INTEGRATED CARE Developing frailty friendly hospitals: the Specialised Clinical Frailty Network

Authors: Nathan Hall, A Richard Fluck, Towhid Imam, Thomas Jacob, Deborah Thompson, Matt Tite, Emma Backhouse, Jugdeep Dhesi and Simon Conroy.

Introduction

The aim of the Specialised Clinical Frailty Network (SCFN) was to develop frailty-attuned pathways in specialised services in England.

Methods

We developed a breakthrough series collaborative involving a range of specialised services, using quality improvement methods (including experience-based design) to implement improvements designed to enhance the experience and outcomes of older people living with frailty who have specialised healthcare needs.

Results

Specialised teams responded positively to the SCFN, many implementing process changes aligned to the needs of older people living with frailty. Some were able to demonstrate improvements in service and/or patient outcomes, including greater identification of frailty, more holistic care and increased use of shared decision making.

Discussion

The network has successfully demonstrated how frailty can be assessed both at individual, as well as population level, to support both local teams and systems to best manage the health of their patients.

KEYWORDS: frailty, specialised healthcare needs, quality improvement

DOI: 10.7861/fhj.2022-0071

Introduction

Older people are major users of specialised care in western countries; older people living with frailty are especially vulnerable to harms that can arise in such settings.^{1–15}

Authors: ^Aformer head of clinical frailty programme, NHS England, London, UK; ^Bassociate medical director, NHS England, London, UK; ^Cprofessional advisor to Ageing Well, NHS England, London, UK; ^Bproject manager, NHS England, London, UK; ^Edirector, NHS Elect, London, UK; ^Fdirector, NHS Elect, London, UK; ^Gprogramme manager, NHS Elect, London, UK; ^Hconsultant geriatrician, Guy's and St Thomas' NHS Foundation Trust, London, UK; ¹clinical lead, NHS Elect, London, UK and honorary professor of geriatric medicine, University College London, London, UK

There is good evidence that frail older patients in acute hospitals benefit from Comprehensive Geriatric Assessment (CGA), which reduces institutionalisation and mortality. CGA is 'a multidimensional, multidisciplinary process which identifies medical, social and functional needs, and the development of an integrated/co-ordinated care plan to meet those needs. However, there is limited evidence for delivering 'hospital wide' CGA outside of traditional geriatric settings.

In response, the hospital-wide CGA (HoW-CGA) study used extensive stakeholder engagement, including patient and public input, to develop an evidence-based clinical toolkit to enable nongeriatric services to embed frailty-attuned care processes. ¹⁹ The evaluation of the pilot sites' efforts to incorporate CGA into their work showed only limited progress. ²⁰ In part, this was because of the sheer volume of work involved, as well as the interaction with existing procedures, policies and norms. The authors suggested that supporting implementation, for example, with a breakthrough series collaborative might enhance the intervention's impact. ²¹ Another key issue was the finding that teams felt a strong need for an ongoing role for geriatricians, but this is not a sustainable solution given the ageing population. ²² Further efforts are required to determine how non-geriatric services can be supported in delivering frailty-attuned care.

The Specialised Clinical Frailty Network (SCFN) was set up in 2018 to explore how frailty-focused clinical pathways might improve outcomes for patients requiring specialised treatments. It combined the learning from the HoW-CGA study with robust implementation support to try and implement frailty-attuned pathways in specialised services.

The aim of this paper was to describe what was done to improve frailty within specialised services, how it was delivered and what impacts were observed.

Methods

Herein, we provide a descriptive account of how the network was set up, how it was perceived and received by participants, and some reports of initial impact.

Network set up

The SCFN was designed using the breakthrough series collaborative approach supported by national stakeholders (NHS England, the British Geriatrics Society, the Royal College of Physicians and a wide range of societies representing the

specialties that participated in the network (British Association of Spine Surgeons (BASS) and the Centre for Perioperative Care (CPOC)). ²³ The specialties were selected to participate by the specialist commissioning team at NHS England, based on clinical and service priorities. The primary quality improvement (QI) method was the Model for Improvement that focused on introducing and refining change through 'plan, do, study, act' cycles to improve services, with support from national clinical and improvement experts. ²⁴

Network approach

Building upon the learning from the related but separate Acute Frailty Network, the SCFN supported hospitals in redesigning services according to a set of principles that were co-produced with lay and clinical stakeholders (Box 1).²⁵

These principles were adapted slightly for each specialty but remained true to the overarching approach outlined in Fig. 1.

