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PLANNED CARE

Clinical Pathway Group

Report 2010

BACKGROUND

Elective surgical procedures are a significant burden on the resources of the NHS nationally, and also regionally. With an ageing population the need for interventions has increased due in part to the rise in age related disease. This has a significant implication for the way healthcare is delivered across the North West, and in particular how resources are allocated. The challenge of maintaining the highest levels of clinical excellence in the services we deliver and the outcomes related to them, require us to rethink, in part, the way elective surgical services are delivered. This will help us ensure that patients are seen and treated promptly, efficiently and in the environment most appropriate to their needs

Elective surgical interventions cross the whole of the health sector, and vary from treatment room procedures which can often be performed in an ambulatory setting, to complex inpatient procedures which require the presence of a large and well coordinated multidisciplinary team. The challenge is to ensure that the right person is delivering the right service in the right location. This was the focus of the Planned Care Clinical Pathway Group.

AIMS

To evaluate the evidence base for why and how certain elective surgical procedures are performed in an ambulatory setting, within the day case environment or as in patient procedures.

To identify and showcase areas of best practice nationally and regionally.

To make recommendations to ensure the best clinical, strategic and commissioning practice, so that the region provides the highest quality elective surgical services to its population

DAY CASE SURGERY

Carrying out elective surgery as a day case procedure where clinical circumstances allow reduces bed occupancy rates and nursing care. In addition patients prefer to recuperate, on the whole, in their own home environments[1]. Following the 2001 recommendations of the Audit Commission, 25 procedures were identified as being safely amenable to be carried out as day cases[2]. If all acute providers within the NW were able to perform 75% of these procedures as day cases a potential 16,500 bed day saving could be achieved[3]. This equates to a saving of £3.3 million across the NW per annum4. As surgical techniques and technologies have advanced, it is becoming clear that it could be possible to perform more procedures in a short stay setting.

ensure that patients are seen and treated promptly, efficiently and in the environment most appropriate to their needs

RECOMMENDATIONS

1. Day Case should be the default unless there are surgical indications to the contrary[5].

There remains significant variation in the rates of day case surgery across the UK, with between 3-6 fold differences according to procedure across the different trusts. Much of this is due to the mindset of acute providers, who organise elective services within the context of inpatient care[5]. Both medical and nursing staff should espouse the day case ethos, and we advocate adoption of the British Association of Day Surgery (BADS) Procedure Directory[6] to identify further gains in short stay surgery. The BADS Procedure Directory provides aspirational target rates for short stay and day case surgery for 160 different surgical procedures across nine surgical specialities. It has been developed on the back of a firm evidence base, allows for the large variation in performance throughout the UK with regards differing surgical specialities, and is accompanied by an Excel based software suite (BADS Efficiency Assessment Tool) to facilitate review. These tools have now been adopted by the Audit Commission as the basis of their review process for day case surgery, and we would recommend their use in conjunction with a sound understanding of the needs and aspirations of the local health economy to identify areas of improvement across elective surgical services whilst maintaining the highest level of patient care and outcomes. A recent study from London has shown a 75% reduction in costs for pilonidal surgery when delivered as a day case, with no difference in the quality of care offered[7].

How would this improve patient care?

Patients staying in hospital no longer than required, with a reduction in morbidity associated with hospital admission.

How can this be measured?

Rates of procedures performed as day case, using benchmarks from BADS Procedure Directory

Overall length of stay for any given procedure

Rates of hospital acquired infection

2. The development of an Integrated Care Pathway Document; the "Patient Passport"

One of the issues which prevent[5] efficient and timely investigation and intervention is a lack of continuity in the documentation that is available for clinicians and other allied health care personnel, when dealing with the care of a patient. All procedures which are on a day case pathway should therefore develop an Integrated Care Pathway Document, from GP referral to discharge, which would include initial consultations and investigations, pre-assessment, consent, patient information leaflets and perioperative care notes. In the absence of an electronic version of this document, which would be accessible to all clinicians involved in the patients care, a paper version of the document could be given to the patient on first consultation, and remain with the patient until the day they are admitted for surgery[8]. An example of this system has been developed and tested at University Hospital of North Staffordshire NHS Trust with positive feedback from patients[9], but long term feasibility may be an issue with paper systems, especially in areas where the transition from paper to electronic records is ongoing.

