Drawing on regional data analytics and stakeholder consultation to improve responses to methamphetamine-related harm in the Illawarra Shoalhaven region

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Acknowledgements

Overview

PRESENTATION ROAD MAP

Background to the Illawarra Shoalhaven region

Current study aims

Methods

1. Regional data analytics – CHRISP/IHIP data

2. Systematic Review

3. Qualitative Interviews

Conclusions

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Background

Methamphetamine use and harms

- 3-fold ↑ regular and dependent methamphetamine use since 2009; estimated 268,000 people use regularly, 160,000 dependent[1].

- ↑ more potent crystalline forms of methamphetamine (ice), ↑ in methamphetamine-related harm[2].

- Helpline calls, drug treatment episodes, arrests and hospital admissions for amphetamine disorders and psychosis all peaked in the mid 2000s, declined for several years, and then steep ↑ since 2010[2].

- Nationally, estimated to cost Australia around $5 billion per year[3].

References:
1. Degenhardt L, et al. Estimating the number of regular and dependent methamphetamine users in Australia, 2002-2014. *Med J Aust* 2016; 204(4): 153.
2. Degenhardt L, et al. Crystalline methamphetamine use and methamphetamine-related harms in Australia. *Drug and Alcohol Review* 2017; 36(2): 160-70.
3. Tait RJ, et al. Quantifying the societal cost of methamphetamine use to Australia. *International Journal of Drug Policy* 2018; 62: 30-6.

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Illawarra Shoalhaven Local Health District

BACKGROUND

- 250km of coastline; more than 400,000 residents; 8 public hospitals[1].

- 7% Nowra-Bomaderry residents identify as ATSI (2.5% NSW and National)[2].

- High levels of socio-economic disadvantage in the Jervis Bay, Nowra and Wollongong/ Shellharbour regions[3].

- Higher unemployment and lower labour participation rates; unemployment in Bomaderry is 10% (vs. NSW 5.2%)[4].

- 152,000+ presentations to the emergency department in 2017[1].

- ISLHD Stimulant Treatment Program (since 2016) provides community-based counselling, medical review and pharmacotherapy (accepts referrals aged 16 years+).

Coledale
Bulli
Wollongong
Port Kembla
Shellharbour
David Berry
Shoalhaven
Milton-Ulladulla

References:
1. Illawarra Shoalhaven Local Health District. Strategic Directions for Illawarra Shoalhaven Health District: 2017-2020: NSW Health, 2017.
2. ABS. Census of Population and Housing, 2016. Australia: Australian Bureau of Statistics, 2016.
3. ABS. Census of Population and Housing: Socio-economic Indexes for Areas (SEIFA). Australia: Australian Bureau of Statistics, 2016.
4. ABS. Labour Force, Australia, September 2018 (cat. no. 6202.0) Australian Bureau of Statistics, 2018.

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Current Study

BACKGROUND

- Existing data capacity in the region presents a unique opportunity to understand methamphetamine care pathways.

- Important for regional planning and service delivery, but also of national and international significance.

- Epidemiological and qualitative data collections, including clinical and consumer consultation.

- Together, these data will inform priorities for intervention and design of a locally-tailored, innovative, integrated model of care.

- Methods:
    1. Regional data analytics - CHRISP/IHIP data
    2. Systematic review
    3. Qualitative interviews

(i) Regional data analytics

Illawarra Health Information Platform (IHIP)

CENTRE FOR HEALTH RESEARCH ILLAWARRA SHOALHAVEN POPULATION (CHRISP)

- Research partnership between UOW and ISLHD (commenced 2016)

Centre for Health Research Illawarra Shoalhaven Population (CHRISP)

- Multidisciplinary team with expertise in research, medicine, public health, pharmacy, epidemiology, statistics, data integration & linkage

Technical platform – Illawarra Health Information Platform (IHIP)

