What next for health and homelessness data linkage in Scotland ?

Delving Deeper

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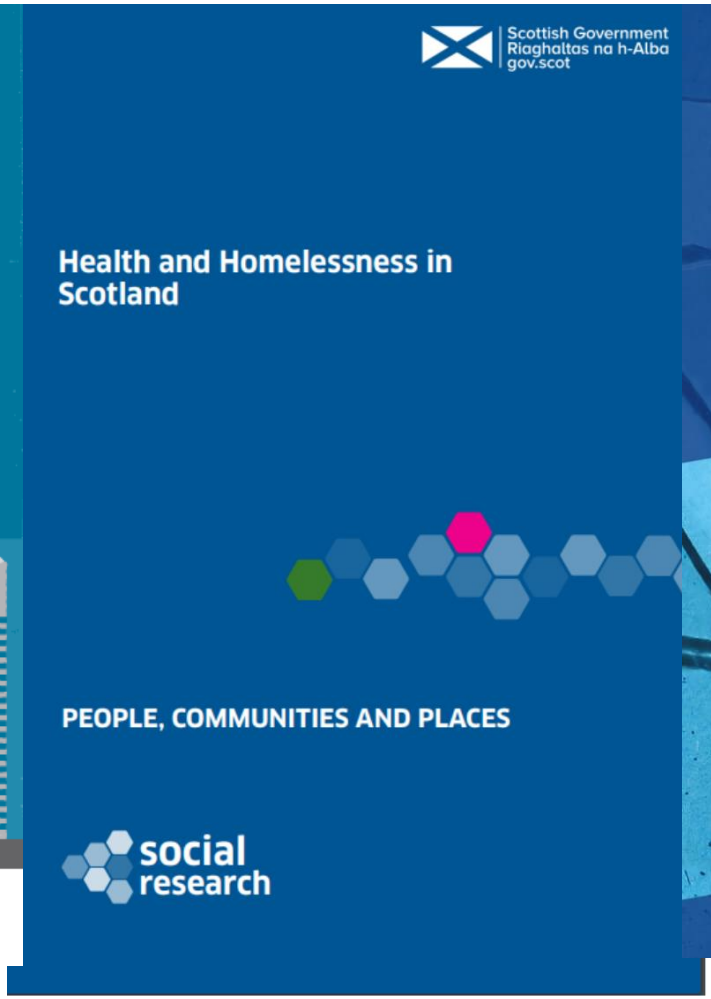
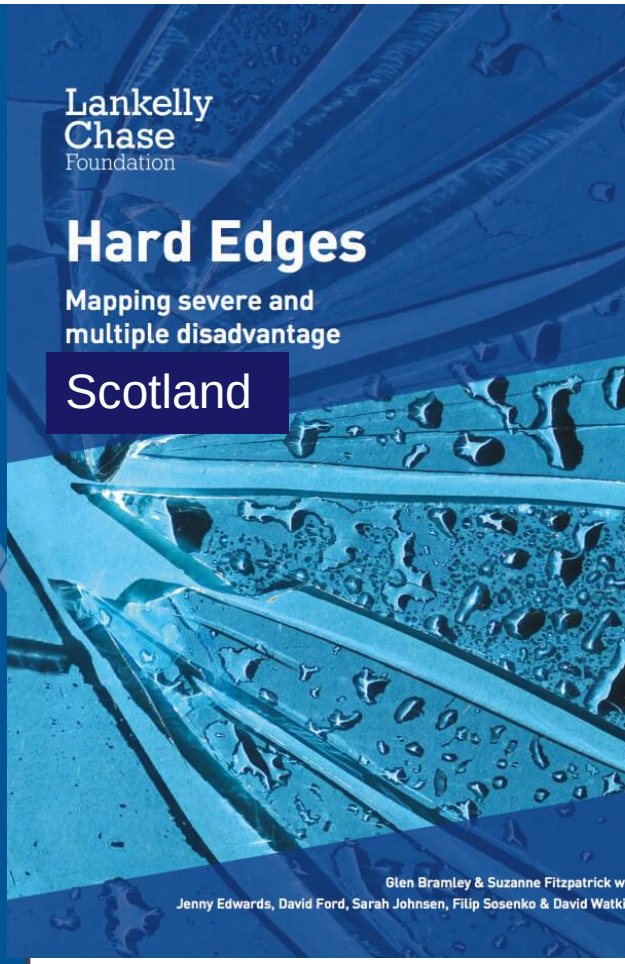
Today's 'Must Reads'





http://tinyurl.com/hhscot

https://www.crisis.org.uk/media/240002/the_homelessness_monitor_scotland_2019.pdf

https://lankellychase.org.uk/resources/

Data – Linkage as driver for:

Improvement in understanding of:

- causes
- consequences
- interventions

Improvement in:

- service design
- joint working
- client journey

Root Causes

Consequences → **Interventions**

Improved personal outcomes

How can new analyses translate into new areas and actions?

High Level Research Questions

- What number and proportion of interactions with health services can be attributed to homeless people?
- (healthcare uptake to homelessness status)

Demand on the Healthcare system

- How many homeless households have multiple or complex needs?
- (homelessness status to health care uptake)

Expressed needs of homelessness community

Methodology

HL1 data (EHC)
People assessed as homeless by LAs

Comparator 1 (LDC)
People living in 20% least deprived areas

Comparator 2 (MDC)
People living in 20% most deprived areas

Secure data linkage

A&E attendances

Hospital admissions

Outpatient clinics

Prescribing

Drug services

Deaths

15 years of data – 1.3 million people in total

Ask the Right Questions

- From whose perspective?
  - Service
  - Client / Client Group
- For what purpose?
  - Cost
  - Effectiveness (right)/ Efficency (well)
  - Trauma-informed

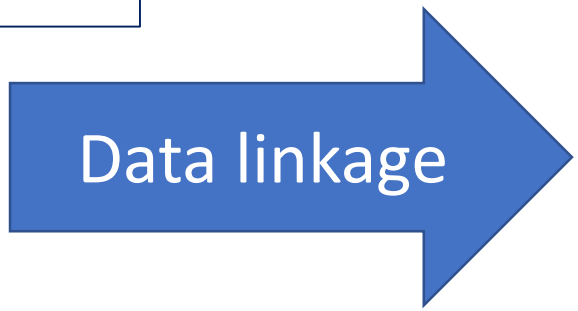
Compose a question that data linkage could answer for your situation / share and discuss