How would this improve patient care?

The patient journey through the pathway would be more streamlined, with fewer delays for repeat investigations and lost information.

How can this be measured?

Number of patients passing through pathway with complete passports

Patient reported satisfaction rates

RECOMMENDATIONS

3. Patients should only be referred when they are ready for surgery

All relevant investigation results required for an efficient and productive first specialist consultation should be available at the time of referral to the specialist. Referrals which do not contain the relevant information should not be permitted to proceed beyond primary care referral through the use of a robust IT system. Also patients should only be referred when they are in the best possible condition for surgery and relevant comorbidities have been corrected as much as possible[10].

How would this improve patient care?

Treating patients when they are medically most able to withstand the rigours of surgery will lead to better outcomes

Avoiding unnecessary referrals and the related inconvenience to patients

How can this be measured?

Rates of inappropriate referrals

Rates of rejected referrals

4. Develop dedicated teams that will deliver the day case service

Units in which there are standardised and agreed protocols for all aspects of day case surgery, from how patients are booked in and cared for on the ward, to the mode and type of anaesthesia and analgesia they are given during the peri-operative period, are better able and equipped to effectively perform day case surgery. This can be facilitated by the introduction of dedicated complete teams for day case pathways, consisting of theatre staff, ward staff and administration support, with the appropriately required skill sets. Evidence from Australia has shown that day surgery services delivered by sub-specialists with a specific interest can reduce morbidity and length of stay[11].

How would this improve patient care?

By providing the best clinical outcomes for any given procedure

How can this be measured?

Rates for specific complications

Variability in practice within and between different units and service providers

5. A coordinated and multidisciplinary discharge process

Day case procedures can require an inpatient stay due to delays and problems in discharge. These can be overcome by ensuring day case units are open for longer periods of time during the day to allow patients who have had surgery in the early afternoon to recover and be discharged safely. This has to be tied in with a greater availability of staff after hours, and in particular allied health care professionals such as physiotherapists, occupational therapists and specialist nurses, whose input is often essential prior to patient discharge. Aintree University Hospitals NHS Foundation Trust has been successful in facilitating weekend discharge for patients following colorectal surgery, through the introduction of stoma nurses on the wards on Saturdays[12]. Often it can be difficult to predict which patients may require an overnight stay, and the addition of a 23 hour unit to an established day case unit can help in managing these patients[13].

Often, delays in dispensing of take home medication can prevent prompt discharge. In Stoke on Trent, common take home medication are available on the day case ward pre-packed and can be nurse dispensed[14].

Discharging of patients should be performed, via a pre-agreed criterion, by any member of the medical team. A criteria led discharge process, in which criterion are determined by the medical team, has been in operation for over ten years at the Countess of Chester Hospital NHS Foundation Trust[15] and has resulted in a reduction in the time patients wait for discharge at the end of their treatment.

How would this improve patient care?

Patients able to return home at the earliest possible opportunity, convalescing in a familiar environment

By reducing the exposure to risks associated with hospitalisation

How can this be measured?

