Reducing avoidable emergency department attendances through bespoke education

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Abstract

Aim To develop an education and partnership programme between the trust and nursing home staff in Northern Ireland.

Methods Twenty care home nurse champions participated in a bespoke Responsive Education and Collaborative Health programme provided by the trust. The trust's practice development facilitator supported care home staff to develop clinical competencies while observing residents' emergency department (ED) attendance trends.

Results After introduction of the programme, avoidable ED attendances were reduced by 31% (*n*=309) compared with the previous year, cost per capita was reduced by £314,340, reliance on community nursing was reduced, and the health and experience of the care home population were improved.

Conclusion ED attendances and reliance on community nursing reduced, identifying a compelling need for continuing partnership, training and facilitation between the trust and independent sector.

Keywords

IN NORTHERN Ireland, the population aged 85 years and over increased by 38% between 2002 and 2012 (McCann and O'Reilly 2014). It is estimated that over the next 20 years the numbers of those aged 75 and 85 will increase by 40% and 58% respectively (Department of Health, Social Services and Public Safety (DHSSPS) 2011). The prevalence of long-term conditions is also forecast to increase by 30% between 2007 and 2020 (DHSSPS 2012). This is important in planning future care for older people because the need for nursing home places is likely to increase.

Care home residents experience 40%–50% more emergency admissions and emergency department (ED) attendances than the average for the general population aged over 75 years (Lilley 2017). In Northern Ireland in 2014 the authors' trust undertook a six-month study of ED attendances from 20 nursing homes. It found that, of 497 attendances, 149 (30%) people were discharged not requiring admission.

On further examination, these attendances were deemed potentially avoidable. Reasons for ED attendance included blocked catheters and blocked percutaneous endoscopic gastrostomy tubes that could have been avoided with training.

The DHSSPS's (2005) 20-year strategic framework for primary care, Caring for People Beyond Tomorrow, notes there is a need for much wider development of community-based alternatives to hospital admission. Northern Ireland's regional strategy, Transforming Your Care (DHSSPS 2011), recommends that older people should be cared for in the right place at the right time with the best possible outcome. It identifies reductions in avoidable hospital admissions as part of the future role of nursing homes. The expert panel led by Rafael Bengoa (DHSSPS 2016a) and the regional priority plan (DHSSPS 2016b) recommend that home should be the hub of care delivery. This could work in parallel with NHS England's (2016) blueprint for the future of urgent and emergency care services, which focuses on improving the quality of care in care homes and reducing avoidable attendances at EDs.

Services for older people are shaped regionally and nationally by attempts to deliver care closer to home and involve individuals

in their plans of care. Joint care planning is the most effective type of end of life care for care home residents and is advocated as best practice (Addicott 2011, DHSSPS 2011). Living with Long Term Conditions: A Policy Framework (DHSSPS 2012) advocates that patient programmes should be based on a partnership approach that includes a range of services for older people. Making Life Better (DHSSPS 2014) defines a whole-system strategic framework for public health underpinned by sustainable communities and building public health policy.

In 2015, the Royal College of Nursing (RCN) conducted a survey of the independent sector in Northern Ireland. One quarter of respondents indicated that they care for people with complex co-morbidities, increasing the difficulty of the expectations of the nurse's role. Therefore, staff require specialist knowledge and continuous training. One of the RCN's recommendations is the development in partnership with health and social care trusts of a learning and development pathway for independent sector registrants to promote their continuing development, and maintain their clinical skills and competencies. The college also advocates greater cohesion between the statutory and independent sectors and partnership working with specialist support from in-reach services such as rapid response teams, and better access to shared learning and development opportunities.

NHS England (2016) cites examples of trusts that have introduced successful in-reach partnerships with care homes:
» South Tyneside NHS Foundation Trust, which established an urgent care team working in care homes.
» Worcestershire, which achieved a 23% reduction in ED attendances by assigning a community nurse practitioner to specific care homes.
» Heart of Birmingham NHS Foundation Trust, where the employment of a nurse prescriber as a case manager to local care homes helped reduce emergency admissions by 25%.