Your Methodology

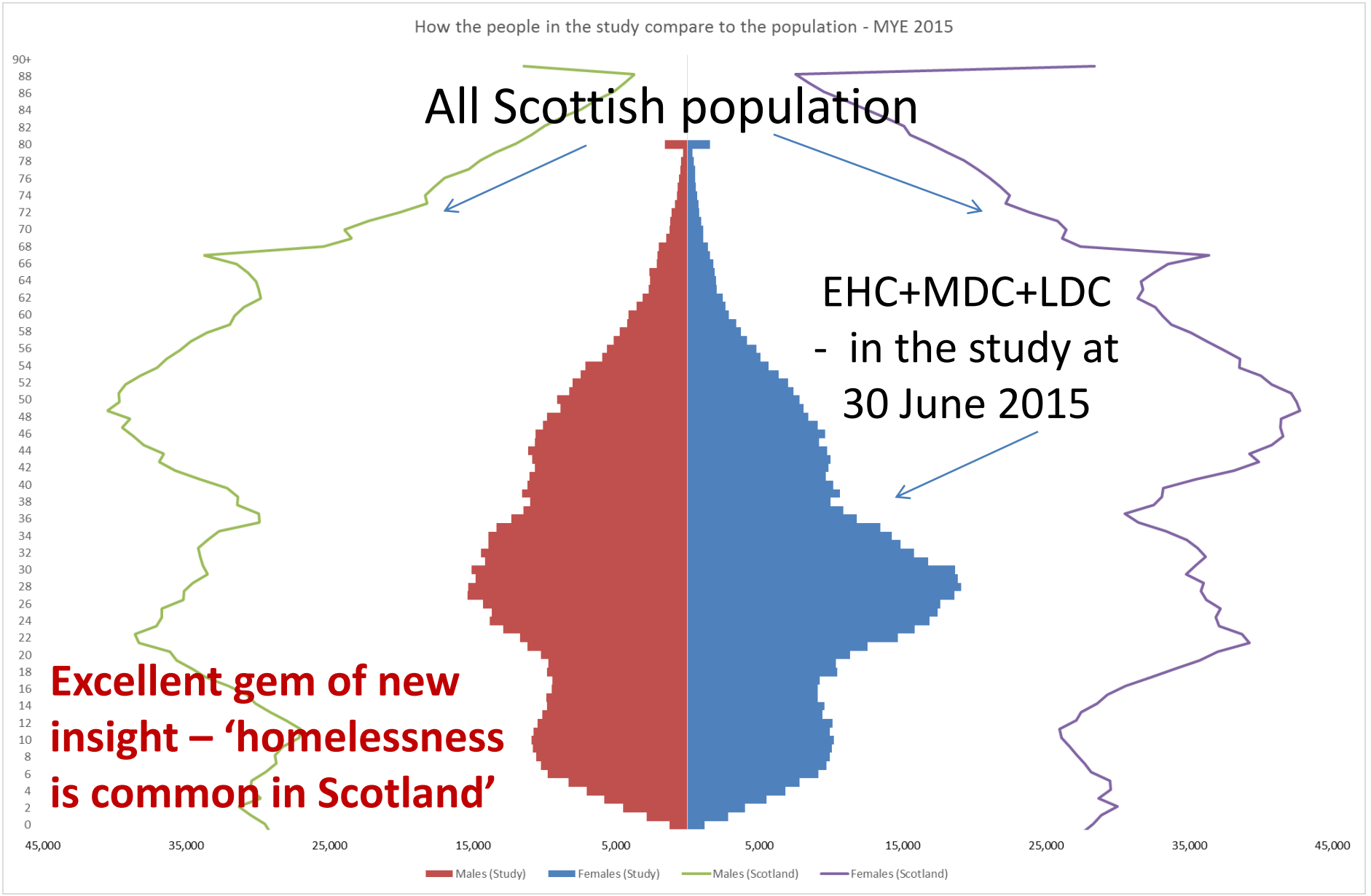
Homeless
(define dataset)

Comparator 1

Comparator 2

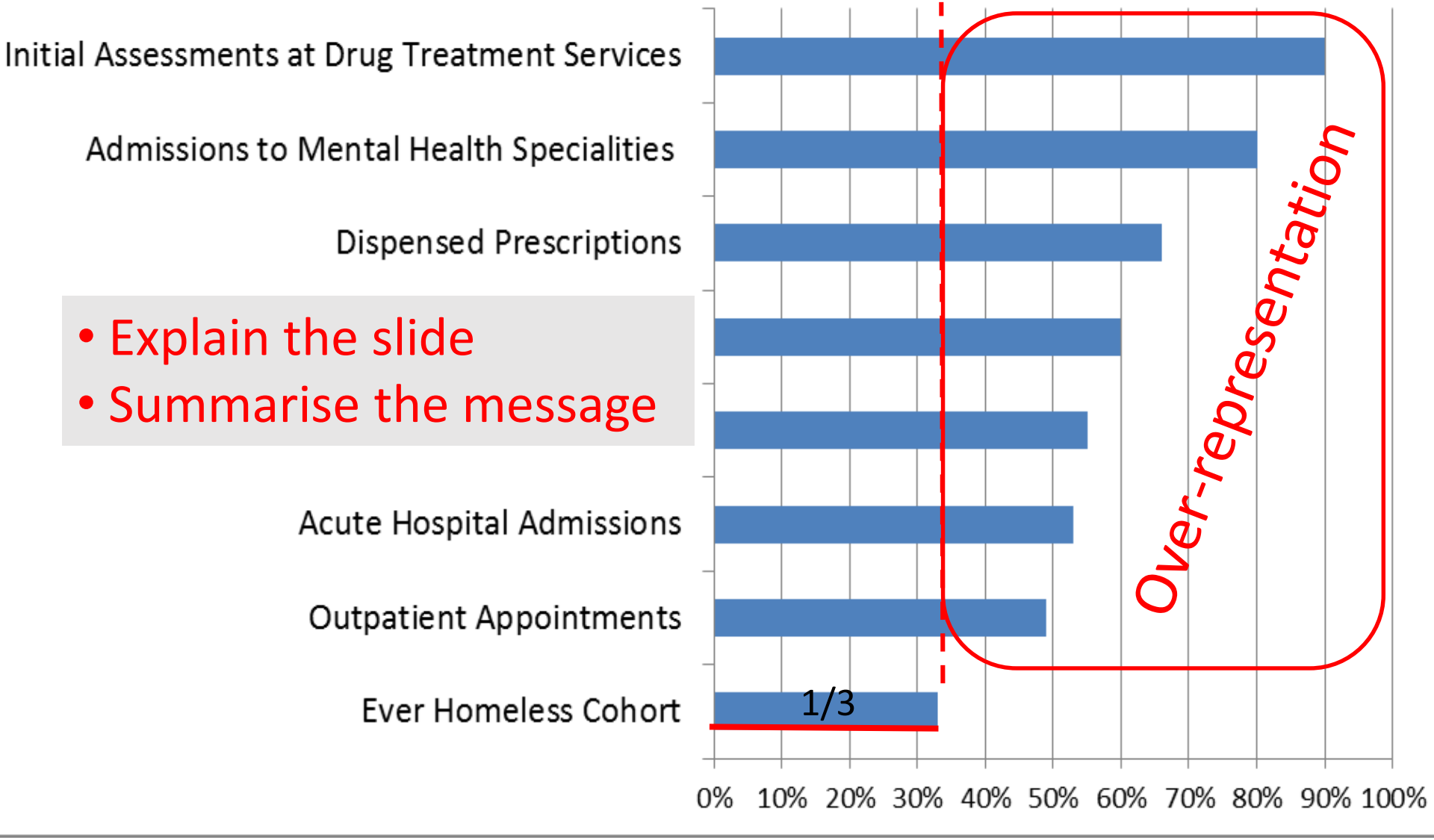


At least 8% of the Scottish population has been homeless at some point in their lives