The 6–9-month SCFN programme began by understanding the local context, planning for change and discussing possible barriers, as well mapping the patient pathway for each service. This 'diagnostic' was fed back to sites with recommendations for improvements. Each participating service was allocated an improvement coach and had access to both measurement and clinical expertise to support planning, delivery, and monitoring of local change and service redesign. Site visits from measurement experts and access to the NHS Elect *Guide to Measurement for Improvement* gave hospital teams the ability to obtain and effectively use data, including access to the Frailty Opportunity Identifier (https://future.nhs.uk/SDEC_CommunityofPractice/view?objectID = 22746256), built using the Hospital Frailty Risk Score. ^{3,6,26}

During the programme, teams from participating hospitals attended four national events, and a series of masterclasses and webinars to support team development, networking, and sharing of experiences. They had access to the SCFN toolkit, which contains service improvement principles, specific measurement support, and were trained in the experience-based design (EBD) approach (https://improvement.nhs.uk/resources/the-experience-based-design-approach). The SCFN coached teams to use EBD

Box 1. Over-arching principles to consider for older people living with frailty who have specialised needs

- Establish a mechanism for early identification of people with frailty
- > Deliver personalised care and improve patient experience
- > Communicate shared decision making across services, settings and systems, making frailty everyone's business
- Use a holistic approach early in the pathway to inform subsequent care planning
- > Decide upon tailored interventions, personalised to the patient
- > Develop a measurement / quality improvement mindset
- Adopt clinical professional standards to reduce unnecessary variation
- > Identify clinical change champions
- Put in place appropriate education and training to develop a highly capable workforce
- > Identify an executive sponsor and underpin with a robust project management structure

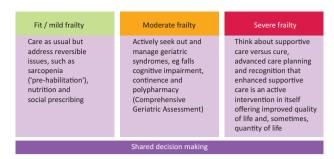


Fig 1. Specialised Clinical Frailty Network overarching approach using frailty to inform clinical care.

as a QI approach to incorporate an alternative perspective of the service. The aim of EBD is to work closely with patients, staff and members of the public to understand how our services make them feel and identify ways to be centred to our patients' needs. ^{27–29} The SCFN team developed a bespoke tool for patient-facing teams to capture the experiences of those who use and deliver frailty services to put the patient perspective at the centre of pathway improvements. EBD tools were created for inpatient care, outpatient care and also staff experience.

The SCFN encouraged values and standards for person-centred patient care to be written and driven by clinical leaders in order to reduce unnecessary variation and instil best practice. This approach was not limited to the immediate specialty team but, as many of the specialist services were tertiary referral centres, it was extended to referring hospitals as well.

Results

Between 2018 and 2021, a total of 50 clinical teams across a range of specialties were supported to deliver an improvement project as part of the SCFN. The specialties involved in the network included:

- > nephrology
- > oncology
- > interventional cardiology
- > cardiac surgery
- spinal surgery
- > critical care medicine
- > vascular surgery
- cancer surgery
- > neurosurgery
- > vascular surgery.

Overall impact of the SCFN

Teams responded positively to the network and support received; for example, evaluation demonstrated that 99% of teams in waves one to four rated the events put on through the network as good or better (unpublished data) and would recommend to others.

Most sites improved processes of care; some started to demonstrate outcome-based improvements. Many sites added elements of frailty assessment into their pathways without the need for additional resources or geriatric-specific expertise. These are summarised against the SCFN principles in Table 1.

| Table 1. Process changes seen within | the Specialised |
|--------------------------------------|-----------------|
| Clinical Frailty Network | |

| Specialised Clinical Frailty Network principles | Pre- | Post- |
|--|------|-------|
| Establish a mechanism for early identification of people with frailty | 28% | 95% |
| Deliver personalised care and improve patient experience | 65% | 81% |
| Communicating shared decision making across services, settings and systems to make frailty everyone's business | 37% | 70% |
| Using a holistic approach early in the pathway to inform subsequent care planning | 28% | 63% |
| Decide upon tailored interventions, personalised to the patient | 66% | 83% |
| Develop a measurement for improvement / quality improvement mindset | 40% | 95% |
| Adopt clinical professional standards to reduce unnecessary variation | 35% | 56% |
| Identify clinical change champions | 33% | 77% |
| Put in place appropriate education and training to develop a highly capable workforce | 23% | 67% |
| Identify an executive sponsor and underpin with a robust project management structure | 37% | 88% |

Teams shared their learning within and beyond their organisations. Many sites developed case studies to share project outcomes, and a number have shared learning at national specialty conferences and published their projects in specialty journals. 5,30–33

Development of frailty-attuned pathways

Forty-one teams embedded frailty assessment (with all using the Clinical Frailty Scale) in their pathways of care alongside implementing other improvement principles developed through the network, such as using a holistic assessment early in the pathway.

