University of Glasgow

Inclusion Health and missingness in healthcare

NHS GG&C Grand Round, November 2023

Andrea Williamson, Professor of General Practice & Inclusion Health

University of Glasgow

Working with…..

GPs at the Deep End

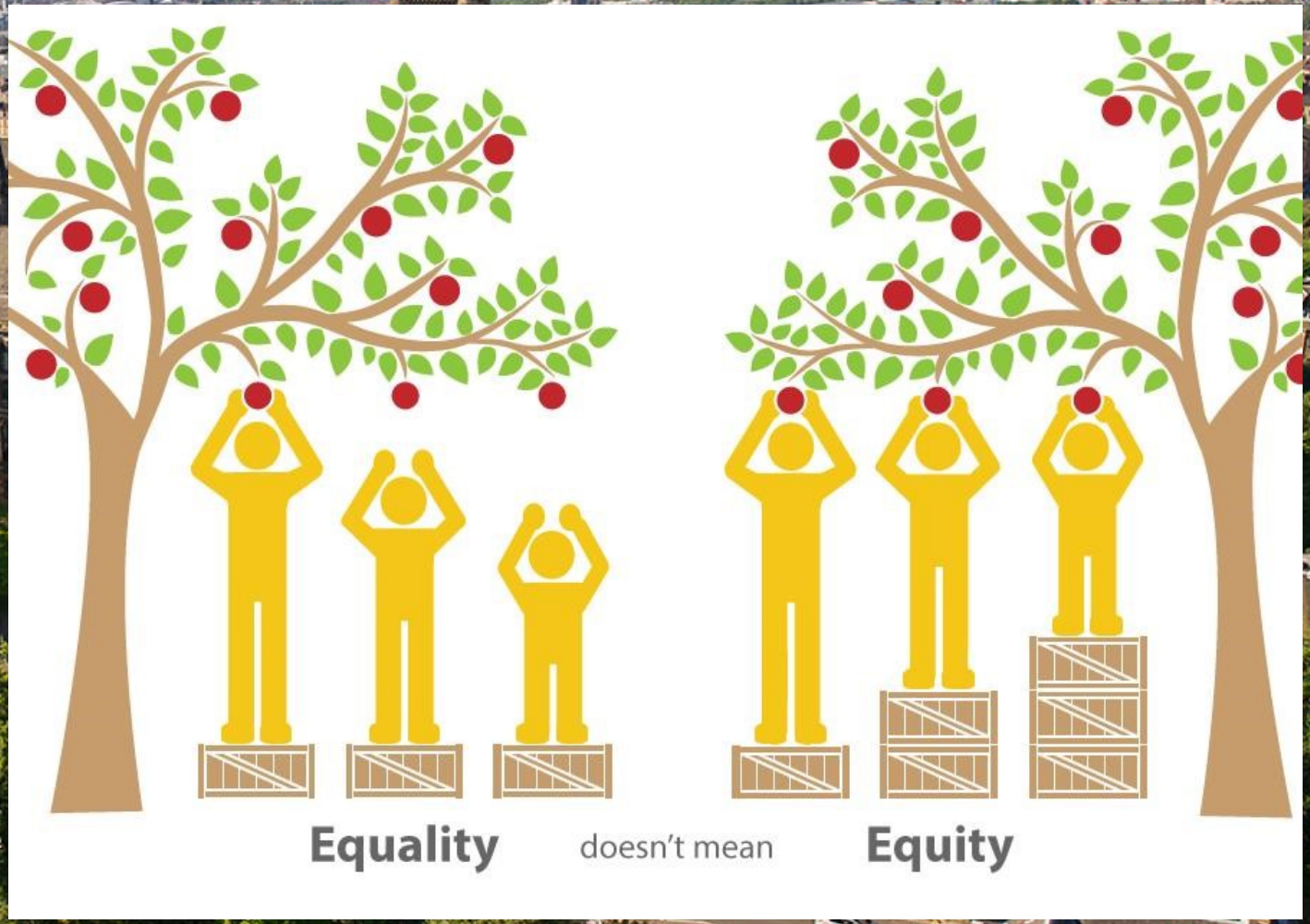
University of Glasgow

Outline

- Inclusion Health
- Severe and Multiple Disadvantage
- Missingness in health care
- What can be done?