Excellent gem of new insight – 'homelessness is common in Scotland'

Proportion of Interactions with each Health Service Dataset



- Explain the slide
- Summarise the message

People in the EHC are over-represented in all datasets

Proportion of cohort, by gender using selected services

- Interpret the data
- Analyse the meaning of the data
- Take analysis to create implications for change

A&E	68%	⟷	52%	⟷	38%	32%
Inpatient	61%	⟷	44%	⟷	32%	31%
Outpatient	80%	⟷	63%	⟷	54%	58%
Mental Health	7.2%	⟷	1.4%	⟷	0.4%	0.4%
SDMD	8.8%	⟷	1.2%	⟷	0.1%	0.0%

SDMD = Scottish Drugs Misuse Database

Understanding Ratio Differences

A&E Attendances	Number	Ratios
EHC	1,160,127	EHC:MDC
(ratio - 1)*100 = percentage change		
LDC	÷ 332,240	EHC:LDC
Total hospital attendances	2,118,143	= 3.5

2.1 million A&E attendances 1 Jan2011 to 31 Dec 2016 for the 1.3 million people in the study.

EHC has 3.5 times more A&E attendances than the LDC

Another way -the rate of A&E attendance was 250% higher

Cohort Ratio Differences – Key Slide

Dataset (health care utilisation or health outcome)	Ever Homeless vs Most Deprived	Ever Homeless vs Least Deprived
A&E	1.8	3.5 250%
Acute Hospital Admissions	1.7	3.1
Outpatient Appointments	1.6	2.3
Dispensed Prescriptions* • Opioid • Alcohol	2.5 6.5 3.9	8.2 169 16,800% 23.6
Admissions to Mental Health Specialities	4.9	20.5
Initial Assessments at Drug Treatment Services	10	133 13,200%
Deaths	2.1	5.3 430%

Explain this slide to your manager

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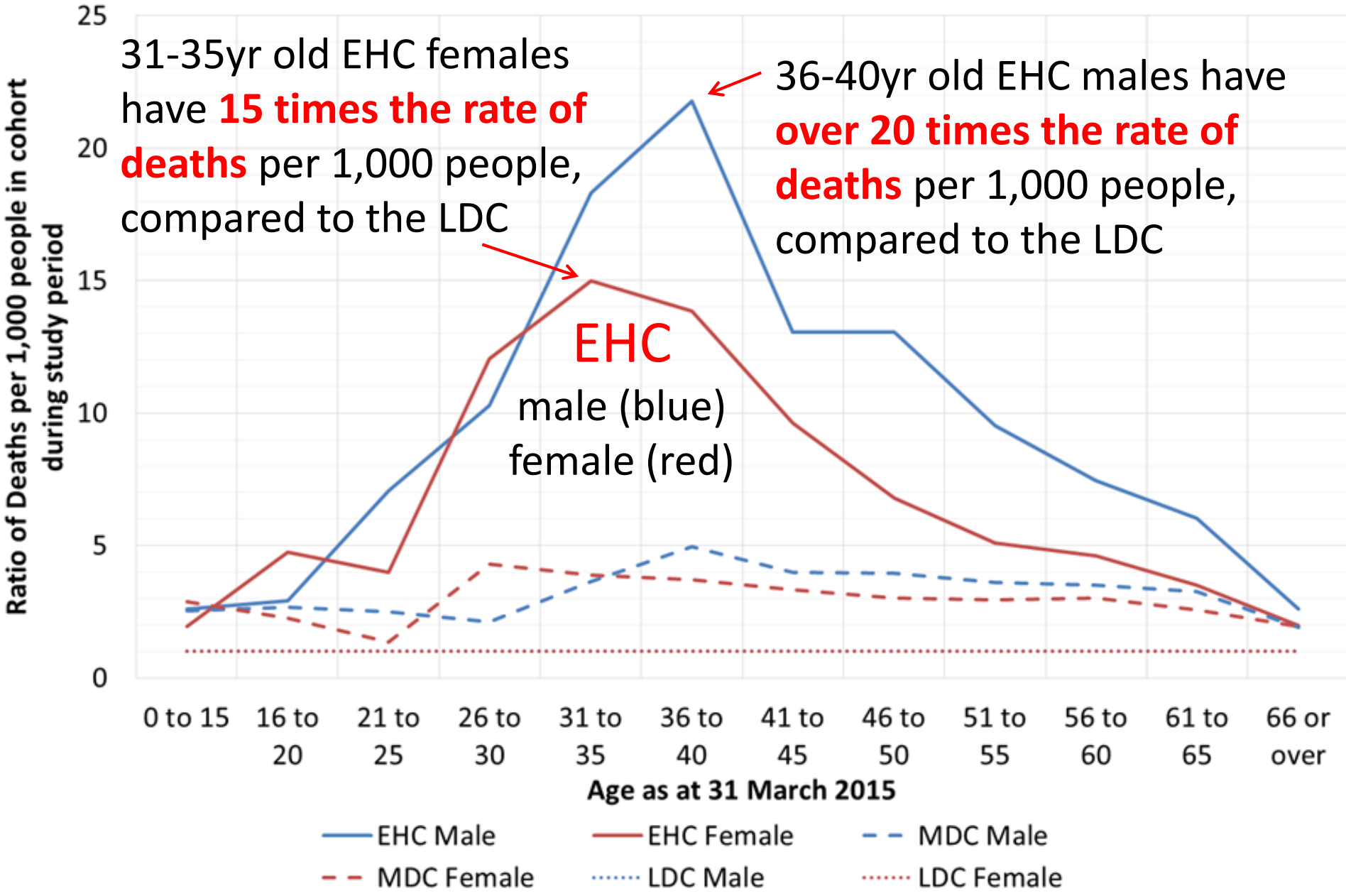
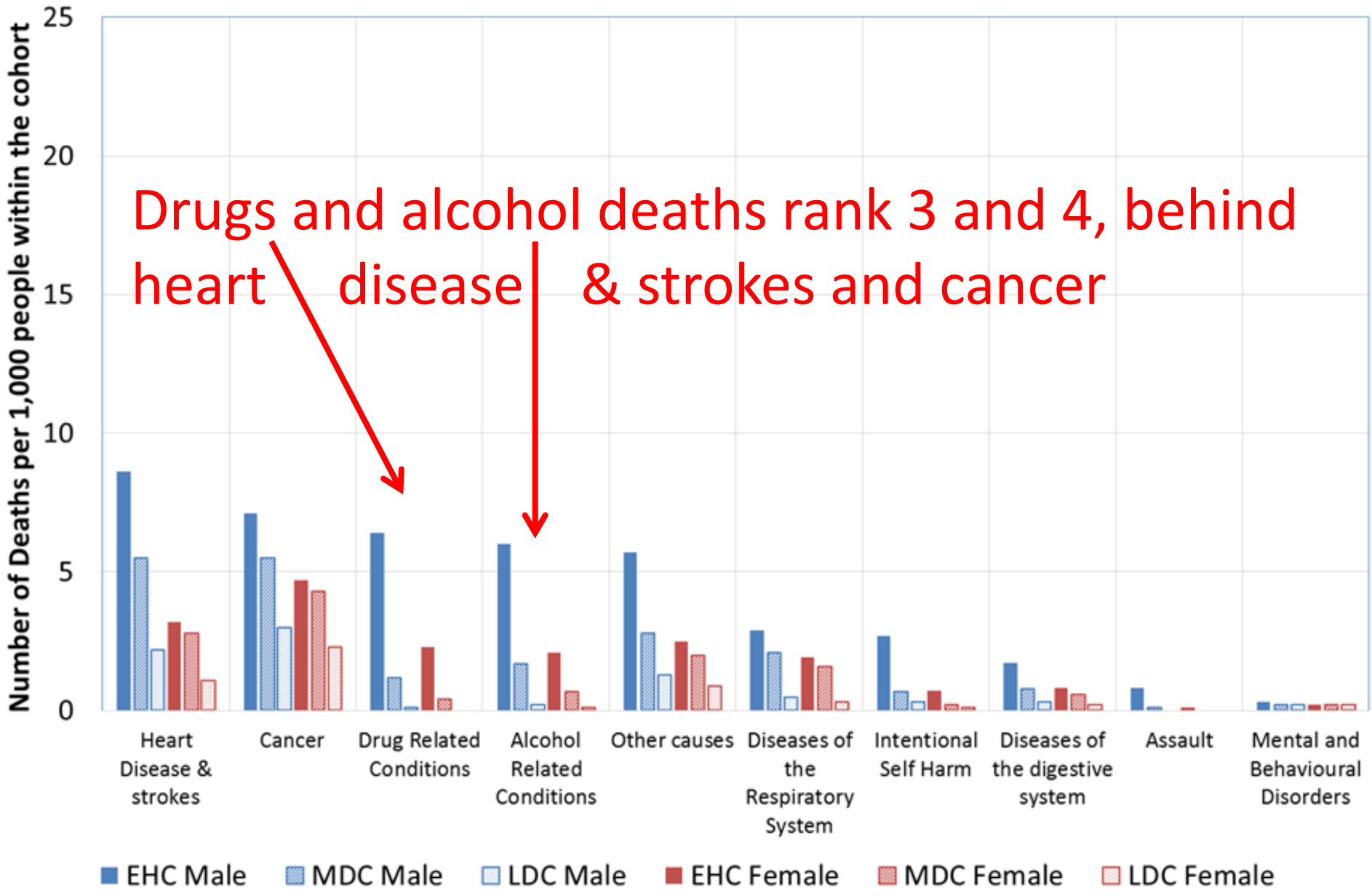
Who dies and when?



