UCD GEARY INSTITUTE
DISCUSSION PAPER SERIES

Does ownership affect the provision of health services in Ireland? – The Case of Hip Replacements in Public and Private Clinics

Gerald O'Nolan
Department of Economics
University of Limerick

Stephen Kinsella
Department of Economics
University of Limerick
Geary Institute
University College Dublin

Eoin Reeves
Department of Economics
University of Limerick

Geary WP2011/28
October 2011

Does ownership affect the provision of health services in Ireland? - The Case of Hip Replacements in Public and Private Clinics

Gerald O'Nolan[1], Stephen Kinsella[2], Eoin Reeves[3]

Abstract

This paper examines how ownership affects professional behaviour, treatment quality and patient satisfaction in the case of hip replacements in Ireland. We use quantitative data for public hospitals and the author's own surveys for the private sector and qualitative data from 12 interviews, following the methodology of Andersen and Jakobsen (2010). We find that patient satisfaction is higher in the private sector though the private sector has fewer patients with complications. The surgeons' choice of operating environment is made in light of the back-up facilities available and *not* influenced by economic considerations. The treatment in both sectors is identical and there is *no* difference in clinical outcomes due to the professional norms of the consultant surgeons. Ownership of facilities does not affect the clinical outcomes in provision of hip replacements in Ireland.

Keywords: Ownership, Health Economics, Irish Health Service.

Introduction

The purpose of this paper is to examine the differences between public and private medical clinics using hip replacements as the vehicle to ascertain whether variations have a beneficial or detrimental effect on the provision of professional services to society. Therefore the unit of

[1] Department of Economics, University of Limerick. Gerald.Onolan@ul.ie
[2] Department of Economics, University of Limerick and Geary Institute University College Dublin. Corresponding author: Stephen.Kinsella@ul.ie
[3] Department of Economics, University of Limerick. Eoin.Reeves@ul.ie

analysis being examined is that of ownership. This study seeks to replicate a paper by Andersen and Jakobsen (2010) which posed this question in terms of the Danish health system. The Irish health system differs from the Danish system in that the mix between public and private is more complex and therefore whilst relying on the methodology provided by Andersen and Jakobsen, modifications have been made to establish similar information in the Irish context.

We find no evidence of a trade-off between economic considerations and good medical practice in either the public or private sectors. Clinical decisions are made in the best interest of patients. This can be attributed to the professional autonomy maintained by consultant surgeons. Professional managers will seek ways to cut spending and most surgeons agree that it is reasonable to take economic issues into consideration provided that it doesn't compromise the best outcome for the patient. The professional norms of the surgeon controls behaviour. There does not appear to be any wish on the part of hospital managers to interfere with their autonomy in clinical matters. Private clinics do tend to get a greater amount of uncomplicated work when compared to their public counterparts. But in most cases this is as a result of the choice made by the surgeon and very often that is based on the availability of back-up emergency services, equipment and personnel. The economic connection is in the investment levels of the private clinics and thereby their suitability for different patient types but outside of the decisions made by surgeons.

Providing Public Services: Public or Private Ownership

This study follows a long tradition of seeking to understand differences in the behaviour and performance of public and private organisations. Understanding such differences has long commanded the attention of academics across different disciplines. In the latter part of the

twentieth century theoretical perspectives on 'government failure' such as property rights and public choice theory were particularly influential in terms of shaping a wave of market-oriented reforms such as: privatisation, de-regulation and different types of quasi-market measures (Le Grand 1991). By focusing on aspects such as the motivations of public bureaucrats (Buchanan 1978), property rights and managerial incentives (Alchain and Demsetz 1972) writers in these traditions illuminate potential sources of public sector inefficiency. Moreover, Williamson (2000 p.603) argues that the public 'bureau' is an organizational type 'of last resort'. These perspectives have been criticised on grounds such as lack of empirical validity (Dunsire et al. 1988) and absence of descriptive realism (Martin and Parker 1997). In developing these criticisms, Stiglitz (1991) gives us a number of examples to show that organisational performance is a function of many variables of which ownership is just one. It is possible to argue that while ownership is not the deciding factor *per se*, the nature of ownership and the way authority and governance is exercised gives rise to the factors that directly impact on the efficiency and effectiveness of an organization. Making a similar point but with reference to the health sector, Duggan (2000) suggests that the critical difference between public and private sector hospitals is the existence of soft budget constraints on government-run institutions.

With these theoretical perspectives in mind, this paper examines ownership differences in the Irish health sector. Focusing on hip replacement clinics the paper contrasts behaviour and performance under public and private ownership. It is important to note that a number of specific factors have shaped the structure of the Irish hospital sector. The following section describes these factors.

The Structure of the Irish Hospital Sector

In probing into the differences between public and private hospitals in Ireland it is necessary to understand that it is not an open, competitive market in the way in which that term would normally be used. In relation to hip replacements which commands the focus of this paper there are a limited number of private hospitals where hip replacements are carried out. At the time of this study (Spring 2011) there were just nine private hospitals carrying out this procedure. In the public sector there are eighteen hospitals which specialize in joint replacement with some of this work carried out in other public hospitals (see Table 1). Within these two types of hospitals patients can be either public or private. In the public hospitals all citizens are entitled to a bed. Those with income below a certain threshold get a medical card which entitles them to free treatment. Private patients must pay for treatment out of their own resources or through medical insurance. In the private hospitals most of the patients are in the latter category but due to the work of the National Treatment Purchase Fund (NTPF) public patients who have been on a waiting list for longer than three months may have their treatment purchased for them in a private hospital (see Figure 1). Approximately 50 per cent of the population have private medical insurance (Finn and Harmon 2006). Consultant orthopaedic surgeons who work in public hospitals have a contract where they are paid a fixed salary for their public work but may also treat a percentage of private patients in the public hospital. For this work they get paid a fee mostly through insurance companies like the Voluntary Health Insurance (VHI) which is the dominant player in the health insurance market. In addition many surgeons also do other work in private hospitals. Some surgeons work only in the private sector. We found no evidence of any surgeon working exclusively in the public sector. At any given time a consultant who works in both sectors may have a mixture of public and private patients in a variety of different hospitals whose treatment is being paid for in a number of different ways.

