MRC/CSO
Social and Public Health
Sciences Unit

Briefing: Premature mortality in people affected by co-occurring homelessness, criminal justice involvement, opioid dependence, and psychosis

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Why did we do this study?

People affected by homelessness, involvement in the criminal justice system, problem use of opioids (such as heroin), or psychosis tend to have poorer health and a higher risk of dying early. However, previous research has tended to study these experiences individually, despite the fact they often go hand-in-hand.

In a previous review of existing evidence, we found that research about the health of people with more than one of these experiences has tended to focus on infectious disease and 'external causes' of ill-health or death (such as overdose, accidents, or assault) – much less is known about the impact of common long-term conditions like heart disease, cancer, diabetes, or lung disease like COPD or asthma. There were very few studies, especially from the UK, looking at multiple different combinations of these experiences or following people up to track their health over time.

Understanding these issues is important to designing effective services and policies that can address people's health needs and tackle inequalities.

What did we do?

We securely combined data collected as part of routine service delivery from local authority homelessness and social work services, the prison system, and healthcare provision. We did this to identify people living in Glasgow affected by one or more of these experiences between 2010 and 2014, then used death certificate data to quantify the risk of dying before the age of 75 ('premature mortality') between 2014 and 2019 for people with different combinations of these experiences.

We looked in detail at causes of death considered by expert panels to be 'avoidable' (that is, deaths which should not occur if everyone has access to timely and effective public health interventions and healthcare services), and at a group of common long-term conditions known as 'non-communicable diseases' (comprising heart disease, diabetes, cancer, and chronic lung disease).

In the results described here, we accounted for age, gender, socioeconomic circumstances (as measured by the Scottish Index of Multiple Deprivation, SIMD), and the calendar year. Unfortunately we were not able to present results separately by gender, because most of the experiences of interest disproportionately affect men so the numbers of women who could be included in our analysis was too small.

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What did we find?

Among the overall group of just over 500,000 Glasgow residents, approximately 5% had any one of the experiences of interest and 1% had more than one.

People with more than one of these experiences were much more likely to die before their 75th birthday than those with only one, who were in turn much more likely to die than those with none of these experiences.

For instance, compared to people who did not experience any of these issues, people with homelessness only were two times more likely to die before the age of 75 but people with homelessness and any other issue were more than eight times more likely to do so.

The additional impact of multiple disadvantage varied, but it was notable that the risk of premature death was substantially increased even among those with only one form of disadvantage. For instance, people with a history of imprisonment alone were more than three times likely to die early than people in the wider population even in the absence of other well-established risk factors such as opioid dependence or homelessness.

Opioid dependence appeared to be associated with the highest risk of premature death, whether alone or in combination with other experiences.

How much more likely are people affected by these experiences to die early, compared to unaffected people?

Each stick figure represents a one-fold increase in the likelihood of dying early compared to unaffected people – e.g., people with any of these experiences are four times more likely to die early than the rest of the population

Any of the experiences below		
	On its own	**Plus other forms of disadvantage**
Homelessness		
Opioid dependence		
Prison		
Community justice		
Psychosis		

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When looking at specific causes of death, we found that conditions avoidable through timely access to high quality healthcare and public health interventions account for a substantial proportion of this burden of premature death. Rates of avoidable death were highest among people with more than one experience, followed by those with just one, and lowest among those with none.

There was also a substantial burden of deaths from non-communicable disease among people with these experiences. Even though non-communicable disease accounted for a lower proportion of deaths than among people in the wider population, the extremely high overall risk of death among people with these experiences meant that they were dying at much higher rates from these conditions.

What next?

Our results suggest that the intersection of these experiences is associated with extremely poor health outcomes, but that there appears to be substantial scope to mitigate these health inequalities through healthcare and public health services.

The finding of a significant burden of non-communicable diseases is notable, as other studies have found that access to prevention and treatment for common physical health conditions among people with these experiences is often very poor. This burden is only likely to increase given the increasing average age of people affected by these experiences in many countries including the UK.

Rather than fragmented and uncoordinated responses that focus on a single issue in isolation or a narrow range of health conditions, we need to reorient policies and services to address intersecting forms of disadvantage and those conditions causing the greatest burden of ill-health. Wide-ranging efforts across multiple sectors are required to prevent these experiences and mitigate their associated poor health outcomes.

Future research

This study has demonstrated the feasibility and value of bringing together routine data collected as part of the day-to-day operation of different sectors and services, to better understand health inequalities. Future research in this area offers the possibility of improving these methods further (for instance, by using other datasets to maximise coverage over time and different areas); to understand the mechanisms underlying these findings; and to evaluate the health impacts of social policy change.

The paper, *Premature mortality among people affected by co-occurring homelessness, justice involvement, opioid dependence, and psychosis: a cohort study using linked administrative data*, is published in The Lancet Public Health. This briefing was prepared by Dr Emily Tweed, Inequalities in Health programme at the MRC/CSO Social and Public Health Sciences Unit, University of Glasgow. For more information please contact Emily.Tweed@glasgow.ac.uk.

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