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## **Is Scotland's new GP contract addressing the inverse care law?**

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## **Abstract**

Scotland, like many countries around the world, has wide health inequalities due in part to the longstanding 'inverse care law' in which a mismatch between patient needs and provision of care in general practice in deprived areas results in poorer care and worse patient outcomes compared with affluent areas. In early 2018, Scotland embarked on a new GP contract, a stated aim of which was to reduce healthcare inequalities. National data on avoidable mortality showed a 4.8 (2019) and 4.9 (2021) fold higher rate in the most deprived compared with the most affluent decile of the population. However, the distribution of whole-time equivalent (WTE) general practice clinicians per 10,000 patients - including GPs, and practice-employed practice nurses and other allied healthcare professionals - showed the opposite trend in both 2019 and 2022, with fewer WTE clinicians of all types in GP practices in deprived areas compared with affluent areas. These findings suggest that radical change is needed to reverse the inverse care law in Scotland.

[141 words]

Keywords: primary care; inequalities; Scotland

## Introduction

Scotland, like many countries, has wide health inequalities between rich and the poor.<sup>1</sup> Although health inequalities are largely driven by wider inequalities in social factors such as education, housing, employment, and wealth, the way that healthcare is designed and delivered is also of key importance. If health services are delivered inequitably then they will contribute to the widening of health inequalities. Such a situation is well documented globally,<sup>2</sup> having been first described in the United Kingdom (UK) as the 'inverse care law' which states that the 'availability of good medical care tends to vary inversely with the need for it in the population served'.<sup>3</sup> Our previous research in Scotland in 2007 showed how the inverse care law operated in general practice at that time; the mismatch of healthcare need and supply resulted in higher GP stress, shorter consultations, lower patient enablement of patients with complex needs in general practice in areas of high socioeconomic deprivation compared with affluent areas.<sup>4</sup>

Since then, the Scottish Government has embarked on a radical reform of health and social care,<sup>5</sup> and a vision to transform primary care through a new Scottish GP contract, introduced in April 2018.<sup>6</sup> This new contract included the formation of GP Clusters (which aim to improve quality of care locally) and a major expansion of the extended multidisciplinary team (MDT) to help reduce GP workload. A stated aim of the contract was to address health inequalities.<sup>6</sup>

Given the well documented existence of the inverse care law in Scotland prior to the new GP contract,<sup>4,7,8</sup> due to a mismatch between healthcare needs and supply,<sup>9</sup> the aim of the present study was to investigate if this has been addressed in general practice since the introduction of the contract.

## Methods

We accessed the most recent datasets relating to health and healthcare need in Scotland as follows: Publicly available data on avoidable mortality in people aged under 75 years of age in 2019 and 2022 was accessed from the National Records of Scotland.<sup>10</sup> 'Preventable mortality' is defined as deaths that can be mainly avoided through effective public health and primary prevention interventions, 'treatable mortality' as deaths that can be mainly avoided through timely and effective healthcare interventions, including secondary prevention and treatment. Avoidable mortality is the sum of deaths defined as either preventable or treatable.

Data from the general practice workforce survey 2019<sup>11</sup> and 2022<sup>12</sup>, broken down by practice deprivation deciles was supplied by Public Health Scotland following a formal information request. The workforce surveys collect information on the number and work patterns of GPs, nurses, and allied healthcare professionals working in general practices throughout Scotland. From this the number of whole-time equivalent primary clinical staff can be calculated. This can also be expressed as a ratio according to the number of patients registered with the practice (clinical staff WTE/10,000 patients). The GPs' data included GP partners in the practice, salaried GPs, and GP retainers (qualified GPs working limited hours, usually due to family commitments). Practice nurses in the practices included general practice nurses, advanced nurse practitioners and treatment room nurses. Other staff included in the surveys as clinical staff employed by the practice were health care assistants, paramedics, pharmacists, physician assistants, phlebotomists, therapist-counsellors, and those with 'other clinical roles'.

Figures were plotted from the obtained data using SPSS version 27.

## Results

Figure 1 shows the distribution of age-adjusted avoidable mortality, and its sub-components of preventable and treatable mortality by deprivation deciles in Scotland. Avoidable mortality was 4.8 times (2019) and 4.9 (2021) times higher in the most deprived decile of the population compared with the most affluent. Rates of preventable mortality were 6.5 (2019) and 6.0 (2022) times higher and treatable mortality was 2.9 (2019) and 3.1 (2021) times higher in the most deprived decile compared with the most affluent decile.

[Figure 1 here]

The distribution of WTE clinical general practice staff per 10,000 patients showed the opposite trend (Figure 2). In both 2019 and 2022, the largest number of total WTE clinical staff were in practices serving the most affluent patients. This trend was seen across all clinical groups.

[Figure 2 here]

## Discussion

Our findings, using the latest data available, indicate that the high level of healthcare need in the poorest parts of Scotland, as indicated by the large inequalities in avoidable mortality, has not been matched by a supply of adequate levels of general practice clinical staff. Indeed, we found a trend in the opposite direction, with higher numbers of general practice clinicians of all types concentrated in the practices serving the most affluent patients in Scotland.

These findings strongly suggest that the inverse care law in Scotland, first reported in 2007,<sup>4</sup> continues unabated despite the promise of the new GP contract. Recent qualitative research has highlighted numerous problems with the new contract, including the unanimous view from national stakeholders, GPs, and MDT staff interviewed that it is not helping practices serving deprived areas.<sup>13</sup>

An important caveat to our findings is that the workforce survey data on MDT staff relates only to staff who are employed by the practice. The new Scottish GP contract has significantly increased the number of extended MDT staff through the Primary Care Improvement Fund (estimated to be over 3,200 WTE in March 2023<sup>14</sup>), who are employed by HSCPs or Health Boards directly, and thus are not included in the figures presented in the results (which are based on practice-employed staff). There has been no national directive by the Scottish Government to distribute these new MDT staff according to practice deprivation, and thus it is up to individual HSCPs to decide how to distribute the new staff.