Historically most Irish hospitals were voluntary hospitals – that is hospitals which were run by charitable or religious organizations. In the twentieth century new hospitals were opened and run directly by the local authorities at first and then directly by the Department of Health and recently by the Health Service Executive (HSE). The distinction between voluntary hospitals and purely public hospitals is now largely symbolic as all public hospitals come under the control of the HSE although the voluntary hospitals still have their own boards of governors. For simplicity, voluntary and public hospitals will be referred to as public hospitals. Recently there has been the growth of a private, for-profit hospital sector. In subsequent sections we will outline the differences between the public sector and the private sector and how they interact with patients who can be either public or private. It is in comparing these two sectors that this paper seeks answers to the following questions: do the two sectors behave differently in the way they select their clients and are the patients subjected to different standards of treatment depending on which service they choose or are compelled to use? Are the clinical results better in one sector that the other and are the users of the services more satisfied? Do the professional norms practiced by the orthopaedic surgeons and other medical personnel moderate the tendencies of the market? We attempt to answer these questions by assessing professional behaviour, treatment quality and patient satisfaction in the case of hip replacements. Andersen and Jakobsen (2010) point to the fact that while comparisons have been made between public and private service provision there is little evidence for services where the decisions are made by professionals who possess highly specialized knowledge.

Funding and Incentives in the Irish Health Care System

Public representatives, who require the support of the electorate, have an incentive to interfere in the running of public institutions. No such constraints affect private hospitals except the requirement to stay within statutory regulations. Public institutions may not have a clear mission or a precise chain of command. The private sector's mission is always clear: 'enhance shareholder wealth through profits' and this is best achieved with good management structures. Surgeons are paid 'fee per item' for private work whether in a public hospital or in a private one. The amount of this fee is largely determined by the insurance companies and the VHI's schedule of fees in particular. In other systems this would be a more credible reimbursement scheme but the Irish situation is complicated by the Medical Consultants' Contract which allows the consultant to perform work on private patients in public hospitals in proportion to the number of beds which are set aside for private patients – usually 20 per cent (C & AG 2007).

Differences in the independence of the two sectors to carry out their objective functions may not be as great as would be expected. The private sector is dependent on Government policy and the support of the VHI. So while direct political interference is not an option for politicians they can exert their influence. The private companies do have the ability to resort to the courts in the event of their interests being unduly compromised. When controlled by the Health Boards the public sector was open to interference as the boards were managed by practicing politicians. Since the creation of the HSE this problem has been ameliorated but has given rise to the accusation not being accountable (Long 2007) . So both sectors have a more equal ability to pursue their goals but within the control of government policy. As Stiglitz (1991) points out the principal dividing line between public and private institutions is that private concerns have hard budget constraints and therefore face the possibility of bankruptcy if they do not perform. In public concerns the budget constraint is softer.

Government has the ability to compel citizens to pay whatever taxes it deems fit and can allow public institutions to operate at a loss indefinitely.

The conclusion from this study is that there is no significant clinical impact as a result of ownership of the facility. The clear autonomy of the consultant surgeons, and their choice of location in which to operate, ensures that economic factors do not impact on the quality of treatment. In both sectors there is a lack of consistency in the quality of facilities available. In some areas the public sector is better equipped to deal with complex cases and in other areas it is the reverse. A true market only exists for people who can pay. For the public (poorer) patient long waiting times and less medical attention often gives rise to more complex and less treatable joint deterioration:

> *'.....the more challenging work is often the more public work in terms of what I do. I do hip and knee revision and the more challenging cases are always more public almost never private…….because the public are so badly serviced they get so completely wrecked that by the time you get to them they are destroyed and they are difficult cases'* (Surgeon S7).

Their treatment however, when they can access it, is the same whether in the public system or in a private clinic paid for by the NTPF.

Large regional public hospitals in Ireland cater for most of the principal medical disciplines and some are also teaching hospitals. There are many different competing interests and competition for beds. When there are a lot of emergencies elective surgery gets postponed. Many of the private hospitals started by doing only elective work and therefore the planning and organization of the work was likely to be more efficient. This together with well-structured management and a clear mission goal makes private clinics attractive to surgeons and patients alike. While direct political interference is not possible in the private sector

much of the income comes from insurance companies, particularly the VHI which provides in excess of 70 per cent of the revenue for a private hospital (CEO 1). The VHI remains a state sponsored body whose sole shareholder is the Minister for Health. If the VHI decides that it will not provide cover for its subscribers at a new private hospital then that hospital's viability is put into question. A second source of revenue for the private sector has been referrals from the NTPF which is another body under the control of the Department of Health.

The VHI's schedule of fees is negotiated with the professional bodies and with both public and private hospitals. These fees are usually mirrored by the other two main health insurance companies, Aviva and Quinn:

> *'....VHI is very much the dominant player in the market so if VHI cuts its rates as night follows day Quinn drops to exactly the same rate and Aviva drops to exactly the same rate and then the NTPF drops to exactly the same rate as well and so there's no competition there…'* (Surgeon S6).

Apart from this the NTPF provides a distortion of incentives in public hospitals. If they have a patient who has a complex but not life threatening condition they can save part of their budget by delaying treatment until the patient is eligible for the NTPF. At that point the patient may be taken to a private hospital to be treated or the public hospital may gain on the double by having the same patient treated in their own hospital but now with the addition of fees paid by the NTPF:

> *'……hospitals are now selecting out the complex cases and saying: "now leave them on the waiting list and eventually the NTPF will scoop them up and that's why you get what's in your list about co-morbidities, the levels of co-morbidities are far higher in the NTPF patients'* (Surgeon S6).

Reimbursement for all private work whether done in a private hospital or a public one appears to be the same. Costs associated with public patients in public hospitals are monitored by Casemix Ireland. Casemix is an internationally recognized system which monitors health services. It compares activity and costs between hospitals by classifying hospital data into groups called DRGs (Diagnosis Related Groups), which are clinically similar and consume similar resources (Casemix Ireland 2011). This service allows hospitals to measure their productivity. Although not publically available the DRG data must have a bearing on the fees negotiated with the main insurance companies which, as we have seen, are remarkably similar. If a patient becomes unexpectedly sick and is detained in hospital for a longer period, then the hospital can bill the insurance company or whoever the payer is for the extra costs. The surgeon's fee remains the same:

> *'If somebody gets sick and spends much longer in hospital than you would expect they write to you and ask you to explain why this and why that and that's??.....and I don't know what happens then. I'm not privy to how they sort out the bill with the hospital. I presume the hospital accountant will send a bill to the VHI but no matter what happens my fee is the same'* (Surgeon S9).

