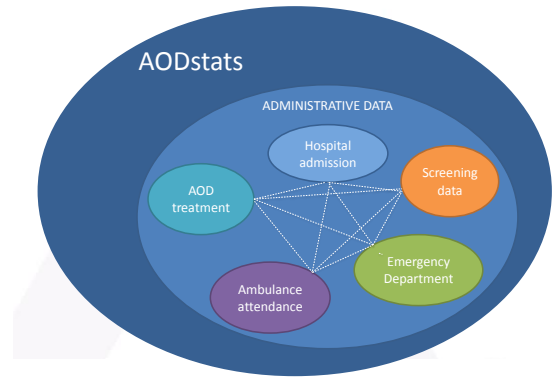


INNOVATIVE DATA TO INFORM POLICY PLANNING AND INTERVENTION

A/Prof Belinda Lloyd
 Jessica Killian
 Dr Caroline Gao
 Dr Fiona Barker
 Sharon Matthews
 Dr Cherie Heilbronn
 Dr Karen Smith



2

DEMAND MODELLING Developing data methods for needs-based planning

Dr Fiona Barker & Dr Caroline Gao
 11 November 2015



Why?



- Planning and forecasting
- Resource allocation
- But...very little information

Despite its obvious importance, health planners have very few tools to model service demand

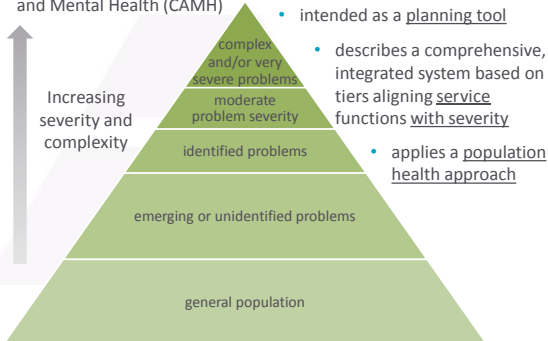


www.turningpoint.org.au



Tiered model - Canada

Developed by Professor Brian Rush from the Centre for Addiction and Mental Health (CAMH)



5

Victorian Tiered Model



Comprised of:

- AOD problem severity (likely dependence)
- Life complexity factors: mental health, employment/school, housing, pregnancy, gambling, legal, children, physical health

Tier	Description	Complexity
5	COMPLEX/HIGH SEVERITY likely dependence	4+
4	CHRONIC HARM likely dependence	2-3
3	RISK/HARM likely dependence	0-1
1/2	LOW TO MODERATE RISK no likely dependence; early intervention and prevention	

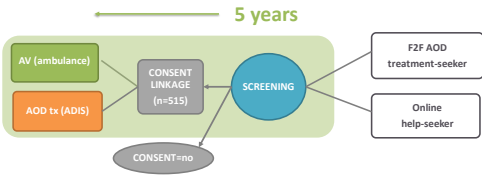
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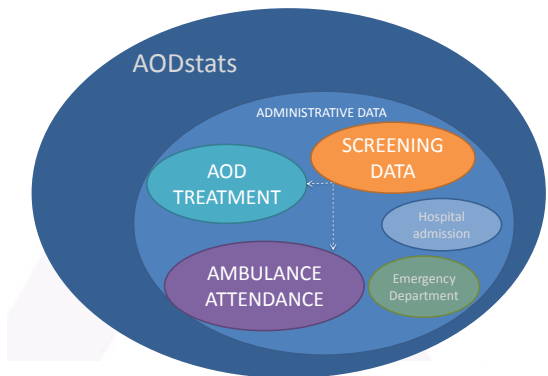
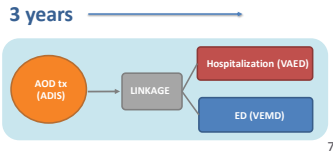
6

