The relationship between workforce flexibility and the costs and outcomes of older peoples' services.

Executive Summary for the National Insitute for Health Research Service Delivery and Organisation programme

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Executive Summary

Background

The purpose of this research is to examine how, and with what impact, workforce substitution and specialisation is influenced by workforce change policies in the context of older peoples' services. The specific setting for this research is community and intermediate care services (CAICS) for older people.

Aims and objectives

The research aimed to address five questions;

- How do workforce change policies impact on the workforce responsible for delivering services for older people?
- What is the relationship between workforce configuration (skill mix; training; delegation, substitution and specialization, role overlap) and patient, staff and service outcomes (including costs)?
- What is the relationship between different service organization and management approaches (team structures, setting of care, supervision and accountability) and patient, staff and service outcomes (including costs)?
- What is the relationship between different organisational and management structures impact and the workforce configuration?
- How does specialization, through the employment of extended scope practitioners, GPs with special interests and geriatricians, impact on the team and service users?

In addition, the research aimed to:

- Develop a model that describes older peoples' community and intermediate care services, given the complexity of the services and interventions.
- Develop a framework to describe the workforce variations across the different approaches to older peoples' community and intermediate care services.

Methodology

Multiple methods were used to address the research questions

- A detailed policy and literature review
- Secondary analysis of existing data arising from a National Evaluation of Intermediate Care services
- A cross sectional survey of 186 older peoples' CAICS, which captures details about the staffing and service configurations
- A prospective study of 20 older peoples' CAICS to examine, in depth specific hypotheses relating to workforce variations on service costs
    - Qualitative data collection involving focus groups with 158 staff from 11 of the teams involved in the prospective study
- A discrete choice experiment with 77 patients to explore user preferences around staffing, service setting and frequency

Findings

IC is characterised by a multi-disciplinary team approach to care and as such staffing is organised to facilitate multidisciplinary team working. Joint professional visits, multidisciplinary team meetings, being based together in a common physical space and the sharing of professional skills were all identified as important organisational aspects of multidisciplinary team working.

Staffing models of older peoples' CAICS vary widely between teams, however there are some common features. Overall, more than 60% of all teams included in our study employ an occupational therapist, physiotherapist, at least one support worker, nurse and an administrator. Social workers and speech and language therapists are employed by around half of all CAICS teams. Fewer than 20% of the teams directly employ a medical practitioner, psychologist, mental health practitioner, pharmacist or podiatrist. CAICS are most likely to be led by a nurse, physiotherapist or occupational therapist.

However, there are large variations in team sizes (mean 18.2 WTE, SD 14.1, range 1.4 - 80). The ratios of support workers to qualified staff varied widely, (mean 0.7, SD 0.8, range 0 - 5.6). Additionally, the ratio of the total number of staff to the total referral showed large variations (mean 66.9, SD 70.3, range 2.9 - 385.4).

The qualitative data indicated that there was no consistent rationale for the adoption of particular staffing models. The variations in costs and patient outcomes in relation to staffing models indicate that there is potential for efficiency savings through more effective use of staffing.

Variations in workforce configuration and different service organisation and management approaches were associated with the following patient, staff and service outcomes;

Patient outcomes:

Patient outcomes were positively and significantly associated with five key staffing variables:

- Having care delivered by a higher proportion of support workers
- Being treated by staff from a team which has fewer senior staff
- Being treated by fewer different types of practitioners during the episode of care
- Being treated by staff who belong to a larger team, and
- Increasing total amount of face to face contact time with the patient.

Staff outcomes:

- Better staff outcomes (satisfaction and intention to leave employer and / or profession) were associated with smaller team size; higher levels of staff integration with peers and colleagues; better team working; better management structures and styles; having a specific line manager; a perception that the team delivered high quality care; and at least weekly team meetings.
- Staff who are more autonomous are less likely to leave their profession.
- Higher grade staff (AfC bands 5-8 vs 1-4) have a higher intention to leave their current employer, but have a lower intention to leave their profession than lower grade staff. Younger staff reported a lower intention to leave their employer.
- Social workers, social care workers and support workers were more likely to report an intention to leave their employer and their profession in the next 12 months.

Service outcomes (costs and length of stay):

- Having a higher proportion of skilled staff is associated with *decreasing* service costs initially, although costs start to increase again. In this study the costs were minimised when around 60% of contacts were provided by skilled staff.
- Cost per patient increases as the number of different types of practitioners treating the patient increases. The rate of increase in cost with each additional practitioner is steep at first but then declines.
- The total number of staff in the team is directly associated with higher service costs (ie, the larger the team, the greater the costs).
- No staffing variables were associated with length of stay, but greater access to technology and equipment is associated with reduced length of stay. Better staff integration with their peers and colleagues was associated with lower overall costs of care delivery.