With the autonomy of the surgeons regarding where they operate, what equipment and what implant they use established there is very little room to suspect that private clinics are in a position to put economic considerations above clinical choices even though they have a greater incentive to do so to increase profits and ensure survival. A number of surgeons suggest that there is greater pressure to re-examine practices in the HSE hospitals to see if cost savings can be made. The cost of hip implants ranges from €1,029 to €17,188 (C & AG 2009). Differences of procedure or choice of equipment or implants may be attributed to the location and culture of where the surgeons did their postgraduate training. Those that trained

in the US and Canada may have differences from those who trained in the UK and continental Europe.

Hip surgery in Ireland

Wear and injury to hip joints is usually something which occurs over a lifetime. The hip replacement procedure has changed little over 40 years and is an operation with a predominantly successful outcome. Patients requiring hip replacements may have discomfort or pain and their condition may have a considerable impact on the quality of their lives but often they are not otherwise unwell. As a result the hip replacement is rarely an emergency operation and can be planned in a methodical fashion. The outcome usually results in a considerable improvement in the quality of life for the patient and can restore a level of mobility which may have been absent for many years. Because of these factors hip surgery can be carried out in fairly simple facilities and so is a suitable case on which to make comparisons between the public and private hospitals and test the question as to whether ownership is a factor in the perceived differences. In Ireland hip replacements are carried out in eighteen public hospitals (Table 1) some of which are large general hospitals. In the private sector nine clinics were identified as carrying out hip replacements at the time of this study (Spring 2011). Out of twenty-five private hospitals examined a number stated that they did not carry out any orthopaedic work. Others did orthopaedics but did not do hip replacements. Some were unable to co-operate with the study.

Public patients who have waited in excess of three months are entitled to be treated by the NTPF who purchase treatment in either private or public hospitals on their behalf. Private patients, in common with all citizens are entitled to accommodation in public hospital but must pay for their treatment or have it paid for by their insurance company. People in this position may, on the advice of their doctor, opt for treatment at a private facility. If patients

are satisfied that the quality of treatment will be equal in the private facility then it may be the non-clinical aspects of the hospital which may attract them. Some private facilities have the décor resembling a luxury hotel and they may prefer the sense of exclusivity. Public hospitals operate within the financial allocation granted to them on an annual basis from the HSE. As it currently stands elective treatments such as hip replacements must compete with all the other disciplines, including Accident and Emergency, for its share of the overall budget. Public hospitals also get revenue by treating private patients. In addition to this they may get revenue from treating public patients who have been sent to them via the NTPF. However the NTPF are restricted to refer no more than 10 per cent of their patients to public hospitals. Private patients are a lucrative source of revenue for public hospitals and it is an area where they can compete with private facilities due to the universal entitlement of citizens to a bed in a public hospital. The VHI and the other insurers do not pay public hospitals the full economic cost of the accommodation, food and treatment (Finn and Harmon 2006) arguing that a portion of the cost of hospitalization is a free entitlement. The private hospitals must charge the full economic cost or face the commercial consequences. Private clinics have traditionally earned their revenue from elective work such as joint replacement and cataract extractions. These routine operations have the advantage of the certainty of being planned and therefore budgeted to expectation. The revenues of private hospitals come from patients' personal funds, insurance companies or from the NTPF. Private clinics employ orthopaedic surgeons many of whom also work in public hospitals. Some work in more than one public hospital and more than one private hospital. This is attractive to the surgeons as they have a range of potential locations in which to treat their private patients. All surgeons stated that the choice of clinic in which to operate on a patient, who had the option, was based solely on clinical considerations. Some private clinics do not have intensive care or a cardiology units as back up and therefore would not be suitable for certain classes of patient.

Following the lead of the Danish study (Andersen and Jakobsen 2010) it is useful to list the reasons why public and private clinics are similar enough to make meaningful comparisons to compare incentives, behaviour and performance. In using the one treatment category of hip replacements we control for the large difference in the intake of patients and their diagnosis. Second, where competition exists – for private patients or public patients treated privately under the NTPF – the payment from the major insurance companies and the NTPF appears to be identical. Competition is only among those patients whose treatment commands a fee either paid for by them or a third party. Third, many surgeons work in both the public and the private sector. Some surgeons work exclusively in the private sector. There is no evidence of surgeons working exclusively in the public sector. There is a high level of professional training, professional body supervision and individual autonomy over their patients in both sectors.

Methodology and data

As with the Danish study (Andersen and Jakobsen 2010), it is not possible to examine in detail the issues of cost, efficiency and profitability. Much of this information is inaccessible due to what is claimed to be 'commercial sensitivity'. In Denmark much of the quantitative data is openly available from the Danish Hip Arthroplasty Register and other national databases. In Ireland data relating to public hospitals is available from the Economic and Social Research Institute (ESRI) but up to now there has been no information on the private hospitals. To fill this gap the author has carried out a survey of private hospitals to gain data in relation to hip replacements and quality. Most of the information for this study comes from 12 interviews carried out with professionals involved in hip replacements. Nine were conducted with orthopaedic surgeons, two with the CEOs of private hospitals and one with the CEO of a public hospital. This is less in number than carried out in Denmark where 20 interviews were done. However, Ireland with a population of 4.5 million has the smallest

number of orthopaedic surgeons, in relation to its population, in Western Europe (IITOS 2009). The Irish Institute of Trauma and Orthopaedic Surgery (IITOS) currently lists 108 members on its website of whom 21 are honorary members including retired surgeons. Outside of these there is unlikely to be more than a total of 120 orthopaedic surgeons operating in the Republic of Ireland of which less than 40 per cent are specialists in hip and knee replacement (see Table 2). Denmark has a population of 5.5 million and has in the region of 450 orthopaedic surgeons (see Table 3).

Much of the quantitative data we need in pursuit of this study relating to public hospitals has been sourced from the ESRI and its Hospital In-Patient Enquiry Scheme (HIPE). HIPE is a system designed to collect demographic, clinical and administrative data on discharges and deaths from hospitals nationally and has been in existence since 1969. Consumer satisfaction can be measured from '*Insight 07, Health and Social Services in Ireland'* - a survey of consumer satisfaction (Boilson *et al*. 2007) commissioned by the HSE and carried out by a group from University College Dublin (UCD) and Lansdowne Market Research. The average length of stay in public hospitals was sourced from the *'Activity in Acute Public Hospitals in Ireland, 2009 Annual Report'* (ERSI 2009). Satisfaction rates for public patients treated under the NTPF in private hospitals were taken from the NTPF's Patient Satisfaction Surveys.