University of Glasgow

The importance of equity 1



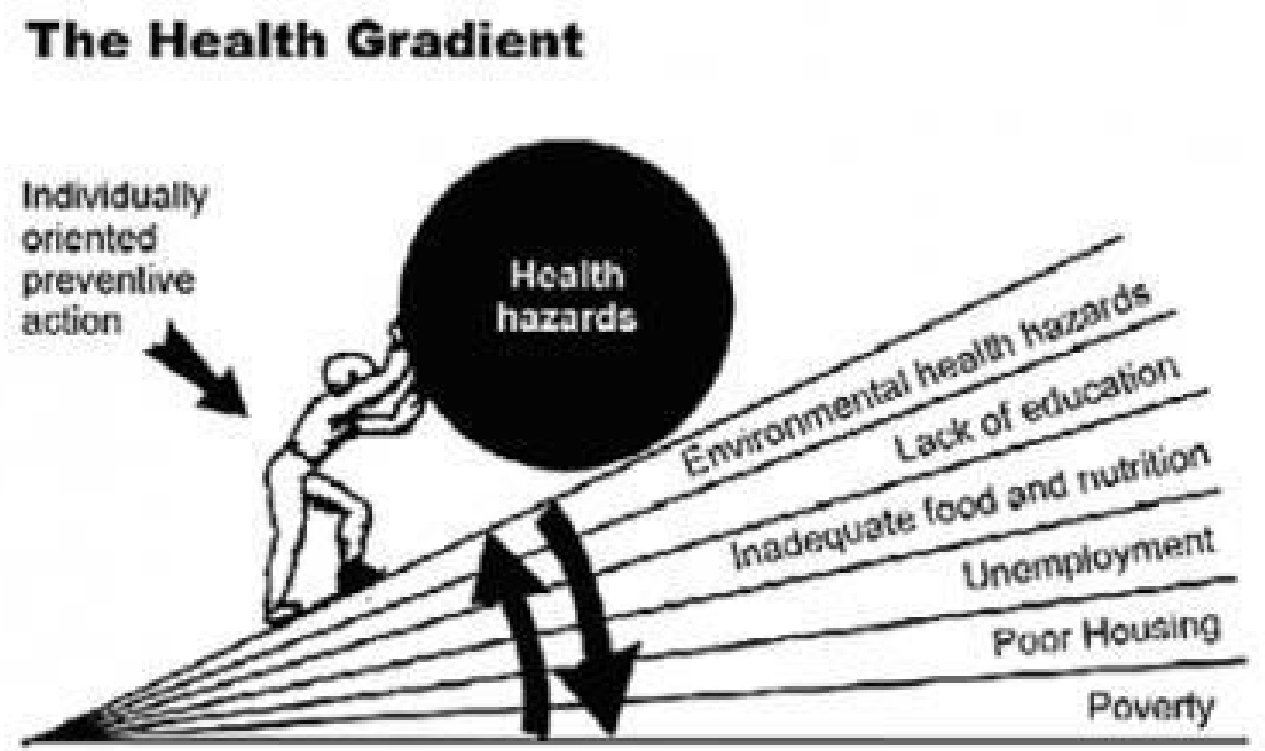
University of Glasgow

The importance of equity 2

INEQUALITY AND ACCESS

Those with least in society struggle more in accessing healthcare than those who are better off.

The impact of the SDHs on treatment burden



Source: *Making Partners: Intersectoral Action for Health* 1988 Proceedings and outcome of a WHO Joint Working Group on Intersectoral Action for Health, The Netherlands.

Definition of Inclusion Health populations

"people who are socially excluded, typically experience multiple overlapping risk factors for poor health (such as poverty, violence and complex trauma), experience stigma and discrimination, and are not consistently accounted for in electronic records (such as healthcare databases). These experiences frequently lead to barriers in access to healthcare and extremely poor health outcomes."

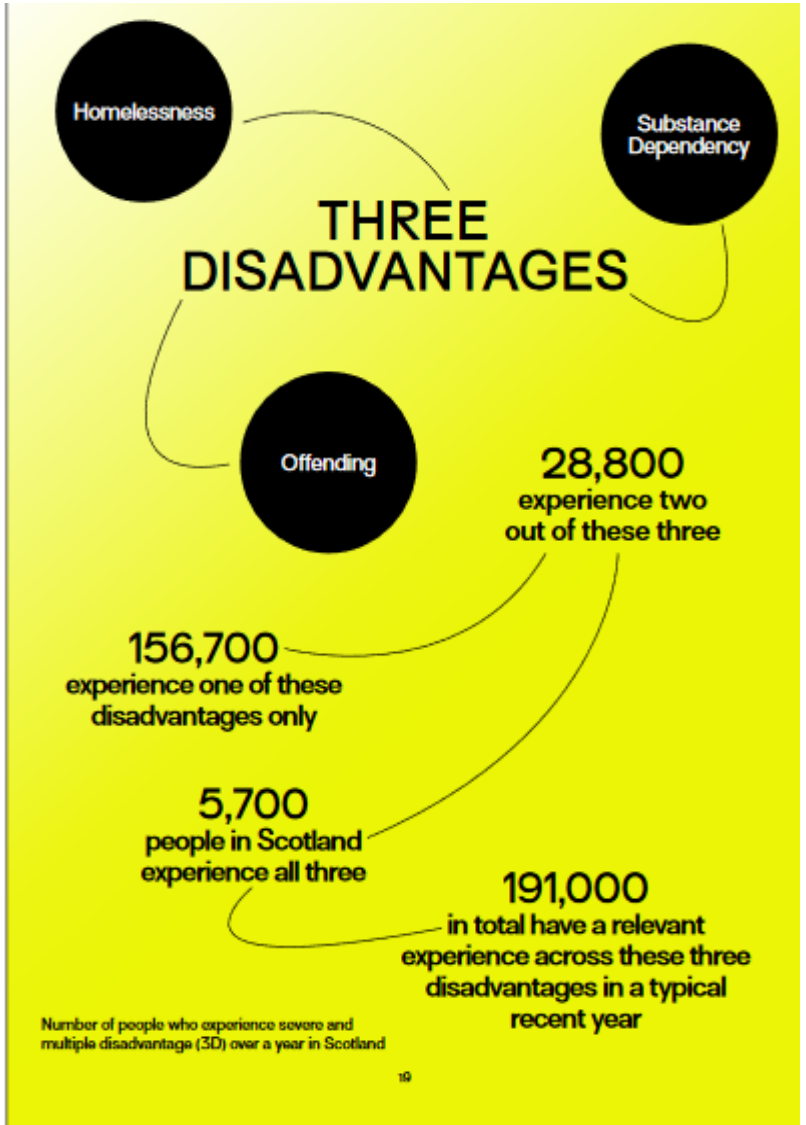
(Public Health England 2021)

Definition of Severe and Multiple Disadvantage

"Multiple and overlapping disadvantages…persistent and interrelated… affect a person's life…include the experience of homelessness, harmful drug or alcohol use, criminal justice involvement, poor mental health, and the experience of domestic violence and abuse…often experienced underlying adverse childhood experiences, poverty, psychological trauma, stigma and discrimination… sporadic and inconsistent contact with services or been serially excluded from services…tend to have much poorer physical and mental health, have higher social care needs, and die at a much younger age than people without severe and multiple disadvantage."