Rates and reasons for delays in discharge

Readmission rates

Rates of unplanned overnight stays

6. Continuing patient support

Many clinicians are reluctant to discharge patients on the same day following surgery due to perceived risk of complications which may lead to significant morbidity and mortality. In many instances, these complications normally present within the first six hours post surgery, or after three to four days and so the rationale for admitting patients overnight is somewhat illogical. Arrangement should be made for patients to have direct access to a skilled and knowledgeable health professional that is able to address their concerns and identify any significant issues which may need intervention. These may include, but are not limited to direct access to a Surgical Assessment Unit for up to 48 hours after surgery. In such instances patients should be reviewed by a senior clinician, such as a Specialist Registrar, as soon as possible. Such a service can be supplemented by a telephone hotline that patients are able to access 24 hours a day and which is manned by trained staff. Ideally this service should be provided by day case ward staff that have the expertise and understanding of the conditions to advise accordingly. At the Countess of Chester NHS Trust, day case nursing staff are on call 24 hours a day, and are accessible via a mobile phone which they carry on a weekly rota basis to answer any queries. The staff are specifically trained to deal with all possible queries, the service is audited regularly and any problems are raised with the Director of the day case unit[15].

How would this improve patient care?

Reassurance for patients

Safeguard to prevent catastrophic complications

How can this be measured?

Numbers of patients contacting telephone hotline

Rates of patients accessing SAU

Readmission rates for complications

Focus on.....Laparoscopic Cholecystectomy

Despite having a good safety and feasibility profile, there continues to be large variations in rates of day case laparoscopic cholecystectomy nationally and regionally[16]. In the period 2008/09, over 5000 laparoscopic cholecystectomies were performed in the NW, with a mean day case rate of 9% (range 0 to 36%)[17]. By increasing rates from 10% to 60% there could be a possible minimum saving of 2500 bed days across the 23 acute providers in the NW.

Many of the obstacles preventing good performance with day case laparoscopic cholecystectomy can easily be overcome with simple and proven interventions. These include:

- Ensuring that body mass index, liver function tests and ultrasound scans have been performed and results are available prior to referral1. Not only does this help reduce the number of clinic visits required pre-operatively, it is also useful in guiding surgeons to other interventions that might be required at the time of surgery (e.g. on table cholangiogram or bile duct exploration)
- Selective performance of pre-operative investigations according to need and NICE guidance[18].
- Multimodal analgesia using oral NSAIDs, paracetamol, codeine and LA, avoiding opioids, and using an anaesthetic with less post operative nausea and vomiting side effects[19].

Specific clinical concerns can also be validly addressed;

- Worries regarding haemorrhage, both reactionary and secondary can be addressed by the fact that reactionary haemorrhage usually declares itself within 4-6 hours, and secondary haemorrhage normally occurs three or more days after surgery.
- Bile leak if present will present itself 3-4 days after surgery
- Some may argue that patient expectations are for an overnight stay following surgery. Contrary to popular belief, many patients report high rates of satisfaction following day case laparoscopic cholecystectomy[20].

AMBULATORY SURGERY

Many surgical procedures across all specialities are currently performed as day case procedures, and in some cases in parallel to more complex interventions, using the same resources and often the same personnel, within an acute hospital setting. We propose that many of these interventions could be performed in a different environment or in a different way which would maintain the highest level of clinical standards, but which would be more convenient and suitable to the needs of patients. In addition, with the increase in demand on surgical services, there is an opportunity for many of these services to be delivered by wider members of the surgical team. This could lead to more procedures being delivered closer to patients, at a time more convenient to them, with a shorter duration of wait, and in a way which ensures better continuity of care. In addition, for those pathologies where there is a marked effect on quality of life, and increased risk of urgent admission and surgery (e.g. hernia surgery), then there is an opportunity to improve patient outcomes, and reduce the strain on an already stretched inpatient capacity[21].

RECOMMENDATIONS

1. Identify areas for improvement

Individual units and directorates should aim to identify services which have the potential to be delivered in a different environment or location across the broad spectrum of elective surgical services. For example in general surgery it is envisaged in the future that only 20% of elective surgical interventions will require specialised intervention, and a large majority of the rest may be able to be delivered in community settings, under local anaesthesia as day or short stay procedures[22]. As a starting point we would advocate identification of procedures which have high rates for day case surgery, and which are free from specialist equipment and needs. These procedures should then be assessed locally, involving all stakeholders, with an emphasis on patient safety and risk management, to ascertain if they can be delivered in alternative ways. If local conditions are amenable it may be possible to offer more complex interventions in a similar setting through the use of innovative analgesic and anaesthetic regimes, including wider use of local and regional anaesthesia. The Probus Surgical Centre in Cornwall is a good example of a service which has been able to perform various procedures including abdominal wall hernias, vasectomy and carpal tunnel decompression using local anaesthesia. They have recently reported over 1000 hernia repairs in a community setting over a period of three years, with complication rates on par with specialist hernia centres[23].