- health records linkage system
- non-identified health databank – ISLHD & other providers
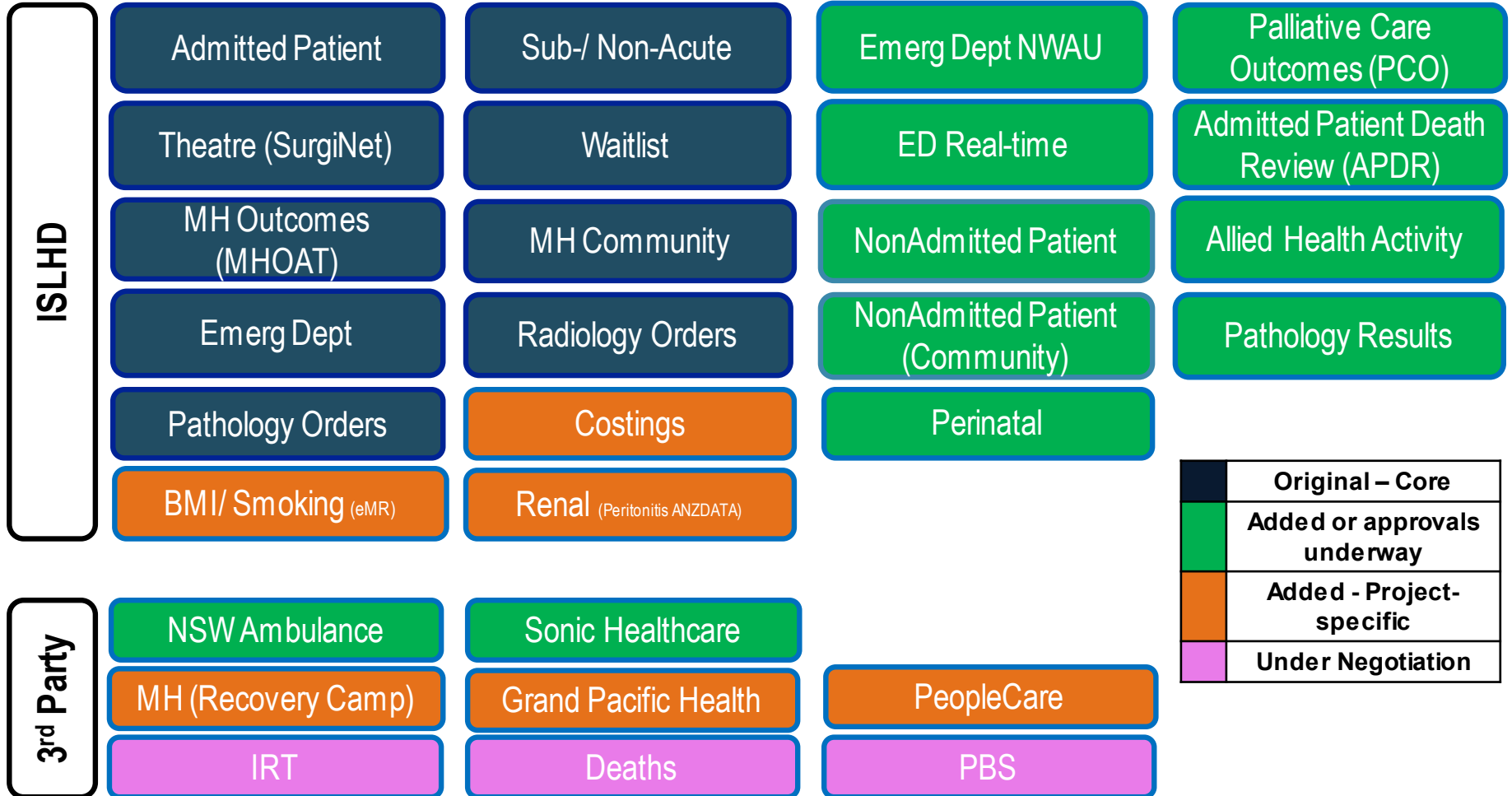- research datasets owned by ISLHD, managed by CSC

Illawarra Health Information Platform (IHIP)
CONTINUED

- **Core business of the research partnership is to:**

  – Provide access to high quality health data

  – Build capacity for research and development

  – Undertake research

  - **Population health, health services & clinical research**

  – Translate research findings into policy and practice

IHIP Data Sets

ISLHD

Admitted Patient	Sub-/ Non-Acute	Emerg Dept NWAU	Palliative Care Outcomes (PCO)
Theatre (SurgiNet)	Waitlist	ED Real-time	Admitted Patient Death Review (APDR)
MH Outcomes (MHOAT)	MH Community	NonAdmitted Patient	Allied Health Activity
Emerg Dept	Radiology Orders	NonAdmitted Patient (Community)	Pathology Results
Pathology Orders	Costings	Perinatal	
BMI/ Smoking (eMR)	Renal (Peritonitis ANZDATA)		

