

## EDITORIALS

## Cancer inequalities endure despite NHS reforms

Real progress requires a more comprehensive approach

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Much of the success of modern medicine has been built on the fundamentals of scientific method—observation, hypothesis generation, intervention, measurement, and comparison. Evidence is expected before implementation. This disciplined, assiduous, and deliberate approach led to many of the most important medical advances in the past 400 years. Do the same standards apply to public policy, arguably the biggest intervention of all?

In this issue, Exarchakou and colleagues (doi:10.1136/bmj.k764) evaluated whether the NHS Cancer Plan (2000) and associated reforms had any impact on cancer survival, and whether any gains were evenly distributed across the English population.<sup>1</sup> Dishearteningly, they conclude that the policy has had little impact on rate of improvement in survival, or on socioeconomic disparities in survival. Does this mean the NHS cancer reforms failed?

The authors' attempt to evaluate the impact of the reforms in a rigorous manner is laudable. Such efforts are fraught with difficulty—there are multiple variables and interventions, and advances in individual cancer types accrue gains at different rates. Accordingly, it is difficult to establish cause and effect.

Minor methodological problems could be discussed, such as the choice of measure of inequality and selection of one year survival as an endpoint. The authors use change in an absolute measure of survival to evaluate the impact of policy on inequities. Patterns in trends can differ depending on whether the metric used is survival or excess mortality, and whether an absolute or relative measure is used.<sup>2</sup> None is considered an ideal method, but the conclusions might have differed if another metric was used.

The authors also only used a comparison between the highest and lowest socioeconomic groups, and it would be useful to understand more about patterns among those in between. The authors were, through necessity, limited to an area level measure of deprivation; again results might be affected by the choice of measure.<sup>3</sup> It seems unlikely, however, that the general conclusions would have differed substantially, regardless of these methodological subtleties.

The policies implemented to tackle cancer related inequity in the United Kingdom were largely focused on two key areas. Firstly, activities to reduce the incidence of cancer (such as tobacco control initiatives). If implemented in a way that impacted most on people in lower socioeconomic groups, these could have pro-equity effects on cancer mortality. However, reducing cancer incidence is not detected by measuring changes in survival among those with a diagnosis, which was the focus of this study.

The second set of strategies aimed to reduce waiting times for treatment to end the “postcode lottery.” These strategies were largely focused on patient behaviours, based on the idea that patients in higher deprivation areas tended to have less knowledge about cancer and its symptoms and delayed seeking care. As highlighted by Exarchakou and colleagues, there is little or no evidence that such policies impact cancer outcomes or reduce inequities.

Social inequalities in cancer incidence, mortality, and survival are seen in many high income countries. Disparities in survival vary by site but tend to either be static or increase with time in many countries, including the United States,<sup>4</sup> New Zealand,<sup>5</sup> Japan,<sup>6</sup> Australia,<sup>7</sup> and Norway,<sup>8</sup> suggesting it is difficult to reduce social inequities.

The drivers of social disparities in cancer outcomes are complex, multifactorial, and non-linear.<sup>3,9</sup> Genuine improvements might require a more comprehensive approach than the NHS reforms. Important elements include a focus on equity at every level of the cancer control system, involvement of those most affected by inequities in identifying solutions, high quality research to identify the key modifiable drivers of inequities, development of evidence based interventions to overcome access barriers to primary care and screening services, development of processes to deal with unequal access to cancer care services and variations in quality of care, and routine monitoring of the entire system for inequity.

Good evidence that health system factors are important in creating and exacerbating unequal outcomes exists and these should be addressed through policy.<sup>10-12</sup> But effective strategies are likely to extend beyond healthcare, as factors such as

stability of employment, geographical isolation, and requirement for family support also have an important effect on ability to access care, particularly for those with fewer resources.

To reduce the incidence and impact of cancer we must continue to be ambitious. The goals of the NHS Cancer Plan were to save lives and to ensure that the gains were evenly shared. These goals remain critical. The methods to achieve them need more work.

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