No such publically available information exists for the private sector and so this comparative information was gathered by the author's survey together with 'Patient Satisfaction Surveys' from the NTPF and individual private hospital Patient Satisfaction Surveys. Raw statistics can tell us only so much. For example we are reliant on individual units to report on themselves and therefore published material is likely to reflect positively on those who produce it. For greater insight into organizational behaviour and performance we rely on qualitative data obtained by interviewing consultant orthopaedic surgeons and hospital managers.

Twelve interviews were carried out in all. This consisted of nine semi-structured interviews with surgeons and three with hospital CEOs in both the public and private sectors. The questions posed to the surgeons were the same as those posed to the Danish surgeons which were kindly provided by Dr Mads Jakobsen, co-author of the Danish study. The question list was adapted to make up for the lack of information readily available on the private sector and to reflect differences in the Irish system. The interviews were transcribed and coded into the software 'NVivo' using the same nodes as those used in the Danish study. As previously described most Irish surgeons operate in all sectors that are locally available to them. Three worked in public hospitals where they also carried out private work. Two worked in private practice only but had previously worked in the public system. The other four worked in in both public and private facilities and carried out private work in all locations. These surgeons were selected initially from the membership list of The Irish Institute of Trauma & Orthopaedic Surgery (IITOS 2011) and thereafter by using the snowball method of asking the interviewee if they could recommend a colleague. Reflecting the methodology of Andersen and Jakobsen (2010) the interviews were coded to the theoretic categories of aspects such as patient selection, professional norms, motivation and behaviour of surgeons. We have used a matrix display of statements comparing public and private clinics on the question of patient selection (see Table 12). Generally we use selected direct quotations within the text to reflect the common trends which emerged. Few anomalies occurred and some interviewees gave surprisingly candid answers where it might not have been expected. All of the interviewees were busy people and gave their time willingly, motivated by a duty to assist an academic study. All transcripts were examined to ascertain the credibility of the statements and were subjected to source evaluation. The consistency of some themes gave extra validation to their legitimacy. For example, the issue of the similarity of the fee schedule of all insurers and the NTPF.

Comparisons of incentives, behaviour and performance

To make a comparison between the public and private sectors we first look at the payment schemes for surgeons in both sectors and question whether there is any incentive which might encourage clinicians to behave differently in one sector than in the other. Many surgeons have a public salary which is enhanced by private practice either carried out in the public hospital or done at a private facility. All surgeons agree that they are well paid for their work but in the public side of the practice there is little incentive to be especially productive:

> *'.....pay in the public sector was in the form of a fixed salary so that productivity was not an issue but the main focus of the effort was care of the patient'* (Surgeon S4).

However, surgeons in the public sector are required to maintain a ratio between the number of public and private operations performed in public hospitals:

> *'I personally think that the way I have it, a balance of public and private, where I keep my ratios fairly steady, but the harder I work in the private side the harder I work in the public side and I gain, the public service gains and there is a nice symbiosis'* (Surgeon S3).

The current contract allows for 20 per cent private work and up to 30 per cent in certain circumstances (Mulholland 2011). When it comes to private work the fee paid to the surgeon is the same no matter who the payer is and therefore the choices made by surgeons as to whether they operate on a patient in a public hospital or a private one relate to which location has sufficient back-up in equipment, personnel and other facilities to ensure the optimum outcome. Surgeons are sufficiently well paid to be able to ignore any potential financial incentive which might cloud their clinical judgement:

> *'On a day to day basis I don't think of economic issues and if I give quality of care, funding takes care of itself'* (Surgeon S5)

In any case ethical training in medicine together with professional bodies and overseeing by the Medical Council gives rise to a culture where most surgeons interviewed state that helping patients and giving good care and attention are the overriding motivations in their work. Hip replacements in particular are very successful operations in the majority of cases and doctors receive a great deal of praise and gratitude from their patients. This is striking when compared to other specialties like oncology, cardiology or neurosurgery:

> *'You can hugely improve their lives in an hour and a half operation it can change somebody's life'* (Surgeon S9).

The overall job satisfaction in this sub-speciality is expressed by all surgeons interviewed as is a high degree of pride and belief in their ability to do as good a job as is possible to do. The finding in this issue is that financial incentives are not a distinguishing feature between public and private hospitals when it comes to surgeons.

It might be assumed by commentators that private hospitals, who have a need and a strong motivation to produce profits, engage in cream skimming. That is choosing patients who have some characteristic other than their need for care, which enhances their profitability. If the market for hip replacements was open and covered the entire population and all types of hospital had equal access to the market this question could be examined. The conclusion is that generally private clinics treat patients with the less complicated surgical requirements and there are a number of reasons for this but there is no evidence that it is connected to the search for profits. There are private clinics which are capable of undertaking the most complex cases. Surgeons have pointed to more complex cases and greater co-morbidities in public patients. This is due to the lack of service and long waiting times experienced by

poorer people. Therefore with the exception of patients referred to private clinics via the NTPF the private clinics would be unlikely to see these patients. The surgeons maintain strict autonomy over where they will treat their private patients in consultation with the patient or their relatives and so the choice will be made on the basis of the facility's ability to deliver a safe outcome:

> *'I decide which patient gets operated on in which hospital and it's my decision it's not necessarily the CEO of the hospital, who doesn't have anything to do with that decision but the fact that they don't have an intensive care unit is a factor'* (Surgeon S9).

One surgeon suggested that the nurses in the public hospitals tend to be more experienced and better able to handle difficult situations. It could be suggested that by keeping equipment and back-up facilities more basic private clinics compel surgeons to de-select the more complex cases in favour of the public hospital. However the private hospitals which have made the big investments required to provide 'state of the art' facilities are the ones which are producing greater profits as can be established from annual reports. Because the decision on patient selection is not in the hands of the private clinics' management and extra cost is recoupable in any case we can conclude that cream skimming is not a practice engaged by the private sector.