Death by ? – Once only Homeless



Death by ? – Repeat Homeless

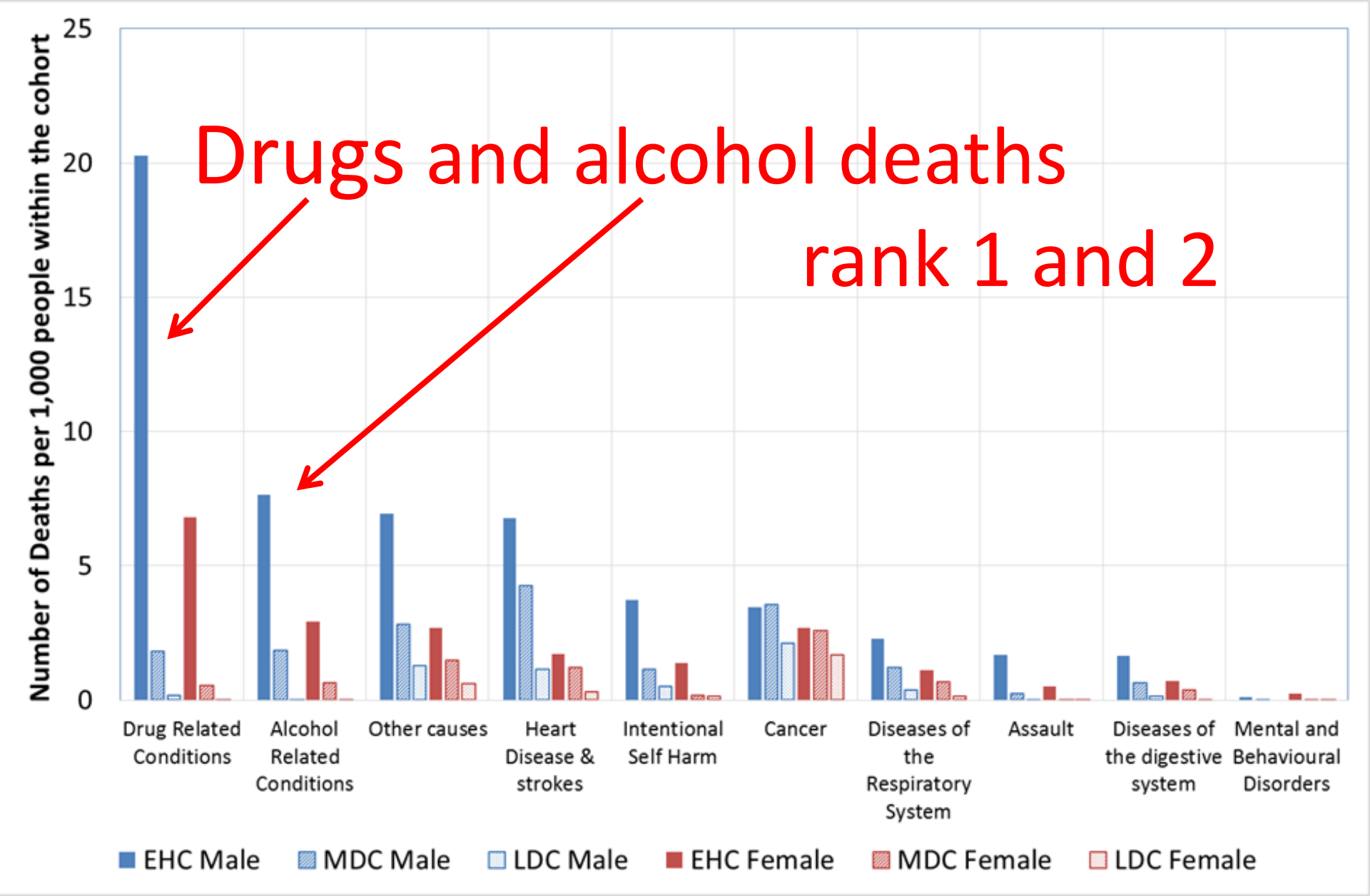


Figure 11.1a: An increase in health activity precedes the first homelessness assessment for **males.** Some a
