

Give the patients the choice—The ‘walk in walk out’ hernia clinic

Daniel R. Leff^{a,b}, Rajinder P. Bhutiani^{b,*}

^a Department of Surgical Oncology and Technology, St. Mary's Hospital, London, UK

^b The ACAD Unit, Central Middlesex Hospital, London, UK

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Abstract

Background: Patients referred with symptomatic inguinal hernias traditionally make at least three visits to the hospital and wait on average 41–53 weeks for their operation. Approximately, 10–15% of patients either do not attend (DNA) their clinic appointment, attend on the day of operation or are cancelled by the hospital due to bed shortage, lack of theatre space or associated co-morbidities. This results in a significant psychological strain on the patients and a financial drain on NHS resources.

Aims: To set up a hernia service within the confines of the NHS and give patients the choice of having their hernia repaired under local anaesthetic with only one visit to the hospital, on a date of their choosing, as in private hernia centres but without incurring the cost.

Patients and Methods: An e-mail containing two detailed proformas, “suitability criteria” and “instructions for patients” was sent to each general practitioner (GP) referring hernia patients to the North West London Hospitals NHS Trust (Northwick Park and Central Middlesex Hospitals). The GP gave each suitable and willing patient the instructions booklet and faxed a referral letter to the consultant's (RPB) scheduler. Patients were advised to read the instruction booklet and, when ready, ring the scheduler to make an appointment for a date of their convenience for the consultation and operation at the same visit.

Results: Ninety patients have been referred to the ‘walk in walk out’ (WIWO) clinic in the last 6 months. Ninety one percent of these patients have had successful ‘tension free’ open mesh repair under local anaesthetic. There were five (6%) inappropriate referrals (recurrent or bilateral hernias), and three patients (3%) did not attend their appointment due to ill health or family bereavement.

Conclusion: Patients with unilateral primary reducible inguinal hernias, regardless of their ASA status can safely have open ‘tension free’ mesh repair under local anaesthetic on a date of their choosing by making just one visit to the hospital. In just 6 months this ‘WIWO’ hernia clinic has shown a high level of patient satisfaction, significant reduction in ‘did not attend’/cancellation rates and financial savings for the Trust. Similar clinics set up across the nation would multiply the benefits we have shown.

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1. Introduction

Inguinal hernia repair is one of the commonest general surgical procedures performed in the NHS today, with approximately 80,000 inguinal hernia repairs being performed each year in England [1]. About 40,000 patients per year are cancelled on the day of operation due to non-clinical reasons [2]. We estimate that a considerable number of patients with

co-morbidities are advised against surgery or are cancelled at the last minute because of the high risk associated with general or regional anaesthesia.

In our trust, an average of 10–15% of patients either do not attend on the day of surgery, because of lost letters, unsuitable dates or family commitments. A significant number of patients are cancelled by the hospital on the day of surgery either due to a shortage of inpatient beds, lack of operating space or because they are considered unsuitable for general or regional anaesthesia due to their associated co-morbidities. Patients categorized as American Society of Anesthesiologists (ASA) class III and IV do not fulfill the normal criteria

* Corresponding author. Fax: +44 02084210907/88692577; mobile: +07762137050.

E-mail address: Bhutiani@aol.com (R.P. Bhutiani).