How would this improve patient care?

Better access for patients

Increased patient choice

How can this be measured?

Patient Reported Outcome Measures

2. Getting the process right

Often patients will attend for numerous outpatient visits for their condition, including return visits following investigations, which can be lengthy and take up to several months to complete. We would advocate the use of ambulatory diagnostic tools, which can be performed at the initial clinic visit, such as portable ultrasound in orthopaedic shoulder clinics, or the use of validated and reliable screening questionnaires, to confirm diagnosis. The use of more complex and specialised diagnostic tests should be reserved for the equivocal cases. Orthopaedic surgeons working at the University Hospitals of Leicester NHS Trust have shown that a clinic based nerve conduction measurement device in non specialist hands is able to diagnose hand nerve entrapment syndrome accurately in 97% of cases as compared with formal electrophysiological studies[24]. Locally, Blackpool PCT is trialling a validated questionnaire which can be used to diagnose carpal tunnel syndrome in secondary care, with a sensitivity of 85% and a positive predict value of 90%[25].

Direct referral can also aid the flow of patients through a pathway, and where possible we would recommend that GPs have access to locally agreed direct access consultations for specific diseases. This has been shown to work well in orthopaedic clinics for hip replacement surgery in Surrey, where parameters, set by clinicians, for predicting the need for THR had a positive predictive value of 92% for joint replacement eventually being performed[26].

Locally, Wrightington, Wigan and Leigh NHS Foundation Trust have developed a "one stop" service for suspected carpal tunnel syndrome. GPs are able to refer patients directly into the clinic, which includes a consultant review and nerve conduction studies. If positive, patients are listed and given a date for surgery in clinic. The whole process from receipt of referral to operation date takes six to eight weeks[27].

How would this improve patient care?

Reducing the time from referral to discharge

Fewer inappropriate referrals

How can this be measured?

Rates of inappropriate referrals

Percentage of patients meeting the 18 week target

Rates of false negative diagnosis

3. The best place for the procedure

Many surgical interventions do not necessarily have to be performed in hospital settings, and we would advocate the use of community based settings for the delivery of such services where the local environment allows. Evidence suggests that patients are happier when some procedures are performed in the community and much of this is related to the convenience of attending for treatment closer to home[28].

Partnership work between Primary Care and Acute Trusts to develop such services is one solution to overcome the hurdles associated with relocation, and these may involve the need to develop local service level agreements. In the North West, Blackpool PCT and Blackpool Fylde and Wyre Hospitals NHS Foundation Trust are pioneering one such partnership, through the provision of a minor hand surgery service, based in the community, but delivered by consultant surgeons[25].

If relocation is not appropriate for the local health economy, then consideration should be given to finding suitable environments within the acute setting which can allow for the service to be delivered in a more effective manner. An exemplar practice of this is the minor hand surgery service offered by Stockport NHS Foundation Trust. This service operates out of the local Ophthalmology Centre, and allows for a wide range of hand procedures to be performed in a basic theatre, using an operating chair (similar to a dentist's chair)[29]. This has opened up capacity in main theatres, which equates to one extra operating session a week for a unit which performs approximately 250 cases a year[30].

How would this improve patient care?

More convenient for patients, with less of a requirement to travel to far away hospitals for treatment

How can this be measured?