after this date, particularly for drug-related and alcohol-related acute admissions, and for repeat homeless pe
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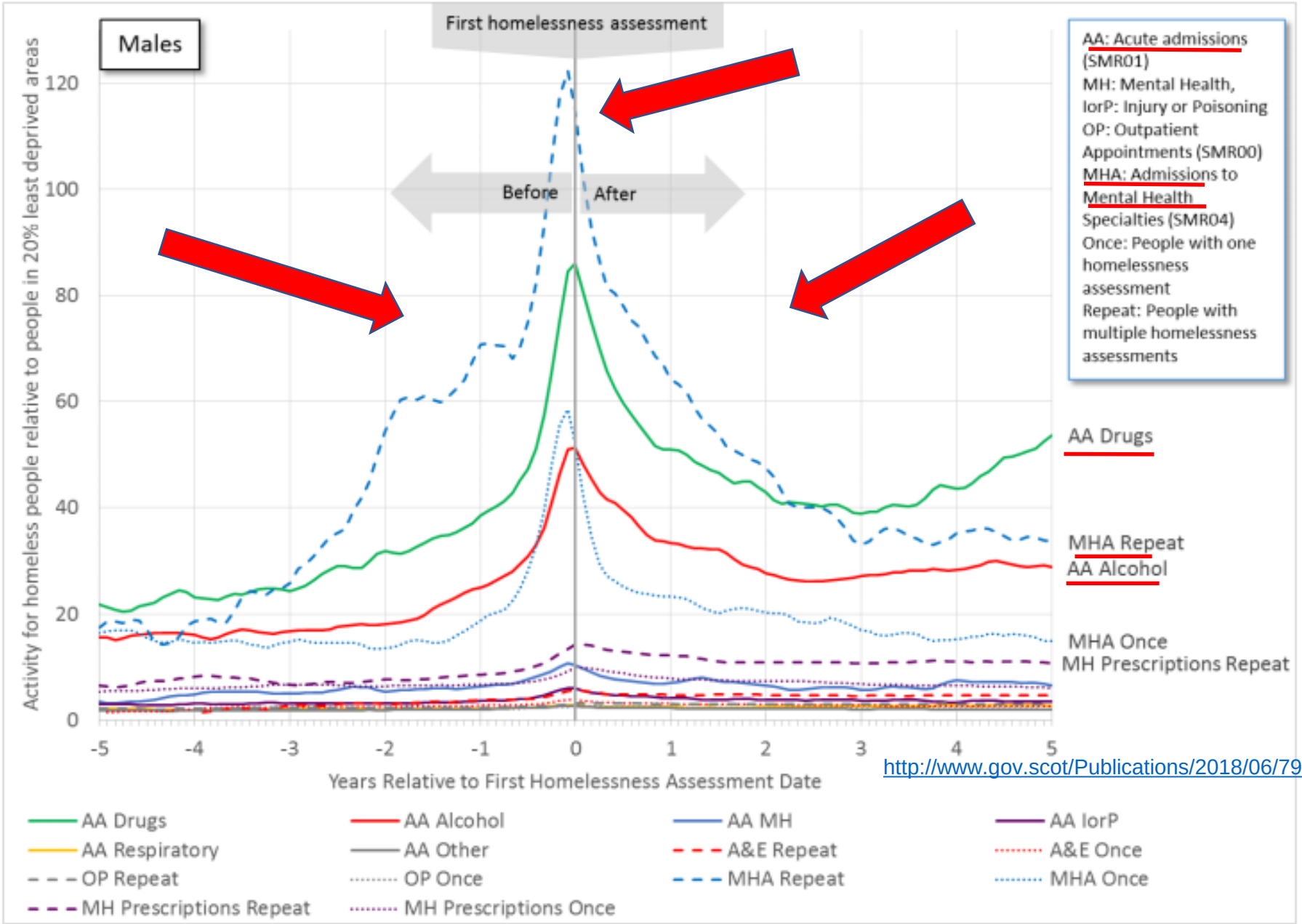
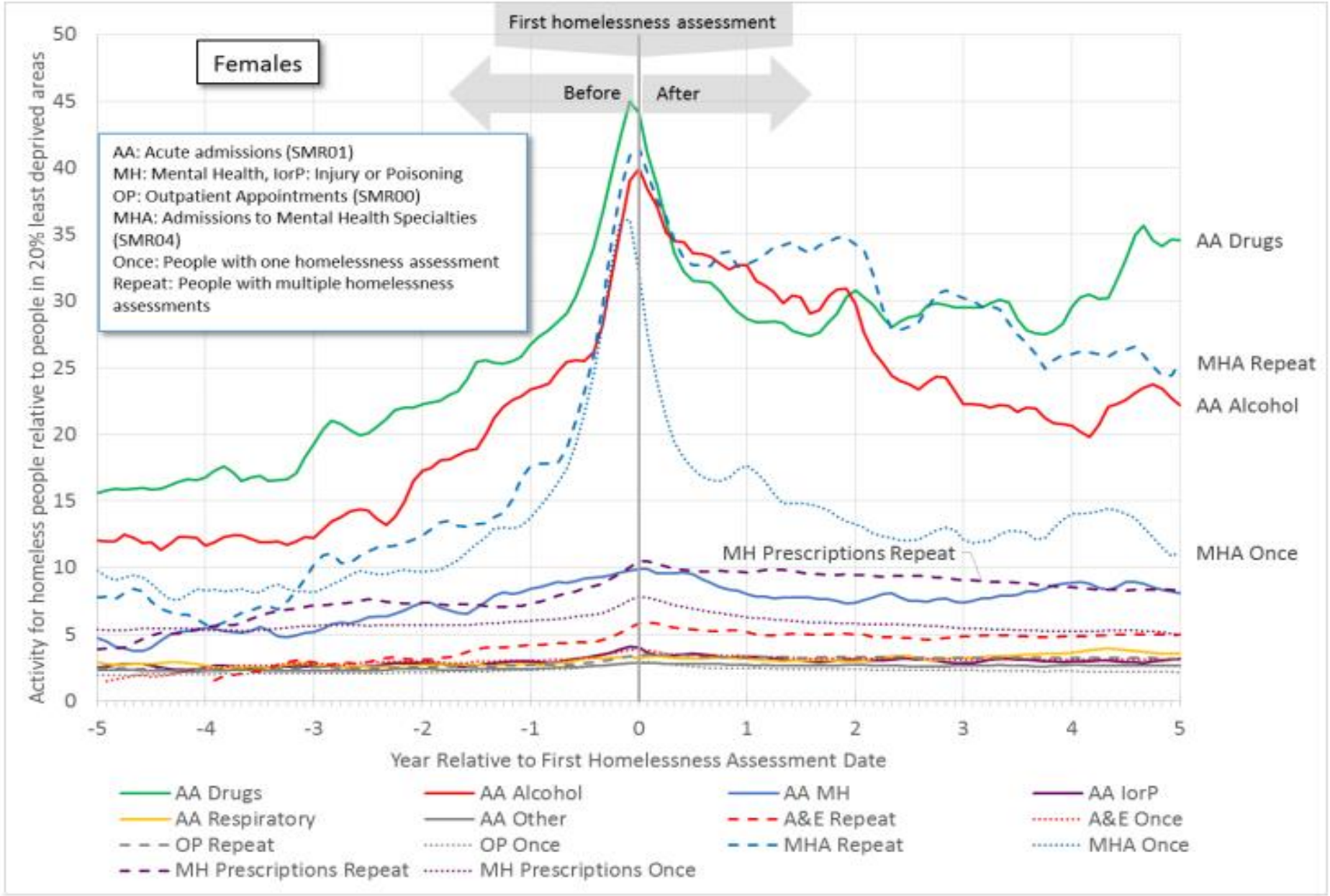
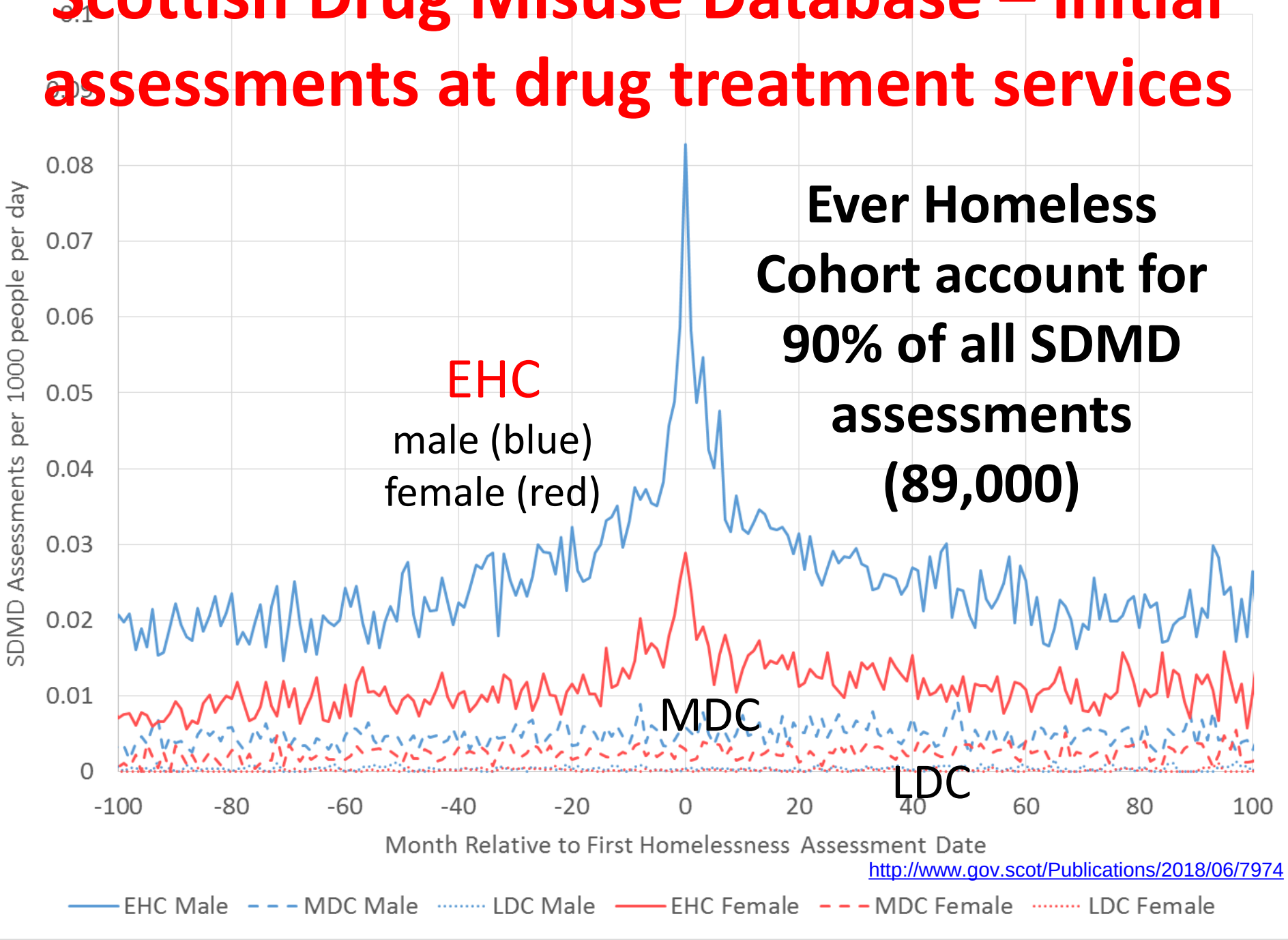