(NICE Guideline 214, 2022)

Severe and Multiple Disadvantage (2019)



ROUTES IN – DRIVEN BY POVERTY, VIOLENCE AND TRAUMA

The study evidences “routes in” to SMD that are consistent with previous research, including the original Hard Edges study in England (Bramley et al, 2015, and also with earlier research on Mutiple Exclusion Homelessness, (MEH) (Fitzpatrick et al, 2013).

Health and SMD

- **Multimorbidity** is the norm at a much younger age (Queen et al, BJGP 2017)
- **Treatment Burden** is much higher for people experiencing homelessness (Jones et al BJGP, 2023)
- **Morbidity**: Role of infections- BBV's, latent TB, respiratory disease, CVS disease (Aldridge et al, Lancet 2018)
- **Mortality**: CVS, cancer, respiratory diseases, external causes over-represented: accidents, self-harm, assault and events of undetermined intent (eg poisoning)
  - 30% of deaths were **amenable to timely healthcare** (Aldridge et al 2019)
  - **Alcohol and drug related deaths important-** but not as much as some data sources suggest, cumulatively more deaths related to NCDs overall in a large cohort of people who inject drugs (Lewer et al, Lancet PH 2022) BUT over-represented in homelessness (NRS 2021)
- **SMD in Glasgow**: "least two of homelessness, opioid dependence, justice involvement, or psychosis is associated with very high rates of premature mortality, particularly from avoidable causes of death, including non-communicable disease". (Tweed et al Lancet PH, 2022)

Current definition

- **Missingness** as the **repeated tendency not to take up offers of care** such that it has a negative impact on the person and their life chances (Lindsay et al, NIHR Open Research 2023)

SMA Research Acknowledgements

Co-investigators: David A Ellis, Alex McConnachie & Phil Wilson

Researcher: Ross McQueenie

Collaborator: Mike Fleming

Trusted Third Party: Dave Kelly Albasoft

Participating GP practices

Colleagues at Scot Gov and eDRIS

SMA study definition

Average of general practice face to face appointments over previous **three years**

- **Never missed appointments per year, 0**
- **Low missed appointments per year, <1**
- **Medium missed appointments per year, 1-2**
- **High missed appointments per year, 2 or more**

(Williamson et al BMJ Open 2017)

Missed appointments results

136 Scottish representative GP practices

550 083 patient records

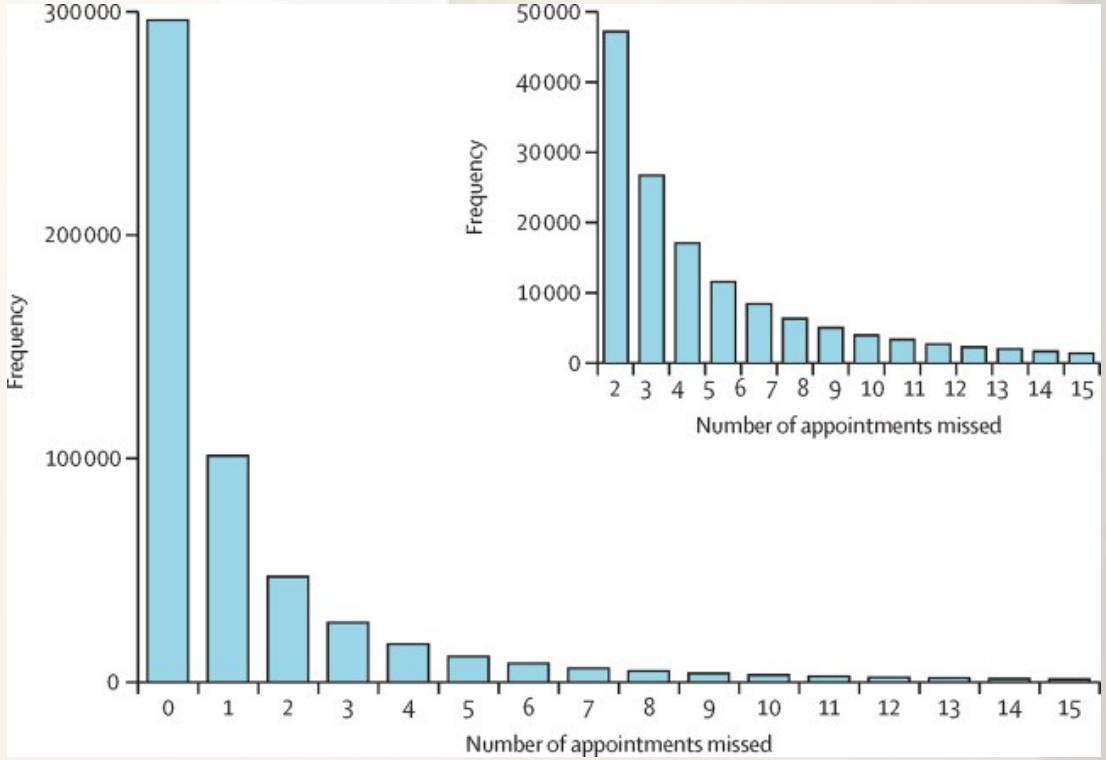
9 177 054 consultations

54·0% (297,002) missed no appointments

46·0% (212,155) missed one or more appointments

19·0% (104,461) missed more than two appointments

(Ellis, McQueenie et al Lancet Public Health 2017)



University of Glasgow

Patient demographic factors

- Most socio-economically deprived **(SIMD 1)** patients most likely to miss appointments (RRR 2·27, 95% CI 2·22–2·31)
- Most remotely located patients least likely to miss appointments (RR 0.37, 0.36–0.38)
- Patients aged **16–30 years** (1·21, 1·19–1·23) & **older than 90 years** (2·20, 2·09–2·29) more likely to miss appointments
- Effect of gender small
- Ethnicity poorly recorded (2.69% all records)

