

# Increased general practice workload due to a primary care led National Health Service: the need for evidence to support rhetoric

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## SUMMARY

*Recent policy initiatives have focused on shifts in the balance of care from secondary care to primary care. A consequence of such shifts is increased workload in primary care. The aim of this paper is to appraise the literature critically to assess whether changes in the balance of care have led to additional work for general practices. In particular, the implications of this literature for the measurement of workload in general practice are highlighted. After an extensive, systematic literature search, only 12 studies that met the review criteria were identified. Although the studies pointed to negligible effects on the number of general practitioner (GP) visits, they failed to capture the many other attributes of a practice's work that are likely to be influenced by a shift in the balance of care. These include both qualitative (e.g. stress and mental effort) and quantitative (i.e. the use of resources in the practice, such as GPs, nurses and other staff's time and administration) measures of workload. The studies may therefore have underestimated the effect on practice workload. To identify correctly the impact on workload of shifts in the balance of care, studies evaluating shifts need to improve their measurement of general practice workload. Furthermore, an extended definition of workload needs to be developed and tested, and workload monitored over time.*

**Keywords:** workload; National Health Service; balance of care; general practice.

## Introduction

IN recent years, the National Health Service (NHS) has been the object of initiatives to shift the balance of care from secondary to primary and community care.<sup>1-3</sup> The shift to a primary care led NHS has been prompted by assumptions about the efficiency of hospitals and by incentives to hospitals to change the way in which they deliver care. The growth and development of fundholding has also encouraged the replacement of secondary care by primary care services. However, shifts between primary and secondary care are not new and have been occurring in both directions. In particular, shifts have occurred in maternity care and psychiatric care.<sup>4,5</sup> Furthermore, the halving of the average duration of hospitalization for acute illnesses and increases in hospitals' throughput during the 1980s have also had implications for primary care workload.

What is common between the 'old' shifts and those that are occurring in the late 1990s is a weak and sometimes non-existent

evidence base.<sup>6,7</sup> However, this lack of evidence has not been a barrier to the occurrence of shifts in the balance of care, as many shifts have been driven by changes in secondary care and by government policy.

A major consequence of these shifts is an increase in workload for the primary care team. As well as the concern that shifts may be inappropriate, there is concern that they have not yet resulted in commensurate reallocation of resources to primary care. In many cases, this is caused by inadequate knowledge of the impact of these changes.<sup>8,9</sup> For purchasers to enable these shifts in resources, it is important to assess their impact on general practice workload. Such an assessment should include determination of the types of services that are shifting, the type of workload they are impinging upon, and the magnitude of the effects on general practice workload. The aim of this paper is to present the first step in gathering such information by reviewing the literature critically to determine if changes in the balance of care in the United Kingdom (UK) have led to additional work for general practices (including the primary health care team within general practices). This review is then used to illustrate some of the issues surrounding the measurement of workload in general practice in the context of shifts in activity and work towards primary care.

## Method

Studies to be reviewed were identified from three sources. First, electronic databases (MEDLINE, Excerpta Medica, and Social Sciences Citation Index) were searched using keywords related to the balance of care, general practice workload, and the evaluation of community care. Secondly, studies were identified from the publication lists of groups known to be working in this area. Thirdly, studies were identified from the citations of articles retrieved and from previous reviews of the literature. This search strategy was based on Dickersin *et al*<sup>10</sup> but did not include manual searching of journals or contacting the authors of studies.

The abstracts identified from this initial search were examined to see if they related changes in the balance of care to changes in general practice workload. If there was any doubt whether a study met this criterion, the full article was retrieved. Papers excluded from the review were letters, editorials, burden of illness studies, case studies, literature reviews, and studies that examined general practice workload but that were unrelated to the balance of care. Studies performed outside the UK were excluded, because they were considered to be of no relevance to UK health care practice. Studies undertaken before 1983 were also excluded, as the debate on community care commenced with the publication of *Care in the Community* in 1983.<sup>1</sup> Additionally, studies conducted before 1983 would not be relevant to the current situation because of the changes that have occurred within the NHS since that date.

