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## Nurse led care

### *Determining long term effects is harder than measuring short term costs*

What's the difference between medical and nursing care? The answer is not straightforward, but shortages in the medical workforce mean that nurses are increasingly called on to undertake work that was previously done by doctors (such as undertaking surgery,<sup>1</sup> prescribing drugs, performing triage in emergency departments), whereas shortages in the nursing workforce mean that healthcare assistants now do many tasks that nurses are trained to do. This fluidity in professional roles and competencies enables the health workforce to respond to need, but are outcomes for patients being improved? Do these benefits come at an additional cost, and if so, are they worth paying for?

Over the past decade, research has increasingly compared nurse led care with usual care for aspects of health care previously delivered by doctors. However, nurse led care does not have one meaning. Nurse led care can be usefully viewed as a continuum with, at one end, nurses undertaking highly protocol driven, focused tasks (cardioversion,<sup>2</sup> colposcopy, smoking cessation) and, at the other end, responding to far more diverse challenges in terms of clinical decision making, such as first contact care and rehabilitation. The extent to which doctors' work can be delegated effectively is likely to be influenced, in part, by the type and complexity of the associated decision tasks. This issue of the *BMJ* presents two economic evaluations of nurse led care—each occupying a different place on this continuum. The paper by Raftery et al (p 707) is an evaluation of nurse led secondary prevention of coronary heart disease and has several strengths, including its basis in a randomised controlled trial with four years' follow up and a cost effectiveness analysis.<sup>3</sup> The authors conclude that primary care based, nurse led secondary prevention of coronary heart disease is highly cost effective, since the cost per patient was only £136 (\$260; €195) greater in the intervention group, but the benefits (fewer deaths and improvements in medical care and patient lifestyle) make this highly worth while, with a cost per quality adjusted life year (QALY) of £1097.

The second study, an evaluation of nurse led intermediate care in an acute setting (p 699), represents a more complex nursing role that demands multifarious clinical decisions (although patients reaching intermediate care have been "filtered" through medical diagnosis and initial treatments).<sup>4</sup> These authors undertook a cost minimisation analysis—they viewed the clinical outcomes in the intermediate care and standard hospital care arms as equivalent and merely totalled up and compared the costs. Walsh et al found, as have others,<sup>5</sup> that nurse led intermediate care in acute settings is more expensive than standard hospital based care for the inpatient phase, but the longer term costs and benefits are more uncertain.

Close inspection of the clinical outcomes in the trial by Walsh et al<sup>6</sup> reveals that patients who received nurse led intermediate care had better functional outcomes at discharge, although this did not reach significance. However, this lack of statistical significance is not the same as "no difference" in functional outcomes. A meta-analysis of 10 studies of nurse led intermediate care<sup>7</sup> (which includes the Walsh trial<sup>6</sup>) identified a statistically significant benefit of nurse led intermediate care on functional status at discharge, as well as reductions in the proportion of patients discharged to institutional care and in readmissions. This indicates that the increase in functional status may be clinically (and potentially economically) important and warrants further study.

In an editorial in the *BMJ* Briggs counselled against cost minimisation analysis in favour of cost effectiveness analysis since studies are rarely powered to confidently identify clinical equivalence.<sup>8</sup> Hence, the lack of a statistically significant difference in effectiveness should not be used as a justification for a cost minimisation analysis. While the higher costs of nurse led intermediate care are due to an increased length of stay, existing analyses have failed to determine whether these costs are offset by lower costs (of health care and particularly social care) and health benefits gained in the longer term.

Papers p 699 and  
Primary care p 707

The ways in which nursing teams in the nurse led units make decisions about discharge also need to be explored. Nurses may, rightly or wrongly, be more conservative in discharging patients. They may err on the side of caution, but the benefits of these conservative decisions can only be judged with longer term follow up.

Do these two new studies help us understand the differences between medical and nursing care? We think they usefully remind us that nursing care is not necessarily less costly and that the extra costs may be worth the benefits but that health outcomes need to be measured carefully in studies of sufficient power. It should not be assumed that the outcomes of nursing and medical care are equivalent.

The skills of healthcare professionals and their assistants are much in demand and constitute a limited

resource that needs to be deployed in the most cost effective way. Although UK health policy supports the development of nursing roles, as nurses take on more duties and responsibilities we must also question what, if anything, is being lost from nursing, to whom and does it matter?

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Competing interests: KS and GR have conducted and published evaluations of nurse led intermediate care.

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## Large scale food retail interventions and diet

*Improving retail provision alone may not have a substantial impact on diet*

Ensuring communities have good access to healthy affordable food is one of the government's joined up strategies to improve public health and reduce health inequalities.<sup>1,2</sup> Policy solutions for deprived communities without good access—food deserts—have focused on improving provision of food retail as part of a wider suite of recommendations for population dietary change focused around awareness, affordability, and acceptability.<sup>3</sup> However, the evidence for the widespread existence of food deserts and their impact on population health has been contested.<sup>4,5</sup> This has meant that although retail based policy recommendations to reduce diet related health inequalities now exist,<sup>1,2</sup> the evidence to inform how, when, and where to reduce these inequalities is only now emerging.

Recently completed projects in Newcastle, Leeds, and Glasgow have started to provide us with this evidence.<sup>6-8</sup> The Newcastle study concludes that food deserts exist only for a minority of people who do not or cannot shop outside their immediate locality and for whom the locality suffers from poor retail provision of foods that compose a healthy diet. Key predictors of healthy eating were found to be dietary knowledge, relative affluence, and healthy lifestyle—retail provision was not independently associated with diet.

The Leeds and Glasgow studies were both prospective evaluations of the impact of large scale food retailing. Utilising an uncontrolled before-after design the Leeds study concluded that access to food improved notably after the intervention. The average

distance travelled to the main food store fell to under 1 km, and the percentage of people walking to the main food store tripled to over 30%. Substantial increases in consumption of fruit and vegetables of between 0.25 and 0.5 portions per day were also reported, particularly for respondents who switched to the new provision. In contrast the Glasgow study, a controlled quasi-experimental study, found little evidence for an overall effect of the intervention for fruit and vegetable consumption in portions per day. For those consumers who switched their main food shopping to the new store an improvement in consumption of around 0.35 portions per day was seen though the evidence for this was very weak. A substantial positive improvement in one measure of psychological health (GHQ-12) and a weak positive effect on self reported health was seen in switchers.

How should this evidence be interpreted? Firstly, the term food desert, although a striking metaphor, has unintentionally led to such polarisation of views by researchers, policy makers, and other interest groups so as to be of limited further use. The authors of the Newcastle study propose that the focus should be on food equity instead.<sup>6</sup>

Secondly, ambiguity remains over whether large scale food retail interventions work. Despite the reporting of positive changes in fruit and vegetable consumption in the Leeds study, pre-intervention and post-intervention designs alone rarely provide compelling evidence that an intervention has been successful. Changes in the prevalence of risk factors and