Integration, effectiveness and costs of different models of primary health care provision for people who are homeless: an evaluation study

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Scientific summary

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Scientific summary

Background

There is a high prevalence of health problems among single people who are homeless; since the 1980s, specialist primary health care services have been developed in several locations across England for them. These include dedicated health centres and mobile health teams that visit hostels and day centres. There have been very few evaluations of these services, however, and their effectiveness is unknown. In 2010, the Department of Health (now Department of Health and Social Care) reported a lack of systematic data on the use of health services by people who are homeless and on the costs of such services, and a lack of evidence of the potential to improve primary care and health outcomes, and thus reduce secondary costs. This study aimed to address these knowledge gaps.

Objectives

The study's overall aim was to evaluate the effectiveness and costs of different models of primary health care provision for people who are homeless. The research questions were as follows.

- Which models or service elements are more effective in engaging people who are homeless in health screening and health care?
- Which models are more effective in providing continuity of care for long-term or complex health conditions?
- What are the associations between integration of the models with other services and health outcomes for people who are homeless?
- How satisfied are service users, primary health care staff and other agencies with the services?

Study design and methods

The study concerned single people (not families or couples with dependent children) staying in hostels, other temporary accommodation or on the streets. A mapping exercise was conducted across England to identify primary health care services for them. Information about access to primary health care was collected from staff at these services and from managers of hostels and day centres for people who are homeless. From these two surveys, four existing Health Service Models were selected for evaluation:

1. specialist health centres primarily for people who are homeless (Dedicated Centres)
2. mobile homeless health teams that hold clinics in hostels or day centres for people who are homeless (Mobile Teams)
3. mainstream general practices that also provide targeted services exclusively for people who are homeless (Specialist GPs)
4. mainstream general practices that provide 'usual care' services to the local population, including to people who are homeless (Usual Care GPs), as a comparison.

Two Case Study Sites (CSSs) were recruited for each of the three specialist models, and four for the Usual Care GP model. The primary outcome was the extent of health screening among people who were homeless and evidence of an intervention if a problem was identified (scored 0 or 1). Six 'Health Screening Indicators' were selected: body mass index, mental health, alcohol use, tuberculosis, smoking and hepatitis A. Data for the primary outcome came from the medical records.

A secondary outcome was the effectiveness of the models in providing health care for five Specific Health Conditions (SHCs) that may be difficult to manage or require integration with other services. These were hypertension, chronic respiratory problems, depression, alcohol problems and drug problems. Each condition had five outcomes (each scoring 1 or 0). Outcomes 1 and 2 assessed whether or not a treatment plan had been initiated and whether or not continuity of care/follow-up was provided by the CSS. Outcomes 3 and 4 concerned patient satisfaction with information provided about the condition and treatment received. Outcome 5 assessed stability or change in the health condition over the study period. Other secondary outcomes included (1) changes over time in health and well-being; (2) oral health status and receipt of dental care; (3) use of health and social care services over 12 months, and service use costs; and (4) satisfaction with the service by patients, practice staff and external agencies.

The study commenced in April 2015, and fieldwork ran from January 2016 to June 2019. Patients who had been homeless in the previous 12 months were recruited as 'case study participants'; they were interviewed at baseline and at 4 and 8 months, and information was collected about their circumstances and service use in the preceding 4 months (totalling 12 months of data). Overall, 363 case study participants were recruited: 96 at each of the three specialist models, and 75 at the Usual Care GP model. Medical records were obtained for 349 of the 363 case study participants, from which the primary outcome and some outcomes for the SHCs were scored, and service use data extracted. Interviews were also conducted with 65 staff and sessional workers at the CSSs, and with 81 service providers and stakeholders.

