

Perioperative Care for Older People undergoing Surgery (POPS) data helps Frimley build a compelling case for change



Introduction

Frimley Health NHS Foundation Trust serves a population of around 800,000 across Surrey, North West Hampshire, East Berkshire and South Buckinghamshire. The Trust has two large district general hospitals – Frimley Park near Camberley and Wexham Park near Slough, as well as Heatherwood in Ascot which provides outpatient services and day surgery.

In 2017, the Trust began working on perioperative care for older patients. Initially the priority was older, frail vascular surgical patients. Dr Sharmistha Gupta joined Frimley Park in 2017 to establish the hospital's first Proactive Care of Older People Undergoing Surgery service. Dr Amit Mandal has been providing an informal perioperative medicine service according to need at Wexham Park Hospital since 2018.

In 2021, Frimley Health was invited to join the first cohort of the Perioperative Care for Older People Undergoing Surgery (POPS) Network to help expand its POPS service. Sharmistha secured funding for the improvement project from the Associate Director of Surgery on the basis that it would be a cross-site project involving both Frimley Park and Wexham Park. This is their story...





Start of POPS at Frimley Park

Prior to joining the POPS Network, Frimley Park Hospital's POPS service had begun by focusing perioperatively on older patients having vascular surgery. Sharmistha established a vascular liaison service in 2017 and in August that year, she began running POPS clinics. Initially fortnightly, the clinic operated weekly from the second half of 2021. After 18 months she was joined by a colleague, Dr Savithri Gunasekara who focussed on NELA (National Emergency Laparotomy Audit) patients as per national mandate.

The POPS service had two PAs (programmed activities – each equates to four hours of consultant time) per week dedicated to vascular patients and one PA per week dedicated to NELA patients. Sharmistha had one PA for a POPS clinic and the other PA was ad hoc. As none of the PAs had proper

funding, clinical pressure from within the Medical Directorate took priority and the surgical service was withdrawn. The POPS clinic accepted referrals from vascular and colorectal surgeons, anaesthetists and specialist nurses, and patients were reviewed prior to scheduled vascular or colorectal surgery and post-operatively. As the service became established, many general surgeons also started referring patients to the POPS clinic for pre-operative optimisation. There were also regular ward rounds for vascular and laparotomy patients. Outside of funded time, Sharmistha also carried out pre-operative and post-operative reviews of colorectal inpatients and held joint clinics with colorectal surgeons as needed.

Although this service was focused on patients above 65 years of age, it was mainly a needs-based service and younger patients with frailty were also seen.

Preliminary work at Wexham Park

At Wexham Park, there is no formal POPS service. However, in 2018, a referral pathway was established for patients aged over 65 having an emergency laparotomy (NELA) or for those with clinical need. Dr Amit Mandal and two consultant anaesthetists work

closely together with surgical colleagues, outside of contractual obligations and without funding, to provide multidisciplinary perioperative care and shared decision-making for surgical inpatients and outpatients.

Project aims

On joining the POPS Network, Frimley Park's aim was to improve the outcomes of patients with frailty during the immediate perioperative period. The team felt it was important to identify frail patients early on using the Rockwood Clinical Frailty Scale (CFS) and for patients with frailty score of four or more, to undergo a Comprehensive Geriatric Assessment (CGA) to identify their individual needs.

These and other high-risk patients, in terms of significant co-morbidity, would then be optimised prior to surgery using a range of proactive interventions aimed at improving outcomes and reducing the risk of complications and readmission. Many significant underlying conditions (largely new or undiagnosed) such as anaemia, diabetes, hypertension, heart failure, abnormal cardiac rhythms, chronic lung disease and renal failure were optimised pre-operatively. In addition, specific to the care of older people, falls risk was identified and minimised when possible, and bone health was addressed. Other important perioperative interventions were recognition and reduction of post-operative delirium and diagnosis of underlying cognitive impairment.

Rehabilitation needs were considered for all the patients post-operatively which facilitated discharge planning.

On discharge, appropriate post-operative follow up was organised either in the POPS clinic, with the GP or other community services.

Rationale

Sharmistha explained why this work is needed: "Patients with frailty and older patients may have different comorbidities many of which are undiagnosed, including cognitive or social issues which can affect their outcomes after surgery. Using a holistic approach helps us identify these areas and offer simple interventions to improve their outcomes and make their entire perioperative journey as smooth as possible."

