Developing Enhanced Primary Care Services for Residents of Nursing Homes in North Staffordshire

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ABSTRACT:

In response to British Geriatrics Society reports 'Quest for Quality' and 'Failing the Frail' we designed, delivered, evaluated and disseminated a model of 'Enhanced Primary Care Services for Nursing Home Residents' in North Staffordshire. Our guiding principles were that all older people must have access to NHS care that is patient centred, needs based, equitable and free at delivery. We developed a proactive model of care recognising the scope and complexity of this population's needs, maximising continuity and minimising unplanned transitions of care. We used published research and our analysis of local data as the evidence base for service design. We piloted the service in one large nursing home and evaluation demonstrated positive outcomes, both clinical and financial. The service was therefore expanded across North Staffordshire and latest evaluation demonstrates improved outcomes delivered at scale. We have shared experiences and supported colleagues in South Warwickshire to develop a similar service.

FULL REPORT:

Background:
In 2012, responding to British Geriatrics Society reports 'Quest for Quality' and 'Failing the Frail' we launched a programme to improve primary care for nursing home residents in North Staffordshire.

Objectives:
To design, deliver and evaluate an enhanced primary care service for nursing home residents, aimed at improving care and reducing A&E attendances and unscheduled admissions.

Service Design:
We took a strongly evidence-based approach to service design, drawing upon both published evidence and our analysis of local data. Local clinical audit conducted jointly by GP and Geriatricians suggested that 32% of acute activity for this population was potentially avoidable, consistent with published evidence that this figure could be as high as 40%, and primary care interventions that could help to achieve this potential were proposed.
We also conducted an analysis of coded unscheduled admission data for nursing home residents in North Staffordshire (594 admissions during 2011) and used this to identify ways in which enhanced primary care provision might improve clinical outcomes. These proposed primary care interventions were collated to inform the design of the new service.
**Pilot Project:**
The newly designed service was delivered to a pilot population of 171 residents in a single nursing home in 2012. In 2011 the pilot site was not an outlier for either A&E attendance or unscheduled admission rates compared to other local nursing homes. Following introduction of the service for the pilot population, their A&E attendance rate fell by 25% (p=0.014) and unscheduled admission rate by 29% (p=0.036), compared to increases in rates for a local population (386 residents in 4 homes) not receiving the enhanced service.

**Service Expansion:**
The pilot service improved individual pathways of care, increased patient, carer and professional satisfaction, and resulted in net financial savings. Expansion of the service was therefore approved by the Staffordshire PCT Cluster and commissioned as a Locally Enhanced Service (LES) across North Staffordshire from April 2013. Participation in the scheme was voluntary, supported by appropriate training and offered to all GPs. During 2013/14 the number of nursing home places covered by the Enhanced Primary Care Service was 664/1113 (60%) of all nursing home places in North Staffordshire. The remaining 449/1113 (40%) of all nursing home places received standard primary care provision only.

**Evaluation of Impact on Unscheduled Admissions:**

**Data Analysis:**
The nursing homes were divided into two groups, namely those receiving the Enhanced Service (LES NHs) and those not receiving the Enhanced Service (non-LES NHs). The number of acute unscheduled admissions in 2013/14 (after introduction of the service) was compared to that for 2012/13 (before the introduction of the service) for each group. The total numbers of admissions by group for each year were compared using a chi square test. The cumulative admissions by month for the year to that month were calculated for each group and standardised as total rates per bed, to allow direct comparison of admissions rates between the two groups. The pilot site was excluded from the 2012/13 'before' rate calculations, because the service was already being delivered in that NH during that year.

**Results:**
In 2012/13, before the Enhanced Service was launched, the rates of unscheduled admissions per bed per year were 0.73 for LES NHs and 0.78 for non-LES NHs. In 2012/13, there was no significant difference in the number of unscheduled admissions from the nursing homes that went on to receive the Enhanced Service in 2013/14 compared to the numbers of unscheduled admissions from nursing homes that did not go on to receive the Enhanced Service in 2013/14 (chi square 0.681, p=0.41).

In 2013/14, after implementation of the Enhanced Service, the rates of unscheduled admissions were 0.52 admissions per bed per year for LES NHs and 0.85 admissions per bed per year for non-LES NHs. In 2013/14, there were very significantly fewer unscheduled admissions from the nursing homes receiving the Enhanced Service compared to those that were not receiving the Enhanced Service (chi square 46.6, p<0.0001). These figures are illustrated on the graph below.
Cumulative rate of unscheduled admissions per bed by month for the year to that date (y axis), for nursing homes receiving and not receiving the Enhanced Service, before (2012/13) and after (2013/14) implementation of the Enhanced Service:

This chart clearly demonstrates that there was no significant difference in rates of admission per bed between the two groups of nursing homes in the year before the implementation of the NH LES (green and blue lines on the chart above). However, after the implementation of the LES there was a significant difference between the two groups (red and purple lines on the chart above) with rates having fallen in the LES group (red line) and increased in the non LES group (purple line).

