

Hip replacements: an update



REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
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executive summary & recommendations

In this section

Background	1
Overall conclusions	1
Effectiveness of hip prostheses	2
Improving the quality of patient care	3
Value for money in hip surgery	4
Recommendations	8

Background

- 1 Hip replacements are one of the most common and most effective major surgical procedures performed in the NHS. Over 43,000 are carried out each year bringing mobility and relief from pain.
- 2 In April 2000 we published a report on elective hip replacements drawing attention to a number of areas - including the effectiveness of hip prostheses - where there was scope to improve the efficiency and effectiveness of the procedure, and the quality of care to patients. Our report, and the subsequent report by the Committee of Public Accounts, made a number of recommendations for improvements. **Figure 1 on page 11** provides detail on these and on progress to date. Since then there have been a number of key developments, including the launch of a National Joint Registry, and the publication of guidelines on the standard of hip prostheses to be used in the NHS. This report provides an update on elective hip replacement in the NHS, three years on.



Overall conclusions

- 3 Effectiveness of hip prostheses is a key issue, having a major impact on patient outcomes. The National Joint Registry will be a valuable resource for assessing effectiveness. We look forward to the point where it will provide usable results. In the meantime, we welcome the guidance issued by the National Institute for Clinical Excellence. Ninety per cent of consultants now use these but the remainder are still using prostheses for which they have no adequate evidence of effectiveness.
- 4 Since our last report there has been significant progress in achieving recommendations made by the Committee of Public Accounts in their report of December 2000, including the establishment of a National Joint Registry and reducing length of stay for patients. In respect of other Committee recommendations the Department of Health and others have put in place arrangements to secure improvements, such as the work of the Modernisation Agency on care pathways, and that of the NHS Purchasing and Supply Agency on benchmarking the price of hip prostheses. It will, however, take time for these and other initiatives to fully take effect, and more remains to be done to ensure an increased level of quality of care to patients, and to improve efficiency and effectiveness. Recent and forthcoming developments such as the


NHS Purchasing and Supply Agency's guidance on which hip prostheses meet National Institute for Clinical Excellence guidance should however mean that further improvements will be realised in due course.

- 5 But there is still progress to be made and some ground to be covered. For example, fewer trusts have policies for introducing new prostheses, and a fifth of surgeons still only follow up their patients' progress for one year after their operation. In addition, some consultants still perform few hip replacements and therefore may not be able to maintain their expertise, while information given to patients is not always adequate. The average wait for an operation once a patient is seen by a consultant for assessment remains at 8 months, and while this is substantially below the NHS target of a 12 month maximum waiting time, it is to be hoped that ongoing work within the NHS to reduce waiting times will lead to improvement.
- 6 Strong leadership within hospitals is the key here. Overall, a number of the issues, and particularly both the absence in some trusts of policies for trialling new prostheses and complete adherence to the National Institute for Clinical Excellence guidelines on choice of hip prostheses, are risks to patient outcomes. They place a question mark over how effectively some trusts are managing them.

Effectiveness of hip prostheses

- 7 There are currently some 64 hip prostheses on the UK market, many of which do not have evidence of long-term effectiveness, often because they are of recent development. In April 2000 the National Institute for Clinical Excellence published guidance for a minimum standard of evidence of effectiveness which should generally be applied to hip prostheses used in the NHS.
- 8 The majority of consultants have got published evidence of effectiveness for the prostheses they use most often. However 11 per cent of consultants do not, and 13 per cent either do not know whether the prostheses they use meet the National Institute of Clinical Excellence standard, or say that they do not.
- 9 In Sweden there has been a national hip registry since 1979, and for many years there has been widespread support for a UK registry. The Committee of Public Accounts recommended that one should be established. Benefits include effective monitoring of hip prostheses, early identification of problems, and improved tracking of patients.
- 10 In July 2001 the Department of Health announced a National Joint Registry for hip and knee replacements for England and Wales. Questions over its funding delayed the start. It was launched on 1 April 2003 but participation is voluntary. It is self-financing, with NHS trusts paying a £25 levy for each prosthesis they purchase - over £1.075m a year for hip prostheses. The National Joint Registry is the only major national registry not to be funded by central government. Prosthesis manufacturers, who benefit significantly from the data available from the Registry, do not contribute to its cost, but are paid an administrative charge of some £107,500 each year in respect of hip prostheses for the first two years, and less thereafter, for collecting the levy from trusts.