(Ellis, McQueenie et al Lancet Public Health 2017)

GP practice demographic factors

- **Appointment delay 2–3 days** (RRR 2·54, 95% CI 2·46–2·62) most strongly associated with non-attendance
- **Urban GP practices** more strongly associated with missed appointments
- **More deprived patients registered with GP practices in more affluent settings have the highest risk of missing appointments**

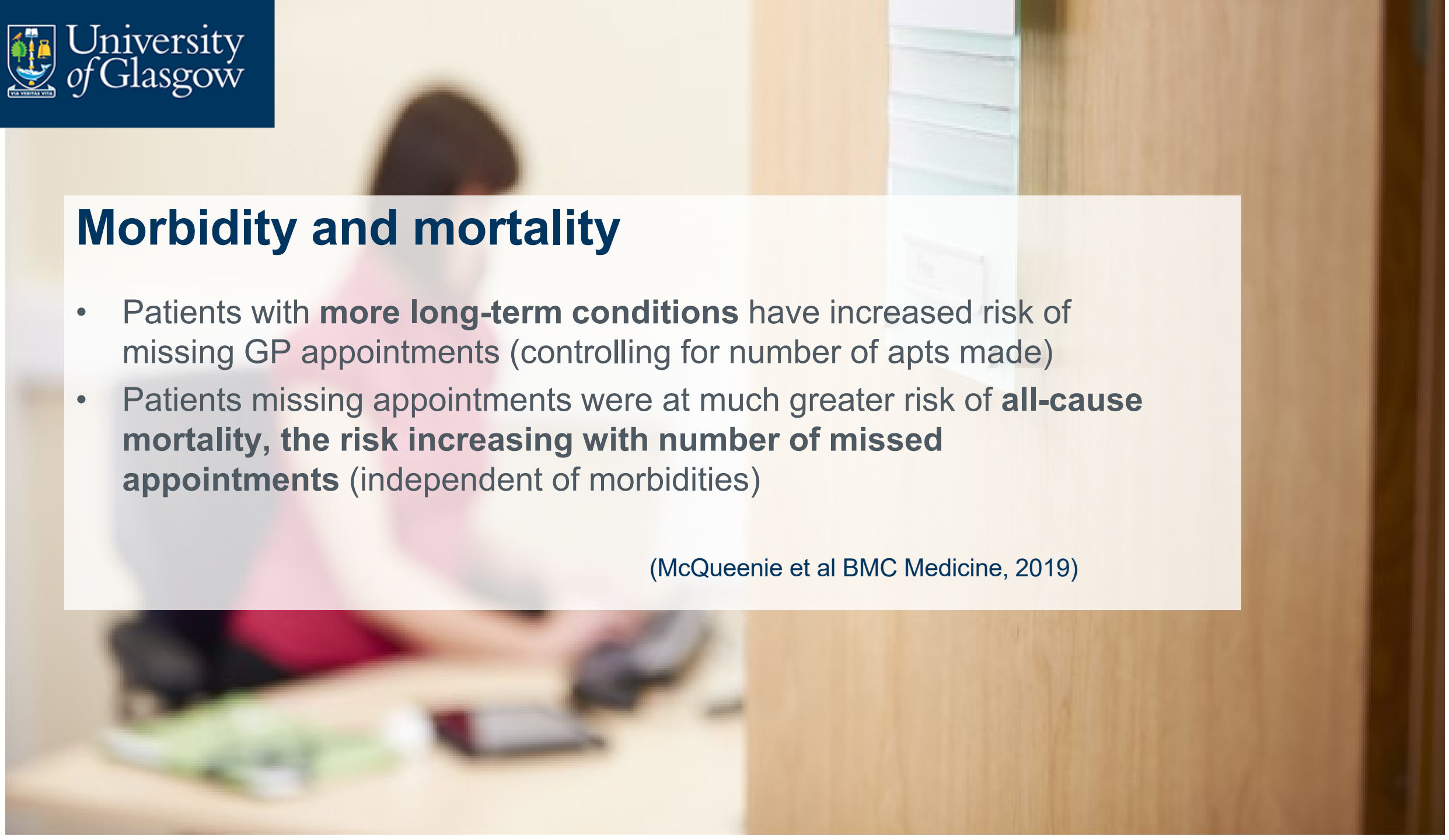
(Ellis, McQueenie et al Lancet Public Health 2017)

Patient and practice demographics

- **Practice factors have a larger effect** than patient factors but a model combining both patient and practice factors gave a higher Cox-Snell pseudo R^2 value (0·66) than models using either group of factors separately (patients only R^2=0·54;practice only R^2=0·63) (Ellis, McQueenie et al Lancet Public Health 2017)

  - Recent QI project in East London:
  - largest reduction in practice missed appointments from reducing practice appointment delay NOT patient nudges eg text reminders (Margham et al BJGP 2021)

,



Morbidity and mortality

- Patients with **more long-term conditions** have increased risk of missing GP appointments (controlling for number of apts made)
- Patients missing appointments were at much greater risk of **all-cause mortality, the risk increasing with number of missed appointments** (independent of morbidities)

(McQueenie et al BMC Medicine, 2019)

