NHS
Specialised Clinical Frailty Network

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Royal National Orthopaedic Hospital NHS Trust takes a holistic view of frail patients

Introduction

The Specialised Clinical Frailty Network (SCFN) explores how specialised services can improve the way they deliver care and treatment to people with frailty. Standard specialised care pathways may not always be appropriate to the needs and preferences of more vulnerable patients, where there are greater risks of longer hospital admissions and increased mortality.

The Network's collaborative improvement programme, delivered by NHS Elect, helps NHS trusts to improve the way they identify frailty and make better treatment decisions to improve patient outcomes. The second wave included Neurosurgery, Spinal Surgery and Adult Critical Care. There were up to six trusts in each specialised area.

This is the experience of one of the Spinal Surgery sites…

The Royal National Orthopaedic Hospital NHS Trust (RNOH) joined the second wave of hospitals working with the SCFN to improve the identification and care of frail patients. Its aim was to screen routinely for frailty among patients over the age of 55 using the Rockwood Clinical Frailty Score (CFS) and to improve the management of frail patients scheduled for spinal surgery.

RNOH and the importance of frailty

The RNOH is a tertiary referral centre for orthopaedic surgery and one of only a handful of standalone specialist musculoskeletal hospitals in the country. Many patients who cannot be treated in normal district general hospitals are seen here, including those with complex conditions like spinal cord injury, nerve injury or sarcoma, or patients who have had failed surgery elsewhere. Such patients face multiple challenges and many travel a long way for treatment at RNOH.

Consultant Anaesthetist, Prasan Panagoda, had been considering how the RNOH could improve the treatment of frail patients for around 18 months before the opportunity to join the SCFN came up. He explained why he believes it is essential to identify frail patients and improve the way they are managed.

"Our patients are getting older and there is greater prevalence of frailty. Many frail patients have complex medical problems. They are at greater risk of falls, pressure ulcers, malnutrition, as well as perioperative complications. People are living longer and developing problems that may require surgical intervention. However, surgery is not always the most appropriate treatment for frail patients and we need to be mindful of that.

When they come into hospital it is an opportunity for us to identify the frail patient and to try and improve their quality of life, with or without surgery. Frail patients need a more holistic approach that looks at their functional status, medications, medical problems, risk of falls, nutritional status and other factors. We can potentially improve their quality of life without them even coming near the operating table. Where surgery is appropriate, we need to do whatever we can to optimise their medical conditions and functional status so they can proceed through the surgical pathway with minimal risk of complications."

Joining the SCFN

Chief Operating Officer and executive lead for the project, Lucy Davies, is committed to improving the treatment of frail patients. She said "There was no question in my mind that we should do this. We were just starting our improvement journey and we were keen to support improvement projects across the Trust. Being invited to join the SCFN offered us the opportunity to look at the way we managed frail patients. It gave us a structure to work to and deadlines that we had to meet. Being part of a national group created a feeling of healthy competition. We didn't want to be the hospital that didn't succeed. We started working with the Network at the end of 2018."

What they did

1. Created a project team

The first step for RNOH was to form a frailty project team. Clinical leadership was provided by Prasan and consultant geriatrician, Charlotte Pratt. The team also comprised physiotherapists Gemma Bruce and Elena Bennett, and consultant spinal surgeons Robert Lee and Sean Molloy. Project lead was service manager Dawn Lewinson, with executive leadership from Lucy Davies.

2. MDT discussions

The team began by creating a driver diagram, outlining what they wanted to achieve. Their aim was to reduce inpatient stays for frail patients (with a CFS score of four and over) aged over 55, by one day. With the multidisciplinary team (MDT) (including physiotherapists, anaesthetists, geriatricians, tissue viability specialists, dieticians, social workers and members of the complex case team), they looked at pre-operative, intra-operative and post-operative issues.

3. PDSA One: Screening for frailty

They decided to focus on the pre-operative stage, with the aim of screening patients over the age of 55 for frailty and then optimising their care prior to surgery. The first PDSA (plan, do, study, act) improvement cycle set out to ensure that all appropriate patients were screened for frailty in the outpatient clinic using the Rockwood CFS. Patients deemed appropriate for screening were those over the age of 55 who were scheduled to have degenerative spine surgery. Although numbers were quite small – only one or two patients per week – all appropriate patients were identified and screened by the two spinal surgeons and their teams throughout the course of the pilot.

4. PDSA 2: Managing frail patients

Once they knew that all frail patients were being screened, the team's next objective was to look at how they were being managed and assess how their treatment might be improved. Patient frailty scores were emailed to the entire frailty team by the project lead, who played a pivotal role in improving the management of frailty.