Another area in which hospital managers in both sectors could be suspected of attempting to put economic considerations ahead of clinical concerns is in the selection of the implants. With such a wide variation in prices for hip implants this has got to be a consideration in the organization and planning of the prudent use of available funds. As we have seen the choice of implant is dependent on the surgeon's opinion of what will work best in any given situation and also what the surgeon is comfortable using. A hip replacement performed on a

younger person is likely to need revision in later life and so the type of operation and implant will be different to the type given to somebody in their 80s. The cost of the implant is not necessarily directly related to quality or longevity:

> *'....the cheapest one isn't always the worst one and the most expensive one isn't always the best one'* (Surgeon S9)

Surgeons maintain that the choice of implant is strictly theirs but admit that everybody involved is aware of financial constraints on the service and that it makes sense to consider rationalizing the variety of available implants and group together various institutions to 'bulk buy' and drive down the price. There is beginning to be an effort on the part of management to bring to the attention of the surgeon the economic implication of choices which have been made:

> *'Of course the management would always like if it was cheaper, or that, but you have one chance of putting in an implant and you have to do it correctly so your technique is important but the implant is just as important'* (Surgeon S1).

Managers in both sectors may feel that some surgeons are using excessively expensive implants and need to be reminded of the reality of budget constraints:

> *'There is an increasing amount of pressure shall we say, based on the recession and the economics of the situation, from the HSE, from hospital management etc., to choose less expensive implants and we are becoming more aware of the corporate responsibility but we want to do the best for an individual patient and if that involves using a very expensive implant I don't want somebody telling me that I can't use a €13,000 implant if it's ideal for that particular patient'* (Surgeon S8).

The finding in this issue is that expensive implants obviously have an impact on the profitability of a private clinic's business and on the use of funds granted to a public hospital but no excessive pressure comes from management which would override a surgeon's clinical opinion on what is required in any given instance. There is an increased appreciation on the part of surgeons of the need to justify the use of higher cost implants. Equally, managers appear to be reluctant to force change in an area where the professional medical personnel have superior knowledge.

The one clear difference between public and private clinics is that waiting times for public patients are longer. Waiting lists in themselves are not a perfect metric for measuring performance. Waiting times also vary considerably over different geographical areas (see Table 4). The amount of waiting time which has to be tolerated by those in the public system is not something that the consultants can control. As it is, Irish orthopaedic consultant surgeons do up to twice as many hip replacements each year as their continental European or UK colleagues (IITOS 2009) despite the fact that less than half the number of hip replacements are done in Ireland. This is due to the small population of surgeons in relation to the general population.

The length of time a patient stays in hospital could be a measure of quality in that shorter stays could be viewed as a cost cutting measure (see Tables 5 and 6). However the length of stay after major surgery has to have a certain minimum if the providers of the service are not to cause future problems requiring re-admissions and even greater costs. Most surgeons are driven by certain protocols where there is a recognised norm for length of stay. This norm is equally recognised in both sectors. This norm cannot easily be shortened but could be lengthened if the circumstances demand it:

> *'We have a standard discharge policy which all of the orthopaedic surgeons have signed off on and the standard policy is that as things stand at present patients are admitted the day prior to surgery, for joint replacement surgery, and are discharged day six. Therefore if they come in on a Monday they go home on a Monday and it means that we can turn around one joint replacement per bed per week using that system. So that is a default system and patients will only stay longer than that designated six days post-operatively if there is a problem identified which occasionally happens'* (Surgeon S3).

Most surgeons state that they are the decision makers regarding when a patient is discharged but some state that the nursing staff may discharge the patient if after the dressings come off and no infection is present and the patient is able to perform certain actions unassisted such as walking a length of corridor or going up and down stairs. Table 6 suggests that the length of stay in private facilities are shorter than those in the public hospitals but this may reflect the predominance of less complex cases in the private sector due to reasons suggested above.

Other measures of the clinical results used in the Danish study included percentages of acute re-admissions of patients within 30 days of discharge for elective hip replacement, the use of prophylactic antibiotic and thrombotic treatment and a measure of patient satisfaction. Total re-admissions in the public hospital system for hip Arthroplasty in 2009 amounted to 2.8 per cent (direct author data request to HIPE) and somewhat higher in the private sector at 3.9 per cent as shown in Table 7. Taken with the higher incidence of more complex cases the reverse might have been expected but this may have been affected by the longer stay in the public hospitals.

Questions about comorbidities must be seen in the context of how they are appraised. Different agencies vary in the way they treat the subject. For example, HIPE statistics for

public hospitals talk of 'catastrophic' complications and comorbidities which amount to 10 per cent of cases. Whereas information from private hospitals say that comorbidities are 90 per cent of cases. As over 70 per cent of hip replacement cases involve patients over 65 years we can take it that there is a high incidence of some form of comorbidity but it is not always categorized in the same way. The Danish study states that 70 – 75 per cent of patients have no comorbidities.

It is equally difficult to establish whether or not a patient is suffering from primary arthritis because on closer inspection many who display the symptoms of arthritis have osteoporosis or hip dysplasia (Surgeon S6).

No public information is available on the use of prophylactic antibiotic and thrombotic treatment in the public sector. Private hospitals surveyed stated that this is a matter of surgeons' records. Surgeons who were asked about this stated that all patients would receive this treatment.

The 'Insight 07' study into Health and Social Services in Ireland was a survey of consumer satisfaction in the public sector (see Table 8). To get a view of satisfaction levels in the private sector we must look at individual hospitals' Patient Satisfaction Surveys published on their websites. The limitation on this type of information is that satisfaction surveys have data which has been submitted voluntarily by the consumers of the service. This means that they may be filled out with extra care by people who have strong views one way or another. The NTPF also produces quarterly Patient Satisfaction Surveys (see Table 9) on all the private hospitals they use and when taken together with individual surveys convey a good picture of consumer opinion as far as it can be established.

Patients choosing private hospitals are likely to be in a higher socio-economic group and may have a greater level of social capital with which to counteract feelings of dissatisfaction

sometimes felt during a period of illness. They are also the group who have a choice as to where they will be treated and having made the choice may wish to rationalize and maintain cognitive consistency. We can conclude that patient satisfaction levels are greater for private facilities but there is nothing to suggest that clinical quality or outcomes have any bearing on this finding (see Table 10).