The SCFN demonstrated how a focus on improving care for the older person in specialised service pathways can lead to more personalised care and treatment, consequently leading to improvements in overall outcomes. Examples from the different specialties are highlighted.

- At the Royal Papworth Hospital adult critical care service, as a result of undertaking frailty assessment and anaesthetistled CGA, they implemented a bespoke anaesthetic pathway designed to optimise patients in the days pre-surgery, including simple bed-bound exercises, medication reviews and reducing risk of post-surgical delirium through avoidance of opioids.
- Barts Health NHS Trust transcatheter aortic valve implantation (TAVI) service found that by assessing for frailty, the team

- were able to highlight patients with mild to no frailty who were able to access an enhanced recovery pathway with same day admission and plan for early discharge, freeing up capacity for more complex patients. The average length of stay for TAVI reduced from 3 to 2 days.
- > Royal Preston Hospital undertook a test of change to improve personal kidney/renal treatment plans for older people living with frailty. They set up a weekly multidisciplinary team (MDT) meeting with frailty therapist input, a specialist renal physician, and nurses from the kidney choice team, dialysis unit and inpatient ward area to explore patients of concern who may benefit from a home follow-up visit from a frailty therapist.
- > Teams across The Christie NHS Foundation Trust have successfully incorporated frailty assessment into cancer pathways and cancer (MDT) meetings, without needing support from an embedded geriatrician.
- Imperial College Healthcare NHS Trust implemented 'turbo' teaching on frailty for nurses, therapists and junior medical staff supporting neurosurgery patients, which led to a demonstrable improvement in understanding of frailty among staff who participated.

Developing personalised care and shared decision making

Many teams involved in the SCFN focused on improving and measuring shared decision making within their pathways; for example, the Newcastle ear, nose and throat cancer team reviewed shared decision-making processes using SDM-Q-9 (www.patient-als-partner.de/index.php?article_id=20&clang=2) and collaboRATE (www.glynelwyn.com/collaborate-measure.html) measurement tools.

Supporting professionals to use improvement methodology

The improvement collaborative approach has enabled not just a focus on embedding the concept of frailty, but also the development of QI capabilities of teams involved in the network.

The majority of clinical teams involved in the network did not have a background or significant experience in using QI. Through the support offered by the network, teams learnt how to undertake a QI project and applied this learning in relation to their focus on frailty; for example, of the first 28 teams participating in network, 24 agreed that their understanding of QI tools and techniques had improved, and 27 agreed that they have developed a measurement for improvement mindset.

All teams involved in the programme adopted measurement for improvement techniques to develop their own process, outcome and balancing measures to gauge their improvement.

Developing whole system approaches to frailty

Connecting different professional disciplines around the shared goal of improving services for older people has encouraged more inter-disciplinary approaches to care being developed. It has fostered connections between different teams and disciplines within specialty centres to encourage the development of more integrated approaches to care (eg between specialised teams and geriatricians); for example, the renal frailty team at Royal Preston Hospital liaised with clinical commissioning group representatives

to discuss a more structured integration of care for patients living with frailty and chronic kidney disease across primary and secondary care services.

The impact of COVID-19

The SCFN adapted its traditional face-to-face delivery in response to COVID-19: the network support was delivered entirely virtually during this period. Workshop sessions were broken down to shorter 2–3-hour workshops held over series of weeks as opposed to large full day events. Engagement was still good during the pandemic, though it varied depending on site location as well as service. Several sites were less able to engage with the work due to redeployment or beds being lost to support adult critical care.

Discussion

The SCFN introduced a wide range of clinical specialties to the concept of frailty. By creating a common language for talking about frailty within systems and between services, the programme was able to set the direction, and individual teams were able to set up projects and develop pathways relevant to their team and service.

Improvement collaboratives can support the development of bottom-up, ground-level approaches to national or regional commissioning priorities that allow more sustainable approaches to implementation. Within this programme, the role of the national team was to agree and set out the broad principles for change (eg set out in the 10 principles developed as part of the toolkit), and individual sites were then able to adapt these to their own local contexts and pathways, embedding learning from other parts of the network and drawing on resources provided by the network

Knowledge has been shared across pathways within health economies. Simple, practical improvement methods have been used to rapidly test and refine approaches, with learning shared within and between specialties. It has also demonstrated how to bring a focus on patient (and staff) experience into projects and has promoted co-design of pathway improvements. The development and use of experience-based design tools is one aspect that other improvement programmes can adopt.