The former minister of health in Northern Ireland recommended that the care of older people should be proactive rather than reactive, and focus on keeping people well (DHSSPS 2016b). Integrated care partnerships (ICPs) in Northern Ireland aim to bring together a network of health and social care providers, service users and carers to design and coordinate local services. Services for frail older people is one of the clinical priority areas for ICPs (Health and Social Care Board (HSC Board) 2016), which funded the Responsive Education and Collaborative Health (REaCH) nursing homes initiative. The REaCH initiative provides a blended approach to care interventions in nursing homes.

Practice development facilitator role

The REaCH initiative in Northern Ireland introduced a trust practice development facilitator role to deliver an anticipatory and preventive model of care. The practice development facilitator draws on patient information systems to determine which homes and residents have the greatest need. Whereas other initiatives involve teams providing enhanced care in care homes, REaCH's objective is to grow, sustain and embed the skills of nursing home registrants in a person-centred way through active facilitation, thereby enabling a self-empowered learning culture. McCormack et al (2010) defined person-centred practice as: 'an approach…established through the formation and fostering of therapeutic relationships between all care providers, older people and others significant to them in their lives. It is enabled by cultures of empowerment that foster continuous approaches to practice development'.

Rycroft-Malone et al (2002) describe facilitators as being crucial to helping others understand what they need to change and how to do so in their application of evidence-based practice. Facilitators are vital to achieving a vision of a person-centred culture in healthcare. Titchen et al (2013) say facilitators help practitioners use planning-action-evaluation-learning through the practice development journey. They also help practitioners understand why new ways work so that they stay motivated.

Aim

The aim of the REaCH initiative is to provide nursing home registrant champions with an education, training and development programme using a facilitative teaching model to enhance their clinical skills and knowledge. The champions would then cascade their learning and knowledge to all other registrants in their homes.

The objectives of the initiative are to:
» Improve the patient–resident experience.
» Maintain residents safely in their homes for as long as possible.
» Engage and support a partnership model with private nursing homes.
» Enhance the knowledge and skills of private nursing home registrants.
» Foster a person-centred culture.

» Support more effective use of other services.
» Reduce avoidable ED attendances.
» Expedite patient discharges when a private nursing home training deficit has unduly extended their hospital stays.

Method

The REaCH initiative was co-designed with specialist practitioners in clinical areas invited to present best practice in their field using research and guidelines to ensure champions' learning was optimised.

The method was underpinned by three aims: improving population health, reducing cost per capita and improving patient experience (Berwick et al 2008). A fourth aim was included: improving the work life of those who deliver care (DHSSPS 2016a). A plan-do-study-act method was adopted to ensure the initiative and facilitator role could be monitored and refined.

Pilot

In the Northern Health and Social Care Trust there are 68 registered nursing homes with 2,754 residents. A pilot programme was developed and delivered to nursing home staff in eight of these homes over three months, with the first programme delivered in 2014.

The education component covered clinical skills acquisition and long-term conditions management and was delivered concurrently to the eight homes, followed by a clinical skills competence assessment supported by the practice development facilitator.

After the pilot was completed, the measured outcome was 11 fewer ED attendances during the pilot compared with the same period the previous year.

Before the same programme was undertaken in 2015-16 with 20 care homes its education component was refined, practice development facilitation was added, and ED and community nursing data were analysed, resulting in an opportunity to test sustainable outcomes for residents.

Introduction of the programme

In 2015, 21 homes that had demonstrated high ED activity were approached to embark on the REaCH programme. Twenty homes with a resident population of 814 responded, with one unable to take up the opportunity because of staffing pressures. A patient profile was completed for each home to help inform the education programme content. Each home identified one or two registered nurse champions to undertake the education programme.

A claims, concerns and issues exercise (Guba and Lincoln 1989) was carried out to establish what registrants hoped to achieve from the programme, their concerns about the programme and any issues that had to be addressed. The five patient experience standards of respect, attitude, behaviour, communication, and privacy and dignity (HSC Board and Public Health Agency 2012), and person-centred care were core to the philosophy of the education programme.