For the remaining studies, a systematic selection process was followed (Figure 1). The first stage enabled the identification of the additional effect of shifts in the balance of care on general practice workload. Since patients may have visited the practice even if shifts in the balance of care had not occurred, it was important to include studies that compared community/primary

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care with long-stay/hospital care.

The second stage of the selection process abstracted data on the effect of shifts in the balance of care on general practice workload. Articles that did not measure the inputs of practice staff went on to the third stage and were examined to see if they measured the inputs of community or district nurses not attached to the practice. General practitioner (GP) fundholders can employ community nursing services, so the costs of these inputs could fall on some practices. These studies were therefore of interest to the review. Studies that did not measure the inputs of practice-based staff or community/district nurses were excluded from the review. The fourth requirement for inclusion in the review was that the inputs of GPs, practice staff, and community nurses could be disentangled from other community care costs. If this was not the case, then no information could be obtained regarding the effects of shifts in the balance of care on general practice workload, and these studies were excluded.

The remaining articles were then reviewed critically. In particular, their measurement of workload was examined. The effects of the shift in the balance of care on general practice workload were summarized with regard to the type of practice input and/or the measure of practice workload used in the study (e.g. visits to the GP), and a summary of the actual effect on general practice workload was included. This summary did not use statistical methods to pool the results because of the different measures of general practice workload that were reported within the selected studies. Any flaws in the study design were also assessed to see if they affected the studies' conclusions about general practice workload. Again, it is important to emphasize that this study attempted to identify the additional effect on general practice workload attributable to the shift in the balance of care.

**Results**

Of the 80 studies identified as potentially relevant, 16 met the criteria shown in Figure 1 (Table 1). Four of these were excluded because they were based on the same data as other included papers. Twelve studies met the criteria and were reviewed. A brief summary of each study and of the effects of the intervention on general practice workload is shown in Table 2 (a fuller summary of each study is available from the authors on request, as are details of studies excluded from the review).

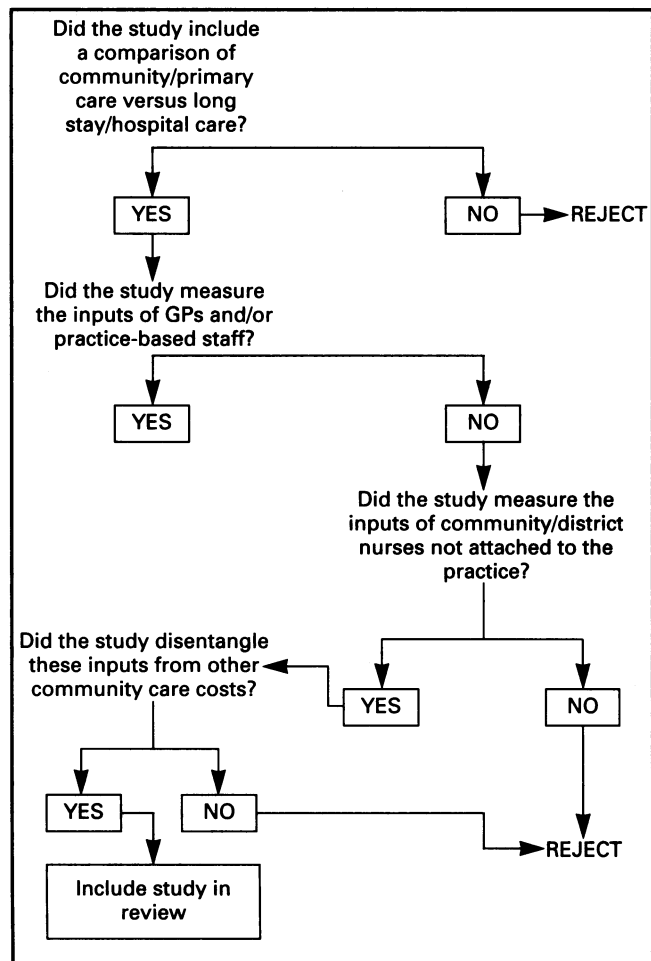
The majority of studies that met the criteria examined psychiatric care (eight studies). Three randomized trials compared home-based psychiatric care with conventional inpatient/outpatient care.<sup>11-13</sup> One trial compared day-hospital with standard inpatient care in the case of emergency admission of patients with neurosis, adjustment reaction, or personality disorder.<sup>14</sup> Four studies compared long-stay psychiatric care with community-based care.<sup>15-18</sup> Three of these studies used a before and after design<sup>15,17,18</sup> and one used a matched prospective comparison.<sup>16</sup> It could be argued that these study designs meant that it was difficult to attribute the effects on general practice workload to the shift in the balance of care. It can also be argued, however, that patients in these studies did not visit GPs or community-based nurses at all when they were long-stay patients. The cost estimates can therefore be considered to be 'extra' costs incurred by the general practices. In the case of psychiatric services, the effects on general practice workload seemed to be greater when care in the community involved long-stay psychiatric or elderly patients rather than patients who would ordinarily have used inpatient/outpatient psychiatric services.