University of Glasgow

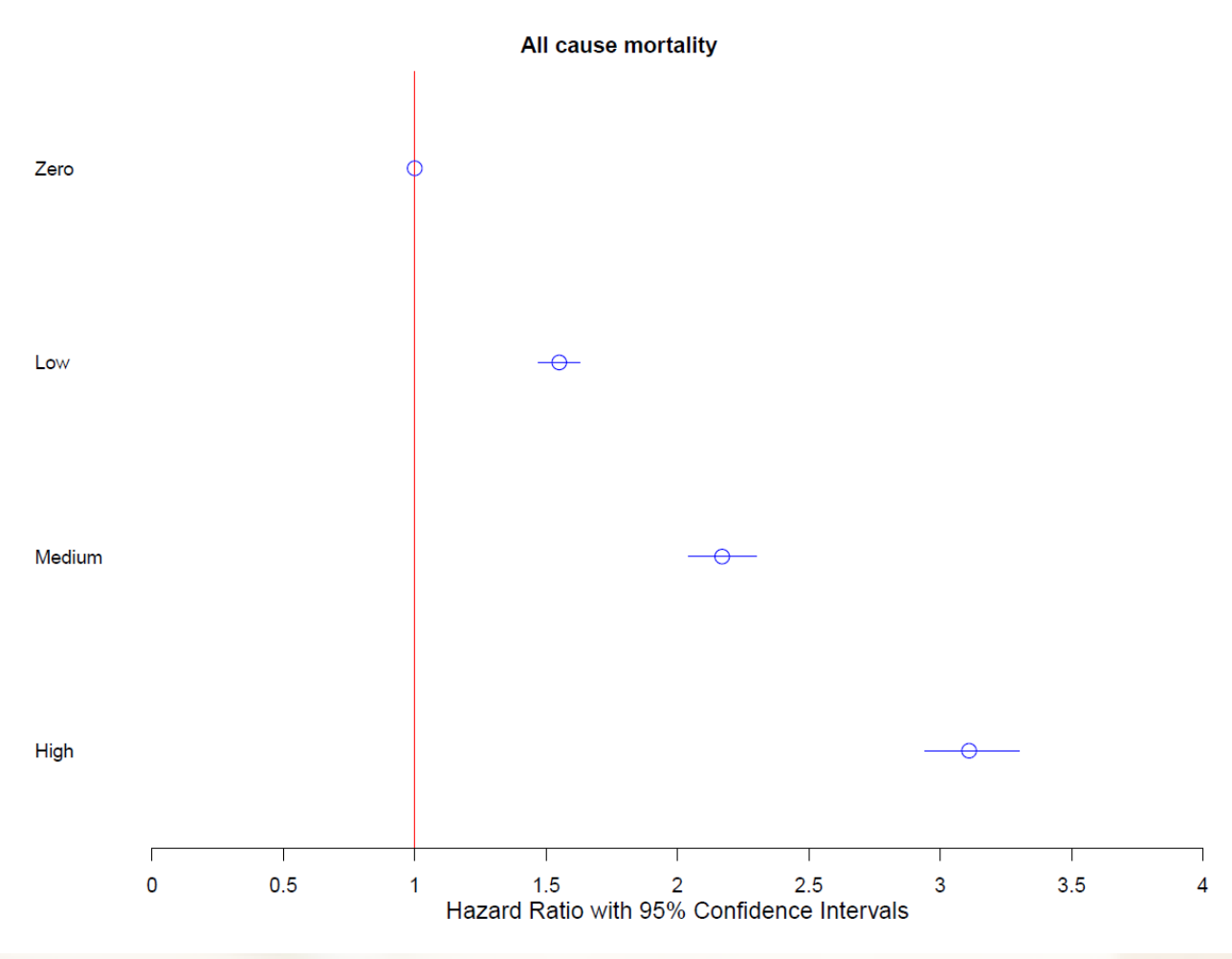
Shocking mortality

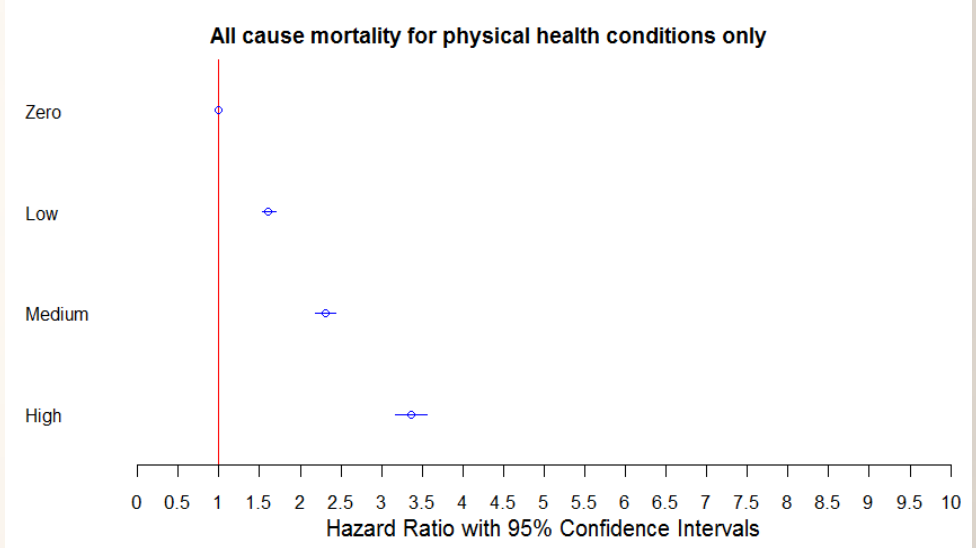
- Patients with **long-term mental-health conditions missing >2 appointments per year had >8x** risk of all-cause mortality compared with those who missed no appointments
- These patients died at a **younger age**, and commonly from **non-natural external factors**
- **Missing appointments repeatedly seems to be a powerful marker for greatly increased risk of mortality, particularly among those without physical long-term conditions** (after adjustment for all other mortality risks)

