Potential high impact redesign opportunities: survey of Integration Joint Boards and literature review

February 2017

Introduction

In November/December 2016, following conversations with a couple of Integration Joint Board (IJB) Chief Officers about planning for 2017–2018 and the need to contain costs while improving outcomes of care, Healthcare Improvement Scotland agreed to support knowledge sharing across IJBs by identifying and sharing experience of initiatives designed to reduce costs while maintaining the quality of services. It was agreed to focus this initial exercise on initiatives which had reduced hospital admissions or length of stay for patients, and subsequently reduced costs.

Methods

The Chief Officers of the 31 Integration Authorities were asked to complete a survey and provide examples of local initiatives that had reduced hospital admissions or length of stay for patients, and subsequently reduced costs.

We also reviewed the literature for published examples of such initiatives of relevance to NHSScotland. The survey was issued in late December 2016 with a late January 2017 deadline for submissions.

A literature search on examples of transformational change associated with cost reduction and quality improvement undertaken for Healthcare Improvement Scotland's strategic commissioning support programme was used as the initial source of published literature. This search combined terms such as *transformational change*, *system redesign*, *cost saving* and *quality of health care*. The literature identified through this process was supplemented with articles cited in or cited by these reports and a rapid review of the findings in these reports undertaken.

Survey results

Eight IJBs provided responses to the survey, with three IJBs providing detail on more than one initiative (see Table 1 for results). The turnaround time allowed for responses was short and the time of year for conducting such a survey was not ideal and we are very grateful to those who were able to provide returns to us.

Most of the examples were high level and, in most of the cases, cost savings were anticipated rather than evidenced. Where more detail was provided, an indication of what was done and the outcomes are summarised below.

The **North and South Lanarkshire Health and Social Care Partnerships'** submission on the Reshaping Care for Older People programme was a 4-year, approximately £10 million programme with a range of initiatives and an evaluation of its success in achieving its overall vision of: *'Older people are valued as an asset, have their voices heard and are able to enjoy full and positive lives in their own homes or in a homely setting.'*

A medium-term outcome was 'resource released for reinvestment'. However, the purpose of the initiative and its evaluation was not to identify successful cost savings. Where resource was released, this was reinvested in other ways to provide enhancements in care rather than reduce costs. For example, the Reablement Team project showed a reduction in home care packages for people, which could free up resource for other clients.

The majority of projects within the programme demonstrated improvements in the quality of care as a result of the additional investment. The programme evaluation suggested that alternative (and potentially cheaper) models of care would mean reductions in effectiveness of care or shifting costs from the public to the third sector, recognising that sometimes this can be cost-effective.

In **North Ayrshire,** a consultant-led older people's rehabilitation ward was transformed to an interdisciplinary intermediate care facility. An increase in throughput of 21% and length of stay reduction of 12 days resulting in saving acute bed days was reported, as was an increase in staff and patient satisfaction.

Also in **North Ayrshire,** a funded project for a joint response from the Scottish Ambulance Service and North Ayrshire Health and Social Care Partnership telecare staff when telecare community alarm equipment was activated. If there is no medical need to transport the person to hospital, the telecare staff arrange, for example, further social care assistance. In one year, this service has avoided 777 people (74.5% of calls) being transported by ambulance to hospital and the cost of any subsequent admissions.

Aberdeenshire Virtual Community Ward (VCW) has been designed to address the needs of patients at risk of admission or readmission, for example those with multimorbidity, end of life care needs, delirium/ confusion, or complex hospital discharge. The VCW model involves short-term (days) wrap-around at home, health and social care support from a multidisciplinary team with a GP, community nurse or carer/care manager, supported with other disciplines as required. In the 6-month reporting period, 830 patients had been admitted to and discharged from the VCW and, although evaluation data is as yet limited, the team estimates that twice as many patients had been managed at home following discharge from VCW as would have been following an acute hospital admission. This project has been supported through primary care transformation funding.

In **East Ayrshire,** the Red Cross has been commissioned to provide a 'Home from Hospital' service, which transports discharged patients to their home and supports them to settle back in with a view to avoiding readmission. The service will also provide small-scale risk assessment for onward referral, for example to avoid falls and low-level practical support with shopping/meal preparation. A follow-up telephone call is made the following day to determine if further support is required. During the evaluation period of around 14 months, East Ayrshire Health and Social Care Partnership has determined that it has supported around 500 people to settle back at home. Estimates have been made of potential savings, but it is not clear how these estimates have been determined or what they cover.