3rd Party

NSW Ambulance	Sonic Healthcare	
MH (Recovery Camp)	Grand Pacific Health	PeopleCare
IRT	Deaths	PBS

	Original – Core
	Added or approvals underway
	Added - Project-specific
	Under Negotiation

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IHIP data: Cohort Study

Emergency department*

Ambulance*

Admitted patient*

Community health

Non-admitted patient

Community mental health

IHIP data: Cohort Study

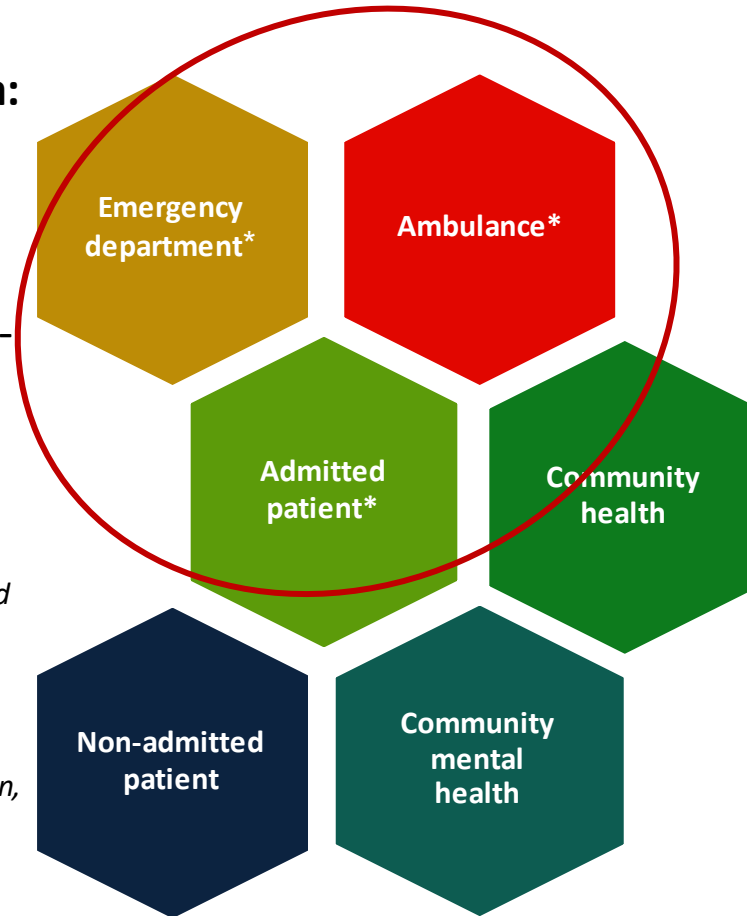**First methamphetamine-related presentation***

IHIP data: Cohort Study

First methamphetamine-related presentation*

Cohort inclusion criteria:
- ISLHD residents
- Aged 16+ years
- Presenting at acute ISLHD services for MA-related problem