Various indicators were used to measure the relative effectiveness of the four Health Service Models, and each model was analysed separately. Comparisons were performed using appropriate regression techniques to explore associations between Health Service Models, demographic and health profiles of participants, and outcomes. Differences in outcomes between models were investigated in relation to contextual factors and mechanisms (service delivery factors). Qualitative data from the interviews with case study participants, practice staff and other agencies were examined using NVivo (QSR International, Warrington, UK) and themes identified. Service use was valued using national tariffs at the individual participant level to provide a cost by service use item, and by groups of items over 12 months.

Key findings

At baseline, the majority of Specialist and Usual Care GP participants were living in staffed accommodation, whereas 41.7% of the Mobile Team participants and 27.1% of the Dedicated Centre participants were sleeping rough. Dedicated Centre and Specialist GP participants were significantly more likely to be using heroin or cocaine, injecting drugs and receiving opioid substitution treatment. A higher percentage of Mobile Team participants were not born in Britain, and they were less likely to have drug problems. Unlike the other three models, the Mobile Teams did not have a 'fixed' base or a GP in the team. Instead, nurses ran clinics in hostels and day centres and patients were encouraged to register with local GPs. In most cases, medical records were shared. Much of the work of the Mobile Teams' nurses concerned assessing health needs and linking patients to general practices or other services, rather than acute disease management.

Primary Outcome Scores ranged from 0 to 6 (6 being the most favourable), with an overall mean of 3.30 (standard deviation 1.24). There were no significant differences in scores between Dedicated Centres, Specialist GPs and Usual Care GPs, but Mobile Teams had a highly statistically significant lower score. Regression analysis revealed that more favourable scores were also associated with self-reports of depression or drug use at baseline; spending a higher proportion of the study period in staffed accommodation; and more consultations with a GP, nurse or health care assistant at the CSS.

Regarding SHCs, more than one-fifth of participants reported chronic respiratory problems or depression at baseline, completed instruments that indicated severe problems, yet these were not documented in the medical records. This applied to all Health Service Models, suggesting a failure at times by staff to identify or record these problems. The most noticeable differences between Health Service Models concerned continuity of care (outcome two). Dedicated Centres, followed by Specialist GPs, were significantly more likely to have achieved this for participants with depression, alcohol problems and drug problems. Mobile Teams were least likely to have maintained continuity of care for all conditions apart from drug problems, for which Usual Care GPs scored slightly lower. When interventions by general practices were included in the Mobile Teams' scores, continuity-of-care rates reached levels comparable to, or above, those of Usual Care GPs, but not as high as those of Dedicated Centres or Specialist GPs. Overall, there were significant associations between the availability of on-site substance misuse services and continuity of care for alcohol and drug problems.

Across all models, poor oral health was common: many participants did not seek dental care, and dental pain and other dental needs were unaddressed. Dental services specifically for people who were homeless or vulnerable were available at or near seven CSSs, but many participants did not access these. Participants of the three specialist models rated the service and care they received considerably more favourably than the general population's ratings of their general practice, whereas Usual Care GP participants rated the service less favourably. Regression modelling revealed a highly statistically significant beneficial effect for the specialist models, compared with the Usual Care GP model, regarding overall experience of the CSS and quality of care received.

Participants of the specialist models were more likely to say that they had confidence and trust in the doctors and nurses, and generally welcomed the friendly attitude of staff, the flexibility of the service and the availability of drop-in sessions. Most staff at the specialist models had considerable experience of working with people who were homeless and had developed innovative ways to address their health needs. They were also more likely than staff of the Usual Care GPs to be well integrated with local homelessness services. A common problem reported by staff and external agencies of all except one CSS was the poor availability of mental health services.

The number of contacts with GPs over the 12-month study period was considerably higher among the study participants than among the general population. In addition, 33.1% had at least one hospital admission, and 65% used out-of-hours services such as NHS 111 or accident and emergency departments. The number of out-of-hours service contacts was positively correlated with the number of GP and nurse contacts, suggesting that out-of-hours services are not necessarily a substitute for GP or nurse consultations. Stepwise logistic regression of out-of-hours service use found that the only significant predictor was number of changes of accommodation during the study period, with each additional change rendering a participant 1.45 times more likely to use such services.