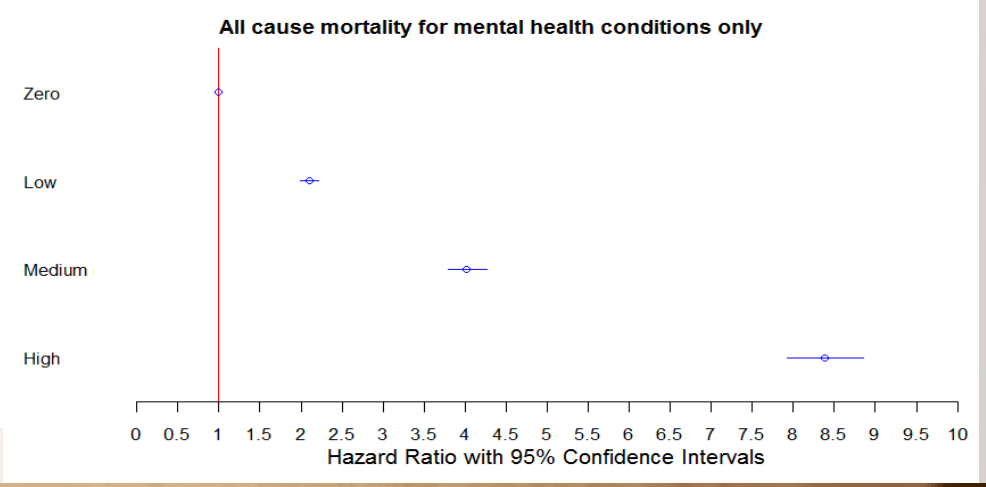
(McQueenie et al BMC Medicine, 2019)

Risk of death

Cox regression: adjusted for age, sex, demographics, practice factors and number of long-term conditions (McQueenie et al BMC Medicine, 2019)







Hospital utilization

- Patients missing **high numbers** of GP appointments were **higher users** of **hospital outpatient** (RR 1.90, 95% CI 1.88-1.93)* especially mental health services (4.56, 4.31-4.83)
- and **inpatient care** (general 1.67, 1.65-1.68, maternity 1.24, mental health 1.23, 1.15-1.31), compared to patients missing no GP appointments
- **Emergency department use was the same across all groups (** 1.00, 0.99-1.01)

*negative binomial regression modelling controlling for age, sex, SIMD and number of long-term conditions.

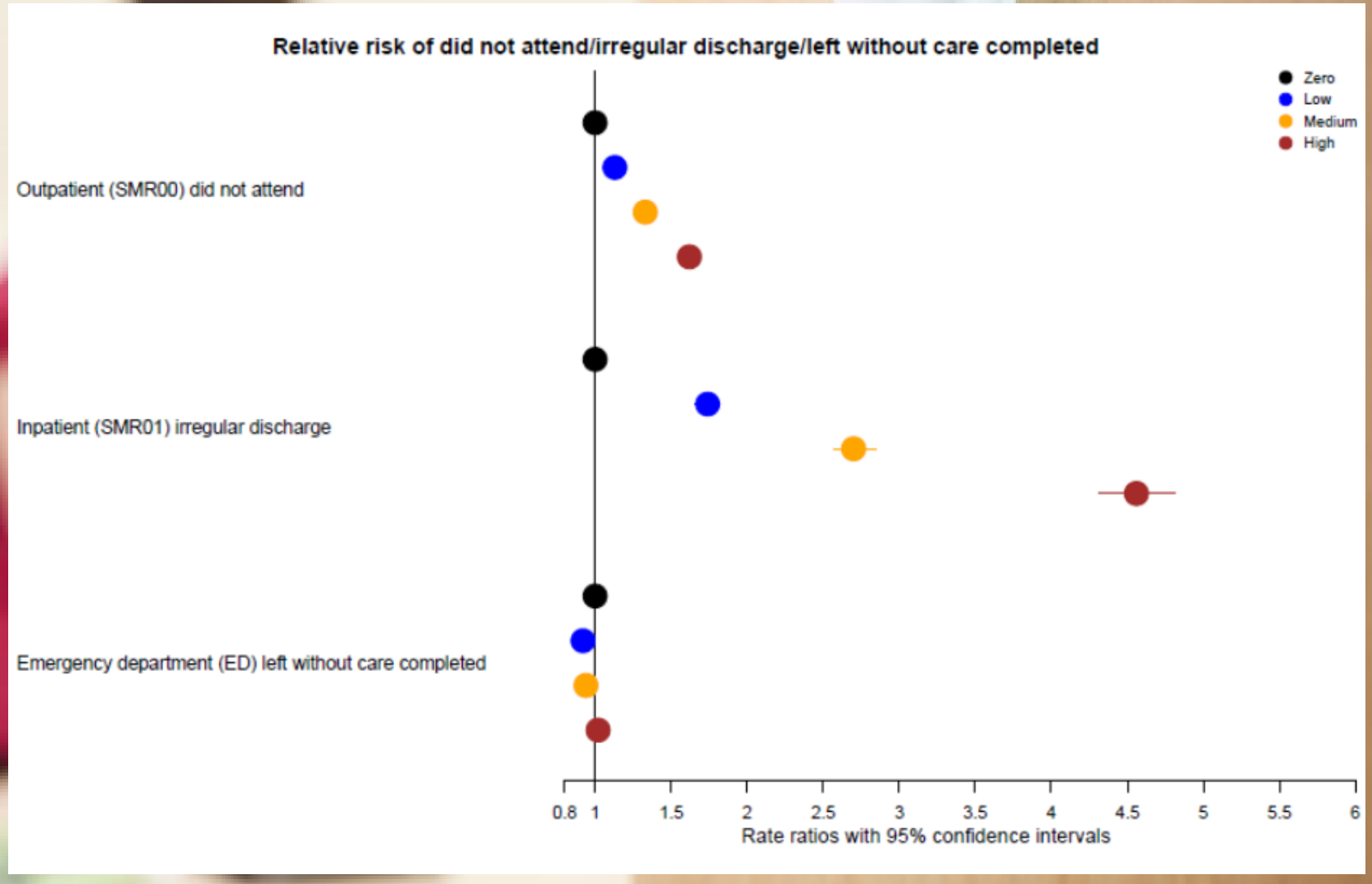
(Williamson et al Plos One 2021)