Dr Amit Mandal, who worked alongside Sharmistha to establish the new POPS service at Wexham Park Hospital, said "There is a strong evidence base to show that timely perioperative medical interventions for older adults or those with significant comorbidities improves all outcomes after surgery, particularly non-cardiac surgery. The physiological stress of surgery can lead to complications for patients with serious underlying conditions such as heart disease and lung disease, which might have been clinically silent up to this point. Research shows that specialist medical input pre- and post-operatively can reduce mortality, post-operative complications like infections or delirium, prevent decompensation of known diseases and reduce length of stay and readmission rate.

Our aim is to roll out the POPS service across both sites. This will also help us to meet GIRFT recommendations and NELA standards."

What they did

Created a project team

Frimley Health established a project team to lead the POPS improvement work. Dr Sharmistha Gupta - Consultant Physician in General Medicine and Elderly Care - led at Frimley Park with Dr Amit Mandal - Consultant Physician in Acute Medicine and Elderly Care - taking the lead role at Wexham Park. The project team also included consultant anaesthetists, consultant surgeons, senior nurses and therapists.

Bringing together clinicians from across the Trust working towards the same objectives proved very beneficial. Amit said "Good teamwork is vital for a project like this. I hadn't worked with Sharmistha before but we both have a passion and shared vision for perioperative care. It has been great to be working within a cohesive and collaborative team that is enthusiastic and committed to optimising clinical outcomes for surgical patients. Even the small interventions we make can have a huge impact on patient outcomes. Sometimes, when there are difficult decisions to make, such as in relation to end of life care, it is really helpful to do this as part of a team."

Established a POPS pilot

Ultimately, Frimley Health's aim is to develop a one-Trust approach to the perioperative care of older people undergoing surgery and to have a multidisciplinary POPS team based at each of its two acute hospitals. The POPS project investigated the impact created over a six-week period over both sites. The team measured the impact of its work on a snapshot of 90 patients cross-site, allowing it to assess the likely impact that a funded service would have. These data have enabled the project team to build a compelling case for change.

Agreed frailty criteria

The Trust wants to provide high quality care to all frail patients throughout the perioperative period. While this predominantly means older patients, Amit explained "We want to create a service that is needs-based rather than age-based, targeting all patients with a CFS score of four and above, those with underlying health issues that put them at risk, as well as patients over the age of 65. The average age of patients seen by our service in this pilot was 79 years "

CFS scoring is not yet routine practice amongst surgical admissions but over time the POPS team hopes to improve the early identification of frail patients to expand the opportunities for 'pre-optimisation'.

Data analysis

The team carried out an analysis of in-patient surgical admissions seen by the POPS team between June and July 2021 at Wexham Park and Frimley Park Hospitals. Ninety patients were included with an average age of 79 and a mean CFS score of four.

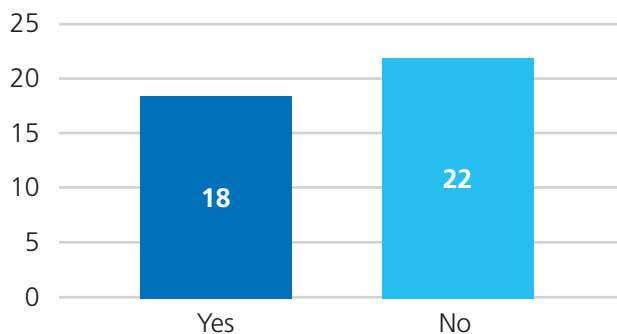
What the data showed

The data provided important insights into the opportunities for the POPS service.

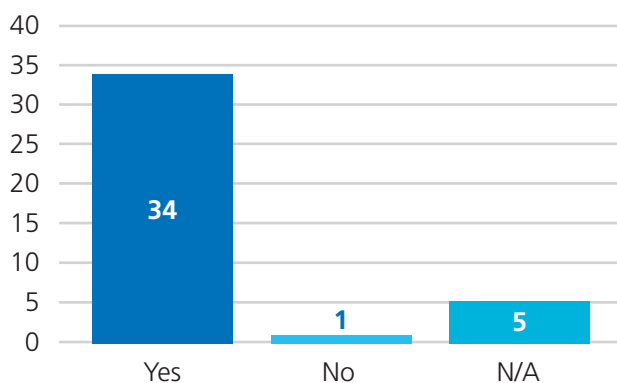
1. Polypharmacy

Polypharmacy is the use of multiple medications (normally five or more) for different conditions. Not all of these may be necessary and there can be an increased risk of adverse medical outcomes. Good practice involves stopping obsolete or harmful drugs, checking that patients are on the right dosage and initiating other drugs according to clinical need. During the six-week period, the POPS team succeeded in stopping an average of 1.4 unnecessary drugs per patient.