http://www.gov.scot/Publications/2018/06/7974

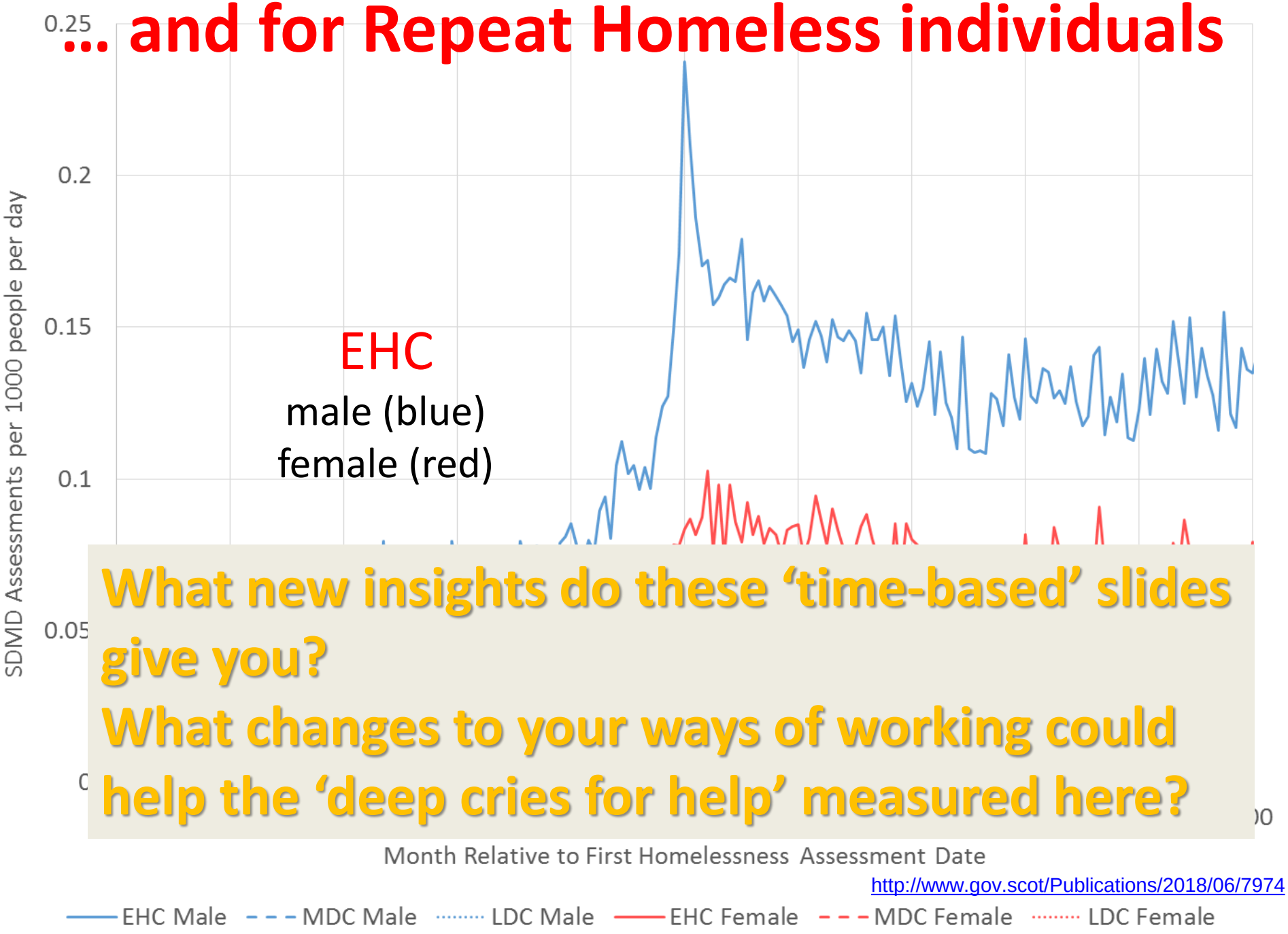
Figure 11.2a: An increase in health activity precedes the first homelessness assessment for **females.** Sor higher after this date, particularly for drug-related and alcohol-related acute admissions, and for repeat hor health admissions (SMR04) and mental health prescriptions.



Scottish Drug Misuse Database – initial assessments at drug treatment services



… and for Repeat Homeless individuals

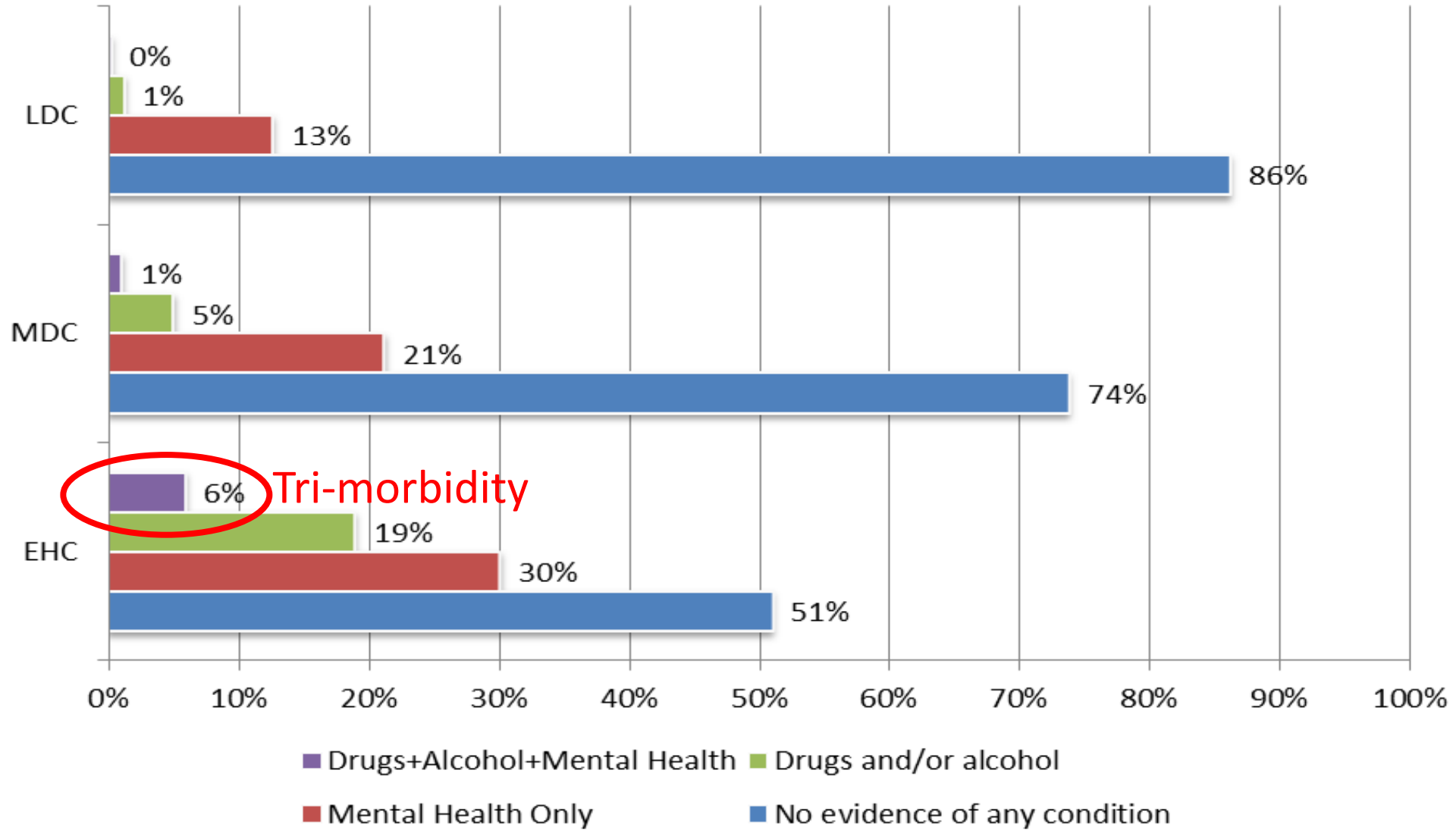


What new insights do these 'time-based' slides give you?