Service use and costs were significantly highest among Dedicated Centre participants, and significantly lower among Usual Care GP participants. Higher Grand Total Costs were also associated with spending a higher proportion of the study in staffed accommodation and more changes of accommodation during the study period; lower Grand Total Costs were associated with being black or Black British, and recent involvement in education/training/employment.

Conclusions and implications

In this study, participant characteristics, contextual factors and mechanisms were influential in determining outcomes. Analyses have mainly focused on differences between the four Health Service Models, but there were key differences between CSSs within the same model, which are also reported.

Overall, outcomes for Dedicated Centres and Specialist GPs (particularly Specialist GP 1) were relatively favourable, especially in relation to continuity of care for health conditions and service use by participants. Their relative success is likely to be attributable to service delivery factors. They had dedicated staff working with patients who were homeless, and provided flexible 'drop-in' services. Multidisciplinary working was prominent, with on-site mental health and substance misuse services, and the sites were well integrated with local hospitals, street outreach teams and homelessness sector services.

With no GP in the Mobile Teams, patients received health care from both Mobile Team nurses and local GPs. The less favourable scores associated with this arrangement for health screening and continuity of care for health conditions suggest poor co-ordination between the services. Health care by Dedicated Centres and Specialist GPs was delivered by GPs and nurses from the same practice, and patients were registered with a single primary health care provider, whereas the Mobile Team model involved the delivery of primary health care by multiple providers at different sites. This may have negatively affected collaborative working among staff and led to uncertainty and confusion among patients. Although the mean number of nurse consultations was considerably higher among Mobile Team participants than in other models, their number of GP contacts was less than that of participants in the Dedicated Centre and Specialist GP models.

Usual Care GPs operated very differently to other models, and service delivery factors are likely to have been crucial in contributing to their relatively poor performance for some outcomes. Their practice list sizes were large; they had no dedicated staff or targeted services for patients who were homeless; they did not offer drop-in clinics, meaning patients were required to book appointments; and they were not well integrated with homelessness services. However, positive scores for health screening at two sites, and higher satisfaction ratings at one site, suggest that some mainstream general practices can accommodate the needs of patients who are homeless, given the right circumstances.

Implications

Implications for NHS commissioners and health care service managers and practitioners arise from the study's findings. In areas with unmet health needs among people who are homeless, commissioners need to consider what models of provision are most appropriate, taking into account the scale and nature of local homelessness. Questions arise as to the function of Mobile Teams and their collaboration with GPs, and whether or not a more effective service could be delivered if they operated as part of a general practice, rather than as a separate service. Likewise, different configurations of dental care delivery need to be explored, and consideration given to the poor availability of mental health services.

There needs to be improved health screening for people who are homeless, leading to an intervention when indicated. Awareness needs to be raised of the links between homelessness and chronic respiratory problems and depression, and assessments should be undertaken to detect these conditions and initiate treatment if required. The relatively poor performance of Usual Care GPs for some outcomes raises questions about their role in providing health care to patients who are homeless, and when the practices might require additional support. Consideration should be given to the introduction of a 'homelessness lead' at these practices to enable more focused work to be undertaken with patients who are homeless. Finally, the evaluation of services is critical, including their performance against national and local indicators, comparisons of different service delivery models, and monitoring of longer-term outcomes.

Limitations

There were limitations to the study. One of the main difficulties was recruiting mainstream general practices with enough patients who were homeless for the Usual Care GP model. Medical records could not be accessed for 14 participants of this model. Given the innovative nature of this study, various measures were used for the first time to assess the performance of the CSS. Screening for the primary

outcome and the management of SHCs did not rely on validated tools for scoring (as none could be found). Instead they depended on the expertise of the research team and other clinicians. Various 'rules' were adopted for the scoring, which undoubtedly had an influence on outcomes.

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