The SCFN has also developed the use of the Hospital Frailty Risk Score to improve our understanding of frailty at a population level (within specialised service pathways) and, for the first time, has allowed commissioners of specialised services to recognise frailty from a population data perspective.

Implications for practice

The programme has successfully demonstrated how frailty can be assessed at individual as well as population level to support both local teams and systems to best manage the health of their patients. The programme has also developed examples of how CGA can be embedded within pathways, using competencies across the specialised MDT. The approach used by the SCFN is an example of how a national or regional body can drive broad strategic ambitions effectively at a local system and hospital level. It has led to the development of multi-professional and multi-specialty approaches in many specialised centres across England.

The SCFN toolkit is a key product of the programme; it is endorsed by the British Geriatrics Society and Royal College of

Physicians. It is supported by a variety of resources made available to teams, including case studies and vignettes from other teams within the network that are available from the network website (www.scfn.org.uk/resources).

Implications for research

Through the programme, further national clinical policy research has been instigated into the important focus of frailty in younger populations. The first stage was completed in summer 2020, which was a literature review undertaken by the National Institute for Health and Care Research Policy Research Unit in Older People and Frailty. ³⁴ Following on, research to understand frailty in younger people has been funded and its life course determinants will start in October 2022

Conclusion

The SCFN has demonstrated that it is feasible to introduce frailty thinking into specialised services, without necessarily relying upon geriatricians. It has shown that care processes can be developed to better reflect the needs of older people living with frailty, with some early suggestions of improvements in outcomes.

Conflicts of interest

Simon Conroy was remunerated for leading the network.

References

- 1 Rechel B, Grundy E, Robine J-M et al. Ageing in the European Union. Lancet 2013;381:1312–22.
- 2 Spillman BC, Lubitz J. The effect of longevity on spending for acute and long-term care. *N Engl J Med* 2000;342:1409–15.
- 3 Imam T, Konstant-Hambling R, Fluck R et al. The Hospital Frailty Risk Score-outcomes in specialised services. Age Ageing 2021:50:511–18.
- 4 Houghton J, Nickinson A, Morton A *et al.* Frailty factors and outcomes in vascular surgery patients: a systematic review and meta-analysis. *Annals of Surgery* 2020;272:266–76.
- 5 Nixon AC, Bampouras TM, Pendleton N et al. Frailty and chronic kidney disease: current evidence and continuing uncertainties. Clin Kidney J 2018;11:236-245.
- 6 Gilbert T, Neuburger J, Kraindler J et al. Development and validation of a Hospital Frailty Risk Score focusing on older people in acute care settings using electronic hospital records: an observational study. Lancet 2018;391:1775–82.
- 7 Allum W, Lordick F, Alsina M et al. ECCO essential requirements for quality cancer care: Oesophageal and gastric cancer. Crit Rev Oncol Hematol 2018;122:179–93.
- 8 Fauchier L, Alonso C, Anselme F et al. Position paper for management of elderly patients with pacemakers and implantable cardiac defibrillators Groupe de rythmologie et stimulation cardiaque de la Societe francaise de cardiologie et Societe francaise de geriatrie et gerontologie. Arch Cardiovasc Dis 2016;109:563–85.
- 9 Rajabali N, Rolfson D, Bagshaw SM. Assessment and utility of frailty measures in critical illness, cardiology, and cardiac surgery. Can J Cardiol 2016;32:1157–65.
- 10 McDermid RC, Stelfox HT, Bagshaw SM. Frailty in the critically ill: a novel concept. Crit Care 2011;15:301.
- 11 Kalsi T, Babic-Illman G, Ross PJ *et al*. The impact of comprehensive geriatric assessment interventions on tolerance to chemotherapy in older people. *Br J Cancer* 2015;112:1435–44.
- 12 Extermann M, Aapro M, Bernabei R et al. Use of comprehensive geriatric assessment in older cancer patients: Recommendations