In an RCN (2015) survey of care home staff, 25% of respondents said they lack clinical skills and specialist knowledge. Most respondents agreed that their learning and development needs are affected by the increasing complexity of residents' conditions, but that they cannot be released for training because staff numbers have become so depleted. The REaCH initiative was therefore delivered flexibly in classrooms as well as in care homes, with content tailored to residents' emerging needs.

The care home champions also attended a two-day tailored REaCH clinical skills programme. Masterclasses based on unique nursing home training needs, such as recognising and managing deteriorating residents, were also provided. These masterclasses included education on the use of the Situation, Background, Assessment, Recommendation (SBAR) communication tool (Nadzam 2009) to improve communication with general practice.

The trust practice development facilitator maintained a visible presence in the nursing homes, supporting staff to develop their clinical competencies, identifying additional training needs and helping to expedite hospital discharges where a care home training deficit was identified. Total engagement of nursing home staff and managers was essential to the programme's success, as was promoting a meaningful and consistent relationship between the trust practice development facilitator and care home staff.

Data from one ED were examined daily to detect attendances by care home residents. Reasons for attendance were examined and, if they were due to clinical outcomes that had been included in the clinical skills programme, the practice development facilitator challenged staff to find the root causes of decisions to attend the ED.

Breslin et al (2010) explain that 'for change in culture/practice to occur, all of the team must be open to challenging practice and to adapt in a positive and effective way.' Equally, the appropriateness of reliance on community

nursing services was monitored, and shortfalls challenged and constructively supported by the trust practice development facilitator.

Results

Quantitative outcomes

In 2015-16 there was a reduction of 31% (*n*=309) in ED attendances compared with the same period in 2014-15. The average monthly ED attendance of 82 in 2014-15 was 59 in 2015-16 (Figure 1). This resulted in a 70% reduction in admission rates and a cost reduction of £314,340. Some spikes in ED attendance were noted in 2016-17, but these reflected regional and national ED surge rates. For example, there were 626 more patients in the ED during the winter compared with the previous winter. Falls, respiratory and urinary conditions were the most common reasons for ED attendance.

Considerable savings in service costs have also been demonstrated. The number of district nursing visits was reduced by 43%, saving £10,989, and the number of hospital diversion nursing visits was reduced by 29%, saving £6,862. The hospital diversion nursing team provide acute care in the home, for example, catheter replacement. Education and the involvement of two practice development facilitators cost £69,000. Some of the clinical education was commissioned from an external education provider, but in the future practice development facilitators will be able to deliver all necessary education and training internally, which should lead to further savings.

Considering all ED and community nursing cost savings, and education and practice development facilitator costs, the total saving for the 20 nursing homes was about £263,191 per year. If the same calculation were made for all the trust's 68 homes and their total population of 2,754 residents, there would be a potential saving of about £894,849 per year.

Reliance on community nursing services, namely district nursing (Figure 2) and hospital diversion services (Figure 3), was also reduced, albeit with occasional peaks after training sessions only where assistance in competency attainment was required from community teams. Before the REaCH programme, nursing home staff routinely contacted district nurses to complete venepuncture, change blocked catheters, undertake routine catheterisations and upload syringe drivers.

ED attendances were measured monthly from 2014 before the REaCH initiative, in 2015-16 during the REaCH intervention period, and in 2017 after the REaCH intervention period had ended to assess