What changes to your ways of working could help the 'deep cries for help' measured here?

http://www.gov.scot/Publications/2018/06/7974

100 people from each cohort. Analyse service uptake of Drug and/or Alcohol-related, Mental Health or all 3 (tri-morbidity)



EHC: 51% None; 30% Mental Health Only; 19% drugs and/or alcohol, Tri-morbidity 6%

Ever vs Repeat Homelessness - analysis

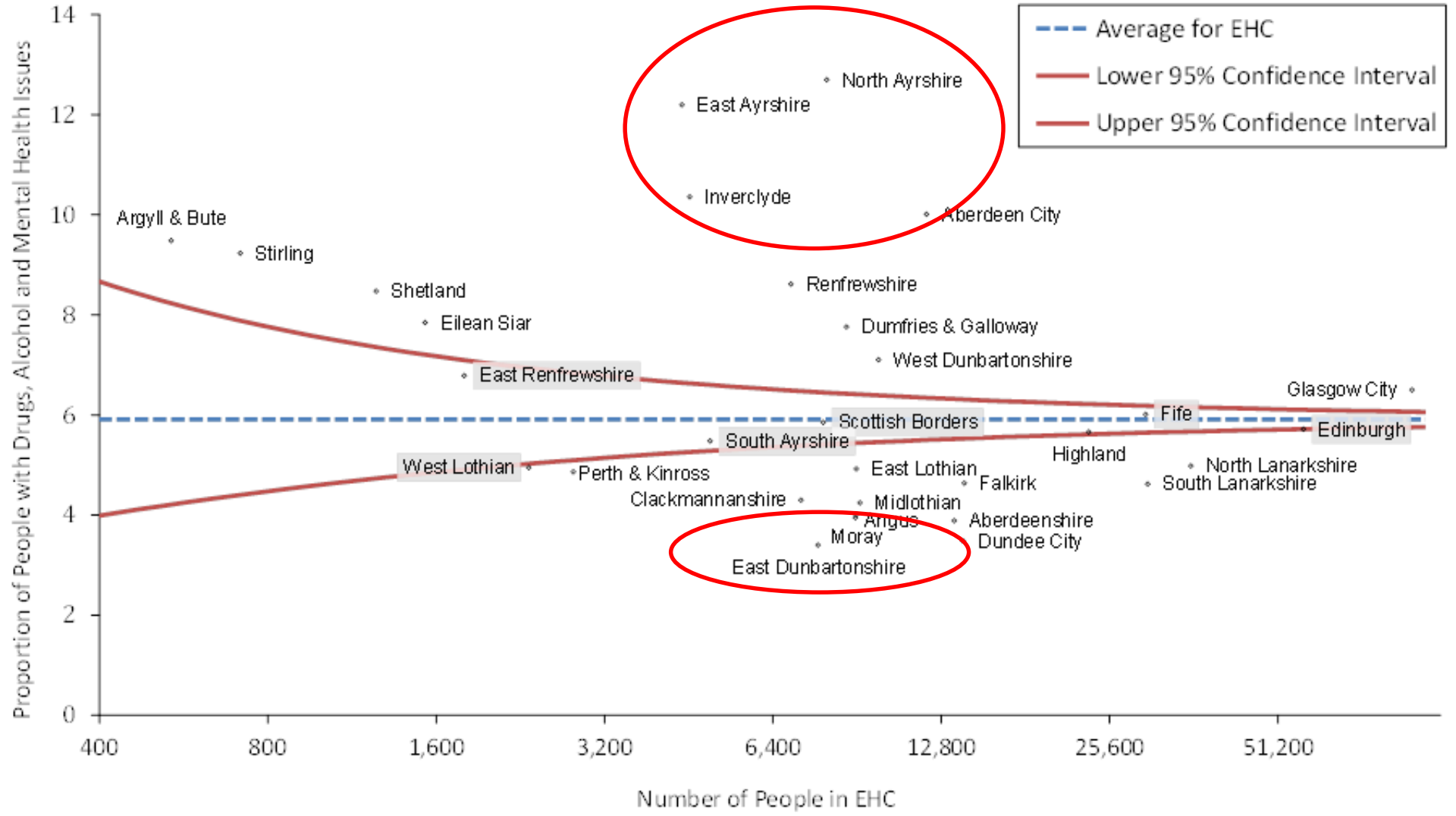
- 6% of people in EHC had tri-morbidity
- Much higher than control groups (MDC 1%, LDC 0.2%)
- 11.4 % in those with Repeat Homelessness (11.4%)

	Once Only	Repeat
	EHC	EHC
Number of People in the Cohort	316,067	119,786
proportion with:		
None	55.4%	39.3%
Any - mental health	43.6%	59.4%
Any - drugs	9.8%	26.4%
Any - alcohol	8.1%	17.2%
Alcohol, drugs and mental health	3.8%	11.4%

Deeper into Tri-morbidity

- 6% EHC
- 11.4% Repeat Homelessness
- **13%** in those who had become homeless after being looked after by a local authority
- **25%** in those who had been looked after and slept rough at some point
- **27%** in those who had become homeless after being discharged from prison

Drugs+Alcohol+Mental Health by Geography



North and East Ayrshire have the highest proportion of EHC people with evidence of drug, alcohol and mental health interactions.

Story so far....

- *A robust and groundbreaking national piece of data-linkage work – taking Scotland to centre stage of health inequalities and homelessness research.*
- **Analysis by:**
- Healthcare and death datasets
- Temporal association with first homeless application
- Person-level alcohol, drug and mental health service uptake

What we don't yet know...

- By Geographies:
  - NHS Board area
  - By Local Authority area
  - By HSCP area
- By Exposure to:
  - Looked after experience
  - Educational attainment
  - Contact with Justice system (youth and adult)
  - Ex-military
- By status:
  - Migrant / Immigrant
  - NRPF
  - Rough sleeping
- By Housing status:
  - Type of tenure
  - Place measures
  - Prevent First
  - HL3
- By health outcome:
  - CVD
  - Cancer
  - Respiratory
  - Diabetes
  - Infection
- Comparisons with:
- National health inequality measures

Questions to ask ourselves....

- Should housing status be a required dimension of GP and hospital admission records?
- Housing is the (missing) stabilising third leg of effective health & social care integration?
- Maximise the Housing Associations ability to protect and improve wellbeing and reduce health inequalities amongst their tenants.
- Seek to demonstrate RSLs impact on wellbeing.
- Lobby Public Health Scotland to prioritise housing as core determinant of wellbeing.

What next....

- Reiterate findings by wide dissemination of results to Scottish Government, public service leaders & wider society
  - Journal publications
  - Conference / workshop presentations
  - Media coverage and discussion
- Respond with high level interpretation and implications for government, public services and third sector action
- Re-analyse current data set to address emerging issues and questions
- Re-use data-linkage process by adding other data sets to address impact of other social determinants and social consequences
- Re-visit in 5 years time to assess impact of current policy changes in process