- from the task force on CGA of the International Society of Geriatric Oncology (SIOG). *Crit Rev Oncol Hematol* 2005:55:241–52.
- 13 Kallenberg MH, Kleinveld HA, Dekker FW et al. Functional and cognitive impairment, frailty, and adverse health outcomes in older patients reaching ESRD-A systematic review. Clin J Am Soc Nephrol 2016:11:1624–39.
- 14 Miller EK, Neuman BJ, Jain A et al. An assessment of frailty as a tool for risk stratification in adult spinal deformity surgery. Neurosurg Focus 2017;43:E3.
- 15 Green P, Arnold SV, Cohen DJ et al. Relation of frailty to outcomes after transcatheter aortic valve replacement (from the PARTNER trial). Am J Cardiol 2015;116:264–9.
- 16 Ellis G, Gardner M, Tsiachristas A et al. Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev 2017;9:CD006211.
- 17 Parker SG, McCue P, Phelps K et al. What is Comprehensive Geriatric Assessment (CGA)? An umbrella review. Age Ageing 2018;47:149–55.
- 18 Bakker FC, Robben SHM, Olde Rikkert MGM. Effects of hospital-wide interventions to improve care for frail older inpatients: a systematic review. BMJ Qual Saf 2011;20:680–91.
- 19 Conroy SP, Bardsley M, Smith P et al. Comprehensive geriatric assessment for frail older people in acute hospitals: the HoW-CGA mixed-methods study. In Health Services and Delivery Research. NIHR Journals Library, 2019.
- 20 Kocman D, Regen E, Phelps K et al. Can comprehensive geriatric assessment be delivered without the need for geriatricians? A formative evaluation in two perioperative surgical settings. Age Ageing 2019;48:644–9.
- 21 Schouten LMT, Hulscher MEJL, Everdingen JJEv et al. Evidence for the impact of quality improvement collaboratives: systematic review. BMJ 2008;336:1491–4.
- 22 Kingston A, Comas-Herrera A, Jagger C. Forecasting the care needs of the older population in England over the next 20 years: estimates from the Population Ageing and Care Simulation (PACSim) modelling study. Lancet Public Health 2018;3:e447–55.
- 23 Institute for Healthcare Improvement. The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. IHI, 2003.
- 24 Langley G, Moen R, Nolan K et al. The improvement guide: a practical approach to enhancing organizational performance, 2nd edn. Jossey-Bass Publishers, 2009.

- 25 van Oppen JD, Thompson D, Tite M et al. The Acute Frailty Network: experiences from α whole-systems quality improvement collaborative for acutely ill older patients in the English NHS. European Geriatric Medicine 2019;10:559–65.
- 26 Davidge M, Holmes M, Shaw A et al. Guide to measurement for improvement. NHS Elect, 2015. www.nhselect.nhs.uk/uploads/files/1/Resource/Service % 20Transformation % 202016/NHS % 20 Elect-Measurement % 20for % 20Improvement-Feb17.pdf [Accessed 18 November 2018].
- 27 Bate P, Robert G. Experience-based design: from redesigning the system around the patient to co-designing services with the patient. *Qual Saf Health Care* 2006;15:307–10.
- 28 Bate P, Robert G. Bringing user experience to healthcare improvement: The concepts, methods and practices of experience-based design. Radcliffe Publishing, 2007.
- 29 Rahman S, Thompson D, Clayton A et al. Analysis of the experience-based design feedback data on a national scale. *Journal of Patient Experience* 2020;7:1068–76.
- 30 Gomes F, Baker K, Bruce J et al. O23 implementation of a clinical frailty pathway at a cancer center: a quality improvement project. Journal of Geriatric Oncology 2019;10(6 Suppl 1):S24.
- 31 Gomes F, Baker K, Eaton MA et al. Clinical frailty in advanced lung cancer patients: an opportunity to improve outcomes. Lung Cancer 2020;139:S45-S.
- 32 Gomes F, Baker K, Woods J et al. MA19.09 Assessing clinical frailty in advanced lung cancer patients - an opportunity to improve patient outcomes? J Thorac Oncol 2019;14:S329.
- 33 Dhaygude AP, Brady ME, Nixon AC *et al*. Frailty is independently associated with worse health-related quality of life in chronic kidney disease: a secondary analysis of the Frailty Assessment in Chronic Kidney Disease study. *Clin Kidney J* 2020;13:85–94.
- 34 Spiers GF, Kunonga TP, Hall A *et al.* Measuring frailty in younger populations: a rapid review of evidence. *BMJ Open* 2021;11:e047051.

Address for correspondence: Dr Simon Conroy, MRC Unit for Lifelong Health and Ageing at UCL, 5th Floor, 1–19 Torrington Place, London WC1E 7HB, UK. Email: simon.conroy@ucl.ac.uk