Polypharmacy identified

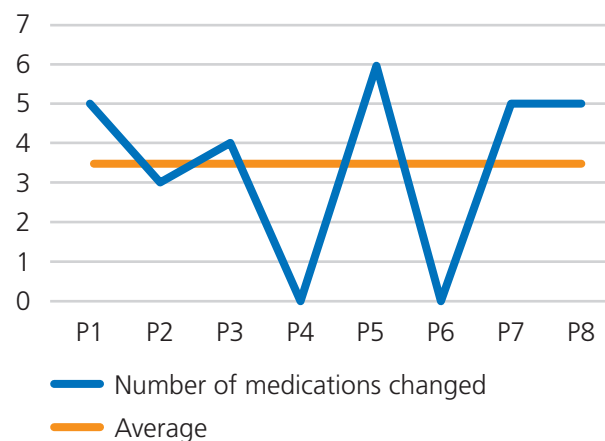


Pharmacological optimisation



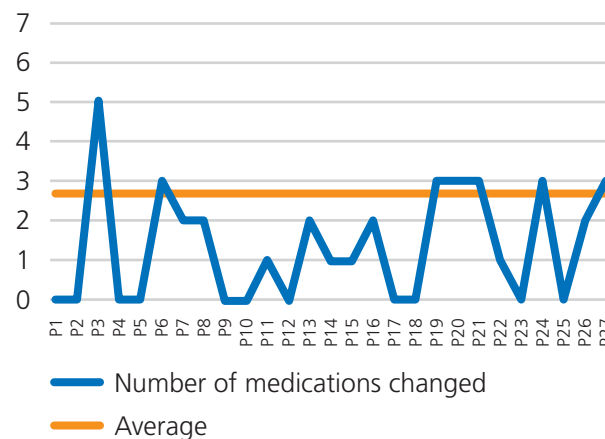
All patients had a medication review. Among those patients who were admitted with falls, an average of 3.5 medications were changed.

Admitted with falls



Among those patients with a history of falls, an average of 2.8 medications were changed.

Not admitted with falls but history of falls



Aside from reducing the risks of adverse outcomes, the team anticipates that by identifying an average of two drugs per patient that could be stopped, this would generate a community-based saving of £239,000 to the ICS.

2. Identified undiagnosed conditions

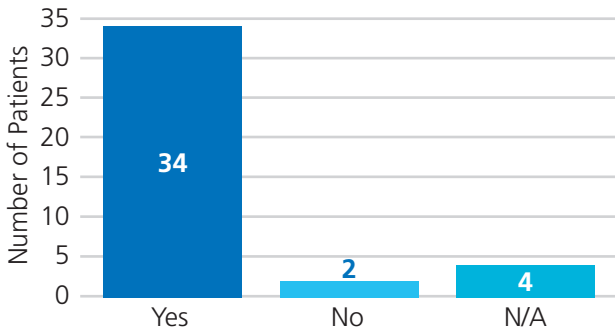
The POPS service identified two or more previously undiagnosed conditions in 71% of patients.

These included anaemia, acute cardiac issues, renal failure, chronic lung disease, cognitive issues etc. Earlier diagnosis of such conditions enables better planning and treatment options. Sharmistha explained “It is easy for certain underlying causes

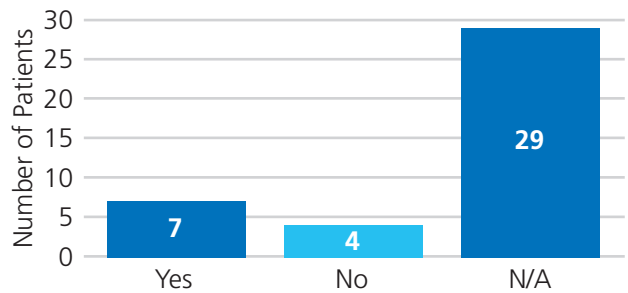
to be missed. For example, if a patient has a history of falls, it’s important to assess their bone health, blood pressure, medication, and other risk factors—anything that could be contributing to an increased risk of falling. If a patient has undiagnosed cognitive impairment they can be at high risk of delirium after surgery. Once we are aware of this we can optimise any of the factors that might lead them to develop delirium.”