Patient satisfaction surveys

4. Innovative clinical practice

Patients should not routinely undergo pre-operative tests unless there is real clinical indication to the contrary, and clinicians should be guided by NICE recommendations[18]. In some instances where tests may have been performed routinely previously, they may not be necessary. The University Hospitals of Leicester NHS Trust minor hand surgery service does not perform any routine investigations on any of its patients undergoing local anaesthetic surgery. The approach they have adopted is very much one of developing a culture of such procedures being likened to visiting the dentist, and on the whole should therefore not require any routine pre-operative investigation[31].

Similarly, some procedures which might historically have required monitoring during surgery can be performed safely without monitoring. Evidence from Denmark suggests that hernia surgery under local anaesthesia can safely be performed unmonitored in the right patient[32], and this is the routine practice for local anaesthetic hernia surgery in the community in Cornwall[23].

Traditionally theatre consumables for minor surgical procedures have often been similar to those required for more specialised procedures, with obvious wastage in the system. We would recommend that individuals review what is deemed necessary for any one procedure in order to remove surplus. Experience from Stockport NHS Foundation Trust has shown that savings can be made by tailoring equipment trays to be procedure specific, and in the case of carpal tunnel decompression this saving equates to £300 per procedure[29]. If this was replicated across the NW, then there is potential for an annual saving of over £2 million pounds[17].

Patients undergoing minor surgical procedures often receive post operative care which lacks much evidence base, and can be prohibitive for normal activities of daily living. Examples of this may include prolonged periods of immobilisation following surgery, or tailored and costly post operative therapy routines which often have little benefit. A recent American study showed no benefit with relation to time to return to work, or function and symptom scores following a two week hand therapy course after hand surgery[33]. In addition, for patients who are not salaried, then a long time off work has considerable financial implications. Published research from the Leicester Carpal Tunnel Service has shown that 93% of patients are back at work or using their hand normally within two weeks of surgery and this rises to 99% at four weeks[34]. We would advise that clinicians encourage patients to return to normal function as soon as it is safe to do so.

How would this improve patient care?

Patients treated more promptly

Able to return to work quicker

How can this be measured?

Validated outcome measures for specific surgical procedures

Complication rates following surgery

5. The right person delivering the right service

Local surgical teams have to decide who is best suited to deliver a surgical service and the personnel available to deliver them. Innovative practices have included the use of surgical nurse practitioners in delivering carpal tunnel surgery within a service which is led by a hand surgeon. A local example of this is the minor hand surgery service offered by Stockport NHS Foundation Trust[29]. Such services can help significantly reduce times from referral to discharge, and in one series, have seen a reduction from 100 weeks to six weeks[35]. Other possible solutions include the Probus Centre model where GPwSI, some who have had extensive training and clinical experience in surgery, provide the service[23]. If a community service is to be delivered by GPwSI, then it must be remembered that there is a cost implication which has to be borne for training and revalidation and that this may not be cost effective in the long term[27]. In addition, evidence from a recent review suggests that primary care practitioners may be less adept at performing certain forms of minor surgery, such as surgical excisions to remove lesions, and this could lead to a reduction in the quality of care provided to patients[36].

Extended scope practitioners need appropriate training, mentoring and support and in the first instance may benefit from a consultant led service. This model has been used effectively in Bradford to deliver a community based flexible cystoscopy service where consultants have led and mentored GPwSI[21].

We understand that these solutions may not always be feasible but we would encourage individuals to identify what works best for them, taking into consideration concerns around patient safety, clinical governance, accreditation and revalidation to ensure good outcomes, and the training needs of junior surgeons. It must be remembered that there are large numbers of adequately trained surgical trainees who cannot, or choose not to, become consultants in the NHS, and there is no doubt that the productivity of teams can be improved by extending the roles of such individuals, and other professionals within teams[37] .

How would this improve patient care?

Patients treated more promptly

Clinicians able to give more time to patients and offer continuity of care

How can this be measured?