Figure 1. Emergency department (ED) attendances over the study period
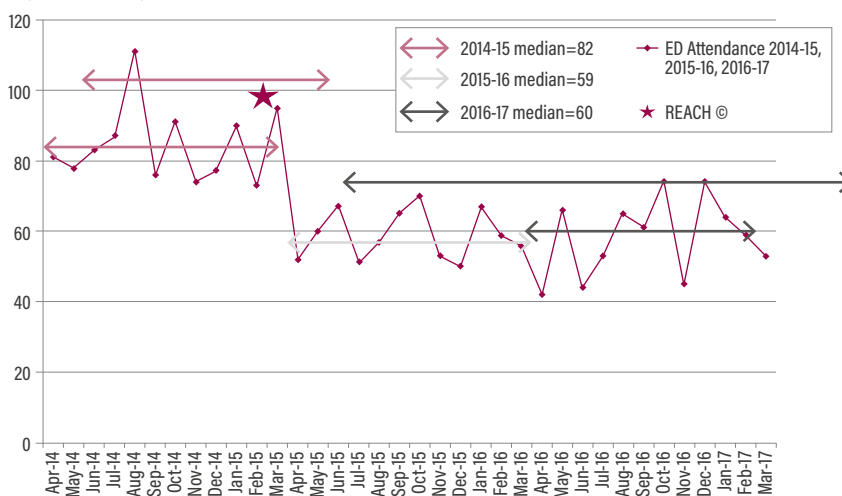

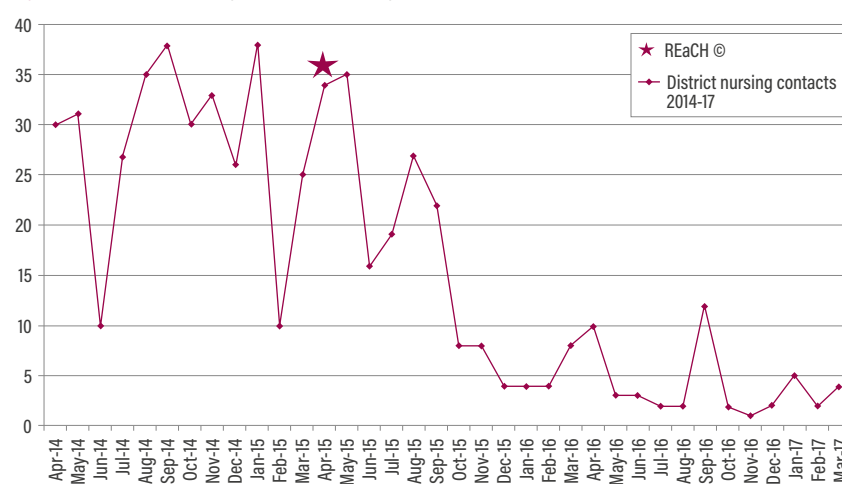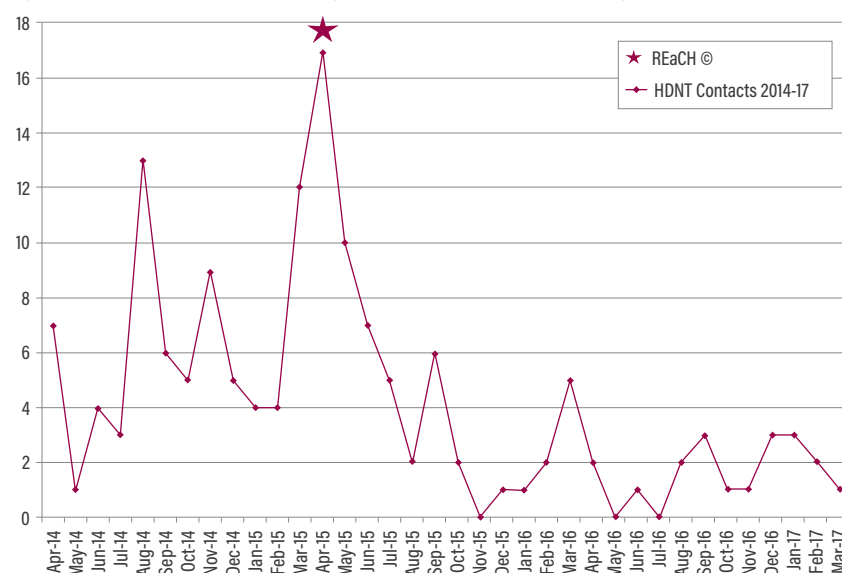Figure 2. District nursing contacts during the study period

Figure 3. Hospital diversion nursing team (HDNT) contacts during the study period

the programme's sustainability (Figure 4). Reduced ED attendance has been sustained and embedded since the intervention. In seven out of the 12 months since the intervention there has been a consistent reduction in ED attendance from the previous year, and a 100% reduction in ED attendance in 2016 since the pre-REaCH intervention year of 2014.