NHS Elect POPS Data Analysis – WPH

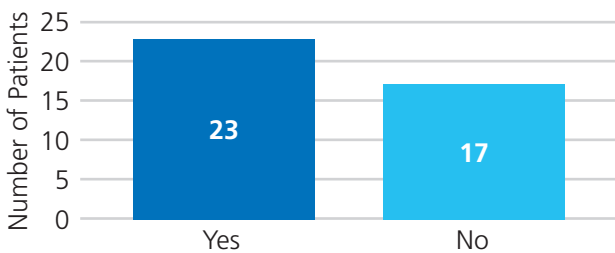
Delirium Screening



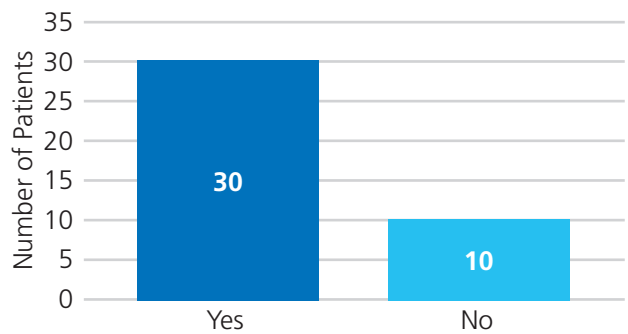
Early recognition of rehab needs



Anaemia identified

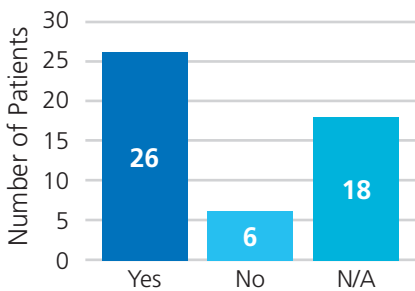


At least 1 new diagnosis

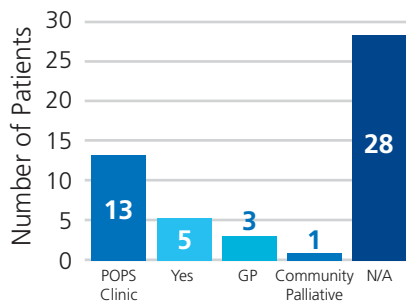


50 Patient Review (FPH)

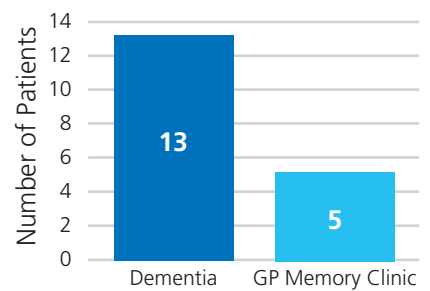
Early Recognition of Rehab Needs



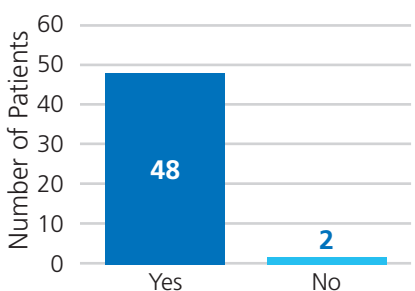
Primary Care Follow Up



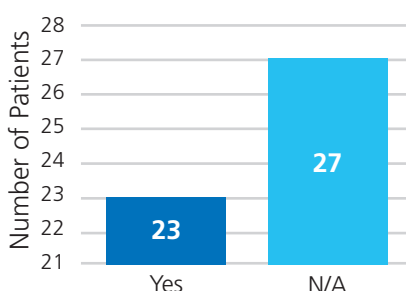
Undiagnosed Cognitive Impairment



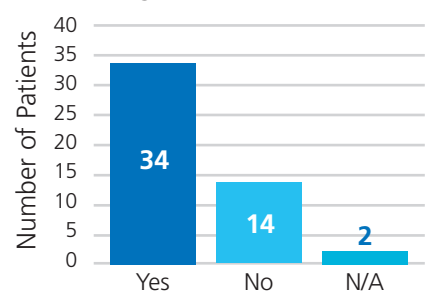
MDT



Anaemia



New undiagnosed Medical Condition

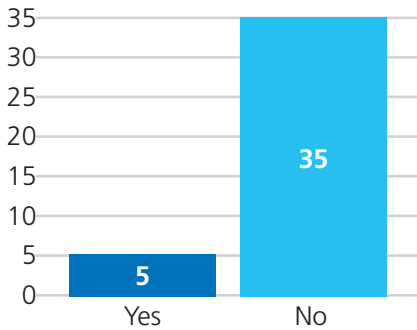


3. Avoided specialty referrals

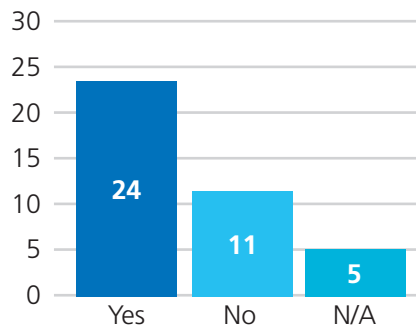
Referrals to other specialities were avoided during the POPS pilot, helping to reduce the workload on colleagues in other specialities. Patients benefited from a systematic and holistic review of their medical conditions as an inpatient. Sharmistha said "Early mobilisation, discharge planning and recognition of a patient's potential rehabilitation needs helps to support rapid recovery and discharge."