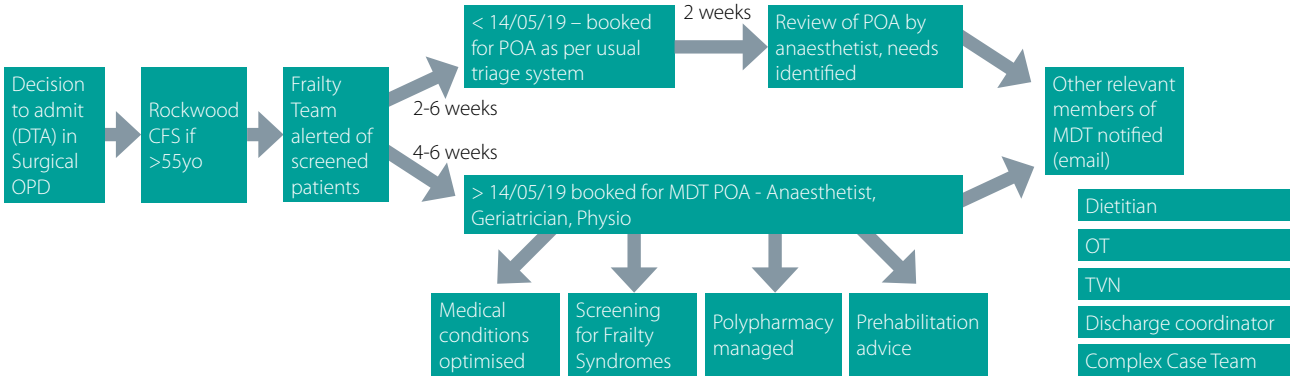
Prasan said "Initially we thought we could do an electronic MDT approach, by which I mean I planned to review the notes of frail patients after they had had their nurse-led pre-assessment, identify issues and then approach relevant members of the MDT and request that they contact the patient. But this approach proved time-consuming and it didn't deliver optimal care, with the prospect of patients receiving numerous calls from various members of the MDT. We quickly decided that a better approach would be to see the patients face-to-face."

Prasan blocked out a weekly slot in his pre-assessment clinic to assess these frail patients himself. This would be in conjunction with Dr Pratt (consultant geriatrician) where possible. These patients were also given specialist bespoke pre-habilitation exercise advice from physiotherapists at the time of their pre-assessment appointment. This proved to be more efficient and patient-friendly than attempting to manage frailty electronically.

Prasan said "The face-to-face meetings are more efficient as we can then actively screen for frailty syndromes and investigate how we might support them on their treatment journey. The physiotherapist sees them on the day and recommends exercises to help strengthen them prior to surgery. Over the following weeks, the physio calls the patient once every two weeks to see how they are getting on with exercises, and suggests changes if necessary. Feedback from patients is very positive and they feel more engaged in their treatment."

5. Support from the SCFN

The Network helped the RNOH to begin its frailty journey and provided support throughout the pilot, including assistance with improvement methodology, such as driver diagrams, process map, PDSA cycles and Experience Based Design (EBD). The team described the Network as "A great driving force which helped us to remain focussed and showed us how to formulate our work using robust improvement methodology."



Outcomes

In total, 24 patients were screened using the Rockwood Clinical Frailty Scale tool, identifying 20 patients who had varying degrees of frailty.

Improvements even before surgery

Prasan said "The surgeons were fully on board, recognising that frailty has a real impact on patient outcomes. Thirteen patients identified as frail went through our new frailty pathway, nine of which have now completed their surgery, all with no significant complications. Three patients opted out of surgery following detailed shared-decision making discussions – an equally important outcome of the pilot, I feel. One patient in particular felt the pre-habilitation exercises made a huge difference to her quality of life, before surgery had even taken place."

The patient in question is a 79-year old woman with a Rockwood CFS of 5. She had degenerative spondylolisthesis, leg pain and weakness on her right side. She lived with her son in a maisonette and spent virtually all of her time upstairs in her bedroom, which had been set up to make cups of tea and warm up microwave meals, enabling her to not leave her room at all during the day. As part of her pre-habilitation exercise programme prior to surgery, she was given advice from the physiotherapists on how to improve her mobility and how to safely navigate the stairs. She was also given regular exercises and shown a video on falls prevention. The physiotherapists called her once a fortnight to check on her progress.

The patient saw a significant improvement in her mobility, as shown in the table below.

Function	Pre-assessment (30-05-19)	Pre-surgery (04-07-19)
Indoor mobility	30 metres with 3 wheeled walker	30 metres with 1 stick
Outdoor mobility	Wheelchair	Short distances with 3 wheeled walker
Stairs	2 times per week with supervision	Daily, independently
Personal activities of daily living	Independent with most	Independent with all (including toe nail cutting)
Domestic activities of daily living	Some assistance from son for harder tasks	Increased independence (now ironing)
Exercise	10-15 minutes of pedals DBE with bicep/ tricep curl	20 minutes pedals Daily exercise programme

She told the team "I haven't felt the pain I used to feel". On the first day after her laminectomy surgery she was able to stand. The surgeons were delighted with her progress.

Prasan said "The lady's functional status and confidence both vastly improved and, as a result of our interventions, we were able to optimise her before surgery took place. She sailed through surgery, stood on the first day post-surgery and was discharged home in good time.

In general, we have observed that patients appreciate being given exercises and advice, it engages them in their own treatment and they like knowing what they can do to help themselves and play a part in their own recovery."