* First methamphetamine-related presentation in ambulance, emergency department and admitted patient data will be identified using ICD-10-AM, ICD-9-CM and SNOMED CT codes for amphetamine/ psychostimulant-related disorders, looking across presenting information, additional information, presenting problem, diagnosis_1 - diagnosis_5
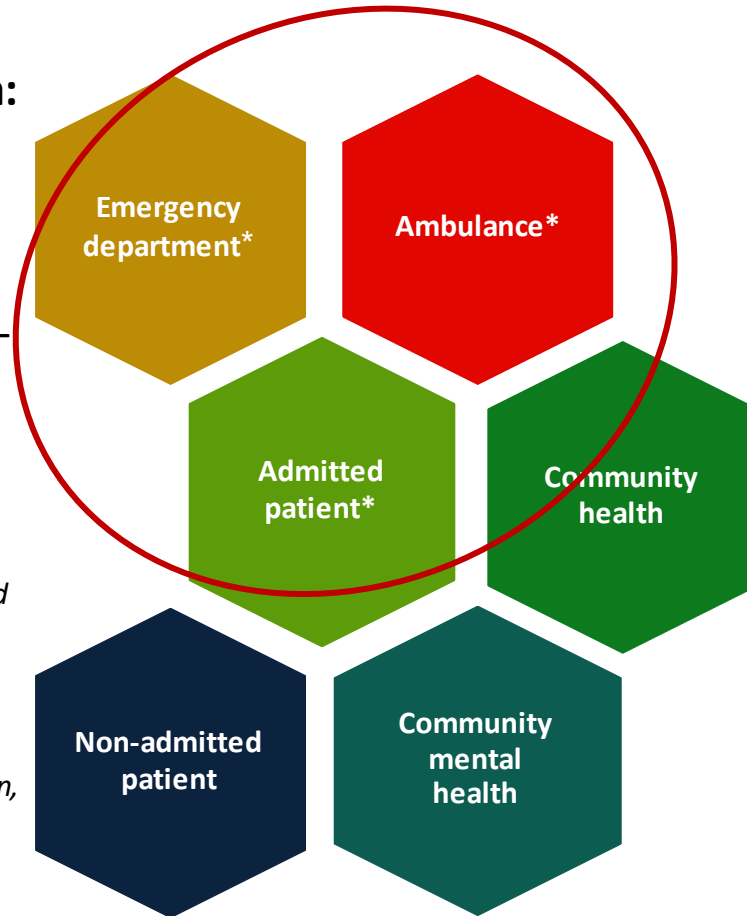

Emergency department*

Ambulance*

Admitted patient*

Community health

Non-admitted patient

Community mental health

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Emergency department*

Ambulance*

Admitted patient*

Community health

Non-admitted patient

Community mental health

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IHIP data: Cohort Study

12 months "look-back" ← | **First methamphetamine-related presentation*** | → **48 months "follow-up"**

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- ISLHD residents
- Aged 16+ years
- Presenting at acute ISLHD services for MA-related problem

* First methamphetamine-related presentation in ambulance, emergency department and admitted patient data will be identified using ICD-10-AM, ICD-9-CM and SNOMED CT codes for amphetamine/ psychostimulant-related disorders, looking across presenting information, additional information, presenting problem, diagnosis_1 - diagnosis_5

Emergency department*

Ambulance*

Admitted patient*

Community health

Non-admitted patient

Community mental health
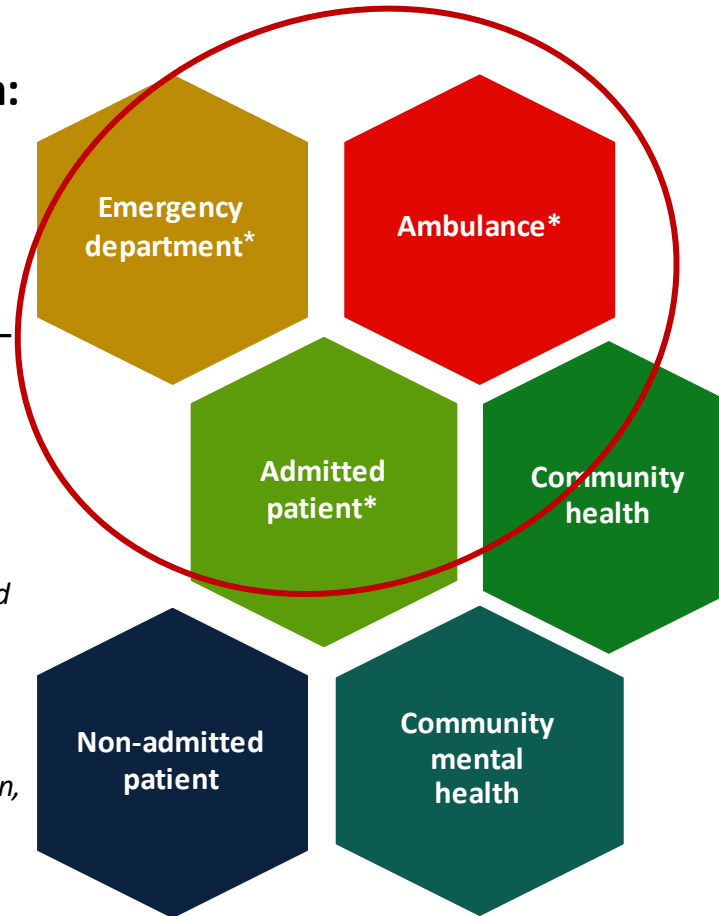
Key outcomes:
- Patient characteristic (socio-demographics, comorbidities, other substance use)
- Visit characteristics
- Temporal trends in health service utilisation
- Persistence in HSU
- Patterns of referral
- Linkage with AOD Clinical Liaison services
- Uptake of AOD services