Qualitative outcomes

Testimonials from relatives and residents indicate a positive experience and provision of person-centred care. For example, one family member said: 'The nurses could look after my dad during his last days of life with use of a syringe driver. Because dad knew his nurses he died peacefully with family beside him.'

Another said: 'It's great the nurses now have the skills to meet my brother's specific needs.' This is similar to the findings of Breslin et al (2010): 'Older people must be involved in the decision-making process along with the health care team…residents are the focus of the delivery and organisation of person-centred care.'

Nurse champions also felt empowered in their workplace, with one stating: 'I feel more empowered to help my patients when they are deteriorating and know how to contact the GP earlier using SBAR.'

Discussion

The independent sector is regulated by the Regulation and Quality Improvement Authority, which measures performance against specific care standards to inform the inspection process. However, minimum care standards alone will not achieve quality care and improved outcomes for residents. Instead, 'Leaders who continually seek to improve practice and empower and support committed staff through meaningful training and development are more likely to unite staff in achieving the vision and ethos of the home' (DHSSPS 2015).

Marshall et al (2017) undertook a two-year safety improvement programme with 90 care homes in the south east of England to help reduce the prevalence of falls, pressure ulcers and urinary tract infections (UTIs) and thereby reduce unnecessary ED attendances.

The programme was underpinned by benchmarking, learning improvement skills and cultural awareness, although with hindsight they admit that shortcomings in their intervention process may have had no effect on ED attendances.

The success of the REaCH initiative shows a compelling need for a collaborative approach to a preventive and anticipatory model of care, which is implicit in Northern Ireland's Draft Programme for Government Framework 2016-2021 (Northern Ireland Executive 2016).

The REaCH initiative has challenged the previous perceived isolation of care homes in terms of training and education, resulting in an improved experience for residents and

Figure 4. Level of emergency department attendance each month over three years
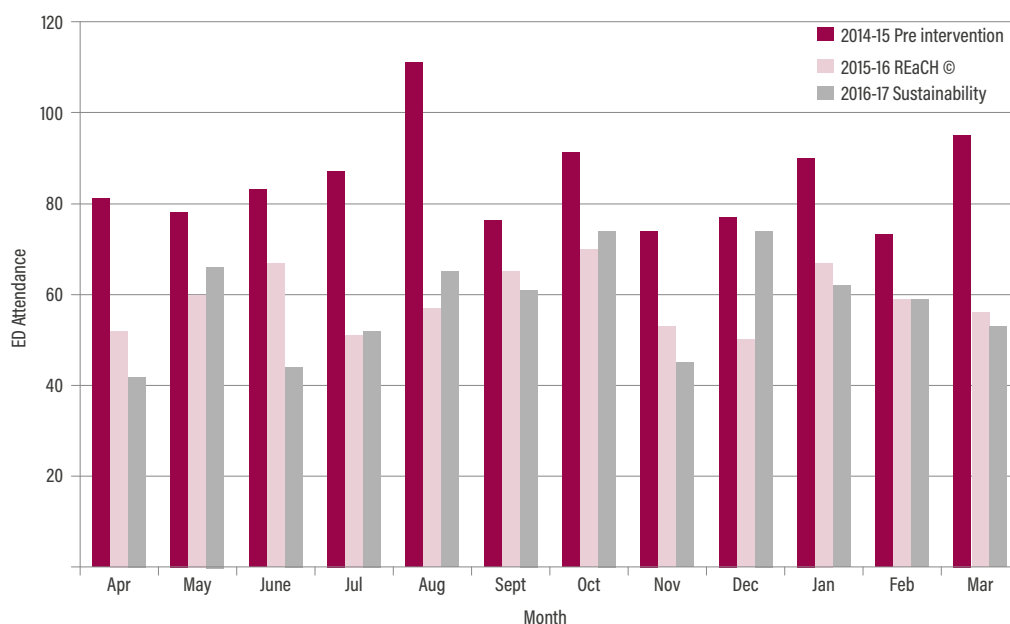
relatives, and enhanced registrant skills and visible trust support in the independent sector.