The actual total number of unscheduled admissions fell by 88 (-20%) in 2013/4 compared to 2012/13 for the group of nursing homes receiving the Enhanced Service and increased by 30 (+9%) in the group of nursing homes not receiving the Enhanced Service. The growth in the number of unscheduled admissions from the non-LES NHs in 2013/14 was consistent with the growth in this activity for this population across all NHs in North Staffordshire and Stoke on Trent in the previous two years.

The average cost of an unscheduled admission in this population in 2011 was £2,500. This figure can be used as the basis for estimating the financial impact of the enhanced service:

Costs for LES NHs:
-88 admissions = saving of 88x£2,500 = £220,000 across a population of 664 NH residents
= saving of £331 per resident per year (likely to be a conservative estimate)
The budget for the NH LES = £275 per resident per year (although this budget was underspent during 2013/14 due to a part year effect in some NHs as the service was not launched simultaneously in all NHs as from 1st April).
Net estimated reduction in mean costs of at least £55 per resident per year.
Costs for non LES NHs:
+30 admissions = increased costs of 30x£2,500 = £75,000 across a population of 449 NH residents = increased costs of £167 per patient per year.
Net estimated increase in mean costs of at least £167 per resident per year

**Qualitative Evaluation:**
Qualitative feedback from patients, carers and professionals was collected for the pilot project and was extremely positive. Formal, structured, qualitative evaluation of patient, carer and professional experiences of the LES is planned but not yet complete.

**Conclusion:**
The North Staffordshire Enhanced Primary Care Service for Nursing Home Residents has been successfully implemented and the benefits of the original pilot project have been replicated at scale across the CCG. The Enhanced Service has been associated with a substantial and significant reduction in unscheduled admissions by nursing home residents in North Staffordshire during 2013/4 as compared to 2012/13. The number of total number of admissions has fallen by 88 (20%) and this represents a decrease in the rate of admission from 0.73 to 0.52 per bed per year. This is compared to continued increase in acute admissions for residents not receiving the Enhanced Service, for whom the total number of admissions has increased by 30 (9%) which represents an increase in the rate of admission from 0.78 to 0.85 per bed per year.

This project indicates that for this population the provision of Enhanced Primary Care Services, supported by suitable training and investment, can help minimise acute unscheduled transitions into secondary care.

It is estimated that the net mean costs fell by at least £55 per patient per year for the NH LES population, compared to an increase in mean costs of at least £167 per patient per year for the non NH LES population.

Throughout this project we have paid considerable attention to effective communication with a range of interested stakeholders. We believe this has made an important contribution to the success of the project and our approach is summarised in the Appendix below.

**Next Steps:**
A number of additional GPs have recently signed up to deliver the service. As a result the residents of 4 further nursing homes (an additional 208 residents) are now, or will soon be, receiving the Enhanced Primary Care Service. This brings the total coverage for the service to 872/1113 NH residents in North Staffordshire, that is 78% of the eligible population. An alternative solution must be found to give the NH residents across North Staffordshire who are still not receiving the Enhanced Service access to the same level of service as soon as possible. This will require an alternative commissioning approach as their current GPs have declined to deliver the LES.
Appendix: Communication with partners and stakeholders:

BGS & ADASS Conference, July 2012:
We discussed our initial plans with the BGS and were invited to present a ‘Clinical Commissioning and Primary Care Perspective’ at a joint BGS and ADASS conference ‘Commissioning Health and Social Care Services for Older People’. Our presentation is available on BGS website.

Northern Staffordshire Event, September 2012:
We organised an event for partners across our local health and care economy. This was to raise awareness of the project and establish shared objectives. It included workshops examining systems of care and identifying and prioritising GP training needs. The event was enthusiastically supported by 75 attendees from 10 organisations.

Staffordshire PCT Cluster, November 2012:
Our proposal to develop the pilot into a fully commissioned LES was presented to Staffordshire Cluster and approved for North Staffordshire and Stoke-on-Trent CCGs.

Engagement/Training Events in North Staffordshire, February-May 2013:
We organised a series of local training/engagement events based around the training needs as identified by the GPs at the event in September 2012 and involving a range of partners including: care homes, primary, community, acute and palliative care, mental health and social services and business (assistive technology).

South Warwickshire CCG, May-December 2013:
Initial informal discussions with South Warwickshire CCG were followed by structured engagement to support their development of a similar service. We presented our evidence and experiences at their launch event and they described our support as ‘inspirational’.

Local Health Economy, December 2013:
Interim evaluation after 8 months of the project was shared locally via email to engaged stakeholders, CCG newsletters, and health economy senior executive and clinical meetings.

GP Resource Centre on North Staffs CCG Intranet:
There is a dedicated area on the North Staffordshire CCG intranet that contains all resources associated with the LES, including service specification, toolkit and all training materials used at GP training events.