The other studies included a randomized trial comparing shared care with standard outpatient care for asthma, a randomized trial comparing general practice follow-up with outpatient

**Table 1.** Number of studies that were excluded at each stage of the selection process and number of studies included in the review.<sup>a</sup>

Stage of selection process	Number of papers
Papers identified as potentially relevant	80
No comparison of long-stay/hospital care versus community primary care	45
Did not measure general practice or nursing inputs	10
Did not disentangle general practice or nursing costs from other community care costs	9
Same data as studies included in the review	4
Papers included in the review	12

<sup>a</sup>Details of excluded studies can be obtained from the authors.



**Figure 1.** Criteria for inclusion of studies.

follow-up for general surgical patients, a prospective comparison of a hospital at home scheme with conventional hospital care for fractured neck of femur patients, and a study comparing an ophthalmic outreach clinic in general practice with direct referral to a general hospital.<sup>19-22</sup>

The main finding resulting from this review was that few studies have examined the effects of a shift in the balance of care on general practice workload. Although the studies reviewed suggested small effects on workload, the measures of workload used in the studies were narrow and may therefore have underestimated the extent to which it had been affected. Most studies measured the number of GP visits (although it was unclear whether this

**Table 2.** Effect on GP workload by care type.

Care type	Number of studies	Effect on general practice workload	Effect on general practice costs <sup>a</sup>
Home-based versus inpatient/outpatient care for psychiatric patients <sup>9-11</sup>	3	No increase in GP visits	Not reported
Day hospital versus inpatient care for emergency admissions with neurosis, adjustment reaction and personality disorder <sup>12</sup>	1	0.5 extra GP visits per patient 3 weeks after admission	Not reported
Long-stay psychiatric care versus community care <sup>13-16</sup>	4	79-89% of patients make use of GP services; 31-61% of patients make use of district nursing services	£86-352 per patient for unspecified general practice services; £86-172 per patient for nursing services
Shared care scheme for asthma <sup>17</sup>	1	No increase in GP visits for asthma	Not reported
GP follow-up versus outpatient follow-up of general surgical patients <sup>18</sup>	1	0.25 extra GP visits per patient in the 6 months after discharge	Not reported
Hospital at home scheme for fractured neck of femur patients <sup>19</sup>	1	22 hours of nursing time per patient in the first 12 days after discharge	Not reported
Ophthalmic outreach clinic versus referral to a hospital <sup>20</sup>	1	35% of GPs participated in the clinic for an average of 3 hours per year. Use of rooms for 1 day per month	Not reported

<sup>a</sup>Per year in 1993/94 prices.

term included all visits to the practice or only visits to the GP or to a practice nurse) or simply reported the proportion of patients who visited a GP. The studies reported either the quantity of general practice inputs or general practice costs, but not both. Of the studies that examined general practice costs, none reported the costing methods used, and so it is difficult to judge what general practice resources were included (for example GP time, administration, consumables, or the time of other staff). Of those studies that examined the effects on GP visits, only one attempted to disentangle those visits that were for the condition of interest from those that were for other medical problems and ailments.<sup>20</sup> Several authors showed that general practice costs accounted for less than 0.5% of total community care costs,<sup>13,17,18</sup> and so the authors of these studies are likely to have concentrated more on measuring other costs.