Although the way in which different HSCPs are distributing staff is not in the public domain, it has been confirmed to us that Glasgow City, the HSCP with the largest number of Deep End practices (77% of the total in Scotland) has not been able to distribute new clinical MDT staff by practice deprivation, due to shortages of available MDT staff, constraints on funding and variations in the capacity of practice properties to accommodate additional staff. Instead, a large proportion of the services are being provided in hubs, health centre treatment rooms, and other venues (community centres, vaccination centres, schools, patients' homes). The HSCP's Pharmacy Teams are based in a combination of hubs and practices, with the distribution of pharmacists to practices based on weighted registered patient lists, which while not a direct measure of deprivation, through the surrogate markers of chronic disease could reflect a higher need in the practices in the most deprived neighbourhoods. The only element of the PCIF, however, that *directly* allocates staff to practices using a deprivation-based model is the community links worker programme [Gary Dower, assistant Chief Officer, Glasgow City HSCP; personal communication].

Thus, more data is required on the distribution of PCIF-funded MDT staff in different Health Boards and HSCPs, but it would seem reasonable to assume that the trends we show in the current study would hold true if data were available on the distribution of HSCP-employed MDT staff by practice deprivation across Scotland as a whole.

A further limitation of the present analysis is that data on the national primary care workforce is based on the Scottish Government's estimated WTE drawn from their general practice workforce surveys which had response rates of 44% and 57% in 2019 and 2022, respectively. Again, it would seem highly improbable that the distribution of clinical staff by practice deprivation in the non-participating practices would be significantly different.

Scotland is not alone in facing an inverse care law in the UK. Recent research from England has shown lower levels of funding to general practices in deprived areas when adjusted for workload,<sup>15</sup> together with shorter consultations for patients with multimorbidity,<sup>16</sup> similar to previous findings in Scotland.<sup>17</sup>

## **Conclusion**

Despite the Scottish Government's vision of reducing health inequalities through a radical transformation of primary care and a new GP contract, our findings suggest that this has not yet occurred. Radical change is needed to reverse the inverse care law in Scotland including a re-distribution of primary care staff according to deprivation level.

Given the global problem of health inequalities, and current attempts to transform primary care in many high-income countries (largely by financial incentives and expansion of the MDT),<sup>18</sup> our findings should serve as a warning to such countries to ensure that policymakers understand and act on the need to match workforce supply with population need in primary care in order to maximise the potential for primary care to reduce health inequalities.<sup>19</sup>

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## **Conflicts of interest**

None declared.

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**Figure 1. Avoidable mortality by deprivation decile in Scotland 2019 and 2021**



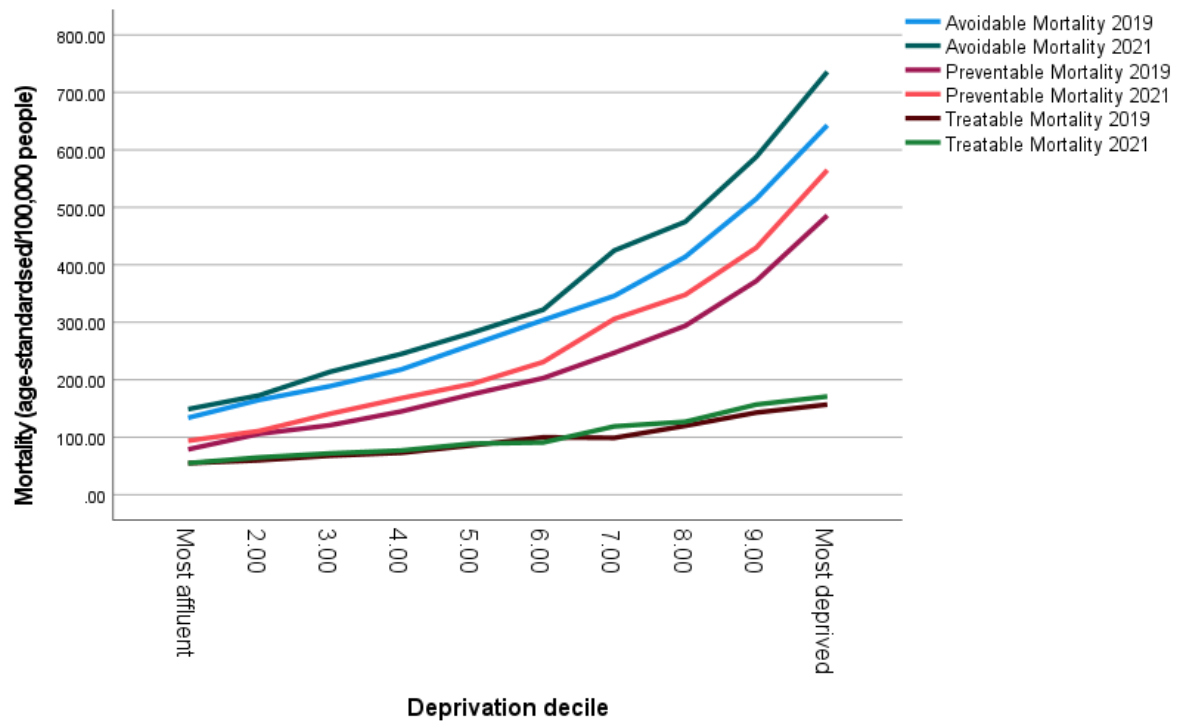


Figure 2. Primary care clinical staff by deprivation decile in Scotland 2019 and 2021