- Teams that reported that they delivered higher quality care also had higher service costs.

The relationship between organisational and management structures and workforce configuration

CAICS are largely heterogeneous, and despite the number of teams surveyed for this study, few clear patterns have emerged that explain the workforce configurations adopted by each team.

There was some evidence of variations in staffing according to the primary setting of care provision. For instance, teams providing home based care provision had higher numbers of support workers, physiotherapists and occupational therapists but fewer medical staff, including general practitioners and geriatricians than inpatient or outpatient services ($p<0.05$). Inpatient services were likely to report higher numbers of nurses and a higher ratio of support workers to qualified staff. Outpatient services reported the highest numbers of medical staff and geriatricians.

A model that describes older peoples' community and intermediate care services, given the complexity of the services and interventions.

The heterogeneity of the services we encountered, and the lack of a clear definition of intermediate care services within the UK context led us to explore, in detail, the components or contextual features that go together to make up a service, resulting in a tool we have called the ‘service proforma’. The service proforma provides a way to compare services without 'pigeon holing' them into pre-existing taxonomies, which appear to have little value in guiding service development. As such, we have not developed a taxonomy for describing older peoples' community and intermediate care service, but have developed a framework through which the services can be compared.

The six domains used to describe intermediate care services are;

- Context
- Reason for the service
- Service users
- Access to the service
- Service structure
- The organisation of care

Based on the findings from both the cross sectional and prospective studies, as well as the qualitative data we have developed a general picture which describes intermediate care services as a whole. However the details within each of the domains tend to vary quite widely.

A framework to describe the workforce variations across the different approaches to older peoples’ community and intermediate care services.

As mentioned above, the lack of a clear and consistent taxonomy around CAICS means that there is not an established basis for comparison between teams.

To address this objective, we have employed Enderby and Stevensons' "Eight Levels of Care" model, which identifies eight packages of patient care based on the levels of patient care need (Enderby and Stevenson 2000).

For each package of care, we have provided data including the mean number of face to face contacts; mean total contact time; mean length of episode (days); mean staff costs; mean dependency scores on admission (EQ-5D and TOMs); mean change in dependency scores; and the mean ratio of qualified to support staff, which has the potential to be used for service planning and benchmarking

Whilst further research is necessary to verify these findings, it serves as a potentially useful benchmark for service planning. With the move to practice based commissioning, also provides a basis for both measuring, and realistically predicting expected changes in outcomes across different patient groups.

The findings from this study have been integrated into an "Interdisciplinary Management Tool" which is being implemented using action research with several intermediate care teams nationally as part of a further SDO funded project, entitled "Enhancing the Effectiveness of Interprofessional Teamworking: Costs and Outcomes" (NETSCC SDO08/1819/214). An outline of the tool is provided in Appendix 15.

Limitations

The heterogeneity of older peoples' CAICS means that it is not possible to draw widespread generalisations, instead the findings need to be seen and interpreted in the context in which they are to be applied.

Several of the conclusions in this study are based on the relationships between 'support' staff and 'qualified' staff, however we are aware that each of these titles includes myriad roles and practitioners, and are unlikely to be a true reflection of the work carried out by these staff.

The prospective study was observational, thus it is not possible to determine causality or examine the direction of any causal relationship between variables.

Conclusions

The workforce configuration of older peoples' CAICS does have an impact on the costs and outcomes for staff and patients.

The research has provided a comprehensive picture of the range, configuration and staffing of older peoples' community and intermediate

care services in the UK, and providing some understanding of the impact of workforce variables on the costs and outcomes of older peoples' services.

While the results of this study can be informative for local providers, purchasers, commissioners and other stakeholders in rehabilitation for older people, local decisions will need to be made in the context of the service delivery infrastructure and development needs. Therefore in deciding about the workforce requirements of older peoples' community based intermediate care and rehabilitation services, stakeholders will need to consider their patient casemix, the local population, and the specific goals of the service. This study has endeavoured to provide a suite of practical tools to support this approach.

Disclaimer

This report presents independent research commissioned by the National Institute for Health Research (NIHR). The views and opinions expressed therein are those of the authors and do not necessarily reflect those of the NHS, the NIHR, the SDO programme or the Department of Health

Addendum

This document was published by the National Coordinating Centre for the Service Delivery and Organisation (NCCSDO) research programme, managed by the London School of Hygiene and Tropical Medicine.

The management of the Service Delivery and Organisation (SDO) programme has now transferred to the National Institute for Health Research Evaluations, Trials and Studies Coordinating Centre (NETSCC) based at the University of Southampton. Prior to April 2009, NETSCC had no involvement in the commissioning or production of this document and therefore we may not be able to comment on the background or technical detail of this document. Should you have any queries please contact sdo@southampton.ac.uk