Hospital missingness

- Patients who had patterns of high missed GP appointments were **more likely** (RR 1.62, 95% CI 1.60-1.64)* to **miss hospital outpatient appointments**
- A **much higher risk** of non-attendance for **mental health services** (7.83, 7.35-8.35).
- Patients with high missed GP appointments were **more likely** (4.56, 4.31-4.81) to experience an **'irregular discharge' from inpatient care**
- No difference for ED 'left before care complete' between GP missed appointment category (1.02, 0.95-1.09)

*negative binomial regression modelling controlling for age, sex, SIMD and number of long-term conditions.

(Williamson et al Plos One 2021)



(Williamson et al Plos One 2021)

Life course social context

Patients at higher risk of missingness are more likely to have

- an ACE recorded in their GP record (Williamson et al BJGP Open 2020)
- From education linked data:
  - reduced school attendance
  - higher levels of school exclusion
  - lower educational attainment (McQueenie et al BMC Medicine 2021)

University of Glasgow

Final key conclusions

- **Patients** at high risk of missingness are characterized by poor health, higher treatment burden, complex social circumstances and have higher premature mortality
- **General practice appointment scheduling** and context is important
- **Patterns of missingness persist across secondary care** outpatients and inpatient ‘irregular discharges’; patients are NOT seen in ED instead
- **Missingness is a strong risk marker for a poor outcome** so needs urgent attention from health service planners and practitioners

Current research

- ‘Interventions to reduce missingness in health care’ (Williamson, O’Donnell, Mackenzie, Wong, Duddy, Simpson & Ellis, NIHR £728k, Baruffati and Lynsay RAs)
  - **Realist evidence synthesis**
  - **Interviews with people with lived experience & professionals**
  - **Developing a complex intervention for primary care**

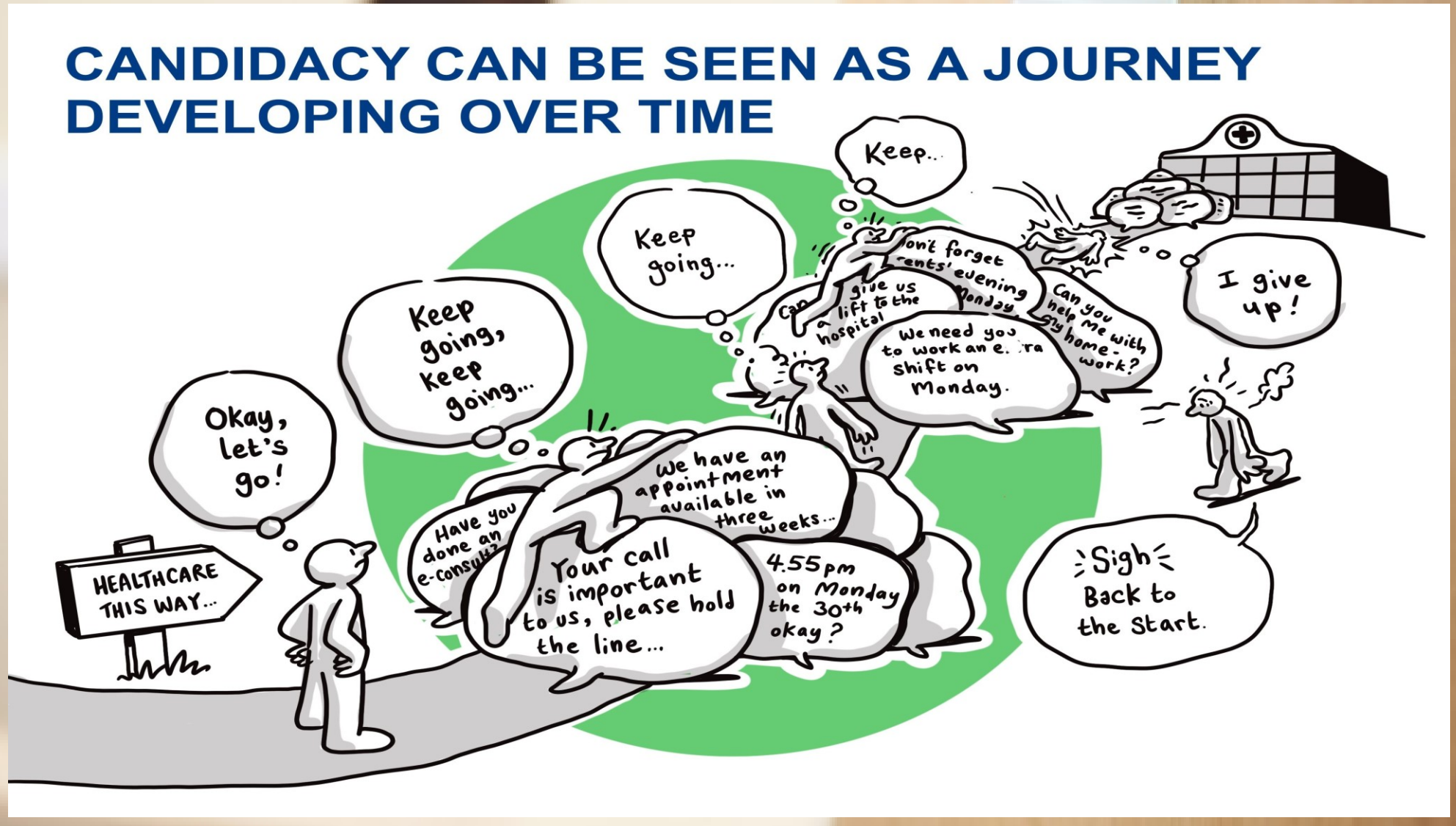
Realist synthesis: drivers of missingness