West Dunbartonshire Health and Social Care Partnership described their Community Hospital Discharge Team which aims to reduce delayed discharges. Early assessors (hospital discharge liaison workers) identify individual patient needs early in the discharge process with a multi-agency approach to discharge involving allied health professional services, social work and nursing. This provides integrated support for discharge at the point the individual is medically fit to return home. The partnership has achieved the target of 0 patients delayed for more than 14 days in all but one month since April 2015.

Table 1 Summary of survey responses

Health and Social Care Partnership	Topic	Population	Reported impact
Falkirk	Pilot 'Discharge to Assess' model	Not stated	Too early to demonstrate results/impact
North and South Lanarkshire	Thirty-nine initiatives under Reshaping Care for Older People funding	Older people	Five medium-term goals identified and projects evaluated against these. Indication of 95 beds saved in 1 year through a number of North and South Lanarkshire initiatives
Western Isles	Through-the-night scheduled care service into a 24/7 unscheduled care service	Not stated	Anticipating financial savings
North Ayrshire	Created interdisciplinary, intermediate care unit from consultant-led older people's rehabilitation ward	Adults with complex needs and older people	Throughput increased by an average 21%; length of stay reduced by an average 12 days; downward trend for readmission at 7 and 28 days
North Ayrshire	North Ayrshire Health and Social Care Partnership telecare staff attend with Scottish Ambulance Service (SAS) staff when alarm activated and no response from individual	Older people with telecare community alarm	In 1 year, 777 (74.5% of calls) people attended by SAS following telecare activation were managed at home with associated reduction in acute care costs
Aberdeenshire	Virtual Community Ward	Avoiding admission/ readmission of primarily older people	Predicting increased proportion of people managed at home versus acute or community hospital admission
Aberdeenshire	Single point of contact for health and social care referrals	Peterhead and Hatton/Cruden Bay GP practice patients	Suggested reduction in inappropriate referrals but data limited to support this

Health and Social Care Partnership	Topic	Population	Reported impact
East Ayrshire	Red Cross - Home from Hospital service	Discharged patients, primarily older people	Supported 1,600 people (500 in East Ayrshire) potential savings of £1.34m to health and social care system
West Dunbartonshire	Community Hospital Discharge Team	Older people in hospital	Reduced to 0 patient discharges delayed for >14 days
Orkney	Step up/step down facility with volunteer support	Adults with rehabilitation needs	Reduced length of stay; improved access to rehabilitation; positive user feedback

Literature review

An overview of relevant articles identified through the literature search with hyperlinks to the reports is presented here. Although the search was not limited to examples of where savings could be made in acute care by transferring care to the community, the majority of identified publications had this as a focus. Relevant published reports were found to be scarce with very few presenting concrete evidence of cost reductions, although the majority of reports do provide evidence of improvements in quality using other measures, for example improved performance measures or patient outcomes.

The **World Health Organisation Health Evidence Network** published a review in 2003 on the impact of reduction of hospital bed capacity and identified that the greatest demand on hospital resources is in the first few days of a hospital stay. Reductions in patient length of stay with associated changes in the patient population have created increasing demands on staff resource. Therefore, the potential savings from reducing bed capacity are limited and it is only by withdrawal of entire services that significant reductions in costs can be achieved.
www.euro.who.int/__data/assets/pdf_file/0004/74713/E82973.PDF

Central Middlesex Hospital undertook a major redesign of care over a 15 year period and which was reported in 2009. Evaluation conducted between 2003–2007 identified improvements in performance but no economic data was presented.
www.nhsconfed.org/~/media/Confederation/Files/Publications/Documents/Local_hospitals.pdf

The **Health Foundation** rapid evidence review on shifting acute inpatient and day case services from hospital to the community published in 2011 indicates potential gains, including improved health outcomes and greater patient satisfaction, but does not demonstrate cost savings to the system.
www.health.org.uk/sites/health/files/GettingOutOfHospital_fullversion.pdf

A 2016 **National Institute of Health Research** scoping review of strategies for improving outpatient effectiveness and efficiency found little evidence of cost-effectiveness or improved efficiency from moving outpatient facilities to the community, although this may be popular with patients. Suggested reasons are supply-induced demand and addressing of previously unmet need together with reduced efficiencies associated with centralising care. Although a few initiatives indicated that changes to outpatient services would reduce costs, there needs to be more robust evaluation of initiatives designed to increase value to patients and services.
www.journalslibrary.nihr.ac.uk/hsdr/hsdr04150#/abstract