Validated outcome measures for specific surgical procedures

Complication rates following surgery

6. Continuity of care

Currently it is not uncommon for some patients to see up to four different clinicians on their journey through a surgical pathway. Individual units should aspire to offer continuity of care within their service and this can most easily be delivered when patients are seen on initial consultation, operated on and followed up by the same clinician. Services which are nurse run or nurse led lend themselves to such continuity of care, and report good patient satisfaction[29,31].

Every year in the NHS, there are approximately 37 million follow up appointments, for review, to undergo tests or for getting test results. Many of these are clinically unnecessary and no doubt add to the 4 million follow up DNAs every year. Infact, 75% of all DNAs are for follow up appointments[38]. Routine follow up should not be the default following all minor to intermediate surgical procedures, and should be evaluated on a case to case basis. When it is deemed necessary, telephone follow up and dedicated hotlines for patient queries should be considered as an alternative to routine hospital based outpatient appointments. This has been successfully trialled in Bristol for minor colorectal surgical procedures, reducing OPD visits, whilst maintaining patient satisfaction[39].

Locally, good practice has been demonstrated in East Lancashire around aural care. A single nurse has released 770 consultant follow-up appointments in a year. If this were extrapolated nationally it would release nearly 800,000 follow-up appointments each year[38].

How would this improve patient care?

More convenience for patients

Increasing patient choice

How can this be measured?

Patient satisfaction surveys

Rates of follow up appointments per speciality

Focus on.....Carpal Tunnel Decompression

Having been identified by the Audit Commission[2] within its "basket of 25" procedures which should routinely be performed as a day case, rates for carpal tunnel decompression throughout the NW in the period 2008-2009 were between 86-99%[17]. Despite this, there are still considerable gains which could be achieved with this procedure, including reducing the long waits many patients have to undertake before surgery and the numerous out patient visits that are still required in some areas. During that same period approximately 6600 carpal tunnel procedures were performed in the NW, with a total cost to providers of over £7 million[17]. It is our sincere belief that it is possible to continue to deliver a high quality service, for what can be a debilitating illness, at a fraction of the cost by introducing innovative practice.

Areas which should be considered include;

- Reducing the number of outpatient visits prior to and after surgery. This can be achieved by ensuring diagnosis and treatment plans are agreed at the initial consultation. This can be aided by the use of hand held nerve conduction devices which have been shown to be reliable and reproducible[40], or the use of the reliable and validated screening tools which can offer an immediate diagnosis[41]. This precludes the need for lengthy delays associated with referral for official nerve conduction studies, which are only required in a small number of equivocal cases.
- Understanding that the procedure does not always have to be performed by a consultant surgeon in a complete theatre complex in an acute hospital setting, and that there is an opportunity for other grades of surgeon (including staff grades) and surgical nurse practitioners to deliver the surgery in a supervised environment.
- The procedure can in most cases be safely and accurately performed under local anaesthetic without tourniquet, and patients can be discharged home with a simple wound dressing and encouraged to mobilise immediately. The use of bandaging should be limited to those on anti-coagulant therapy[42].
- The cost of theatre consumables can be drastically reduced by tailoring surgical trays specifically for the procedure, and by using disposable kits, which can be autoclaved and donated to the developing third world after use[31].
- Follow up should be limited and restricted to two weeks after surgery. Research has shown that an assessment at this time correlates well with medium term prognosis in a high percentage of patients[43].

Specific clinical concerns can also be validly addressed;

- Worries regarding bow stringing of tendons and other complications which may be associated with early mobilisation do not seem to be justified[34,43].
- Patients actually report greater satisfaction with an ambulatory service, which also offers surgery to many who may have been declined previously due to significant comorbidities (e.g. morbid obesity, renal failure)[31].

Every year in the NHS, there are approximately 37 million follow up appointments, for review, to undergo tests or for getting test results. Many of these are clinically unnecessary and no doubt add to the 4 million follow up DNAs every year.

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Evidence suggests that patients are happier when some procedures are performed in the community and much of this is related to the convenience of attending for treatment closer to home