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- 11 The Medicines and Healthcare products Regulatory Agency remains concerned that a significant number of consultants are not reporting problems with hip prostheses even though the overall level of reporting has improved. The Agency continues to take action on a number of fronts to improve awareness of the need to report adverse incidents.
 - 12 Over a third of trusts told us that manufacturers offer them incentives for the introduction of new prostheses. This is of particular concern as only some 20 per cent of trusts have a policy on trialling new hips (down from about a third in 2000) and the risk is that incentives may become an undue influence on purchasing decisions.
 - 13 Some 9 per cent of consultants who responded told us that they accepted incentives from manufacturers for the introduction of new prostheses - mainly free overseas travel for training. The Department of Health has issued guidance requiring such commercial sponsorship to be registered and appropriately approved. However we found that only about a third of accepted incentives were properly registered and 10 overseas trips were not approved at all. This raises some concerns about the transparency and public accountability of commercial sponsorship arrangements at some trusts.

Improving the quality of patient care

- 14 The decision to perform hip replacement surgery involves clinical judgement in respect of factors such as age and weight. Our earlier report found variations in how criteria such as these are applied and it remains the case that equity of access cannot be fully demonstrated.
- 15 At the time of our October 2002 survey, patients waited on average three and a half months to see a consultant, and then a further 8 months before admission to hospital. One of the key factors influencing waiting time is the number of consultants. At 31 March 2002 there were 1,303 orthopaedic consultants in post. According to the Department of Health's current supply projections, there may be sufficient trained specialists to increase numbers in trauma and orthopaedic surgery to around 1,470 by September 2004.
- 16 We found that 10 per cent of orthopaedic consultants surveyed¹ prioritise their patients mainly on the basis of the need to meet waiting time targets rather than in terms of clinical priority. The British Orthopaedic Association found that in March 2001, 52 out of 100 orthopaedic units that responded to a survey had been asked to operate on long waiting time patients at the expense of more clinically urgent cases.
- 17 Integrated care pathways are a means to improved quality of care and reduced length of stay; and we welcome the efforts being made by the Modernisation Agency to disseminate good practice in this area. The number of trusts using integrated care pathways has increased to around 50 per cent from 29 per cent in our earlier report, but while some variation is to be expected, the pathways vary significantly in size and scope. This indicates the opportunity for further spreading of good practice, including in ensuring the effective discharge of older patients².

¹ Appendix B sets out the detailed methodology.

² 'Ensuring the effective discharge of older patients from NHS acute hospitals', National Audit Office Report, (HC392, 2002-3).

- 18** In its December 2000 Report, the Committee of Public Accounts expressed concern about a possible link between surgeon skills and experience and the effectiveness of hip replacement operations. A Royal College of Surgeons investigation found no link between grade of surgeon and clinical outcomes. However US evidence indicates a link between volume of operations carried out and outcomes. The position has changed little since our earlier report. Around 10 per cent of surgeons do 10 or fewer operations per year.
- 19** Almost all trusts now provide patient information, but some do not provide specific information on hip replacement and others vary in terms of the quality and scope of the information provided.
- 20** Three quarters of consultants have access to infection data. Evidence suggests that rates of infection are higher than British Orthopaedic Association standards, and there is therefore scope for improvement. The National Audit Office is currently undertaking a detailed examination of hospital acquired infection. Whilst there have been improvements in the frequency and period during which consultants follow up their patients after a hip replacement, some 20 per cent told us they do not do so for as long and as often as they think appropriate, mainly because of shortage of time or pressure to meet waiting list targets.