Applying the model: 2 key applications

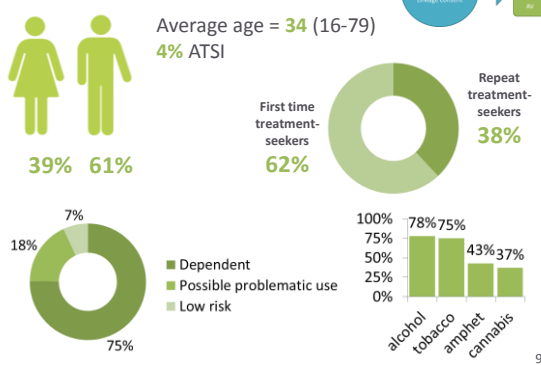
1. RETROSPECTIVE



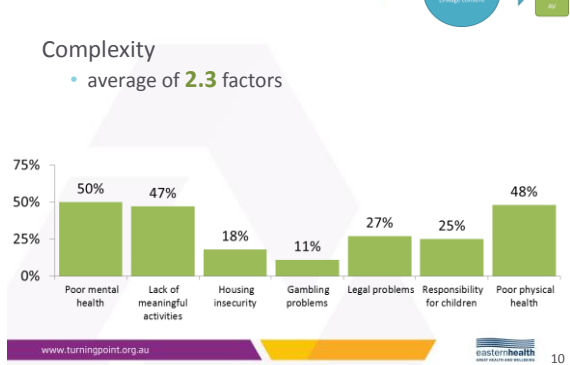
2. PROSPECTIVE



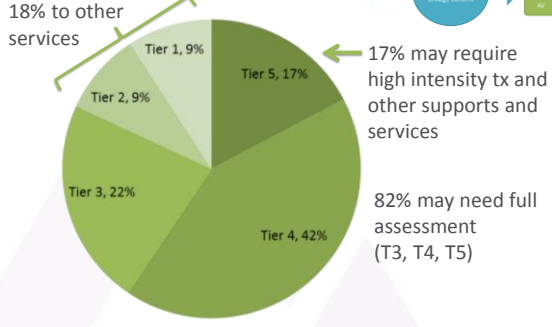
1. Retrospective (screen consents)



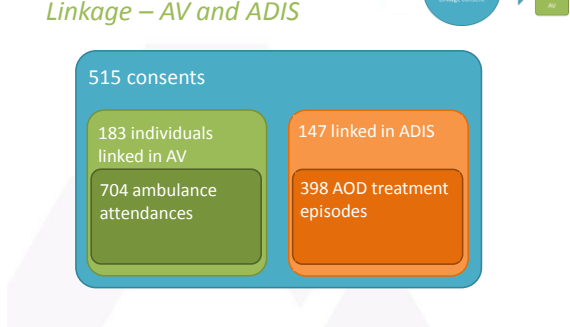
1. Retrospective (screen consents)



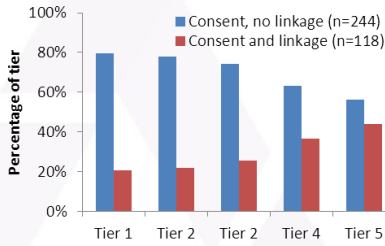
1. Retrospective (screen consents)



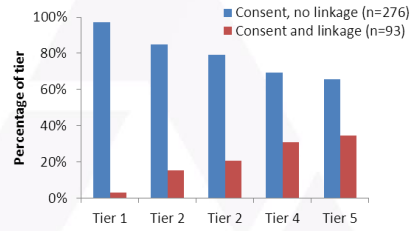
1. Retrospective (screen consents)



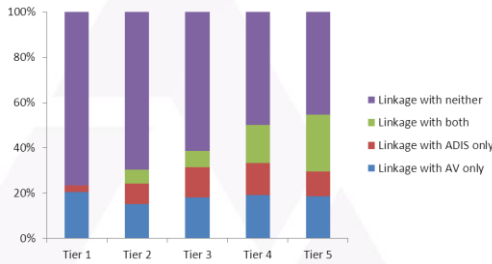
1. Retrospective (screen consents)
Ambulance attendances



1. Retrospective (screen consents)
AOD treatment episodes

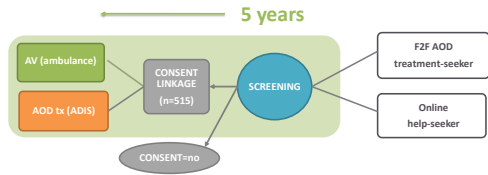


1. Retrospective (screen consents)
Combined service use

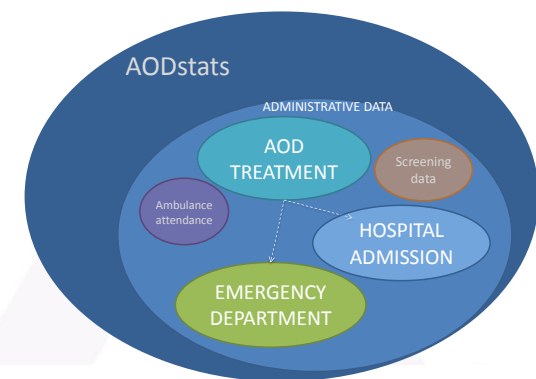
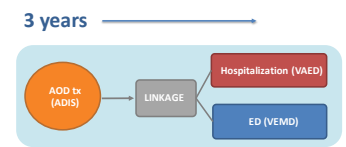