- PEOPLE factors
  - Beliefs, perceptions about health, whether healthcare likely to be important, to be useful
  - Competing or conflicting demands or candidacies, lack of resources
  - Fear, denial, avoidance, stigma and shame
- SERVICE factors
  - Relational misalignment
  - Lack of structural, cultural and relational safety
  - Low permeability of services

(unpublished, led by Lindsay)

University of Glasgow

Candidacy



Adjudication

ADJUDICATION OF HEALTH SERVICE

Services are not configured so that trusted relationships with individuals or professional teams can be established or maintained.

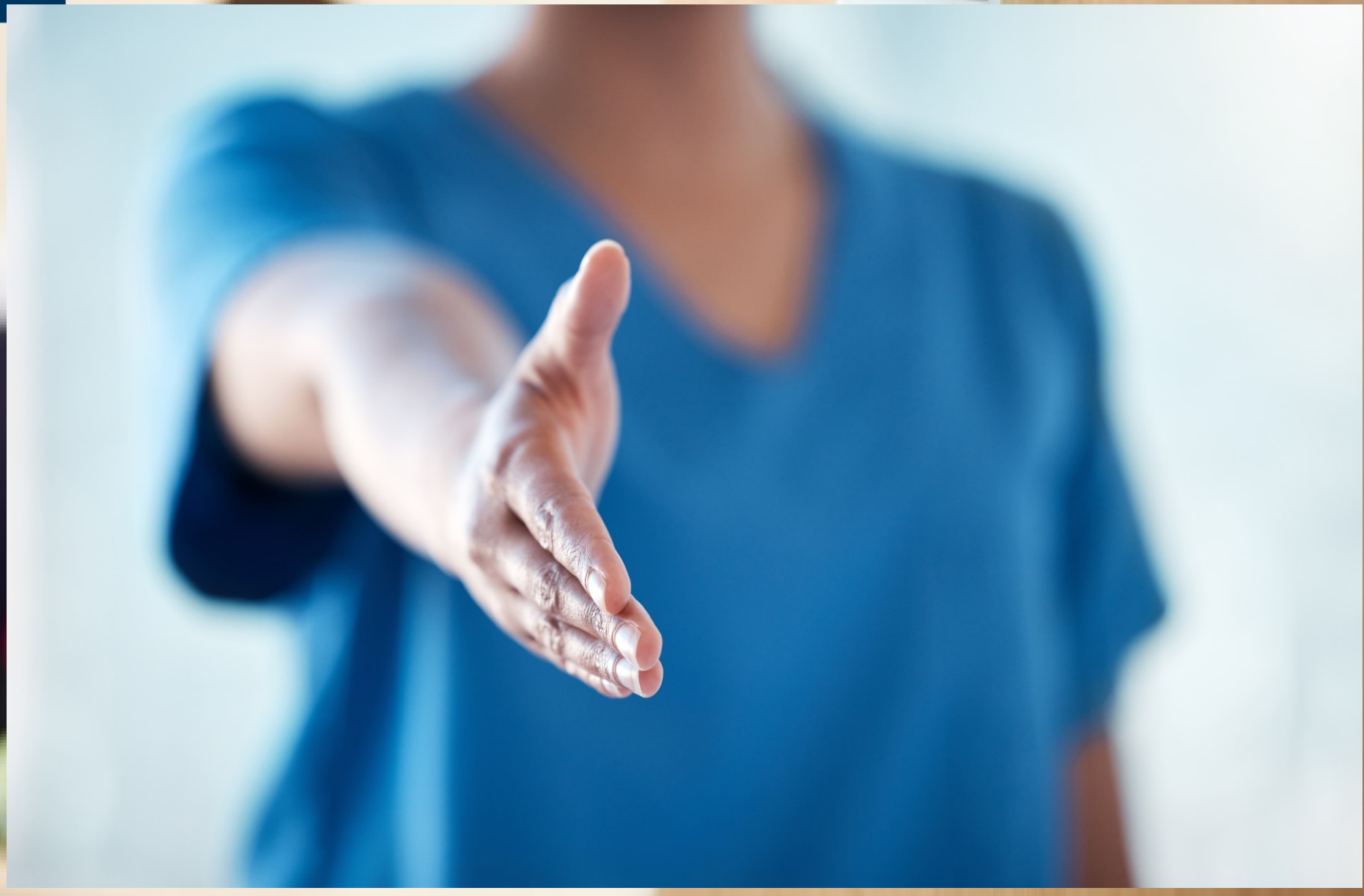
University of Glasgow

Stigma

HEALTHCARE CAN REINFORCE STIGMA THAT CONTRIBUTES TO MISSINGNESS

University of Glasgow

Welcome



Welcome 2

What can be done?

- Identifying patients at high risk of missingness
- Supporting patients to engage:
  - Importance of relational care (Inclusion Health, NICE Guideline 214 2022)
  - Trauma informed practice- words, actions (and what's behind them) matter!*
  - Health care navigators?
- patient engagement coordinator for systems and patients?

*Useful practical paper doi: 10.1016/j.pec.2023.107977

University of Glasgow

Follow up and further information

- Addressing missingness already?: email our research team address at missingness@glasgow.ac.u
- Contact me directly andrea.williamson@glasgow.ac.uk

- Further information about the research (papers, presentations, what we are doing now)
- http://www.gla.ac.uk/serialmissedappointments

Thank you!

NHSGGCC MedEd Educational and Teaching QR