Value for money in hip surgery

- 21** The Department of Health has taken a number of positive steps to improve value for money in hip surgery, particularly through the Orthopaedic Services Collaborative and the Action on Orthopaedics programme. In addition, the proposed new Diagnosis and Treatment Centres have the potential to make a significant difference. But there is more that can be done.
- 22** The number of consultants who told us that 25 per cent or more of referrals to them by general practitioners were inappropriate has increased since our earlier report from 6 to 10 per cent. This imposes an unnecessary burden on patients and wastes NHS resources.
- 23** The cost of hip replacements varies widely across trusts (on average £4,300 but ranging from £2,000 to £8,000) partly as a reflection of the complexity of cases. Some trusts have benchmarked costs but there remains scope to do more. To date, only 1 in 4 trusts has used the NHS Purchasing and Supply Agency benchmarking service for hip prostheses, though others have taken a variety of steps to reduce costs.
- 24** Patient length of stay is an important issue for both patients and trusts, and it is encouraging that for hip replacements it has decreased significantly since our last report - to 8 days for a primary hip. Many consultants believe there is scope for further reduction consistent with clinical needs, and this could have a significant impact in terms of increasing the number of patients treated (Figure 15).

Recommendations

25 Hip replacements are common and effective - a 'benchmark' procedure that can dramatically change people's lives. The Department of Health and the orthopaedic community have taken steps to improve hip replacement services. Other changes will be coming on line that will also make a difference. Our review found much good work, but there is still some way to go to meet the concerns addressed in our earlier report in April 2000 and that of the Committee of Public Accounts in December 2000 (Figure 1). In this context we make the following recommendations.

The Department of Health should:

- a in collaboration with the British Orthopaedic Association, and building on recent work by the Modernisation Agency, develop:
 - i) templates for an integrated care pathway for primary hip replacement;
 - ii) guidelines on recommended length of stay for hip replacement patients with no complicating factors; and
 - iii) patient information for hip replacement patients;
- b develop guidelines to minimise the inequity in access to treatment by NHS consultants, building on the National Service Framework for Older People benchmarking tool.

NHS acute trusts should:

- c in the interests of good clinical governance:
 - develop protocols in the light of guidance by the NHS Purchasing and Supply Agency to ensure that, wherever suitable, consultants use prostheses that conform to the National Institute for Clinical Excellence guidance. And that where other prostheses are used there are solid clinical grounds for doing so in each case;
 - draw up a policy for trialling of new prostheses if they have not already done so;
 - evaluate the risks involved with consultants who carry out few hip replacements and put in place procedures to manage such risks. These procedures could include regular independent or peer reviews of surgeon performance, by monitoring infection rates and other clinical outcomes of surgery;
- d consider scope for reducing the cost of their prosthesis purchasing, using the services of the NHS Purchasing & Supply Agency;
- e put in place arrangements for verifying that all consultants are complying with the NHS guidance on commercial sponsorship;

- f monitor length of stay for hip replacement patients and take steps to reduce it where appropriate and compatible with high quality patient care. Measures taken to reduce length of stay could include admission on day of surgery and earlier discharge planning, introduction of an integrated care pathway and regular audits of variances between the pathway and what actually happens, and informing patients about their expected length of stay at their pre-admission assessment;
- g work together with primary care trusts to identify referral routes for patients with hip conditions to health professionals other than consultants, who can assess, diagnose, treat and refer on the patients, to reduce inappropriate referrals from general practitioners and allow greater time for consultants to follow up patients after surgery. This should build on the work of the Modernisation Agency in promoting the use of scoring systems and greater provision of care by General Practitioners; and take account of the National Institute for Clinical Excellence referral advice on osteoarthritis;
- h maintain records and monitor infection rates following hip replacements for all consultants, taking action where unusually high rates are found. This would include identifying to what extent the infections can be attributed to the practice of the consultant, or the systems in place in the hospital.

Primary care trusts should:

- i ensure that the need to meet NHS Plan targets for reducing waiting times for hip replacement surgery is taken fully into account in financing and resourcing decisions.

The Commission for Health Improvement should:

- j ensure that their annual work programme includes examining, at an appropriate sample of trusts, whether National Institute for Clinical Excellence guidance on hip prostheses is being appropriately complied with, and whether trusts maintain and actively monitor registers for commercial sponsorship;
- k include, in their clinical governance reviews, the equity with which patients are offered hip replacements, the prioritisation of patients on NHS waiting lists, and the use of integrated care pathways.

The Medicines and Healthcare products Regulatory Agency should:

- l examine what further steps can be taken to encourage orthopaedic surgeons to report all notifiable incidents concerning hip prostheses to them.