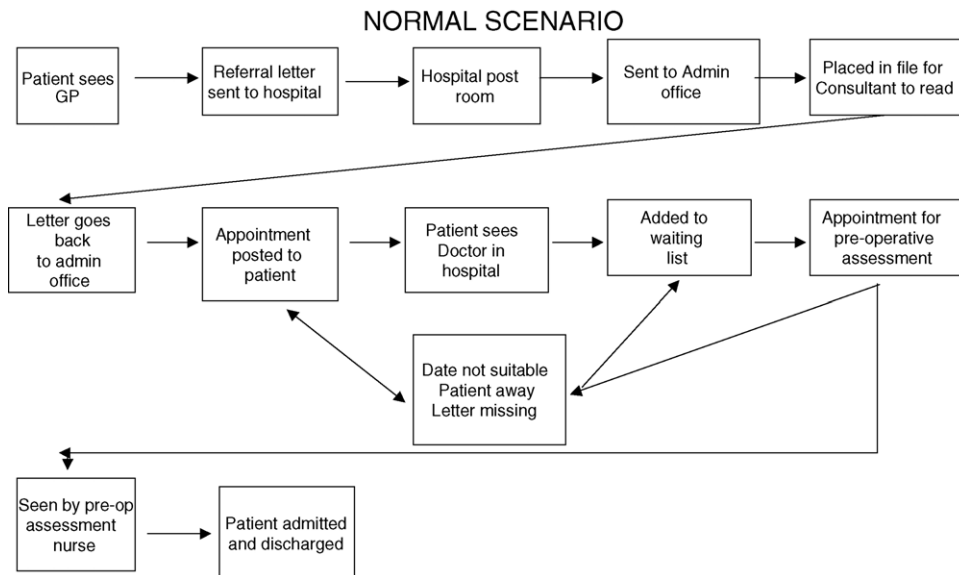


Fig. 1. The normal case scenario.

for day case surgery. These patients could have their hernia repaired under local anaesthetic in one of the private hernia centres at a cost of £1300. We believe that patients who can afford to pay for private healthcare would buy their treatment regardless, but a significant proportion of our patients cannot afford private health care and end up waiting and suffering.

The vast majority of patients in our trust still undergo inguinal hernia repair under a general anaesthetic despite several studies having reported on the benefits of inguinal hernia repair under local anaesthetic, such as shorter hospital stay, less post-operative pain, early mobilization and reduced mic-tur-tation problems [3–5]. In addition it allows the surgeon to test the quality of the repair at the time of surgery.

In the ‘normal case scenario’ (Fig. 1) a patient with an inguinal hernia would visit the hospital on at least three separate occasions, i.e. once to see a consultant, then for pre-operative assessment and finally for the operation. The average GP to operation time in our trust is 41–53 weeks. However, if patients are repeatedly cancelled on the day of surgery, there is no limit to their wait and suffering.

It was the desire to reduce these long waiting times and the suffering of one patient in particular, who had to sell a sentimental item to pay for private healthcare that prompted RPB to create the first ‘WIWO’ hernia clinic within the confines of the NHS. The aim was to give the patients the choice to organize the date of their own operation, have the hernia repaired under local anaesthetic and make only one visit to the hospital.

2. Patients and methods

In order to establish the ‘WIWO’ hernia clinic, each GP in the catchment area serving North West London Hospitals NHS Trust was e-mailed two proformas, entitled “instruc-

tions for patients” and “suitability criteria for the WIWO clinic” (Table 1).

Each GP usually referring hernia patients to the general surgical outpatients is requested to refer suitable patients to the WIWO hernia clinic by faxing a letter to the consultant’s scheduler. Suitable patients are given the choice of being referred to the WIWO clinic for their consultation and operation at a single visit.

Each suitable and willing patient is given the “instructions for the patient” booklet by their GP and advised to ring the consultant’s designated scheduler to make an appointment on a date of their choosing. Patients who do not fit into the criteria of the ‘WIWO’ clinic (Table 2) or wish not to be referred to the WIWO clinic are referred to the surgical outpatient clinic as in the normal case scenario.

On arriving at the clinic, patients are guided to a specified pre-operative area where a dedicated nurse completes their paperwork, performs their pre-assessment consisting only of routine measurements of pulse, blood pressure and

Table 1
Suitability criteria

Patients suitable for WIWO hernia clinic

- (1) Willing to have their hernia repaired under a local anaesthetic
- (2) Unilateral primary reducible inguinal, femoral and umbilical hernia
- (3) Small to medium build (BMI < 25)
- (4) Able to lie flat for 45 min

Table 2
Exclusion criteria

Patients not suitable for WIWO hernia clinic

- (1) Bilateral hernias
- (2) Recurrent hernias
- (3) Xylocaine or bupivacaine allergy

temperature, allays any fear they may have and answers their questions. Each patient is seen by the surgeon (RPB) who explains the procedure, its complications in detail and obtains informed written consent as well as answering any of their questions and their concerns. We encourage the next of kin to be present with the patient during this consultation.

