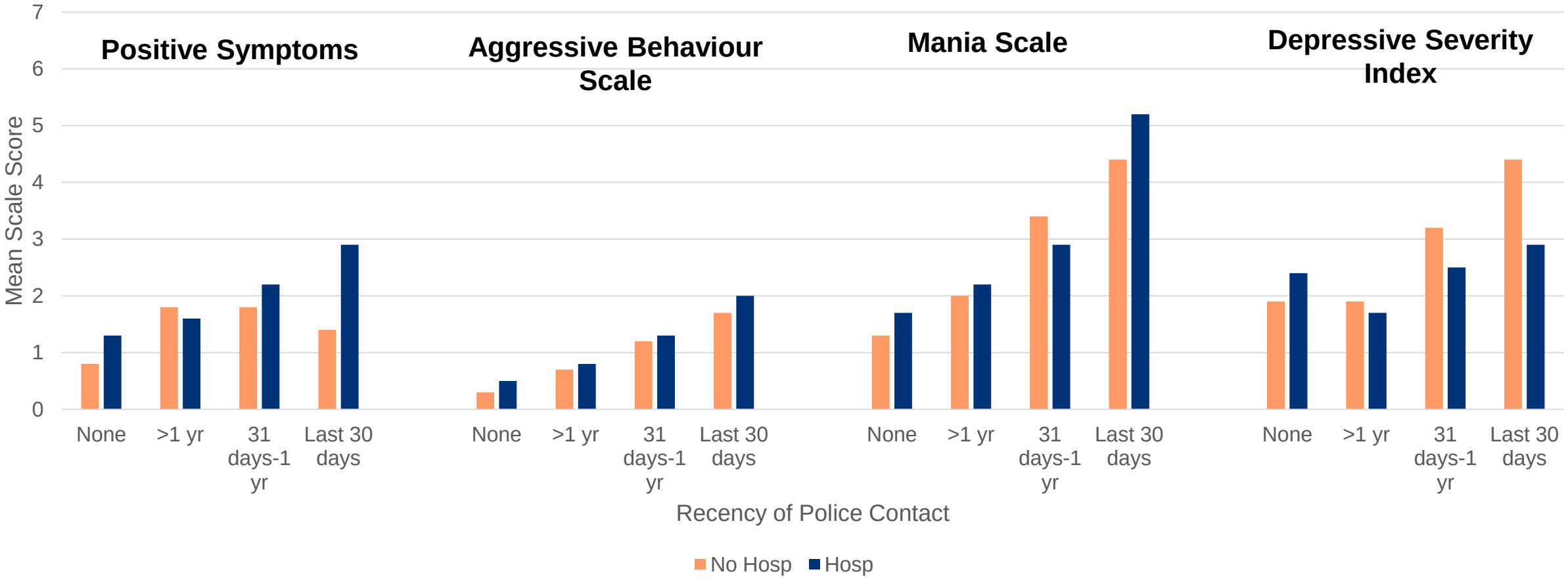
Mean clinical scale scores by recency of contact with police AND hospitalization in last 90 days, community mental health



Summary

- Substantial percentage of persons with mental health needs come into contact with all three services
  - Patient safety risks higher in hospital admissions than CMH
- Contact with police strongly associated with mental health symptoms and severity of patient safety risks
  - True for both inpatient and community
- Recent hospitalization associated with higher severity
  - Less clear for depressive symptoms
- Next steps
  - Longitudinal modelling of outcomes with linked data

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