Conclusion

In this paper we have examined aspects of hip replacements in both the public and the private hospital sectors to answer the question whether ownership affects the delivery of professional health services in Ireland. Is the fact of ownership, whether in public hands or private, a deciding factor as to the quality of service and the behaviour of professionals in the execution of their duties? In viewing public services generally the theoretical argument put forward by Andersen and Jakobsen (2010) is that public clinics face more political involvement than private clinics and so private clinics have more autonomy and more credible reimbursement schemes than public ones. We could also add that private businesses usually have a clearer command structure and a clear objective function. Also very large organizations with multiple site institutions and a variety of historically evolved cultures are unlikely to be as nimble in pure business terms as a single unit establishment which has a limited menu of services. Using the limited amount of quantitative data available, together with interviews and following Andersen and Jakobsen, we have examined how ownership affects incentives, patient selection, clinical procedures, clinical performance and non-clinical factors, bearing in mind the differences between the Irish system and the Danish system.

In our examination of this issue we have found *no* evidence of any trade-off between economic considerations and good medical practice. This is largely due to the strongly held position of professional autonomy maintained by the surgeons. The professional organization

of the orthopaedic surgeons and the governance of the Medical Council ensures that Irish surgeons are trained to a high standard and that training is kept up to date. Managers in both sectors are constantly looking for ways to cut out waste and excessive spending and most surgeons agree that it is prudent to take economic issues into consideration, provided that it doesn't have an adverse effect on the best outcome for the patient.

We find that the professional norms of surgeons control behaviour, not that there appears to be any wish on the part of managers to interfere with their autonomy in clinical matters. Some private clinics do a greater amount of straight-forward uncomplicated work when compared to their public counterparts. But in most cases this is as a result of the choice of location made by the surgeon and is based on the availability of back-up emergency services, equipment and personnel in the chosen location. The better equipped, staffed and funded private hospitals are in a position to compete for complex work with any public hospital and these are the clinics which appear to be most profitable. Also the prices commanded from the various payers are the same. Therefore it can be concluded that cream skimming does *not* occur as a commercial weapon and that private clinics rely on non-clinical factors to attract patients. This gives surgeons more options to treat their patients and they can do more private work than they might be able to do with the ratio limit they have for private work in the public hospital.

The findings of this paper have their limitations when consideration is given to the public undertaking that is the Irish Health Service and then the small and relatively new for-profit sector. The availability of data from national registers is limited when compared to the system in Denmark and other Scandinavian countries. Ireland is not unique in this regard. Many countries are only beginning to copy the Scandinavian model now in response to public anxiety caused by faulty implants used in the recent past (Lakhani 2010). In contrast to the public sector there has been no data up to now for private hospitals. The author's survey of

private hospitals together with the interviews involving surgeons and hospital managers provides a new insight into how this particular treatment is organized in Ireland. The existence of this study along-side the original in Denmark has reinforced the view that professional norms amongst medical personnel ameliorate overt commercial considerations.

References:

Alchian, A. A. and Demsetz, H. (1972) 'Production, Information Costs, and Economic Organization', *The American Economic Review,* 62(1972), 777 - 795.

Andersen, L. B. and Jakobsen, M. (2010) 'Does ownership matter for the provision of professional services? Hip operations at publicly and privately owned clinics in Denmark', *Public Administration,* no. doi: 10.1111/j.1467-9299.2010.01881.x(December 2010).

Boilson, A., Craven, A., Drummund, A., Fitx-Simon, N., O'Mahony, D., Stains, A. and Kelleher, C. (2007) *Insight 07, Health and Social Services in Ireland - a survey of consumer satisfaction*, Dublin: University College Dublin and Lansdowne Market Research.

Buchanan, J. M. (1978) 'From Private Preference to Public Philosophy: The Development of Public Choice' in J.M. Buchanan, C.K. Rowley, A. Breton, J. W., B. Frey and Peacock, A. T., eds., *The Economics of Politics*, London: Institute of Economic Affairs, 1 - 20.

C & AG (2009) *Accounts of the Public Service*, Dublin: Government of Ireland.

Casemix Ireland (2011) 'Casemix Ireland', [online], available: http://www.casemix.ie/index.jsp?&p=93&n=134 [accessed 22nd June 2011].

Duggan, M. G. (2000) 'Hospital Owership and Public Medical Spending', *The Quarterly Journal of Economics,* 115(No. 4), 1343 - 1373.

Dunsire, A., Hartley, K., Parker, D. and Dimritriou, B. (1988) 'Organisational Status and Performance: A Conceptual Framework for Testing Public Choice Theories', *Public Administration,* 66(Winter), 363 - 388.

ERSI (2009) *Activity in Acute Hospitals in Ireland Annual Report 2009*, Dublin: Economic and Social Research Institute.

Finn, C. and Harmon, C. (2006) 'A dynamic model of demand for private health insurance in Ireland', *ESRI, ISSC & University of Ulster*.

IITOS (2009) *Medical Manpower document 2009*, Dublin: The Irish Institute of Trauma & Orthopaedic Surgery.

IITOS (2011) 'Current Membership', [online], available: http://www.iitos.ie/Current_Membership/Default.72.html [accessed 12th July 2011].

Lakhani, N. (2010) 'Thousands of patients left in agony by faulty hip replacements', *The Independent,* 12th September 2010,

Le Grand, J. (1991) 'Quasi-markets and Social Policy', *The Economic Journal,* 101(408), 1256 - 1267.

Long, A. (2007) 'HSE is unaccountable, union report says', *Irish Health*, available: http://www.irishhealth.com/article.html?id=11770 [accessed 7th July 2011].

Martin, S. and Parker, D. (1997) *The Impact of Privatisation: Ownership and Corporate Performance in the UK,* London: Routledge.

Mulholland, P. (2011) 'A public/private dispute', *Irish Medical News*, available: http://www.imn.ie/news/4028-a-publicprivate-dispute [accessed 7th July 2011].

Stiglitz, J. E. (1991) 'The Economic Role of the State: Efficiency and Effectiveness' in Hardiman, T. P. and Mulreany, M., eds., *Efficiency and Effectiveness in the Public Domain*, Dublin: Institute of Public Admistration.

Williamson, O. E. (2000) 'The New Institutional Economics: Taking Stock, Looking Ahead', *Journal of Economic Literature,* 38(3).