The attending nurse walks the patient to the operating theatre. An intravenous cannula is sited on the dorsum of the hand and 1.5 mg of midazolam (Hypnoval) is administered intravenously by the surgeon, prior to the start of the operation. The surgeon uses a 60 ml mixture of 0.25% lignocaine with adrenaline (1:200,000) (maximum permitted is 7 mg/kg bodyweight) and 0.25% bupivacaine with adrenaline (maximum permitted is 4 mg/kg body weight) to induce a nerve and infiltration block. This combination is ideal for having both a rapid onset of anaesthetic effect due to the lignocaine and a long acting effect due to the bupivacaine. Each patient receives a single dose of intravenous antibiotic preoperatively, normally 1.5 g of Cefuroxime, but those with allergy are given an alternative. Prior to making the incision, the injected anaesthetic agents are massaged well into the area and enough time is given for them to take effect.

There is no designated anaesthetist scheduled to cover the list. In the rare event of a patient needing help with pain relief or anxiety, consultant anaesthetists from adjoining theatres would help. So far we have sought no anaesthetic help. Each patient undergoes standard Lichtenstein ‘tension free’ mesh repair. The prolene mesh is sutured to the inguinal ligament using 3/0 prolene interrupted sutures applied at three anchoring sites; pubic tubercle with mesh overhanging it, a mid-point between pubic tubercle and internal ring and just lateral to the internal ring itself. The mesh is stapled to the conjoint tendon using a Versatac stapling device (Tyco). The lateral tails of the mesh are overlapped behind the cord and stapled to one another.

The wound is closed in layers; the skin is closed using a subcuticular 4/0 PDS suture and a Tegaderm dressing is applied over the wound. The patient is allowed to have a shower 24 h after the operation, but the dressing is left in situ until a clinic appointment 2 weeks later. Patients are taken to recovery in a wheel chair and spend at average of 2–3 h in the recovery unit. Once they have eaten, passed urine and are comfortably mobile, they are allowed home with their relatives. They are encouraged to mobilize from the next morning, but are advised to avoid heavy lifting for 6 weeks postoperatively.

The attending nurse telephones the patients at home the next morning to ensure that they are well. In the rare event of a problem, the nurse will organize for the patient to be reviewed by the consultant within 24 h or sooner if required. This ‘open access’ approach has been found to be of great help in cementing the patient’s confidence and has made the clinic more acceptable to both patients and GPs alike.

Each patient is given a standard ‘satisfaction survey’ proforma at the time of discharge to be returned at their follow up appointment.

3. Results

In the WIWO hernia clinic we have reduced the complex web of the ‘normal case scenario’ (Fig. 1) to a two-stage approach (Fig. 2).

A total of 90 patients have so far been referred to this clinic in the last 6 months. 91% ($n=82$) (Fig. 3) have had their inguinal hernia repaired as per protocol. Five patients (6%) were referred inappropriately (four patients with recurrent inguinal hernias and one patient with bilateral inguinal hernias). Three patients (3%) did not attend their appointment, two due to ill health and one because of a family bereavement. These patients were advised to contact the scheduler, when they were ready for the operation. We did not have to cancel any patients except those referred inappropriately.

Of the 91% ($n=82$) of patients undergoing inguinal hernia repair we have recorded only two complications thus far. One patient developed a subcutaneous haematoma, following local trauma in the post-operative period. The patient made a full recovery following drainage of the haematoma in the outpatient clinic. The other, a patient with known benign prostatic hyperplasia, developed acute retention of urine necessitating catheterization and an overnight stay. The catheter

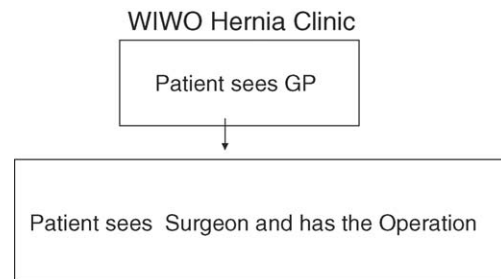


Fig. 2. The ‘walk in walk out’ hernia clinic.