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(ii) Systematic review

Systematic Review

CHARACTERISTICS AND EFFECTIVENESS OF BRIEF INTERVENTIONS FOR METHAMPHETAMINE USE IN PRIMARY AND ACUTE HEALTHCARE SETTINGS

1. What are the characteristics of brief interventions for psychostimulant use in primary and acute healthcare settings, and what is their level of specificity regarding (meth)amphetamine use and use disorders?

2. What is the evidence on the efficacy/effectiveness of brief interventions targeting (meth)amphetamine use in non-treatment-seeking populations?

Systematic Review
DEFINITION OF 'BRIEF INTERVENTION'

- Aims to reduce psychostimulant use and/or harm

- Time-limited (1-4 sessions)

- 1+ Screening, Brief Intervention, Referral to Treatment (SBIRT) element, AND

- 1+ FRAMES element (feedback, responsibility, advice, menu of options, empathy, self-efficacy)

Systematic Review
METHODS

Primary outcomes:

1. Psychostimulant/ (meth)amphetamine use; and/or

2. Psychostimulant/ (meth)amphetamine-related consequences; and/or

3. Linkages to psychostimulant/ (meth)amphetamine treatment

- *Any primary outcomes related to these domains will be eligible for inclusion. No other outcome measurement will be used for review inclusion criteria.*

Secondary outcomes:

1. Heath service utilisation (e.g., GP, ED, ambulance, hospital)

2. Physical health problems

3. Mental health symptoms (e.g., psychological distress, anxiety, depression, psychotic symptoms)

4. Quality of life

5. Referrals and referral uptake

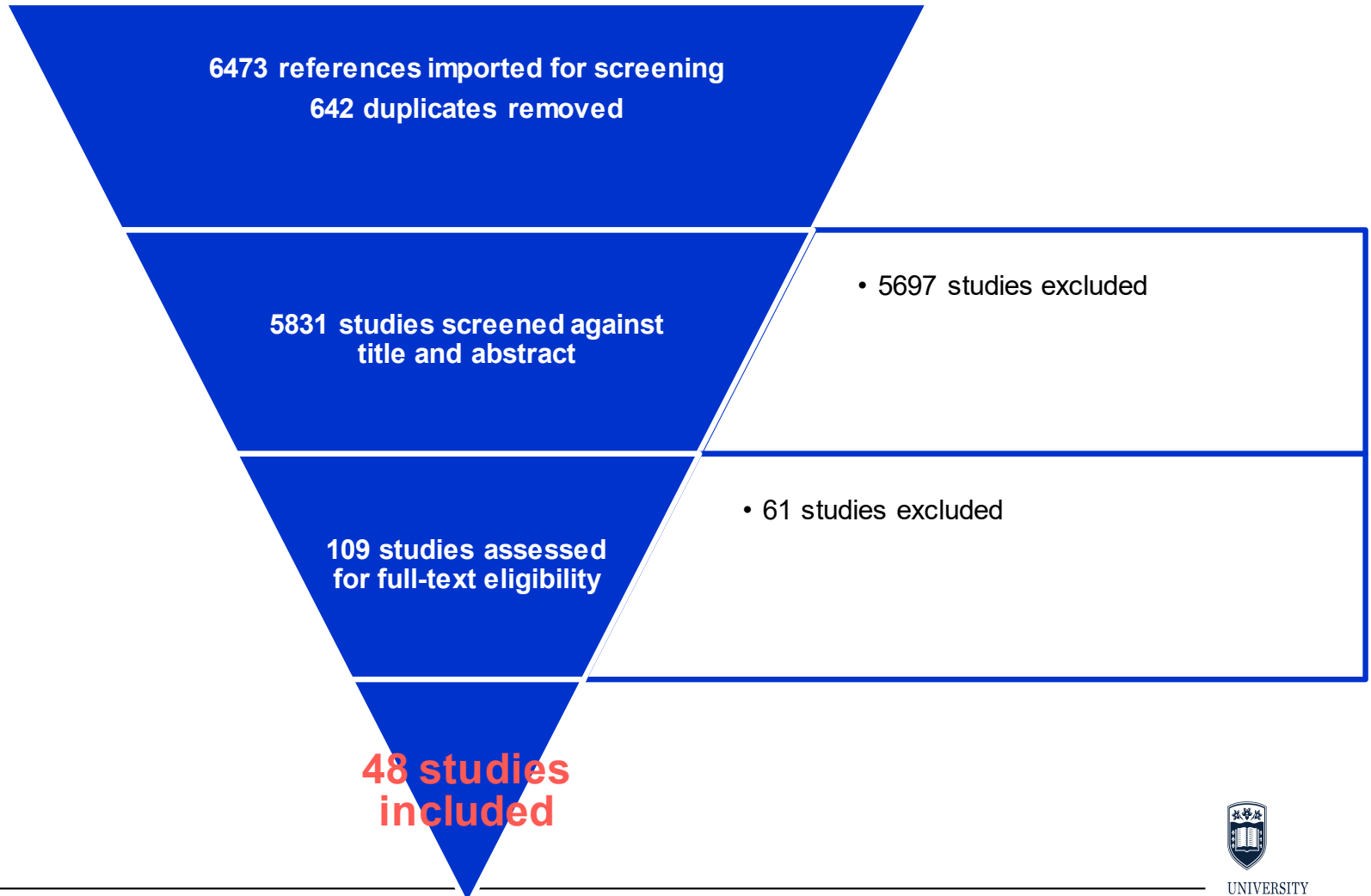- *Data for these secondary outcomes will be collected when reported in the primary studies.*

Other inclusion criteria:

- Peer-reviewed literature

- All intervention study designs (RCTs, non-RCTs, controlled before-after studies, case-control studies, etc)

- English language

- 2000-2019

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Systematic Review
SCREENING COMPLETED

6473 references imported for screening
642 duplicates removed

5831 studies screened against
title and abstract

- 5697 studies excluded

109 studies assessed
for full-text eligibility

- 61 studies excluded

48 studies
included

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(iii) Qualitative interviews

Qualitative interviews

VIEWS OF ISLHD CLINICIANS AND PEOPLE WHO USE METHAMPHETAMINE

CLINICIAN INTERVIEWS (N=15)

Semi-structured interviews with clinicians working in AOD, mental health, inpatient hospital and ED settings.

Key outcomes:

- Local clinical pathways for people experiencing methamphetamine-related harm.
- Effectiveness of existing strategies
- Opportunities for improving models of care
- Barriers to changing practice.

PEOPLE WHO USE METHAMPHETAMINE (N=20)

Semi-structured interviews with people living in ISLHD region who use MA (including both in- and out-of-treatment populations).

Key outcomes:

- Help-seeking strategies and preferences
- Opportunities for improving linkage with harm reduction and treatment services
- Barriers to help-seeking

Summary and conclusions

Research Outcomes

- Describe the demographic and clinical profiles of people who present to ISLHD emergency/acute healthcare services for MA-related problems (including young people).

- Understand the proportion of people referred to specialist AOD services, the proportion who attend AOD services, and predictors of these outcomes.

- Understand coding issues in emergency/acute healthcare settings.

- IHIP data will be used alongside the systematic review and qualitative interviews with ISLHD staff and people who use MA to inform a screening/referral intervention that can be implemented and evaluated.

Capacity-building

- New research partnerships

- Co-led by clinicians and researchers with the aim of generating immediately-translatable evidence to inform practice

- Research capacity-building

- Building research track records and profile

- ISLHD investigators are involved at each stage, including planning, data collection and co-designing future intervention(s)

Thank you

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