Figure 1

Areas for improvement in 2000 and progress to date

PAC recommendation (December 2000)	Progress to date (paragraph where the issue is discussed in the report)
On the need for better control over the selection, introduction and use of hip prostheses	
1 Monitor the implementation of National Institute for Clinical Excellence guidance on the use of hip prostheses.	The Commission for Health Improvement has responsibility for this. Limited testing of compliance to date. (Paragraph 2.4)
2 NHS trusts need to review their selection of hip prostheses with controls over introduction and use.	Fewer trusts now have policies for the introduction of new prostheses than in 1999. (Paragraph 2.16)
3 The case for a national register is compelling.	A contract to run the Registry was signed in November 2002. It was launched on 1 April 2003. (Paragraph 2.8)
4 Patients should be informed when a new type of prosthesis is used as part of a clinical trial.	The majority of consultants always inform patients when they are part of a trial. (Paragraph 2.17)
On improving the quality of care to patients requiring total hip replacements	
5 Increased numbers of orthopaedic surgeons should reduce waiting lists, and there is a need to ensure greater consistency of access on grounds of age or weight.	At March 2002, there were 1,303 orthopaedic consultants in post. According to the Department of Health's current supply projections, there may be sufficient trained specialists to increase the numbers in trauma and orthopaedic surgery to around 1,470 by September 2004, (with additional measures to meet the NHS Plan targets). (Paragraph 3.6) There are still variations in the age and weight below and above which consultants feel that surgery may not generally be appropriate. These variations may point to a lack of clinical consensus with associated differences in the availability of hip replacement surgery. The National Service Framework for Older People has developed a benchmarking tool to address the potential problem of age discrimination including in the provision of hip replacement surgery. (Paragraph 3.2)
6 There is a lack of authoritative evidence about the link between surgeon skill and experience and effectiveness of hip replacements.	A Royal College of Surgeons investigation concluded that there was no evidence of a link between clinical outcomes and grade of surgeon. US evidence indicates a link between outcomes and the volume of operations carried out. Sixty five per cent of NHS consultants carry out 50 or fewer primary hip operations per year. The National Joint Registry will, in due course, provide feedback on surgeon performance. (Paragraph 3.14)

PAC recommendation (December 2000)	Progress to date (paragraph where the issue is discussed in the report)
7 The average lengths of stay for patients after hip operations are too long.	There has been a decrease in length of stay for both primary and revision surgery but there is scope for further reduction without adverse effect on patients. (Paragraph 4.10)
8 Less than half of consultants maintain accurate infection data.	Just over a third of consultants that responded to our survey questionnaire provided information on their infection rates. But many of these rates were based on low volumes of operations, and overall it was not possible to derive a reliable average infection rate. However, the rates available from the Nosocomial Infection National Surveillance Service suggest there is scope to reduce rates. More importantly the responses indicate the need for a more comprehensive surveillance in orthopaedic surgery. The National Joint Registry has recorded data on infection since April 2003. (Paragraphs 3.15-3.17)
9 The NHS Executive needs to be more proactive in ensuring that standards for patient follow up are set and monitored.	Clinical governance arrangements in trusts should ensure standards for patient follow up are set and enforced. (Paragraph 3.18)
10 The NHS Executive needs to do more to encourage the use of care pathways, and to provide good practice guidance.	The Modernisation Agency has undertaken two programmes to improve performance in orthopaedic services including the design of integrated care pathways. (Paragraph 3.9)
On the procurement of hip prostheses	
11 Inducement must not run counter to the patient's interest, and cash payments to individual clinicians are not acceptable.	Nearly 60 of the 650 consultants who responded to our survey said that they had accepted incentives, mainly in the form of overseas travel for training purposes. We found a number of cases where benefits were not properly registered or approved. (Paragraph 2.20)
12 The new NHS Purchasing and Supply Agency has a key role to play in securing greater economy by providing trusts with better intelligence on prices and discounts.	A prosthesis price benchmarking service has been available to trusts since 2001, but has been used by only around 1 in 4 trusts. (Paragraph 4.6)
13 There are wide unexplained variations in the costs of hip replacements and lack of management data.	Cost variations still exist though their range has decreased. (Paragraph 4.5)

Sources: Based on Committee of Public Accounts 43rd Report, Session 1999-00, and responses to our September 2002 survey of NHS acute trusts.