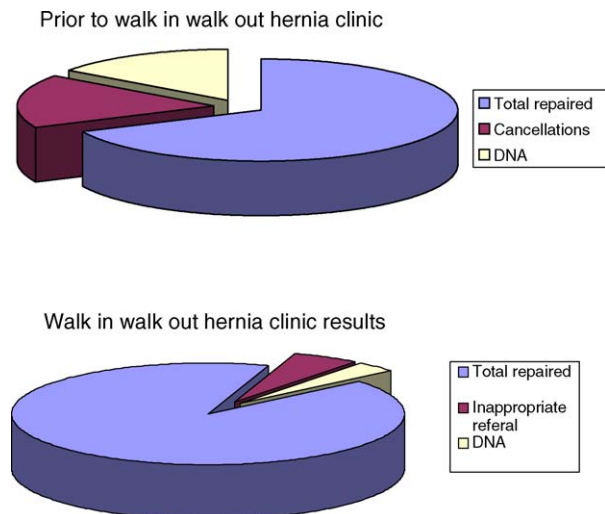


Fig. 3. Results of the ‘WIWO’ hernia clinic compared to the year before the clinic commenced.

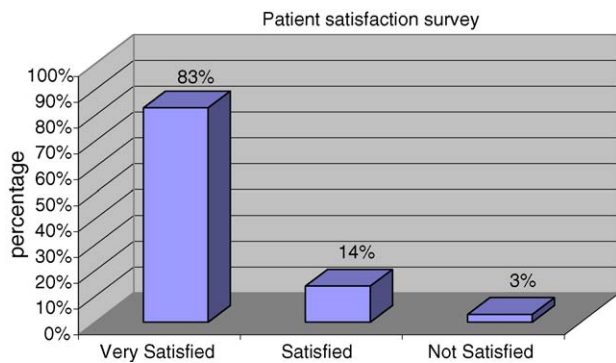


Fig. 4. The patient satisfaction survey.

was removed the next day following which the patient was able to void normally and was discharged home.

Only 87% ($n = 71$) of the 'satisfaction survey' proformas have been returned. Nearly 83% ($n = 59$) of these 71 patients were very satisfied and 14% ($n = 12$) were satisfied with their treatment (Fig. 4). Only two patients were not totally satisfied with the service.

4. Discussion

Given the current set up in the NHS, patients with inguinal hernias make several unnecessary visits to the hospital, wait for protracted periods to get onto a waiting list and wait on average 137 days for inguinal herniorrhaphy. Although considered by many as a 'minor' ailment inguinal hernias can cause significant physical and psychological morbidity.

Typically, the hospital and surgeons dictate the date of the patient's clinic appointments, reassessment and operation. One theory accounting for high 'did not attend' rates is that patients have no control over the dates of their appointments or their operation, which may clash with work or family commitments. The 'WIWO' hernia clinic has sought to address this problem by putting the patient in charge and providing them with the autonomy to choose the date of their consultation and operation. This has allowed us to reduce the 'did not attend' and cancellation rates from nearly 15% to around 3%, in just 6 months. It is hoped that this figure will reduce even further as more doctors and patients are educated about this clinic.

The 'WIWO' hernia clinic has especially helped high risk elderly patients and those with associated co-morbidities. These are the patients who would otherwise be on in-patient waiting lists, have protracted hospital stays, sustain nosocomial infections and who run the risk of being repeatedly cancelled on the day of surgery. These patients have had successful inguinal hernia repair under local anaesthetic in the 'WIWO' hernia clinic, which is unrestricted in terms of patients' ASA status.

Patients are no longer burdened with making arrangements for three visits to the hospital and can be treated on an entirely

one stop basis, with a reduced waiting time from initial GP consultation to the date of surgery. As a consequence, high risk elderly patients are no longer forced to seek treatment in the private sector.

Inguinal herniorrhaphy under local anaesthetic has been shown to be beneficial with patients experiencing less postoperative pain, earlier ambulation and less frequent micturition problems [3–5].

Our patient 'satisfaction survey' reflects the advantages that the patients experience with this treatment. Nearly 97% ($n = 69$) of the patients, who have been treated and returned their proformas, reported that they were either very satisfied or satisfied with their treatment.

Indeed, 95% of the patients stated that they would recommend the service to their friends and relatives and would have a hernia on the contralateral side repaired in the same way if it were to become necessary in the future.