Applying the model: 2 key applications

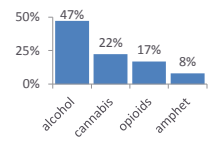
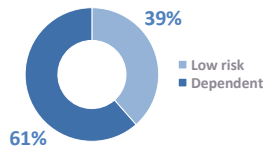
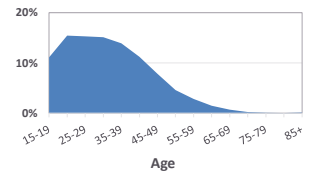
1. RETROSPECTIVE



2. PROSPECTIVE



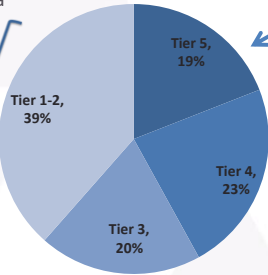
2. Prospective (linkage)



2. Prospective (linkage)



Higher than screening data due to under-reporting of risk factors

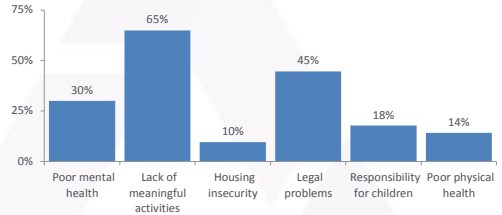


Higher than screening data due to lower cut-off

2. Prospective (linkage)



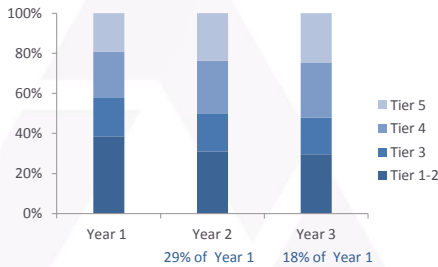
Complexity average of 1.9 factors



2. Prospective (linkage)



Distribution of tiers by year



29% of Year 1 18% of Year 1

2. Prospective (linkage)



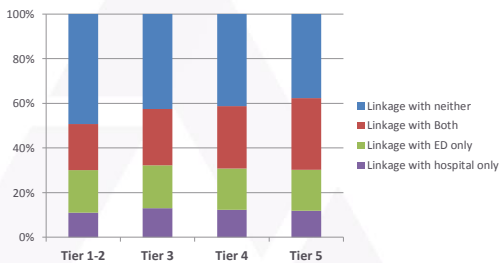
Survival in Year2 and Year 3 by tiers



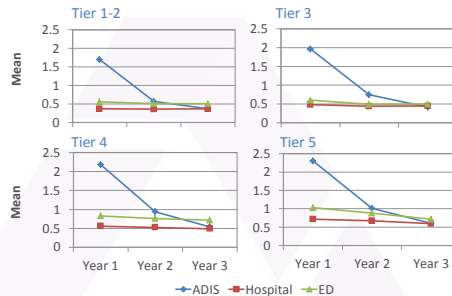
2. Prospective (linkage)



Combined service use



2. Prospective (linkage)



The tiered model:



- Population-level tool
- Metric that integrates multiple risk factors
- Uses measures that are flexible
- The data (screen/administrative) are cost-effective
- Maps demand and specialist AOD treatment need

Preliminary analysis suggests that the tiered model effectively reflects a spectrum of service needs

... and it provides a

- Clearer picture
- Broader picture

How can we use the tiered model?

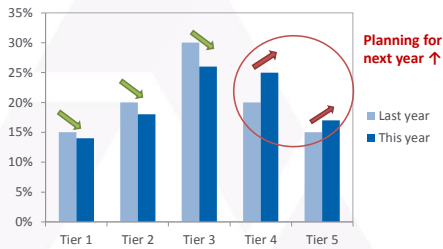


- Opportunity for further analysis with data-linkage
- Evaluate treatment pathways and client outcomes
- Trends as predictors for resource need/allocation
- Can provide valuable information about access

How can we use the tiered model?



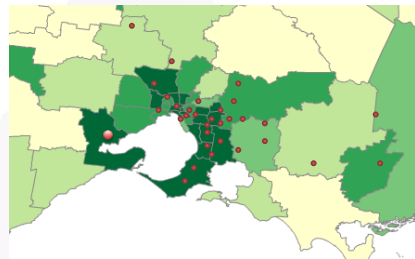
- Changes over time



How can we use the tiered model?



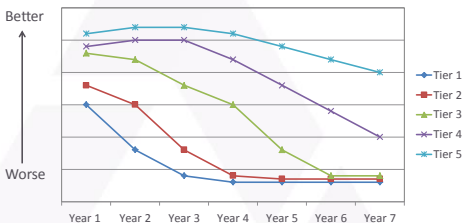
- Trends in spatial distribution



How can we use the tiered model?



- Can be embedded into longitudinal studies



Acknowledgements



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