The team endeavoured to capture patient feedback using EBD questionnaires. However, response rates were low, even when patients were contacted after being discharged.

Reassessment of objectives

In relation to their initial aim of reducing length of stay for frail patients, the team at RNOH soon realised that this was unrealistic. Prasan said "We are talking about patients having spinal surgery. Each one has a different problem and a different level of complexity. Some come in for single stage surgery while others have two or even three-stage surgery.

There is no real consistency in terms of length of stay so we have abandoned this as an outcome measure. However, we are still keen to look at the patient experience as well as reducing complication rates – pain, constipation, chest infections, blood clots and so on.

Challenges

As with any improvement project, there have been a number of challenges to overcome.

1. Demonstrating outcomes

How to demonstrate positive outcomes has been one of the primary challenges of the frailty improvement project at RNOH. Prasan said "It has been hard to obtain definitive data that demonstrates improvement but the feedback we are receiving from both patients and the MDT suggests that aiming to deliver a gold standard model of care for frail patients is having a significantly positive impact."

Consultant spinal surgeon, Robert Lee said "We rigorously collect outcomes data for our patients, not only patient feedback at the time of follow-up consultation, but also outcome scores and complications collected on the British Spine Registry and in some case with postoperative gait analysis. There is no question that frail patients who have been optimised pre-operatively have fewer complications and better outcome scores."

One patient recently wrote to the hospital following her spinal surgery. She told the surgeon "what you have done almost beggars belief", describing it as "the best Christmas present ever". She said "I was walking around in the shape of a staircase whereas I am now more like a column and therefore a more stable structure."

2. Cultural change

During the pilot, the spinal surgeons used the scoring tool consistently. However, this is not yet something that is embedded into the culture. Even while the pilot was underway, some members of the surgical team still needed to be prompted at times to use the tool.

Lucy believes there are a couple of ways to approach culture change "We are aiming to increase awareness of frailty across the Trust. The frailty team is presenting to our Trust board meeting next month and is also planning to present at our regular audit meetings. In addition, Rockwood CFS is being added onto the system our surgeons use to list patients for surgery. It is being set up so that every patient over 55 who is listed for surgery, automatically triggers a screen showing the Rockwood CFS".

3. Lack of resources

Another challenge for the team has been a lack of suitable resources, in particular having sufficient admin support, consultant anaesthetists, physiotherapists and geriatricians to manage patients coming through the service. Prasan said "Since the pilot finished, the physiotherapists in particular have been very short-staffed and unable to attend pre-assessment appointments. If we do roll this out to other specialities there will be much higher numbers of patients so it is essential to have these resources and the administrative back-up. Our project lead, Dawn, proved vital in keeping the project running so we know that a good administrative resource is essential."

4. Lack of space

The aim is to provide a single place for frail patients to see specialist clinicians and therapists. However, lack of capacity within the pre-assessment clinic meant that this didn't always happen and that patients sometimes had to be seen in other departments. It is important for the patient to be seen by various members of the MDT on the same day, as some have travelled long distances. Ideally, an area is needed with sufficient space to see everyone in one location.

5. Data

The Trust found it difficult to access some of the baseline data suggested by the SCFN as there weren't sufficient resources in the information team to collect and analyse the relevant data. Lucy said "The people we have in our information team are so busy they could not give us the data analyst time we wanted and needed to support this project. It was a challenge and has posed a bigger question for me in terms of how we invest as a Trust to provide this resource in the future."

What's next?

Although the six-month pilot project has come to an end, the Trust is aiming to continue providing the frailty service to spinal patients while expanding it to include patients in the joint reconstruction unit. Lucy said "The joint reconstruction sub-specialty tends to have older, frailer patients so if we are going to have any significant impact it will be there."

The Trust acknowledges that the challenge will be to find sufficient resources to expand the service into this and other areas.

Success factors

The RNOH team has identified a number of key factors that it regards as crucial to the success of a project of this type:

- Engage key surgeons and members of the senior management team who understand the need for a frailty service and, in particular, why frailty and surgery can be a bad combination.
- Have senior surgeons who are really on board with what you are trying to do and recognise the issues. This helps to ensure that the aims and objectives filter down to more junior staff, which is when changes start to embed.
- See frail patients face-to-face rather than trying to gather information and give advice via calls and emails. This is more efficient and ultimately works better for the patient.

Conclusions

Prasan said "Frailty is now being looked at as a public health issue and we are on board with this. If patients are recognised to be frail, we need to look at them from a holistic and multimodal perspective."

Lucy concluded "I was struck by the story of our 79-year old patient and just how much the physiotherapy intervention had changed her entire life. Even before she underwent surgery, she was able to get downstairs and go out.

This work is really important. Traditionally, some orthopaedic surgeons have tended to see patients as a technical challenge without necessarily paying too much attention to their hopes and aspirations. This is about looking at patients as a whole person and how our treatment fits into their whole life, with or without surgery."

SCFN at NHS Elect
LABS Hogarth House,
136 High Holborn, Holborn,
London WC1V 6PX

Tel: 020 3925 4851
Email: networksinfo@nhselect.org.uk

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