TABLE 1 *Hospitals currently carrying out hip replacements in Ireland**

HSE Area	Public Hospitals	No.	Private Hospitals	No.
Dublin North/North East HSE Area	Beaumont Cappagh Connolly Mater	4	Mater Private Sports Injury Clinic	2
Midlands/Dublin East Coast/ Dublin South West HSE Area	Kilcrene Tullamore Navan St. Vincent's Tallaght St. James's	6	Beacon Blackrock Clinic Hermitage Auteven	4
South East/Southern HSE Area	Cork UH Kerry General Waterford	3	Shanakiel Whitfield	2
North West/West/Mid-West HSE Area	Letterkenny Mayo General Merlin Park MWR Croom Sligo General	5	Galway Clinic	1
Total		18		9

Sources: (IITOS 2009); (National Patient Treatment Register 2010) *Other public hospitals provide some limited elective orthopaedic service.

TABLE 2 *Current numbers of permanent consultant posts and consultant/population ratio by HSE hospital group.*

Hospital group:	Population*	No. of Consultant Posts	Pop per Consultant.
Dublin North:	534,521	16	1/33,407
Dublin South:	870,777	13	1/66,982
Mid-West:	361,028	5	1/72,205
North East:	394,028	5	1/78,805
South East:	460,838	6	1/76,806
Southern:	621,130	7	1/88,732
West/NW:	651,385	18	1/36,188
Total	4,230,778	78	1/54,240

Source: (IITOS 2009) *Population at the time of the 2006 census

TABLE 3 *Density of Orthopaedic Surgeons by population in Denmark*

	Population	**No. of Orthopaedic Surgeons per 100,000 (Range)**	**Population per Surgeon**
Denmark	5,529,270	8.2 (4.9 – 11.6)	1/12,195

Sources: (Pedersen 2006); (World Bank 2010)

TABLE 4 *Waiting Time for Hip Replacement*

Public Hospital	**No. of Months**
National Median	4
Beaumont	5
Cappagh	3
Connolly	0
CUH	2
Kerry General	1
Letterkenny General	3
Kilcrene	2
Mater	8
Mayo General	4
Merlin Park	3
Tullamore	7
MWR Croom	1
Navan	4
Sligo General	3
St. Vincent's	5
Tallaght	6
Waterford	3

Source: (NTPF 2010)

TABLE 5 *Number of procedures and length of stay for Hip Arthroplasty patients in Public Hospitals in Ireland*

Hip Arthroplasty	**15 – 44 Years**	**45 – 64 Years**	**65 Years and Over**	**Total**
No. of Procedures	169 (4%)	1,199 (25%)	3,345 (71%)	4,714
Average Length of Stay (Days)	6.8	8.1	11.2	10.2

Source: (ERSI 2009)

TABLE 6 *Comparison of length of stay between public and private hospitals for hip arthroplasty*

Hip Arthroplasty	**Average length of stay (days)**
Public Hospitals	10.2
Private Hospitals	7.7

Sources: (ERSI 2009); Author's Survey

TABLE 7 *Number of inpatient readmissions for hip Arthroplasty 2009*

	Total Readmissions
Hip Arthroplasty (Public)	2.8%
Hip Arthroplasty (Private)	3.9%

Sources: (ESRI 2011); HIPE Unit, Health Research and Information Division, ESRI; Author's Survey

TABLE 8 *Inpatient's ratings for quality of care and cleanliness while in hospital*

Group	**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**	**Very Poor**	**Don't Know**
Under 50s Care	19%	37%	31%	9%	2%	0%	2%
Over 50s Care	33%	40%	18%	6%	2%	0%	1%
Under 50s Cleanliness		22%	35%	25%	7%	5%	6%
Over 50s Cleanliness		28%	44%	14%	7%	3%	3%

Source: (Boilson et al. 2007)

TABLE 9 *Consolidated satisfaction survey of NTPF patients, 2009**

	Excellent	**Very Good**	**Good**	**Poor**	**Number of Surveys returned**
Aut Even, Kilkenny	80%	16%	4%	0%	418
Beacon Hospital, Dublin	80%	16%	4%	1%	458
Blackrock Clinic, Dublin	79%	17%	4%	1%	571
Galway Clinic	75%	21%	4%	1%	779
Hermitage Clinic, Dublin	69%	25%	5%	2%	301
Mater Private, Dublin	75%	21%	4%	0%	1529
Shanakiel Clinic, Cork	90%	8%	2%	0%	176
Sports Surgery Clinic	82%	18%	0%	0%	22
Whitfield Clinic	88%	12%	1%	0%	219

Source: (NTPF 2011) * NTPF statistics are produced per quarter

TABLE 10 *Comparison satisfaction rates between public and private hospitals*

Hospitals	Excellent	Very Good	Good	Fair	Poor	Very Poor	Don't Know	Excellent Very Good Good
Public	26%	38.5%	24.5%	7.50%	2%	0%	1.5%	89%
Private	79.5%	17%	3%		0.5%			99.5%

Sources: (Boilson et al. 2007); (NTPF 2011)