Only two patients were not totally satisfied. One of these patients confessed to being needle phobic and only came to the WIWO clinic in order to be able to choose the date of his operation. The other patient felt that the needles used for infiltration of local anaesthetic were too blunt. However he did not have any specific complaint or suggestions regarding the clinic or the service provided.

The benefits to the hospital include, reduced clerical work and its associated costs (as all patients ring to make their appointment and the hospital does not send any information in the post). On average a hospital loses approximately £1000 per patient if they do not attend the outpatient appointment, the date of pre-assessment and/or the day of operation. By reducing the number of appointments, 'did not attend' and cancellation rates we estimate a significant financial saving for the Trust. Since all our patients have inguinal hernia repair under a local anaesthetic we have saved on the costs and manpower associated with routine preoperative tests and have released our consultant anaesthetists for sessions elsewhere. As the patients choose and arrange their own appointment, we have been able to dispense with the waiting lists for inguinal herniorrhaphy, except where the patients choose not to follow this route.

The consultant has found this clinic to be an ideal place to teach medical students how to examine inguinal hernias and to define the anatomical boundaries of the inguinal canal. Surgical trainees gain an opportunity to learn the technique of herniorrhaphy under local anaesthetic.

A recent study by Putnis et al. [6] has demonstrated similar success with one-stop inguinal hernia surgery. Since the vast majority of their patients had a general anaesthetic (only two patients had hernia repair under local anaesthetic), a pre-assessment health questionnaire was still required and they were limited to ASA class I and II patients. This excludes the significant number of patients (ASA III and IV) who would otherwise be on an in-patient waiting list or be repeatedly declined surgery due to their co-morbidity, bed shortage and theatre time. Of the 12 patients who were deemed unsuitable for day surgery by Putnis et al., 11 could have had successful

Table 3
Benefits of WIWO clinic

Summary of benefits of the 'WIWO' hernia clinic
Patients have a choice of an operation under local anaesthetic
One single visit for consultation and operation
A date of their choosing to fit in with their work and private life
No cancellations due to bed shortage or ASA status
Recovery from operation in the comfort of their home with their loved ones
Minimizing risk of nosocomial infection
Reduced waiting times from initial GP consultation to the date of surgery

open hernia repair under local anaesthetic in our 'WIWO' hernia clinic.

In addition, the patient's were required to visit their GP on two separate occasions, once to confirm the diagnosis and then for a general examination and completion of a health questionnaire. We believe this extra load on the already crowded GP surgery makes it harder to optimize their surgery time. It raises the question as to whether or not such a system is truly one-stop because the burden of visits is being transferred from the hospital to the GPs. In contrast, the 'WIWO' hernia clinic has led to a reduced volume of correspondence with the hospital and less repeated referrals of high-risk patients allowing GPs to maximize their surgery time.

We feel it is the GPs who know their patients best. Their input and co-operation is crucial to receiving appropriate referrals and allaying the apprehension of patients regarding surgery.

We have shown that the use of a detailed protocol sent to all referring GPs is not only a useful tool in receiving appropriate referrals, but extremely important in the successful running of this clinic.

Even patients who were referred inappropriately were seen by the consultant surgeon, had their routine pre-assessment for a general anaesthetic and were given a date for laparoscopic repair (total extraperitoneal procedure) at this visit. This has prevented them from making any further visits to the hospital except for their operation.

It is important to stress that no patient is under duress to undergo treatment on the day of the visit. For successful treatment of inguinal hernia under local anaesthetic it is imperative that the patient is willing and moreover wishes to have the operation performed this way.

Indeed, to avoid this clinic becoming a 'conveyer belt' those patients who prefer to have a general anesthetic or feel they need more time to think, are given an out patient appoint-

ment for further discussion or are offered a place on the in patient waiting list for an inguinal hernia repair under a general anaesthetic. We have not encountered any such patient thus far.

The benefits of the 'WIWO' hernia clinic described above are summarized in Table 3.

5. Conclusion

To reduce 'did not attend' and cancellation rates in our out-patient clinics, pre-assessment clinics and operating theatres and to maximize the use of our limited beds, we need to put the patients at the centre of our care and make them control some aspects of their treatment, such as choosing the date of their operation. This 'WIWO' clinic has shown that for operations such as inguinal hernia repair, it is feasible, very acceptable, safe and makes financial sense.

Acknowledgements

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