Thus, although impacts on workload are shown to be small, the measurement of workload (i.e. the change in resources used in the general practice) is poor and potentially incomplete. In the studies reviewed, many of the services that were evaluated are likely to have been well organized and hospital led, and to have had adequate community support (partly because they were being evaluated). The studies may therefore represent a biased sample of shifts in the balance of care (i.e. only the well-organized schemes). It is therefore difficult to generalize their results.

## Discussion

The deficiencies in the above studies have several implications for the measurement of workload in general practice. 'Workload' comprises many different attributes and consists of much more than just 'GP visits'. There are essentially two components to workload: quantitative and qualitative. Quantitative workload includes the usual 'objective' factors, such as number of consultations, hours of administration per week, and practice nurse visits. From the perspective of economic evaluation, quantitative workload can be defined as those general practice resources used in the care of patients, including GPs' and other practice staff time, consumables, equipment costs, and overheads.<sup>23</sup> The use of the economic concept of opportunity cost (where costs are defined in terms of the value of the resource in its next best alter-

native use) concentrates on the quantity and value of resources used rather than on financial issues (such as whether resources have been paid for). Thus, as long as a resource has an alternative use, it will be included and valued. Economic evaluations often include the costs of existing equipment, buildings, and voluntary labour, even though, in financial terms, these resources are 'free' (i.e. have already been paid for). In economic terms, they usually have value in other uses and must therefore be costed.<sup>25</sup> Even though this distinction between financial and economic cost is often not made clear, it has important implications when examining the effects of shifts in the balance of care on workload (i.e. the use of resources) in general practice.

Qualitative workload includes psychological factors, such as stress and mental effort, which are also related to the intensity of work, and have been shown by many studies to be important to GPs in their daily lives. Thus, these factors should not be ignored when measuring workload.<sup>25-27</sup> For example, Hsiao *et al*<sup>28</sup> attempted to develop reliable and valid methods of estimating the relative resource input cost of physician services in the United States. The methodology divided workload into intraservice (e.g. direct patient contact), preservice and post service (e.g. reviewing and updating records). Attempts were made to quantify four main dimensions of this work: time, mental effort and judgement, technical skill and physical effort, and stress. Workload was estimated by presenting a sample of physicians with clinical vignettes. This exercise highlighted the fact that the definition of workload is important and should try to include costs that may be otherwise 'hidden'.

However, the measurement of workload also depends on the question being asked and the use to which the information is put. In the context of shifts in the balance of care, the purpose of attempting to measure workload is for GPs to receive compensation or other forms of support. Thus, given a number of different attributes of workload, each of which can be affected differently by different shifts in the balance of care, any measure of workload must attempt to examine each attribute. Furthermore, it is likely that resources to compensate and support GPs will be limited, and so it is important to ascertain the relative importance of each of these attributes so that the most important can be targeted first.

## Conclusion

If the problem of increasing workload is to be addressed (which may include the compensation of practices for shifts in the balance of care), then it should be 'evidence based'. Evidence should be gathered on three fronts. First, to recommend shifts requires research in order to establish whether the shift in general practice workload increases the benefit to patients for a similar cost or provides the same benefit at a lower cost.<sup>5</sup> Once this has been demonstrated, it is necessary to conduct more research into defining the nature of the extra workload associated with such shifts. This paper has shown that few studies have attempted to assess the effect of shifts in the balance of care on general practice workload. Of those that have, negligible effects have been found. However, this may be because a narrow definition of workload has been used, which may lead to an underestimate of the effects of shifts in the balance of care on general practice workload. Future research evaluating the costs and benefits of shifting the balance of care should therefore be more rigorous when measuring general practice resources. Further work could be developed upon the lines of Hsiao *et al*<sup>28</sup> Finally, it will be necessary to monitor and measure more precisely how shifts in the balance of care are affecting workload over time.

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