NHS Elect POPS Data Analysis - WPH

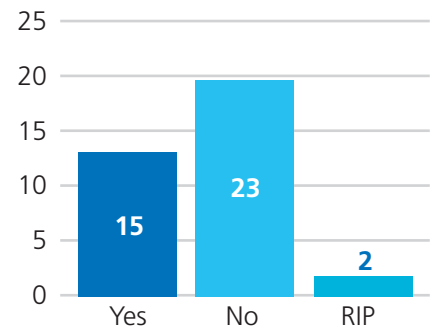
MDT anaesthetic/medicine



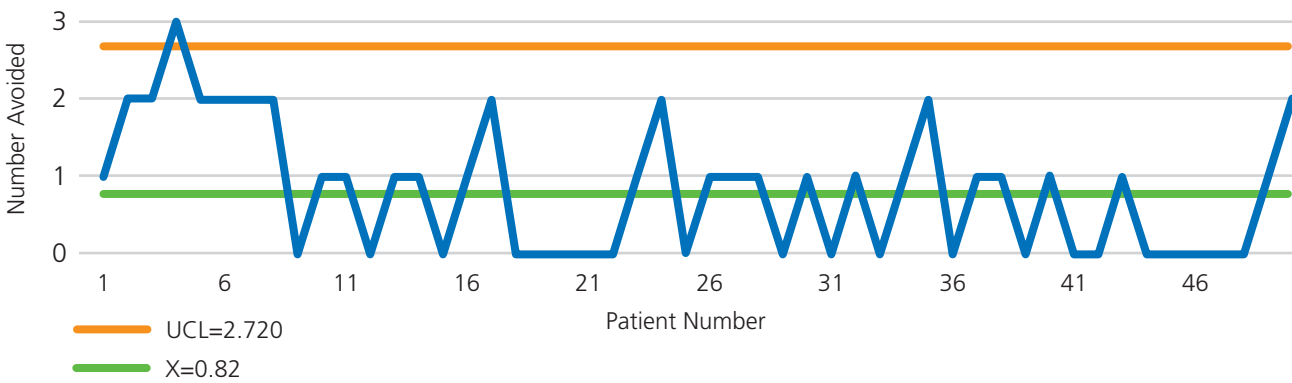
Specialty referral avoided



Ongoing care provided



Number of specialty referrals avoided per patient

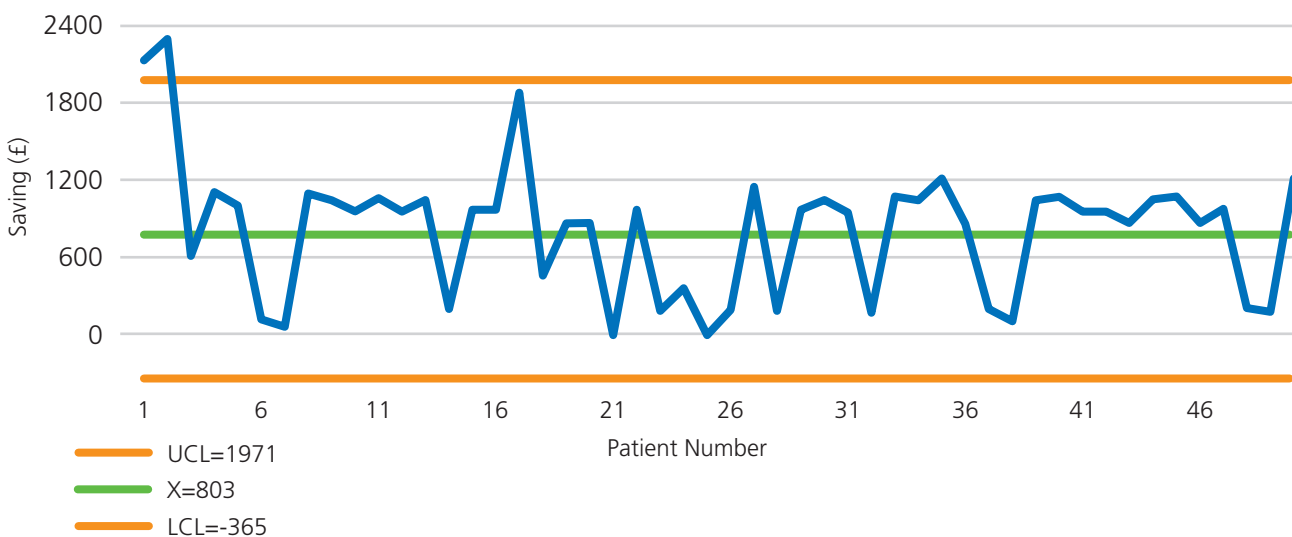


4. Cost savings

Polypharmacy optimisation led to a savings of £239,000.

The POPS Clinic in Frimley Park showed a potential savings of £803 per patient, leading to a saving of £385,440 annually. Similar savings are extrapolated for Wexham Park.

Financial Saving per Patient



Building a business case

Armed with this information, the POPS project team then put together a compelling business case for a funded Trust-wide POPS service, which was reviewed and approved by the Senior Leadership Committee and is currently awaiting ICS funding approval. Once implemented, the POPS team expects to see six patients per month in the Wexham Park POPS clinic (the POPS clinic at Frimley Park site already sees five to six patients per week) and to review 20 ward patients per site per weekly.

Not only is there a potential for cost savings by avoiding polypharmacy, but by optimising surgical patients it is also possible to reduce mortality and morbidity, improve recovery times, reduce length of stay and cut readmission rates. Audit data suggests that reducing readmissions could reduce vascular admissions by 8%, surgical admissions by 16% and overall length of stay by 3.5 days per patient per site.

Challenges

For Frimley Health, one of the biggest challenges of the POPS project was that the majority of the work largely fell outside contractual activity. It was hard to get junior doctors' input into the service and frail patients were not always identified early enough for perioperative interventions to take place.

Nevertheless, the project produced some invaluable data, demonstrating that the POPS service has the potential to deliver multiple improvements in patient outcomes and significant cost reductions. The team hopes to formally integrate the service with the surgical team once funding has been secured.

Learning

One of the benefits of working alongside the POPS Network was that it gave the project team a better understanding of how to collect and use this data. In particular, the Network showed the Frimley Health team how to obtain a tariff for each element of the patient journey, enabling them to demonstrate cost savings.

Amit commented "One of the things this work has shown is that any improvement is a marathon and not a sprint. It takes a long time to test a new service and when you are doing it in an ad hoc way outside of normal contractual obligations that can be a challenge. It has been helpful to have become part of a single Trust-wide POPS team and being able to learn from other Trusts via the POPS Network. The experience of working with the Network and our one-Trust approach helped to strengthen our business case."

Sharmistha said "The POPS service forms part of a larger strategic ambition of caring well for an ageing population and creating an integrated pathway for frail patients from their homes through their admission and hospital stay, in-patient rehabilitation and back to their homes again. It works alongside GPs, district nurses and other community services."

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