One approach to outcomes-based contracting is summarised in this 2014 report describing **Bedfordshire Clinical Commissioning Group's** aims to improve the quality of care of musculoskeletal services while controlling costs through an outcomes-based capitation contract. The report was produced by the International Consortium for Health Outcomes Measurement (ICHOM) with the payment model consisting of two parts: a fixed part (bundled payment) and a variable part (outcomes-based payment). The variable part was designed to incentivise excellence in quality and consisted of five criteria, including use of innovative technology and patient experience. The business case detailed the costs of redesigning and procuring the new integrated musculoskeletal system to be in the region of £500K. Bedfordshire Clinical Commissioning Group estimated the cost savings of adopting the outcomes-based capitation system could be £750K per year.
www.ichom.org/files/articles/ICHOM-Bedfordshire-Case-Study.pdf

The **House of Care** model for people with long-term conditions has been described in a 2013 King's Fund report. The use of predictive modelling tools to identify those people at highest risk of hospital admission in an attempt to control costs is considered potentially effective, but the authors suggest that as this is a very small proportion of the whole local population it may not deliver the required returns.
www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/delivering-better-services-for-people-with-long-term-conditions.pdf

A 2010 **Health Foundation** research study on the Quality and Outcomes Framework (QOF) as a mechanism to increase the use of preventative interventions in primary care concluded that the QOF achieved 'material but limited' gains in both hospital costs and outcomes.
www.health.org.uk/sites/health/files/DoQualityImprovementsInPrimaryCareReduceSecondaryCareCosts_fullversion.pdf

Southcentral Foundation in Anchorage, Alaska undertook what is widely regarded as one of the most successful examples of health system redesign in the United States and internationally. This involved a whole systems redesign based on a generalist model with specialists being brought into primary care rather than patients being referred to secondary care centres. The model also involved redesigning job roles, an emphasis on staff training and development, and significant investment in IT and data systems and service improvement.
www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/intentional-whole-health-system-redesign-Kings-Fund-November-2015.pdf

Living Well in Communities programme

During the 2015 design phase of Healthcare Improvement Scotland's Living Well in Communities programme, we completed an analysis of the high impact opportunities for reducing acute hospital bed use. The report, currently unpublished, highlights the following areas for exploration:

- High emergency admission rates are associated with patient age and deprivation, presence of long-term conditions and multimorbidity. Interventions to improve the management of ambulatory care sensitive conditions – for example asthma, chronic obstructive pulmonary disease (COPD), diabetes and congestive heart disease – have been found to result in avoidance of emergency admissions. Therefore, effective management and treatment of targeted populations through preventative and primary care intervention has the potential to reduce the rates of emergency hospital admission.
- There is a mismatch in the provision of primary care and the health needs of the Scottish population with even distribution of GPs across socio-economic areas despite the higher levels of multimorbidity and health need in areas of higher deprivation. Better demand and supply distribution may, therefore, result in reduction of emergency admission.
- Delayed discharge in patients over 75 years: the evidence suggests that higher rates of delayed discharges in this patient group may result from a lack of informal care being available. This patient group is also more likely to experience readmission. Variation in bed use across different areas suggests that factors outside acute care were of significance suggesting that well-integrated services are beneficial in terms of reducing length of stay and admission avoidance.

- End of life care: a high proportion of lifetime health costs are in the last year of life. Studies indicate that most people state they would prefer to die at home but this is not observed. However, variation in provision and access, rather than not supporting patient preference, may have impacted on data on location of death. Anticipatory care planning requires the identification of the person entering their last year of life and people are often reluctant to initiate conversations about their own death. Decisions about end of life require early conversations between patients and professionals to support implementation of patient preferences and to ensure care is appropriate in light of these decisions.
- There are a number of interventions that can be implemented to reduce unplanned admissions and readmissions, including continuity of care from a single GP, integration of primary and secondary care, self-management in patients with COPD and asthma, telemonitoring in heart failure, assertive case management in mental health, senior clinician review in accident and emergency departments, multidisciplinary interventions, structured discharge planning, and personalised healthcare programmes.

Through the evidence review and stakeholder engagement, the Living Well in Communities programme identified five priority areas where additional improvement support could increase the pace and scale of quality improvement. These are frailty and falls, high resource individuals, anticipatory care planning, delayed discharge, and housing.

Conclusions

The evidence base in terms of robustly evaluated examples of redesign of care to reduced bed use and costs is relatively limited. However, this may be more a lack of evidence than evidence of no impact. There is a sound rationale and theoretical evidence base for many initiatives, usually involving moving care from acute services to the community, which could result in savings from reducing bed use. However, without reducing the number of beds in a facility (and the staffing to care for patients using these beds) savings will not be cash releasing. Furthermore, many of the examples we collected from IJBs required investment to implement the service redesign.

This report has been produced with the aim of supporting IJBs with their development and planning processes. As a priority for 2017–2018, the Improvement Hub will be developing, testing and implementing approaches to rapidly capturing and spreading learning across Scotland on what is and isn't working in terms of improving outcomes whilst reducing or maintaining costs.

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