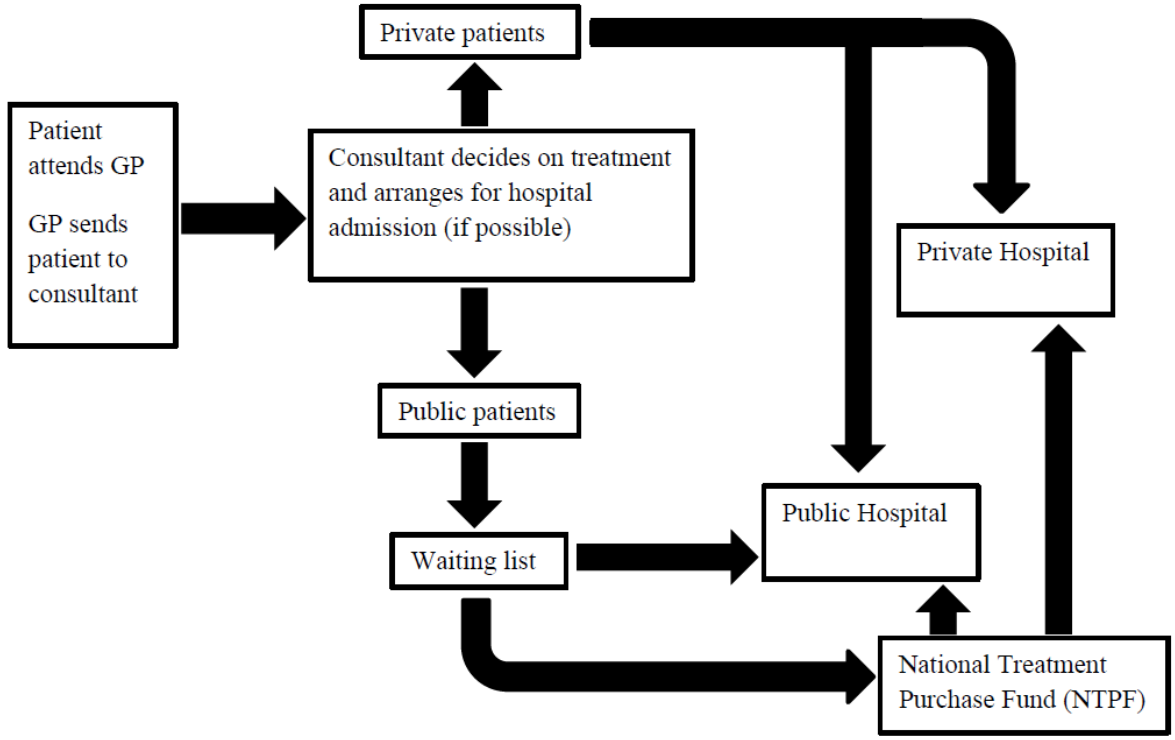
TABLE 11 *Summary of findings to the questions posed*

Questions	**Public Hospitals**	**Private Hospitals**
Patient Selection	Public hospitals have no choice regarding patients selection except for the possibility of allowing a patient to wait so that they can be treated by the NTPF	The orthopaedic surgeon is autonomous in who gets treated in what hospital. Selection or de-selection from a private hospital is due to levels of back-up thought appropriate in each case
Standard of Treatment	Clinical treatment is identical in both sectors but satisfaction levels are lower in the public sector due to non-clinical factors	Clinical treatment is identical but patients who have exercised a choice to be treated in a more exclusive facility show greater satisfaction
Clinical Results	Measured by length of stay and re-admission levels there is little difference although public patients have a greater tendency towards co-morbidities	The public patients treated by private hospitals through the NTPF may have the effect of evening out clinical results
Professional Norms	The autonomy of surgeons and the standards set down by the Medical Council and the professional bodies ensures that managers do not interfere in clinical decisions	The autonomy of surgeons and the standards set down by the Medical Council and the professional bodies ensures that managers do not interfere in clinical decisions
Patient Satisfaction	Declared patient satisfaction is less in the public sector. But public patients have greater co-morbidities and may have less social capital to cope with illness and with asserting themselves in the face of medical professionals	Declared patient satisfaction is greater in private hospitals. Private patients have, by definition, higher income and are likely to have more education and the choice between both sectors. Having made the choice are likely to be happy with it

TABLE 12 *Statements on selection of patients from surgeons*

Statements about	**Surgeons who work in a Public hospital with private work**	**Surgeons who deal in Private practice only**	**Surgeons who deal in Public and private practice in both public and private hospitals**
Public clinics	….the more challenging work is often the more public work in terms of what I do. I do hip and knee revision and the more challenging cases are always more public almost never private. (S7) ….my operating list could get cut next week because the HSE tell me that they don't have enough money anymore and so I can't do any more work. (S7)		In terms of what I do for them, what operation I do, what implant I select there is no difference at all. I would say there are some people say with a heart problem, if he's a private patient I am always going to steer him down to the Private (Name) Clinic because they have a great cardiac service there. (S6)
Private clinics	.. are there some patients which wouldn't be suitable? Yes! It's back-up, it's equipment, it's technical, it's expense sometimes the more technical operations, if you take the orthopaedic implants, if you like, they can be quite a bit more expensive in certain situations and then you'll have patients who are medically higher risk and need intensive care. Now increasingly the private hospitals have beefed up their ancillary stuff, a lot of them have cardiology on site a lot of them have intensive care units so increasingly that's less of a problem. For many years they would have only done primary operations which are considerably cheaper and less technically demanding and less complex implants.(S2)	… it would not be safe to treat a haemophiliac or someone who had a history of heart trouble because the multi-disciplinary personnel and facilities that would be required would not be available at the private clinic and so would have to be done in a major public hospital.(S4) We have excellent facilities compared to regional orthopaedic units. I get patients sent to me who are too medically unwell for treatment in the public facility. This was the reverse in the past. (S5)	In the private sector we tend to do one or two session with an actual physiotherapist, half-hour session with the physiotherapist before they come in. In the public sector they get about fifteen minutes. (S6) The private hospital that I work in doesn't have an intensive care unit so if a patient needs intensive care post operatively they can't be done in the private hospital. I decide which patient gets operated on in which hospital and it's my decision it's not necessarily the CEO of the hospital, who doesn't have anything to do with that decision but the fact that they don't have an intensive care unit is a factor. (S9)

FIGURE 1 *Patient's Progress Flow Chart*



References:

Boilson, A., Craven, A., Drummund, A., Fitx-Simon, N., O'Mahony, D., Stains, A. and Kelleher, C. (2007) *Insight 07, Health and Social Services in Ireland - a survey of consumer satisfaction*, Dublin: University College Dublin and Lansdowne Market Research.

ERSI (2009) *Activity in Acute Hospitals in Ireland Annual Report 2009*, Dublin: Economic and Social Research Institute.

Economic and Social Research Institute (2011) *Hipe Data Requests* 16th March 2011, available: [accessed].

IITOS (2009) *Medical Manpower document 2009*, Dublin: The Irish Institute of Trauma & Orthopaedic Surgery.

National Patient Treatment Register (2010) *NTR Bi-annual Report*, Dublin: NTPF.

NTPF (2010) 'A Report on the National Patient Treatment Register', [online], available: https://www.ptr.ie/Pages/ptrStatistics.asp [accessed 27th June 2011].

NTPF (2011) 'Patient Satisfaction Surveys', [online], available: http://www.ntpf.ie/surveys/ [accessed 19th May 2011].

Pedersen, A. B. (2006) *Studies based on the Danish Arthoplasty Registry*, unpublished thesis University of Aarhus.

World Bank (2010) 'Population Total', [online], available: http://data.worldbank.org/indicator/SP.POP.TOTL [accessed 18th May 2011].