As in the project by Marshall et al (2017), falls, urinary and respiratory conditions were the most common reasons for ED attendance. This finding is consistent with US research that showed there is little consistency across nursing homes of policies implemented to prevent UTIs (Ford 2016). As respiratory conditions and falls remain consistent presentations at ED, additional REaCH masterclasses have been organised for care home staff. However, between April and September 2017 a reduction in residents presenting at ED with urinary issues was noted.

The Department of Health (2012) advises that, if more integrated care mechanisms are adopted, many falls and fractures in older people can be avoided. The National Institute for Health and Care Excellence (2013), meanwhile, recommended that falls can be reduced by as much as 30% by implementing evidence-based, multifactorial interventions. Therefore, falls prevention was a central component of the education programme using the Public Health Agency's (PHA) (2013) Falls Prevention Toolkit.

The REaCH initiative has demonstrated a successful collaboration between the trust and independent care homes. Person-centred outcomes were crucial to maintaining participation, inclusion and collaboration in a mobile workforce, similar to the development work undertaken between Care England and care homes (Shaw and Sanders 2017). These initiatives can change the perception of nursing, inspire confidence in care home nurses' roles and influence the next nursing generation.

The programme focused initially on reducing avoidable ED attendances, but after improvements to staff training were identified as a way to expedite residents' discharge, acute hospital staff collaborated with the practice development facilitator to arrange the required training. During busy periods, acute hospitals ask the practice development facilitators for help in discharging nursing home residents.

As the initiative evolved, some unanticipated positive outcomes emerged. These include collaboration with the trust's medication optimisation team in reviewing the medication of residents who are frequent attenders to the ED and with the dementia home support team. The facilitator also provided signposting for care home staff to relevant trust services, which included telemonitoring for two residents.

The initiative prompted a positive learning community to emerge, with nursing home staff networking and sharing good practice. A newsletter was developed for nursing home staff by the REaCH practice development facilitator to share new learning and to celebrate success.

The PHA of Northern Ireland engaged the REaCH practice development facilitators to participate in a regional Extension for Community Healthcare Outcomes project to share virtual learning across the homes by a learning hub. This online method was based on a teaching model that helped rural doctors and nurses in New Mexico to deal with widespread, untreated hepatitis C (Robert Wood Johnson Foundation 2014).

Conclusion

The nursing home REaCH initiative has demonstrated quantitative and qualitative improvements in residents' care. After introduction of the programme, avoidable ED attendances were reduced by 31% (n=309) compared with the previous year and cost per capita was reduced by £314,340.

A spread plan has been agreed by the Northern Health and Social Care Trust and ICPs to extend the initiative to a further 18 nursing homes. This means 38 homes are involved, covering 56% of the Northern Health and Social Care Trust. A further 30 nursing homes are not yet participating in the initiative because their inclusion is dependent on further incremental funding, which means an issue of regional equity has arisen. This is important because the continuing success and integrity of this model depends on each training, education and facilitated support component being maintained equally. As Marshall (2014) warns, there must be a connection between the planning on the 'high ground' and implementation in the 'swampy lowlands'.

Challenges in maintaining the knowledge and skills base of care home staff may arise when the service is launched at additional homes, for example, because of the mobility of the nursing home workforce. This has not yet been the case, however, probably because of the continued visible support provided by the practice development facilitator at the early intervention homes.

Spilsbury et al (2015) state that: 'There is a need for a whole-system approach, to promote partnership working between providers, to understand the full patient journey, including the nurses' contribution in care homes.' This service model of anticipatory and responsive care demonstrates a cohesive and sustainable service transferable to other care home settings.

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