Public or private production of health services?

Danish Hip operations in the public and private sector

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Abstract

The users of privately produced health services in Denmark are more satisfied than it is the case for the users publicly produced services, and this is surprising from the perspective of the sociology of professions. Potential reasons for this are differences in patient composition, non-clinical factors and clinical procedures and outcome. We argue that because the residual claimant in the private sector get the profit, and because the production decisions matter much more for the bottom line in the private sector, private producers to a higher degree try to attract patients where the fee exceeds the costs than public producers. This is done by optimizing the non-clinical factors and deselecting the most difficult patients. In accordance with the functionalist sociology of professions, we argue that the clinical procedures and results are similar in the two sectors. Combining data from the Danish Hip Arthroplasty Register and from the Danish central patient register with 11 semi-structured interviews, we find that private clinics dump the very difficult hip patients, but that similar hip patients are treated in the same way in the two sectors. The non-clinical context factors such as the waiting time are, however, very different in the two sectors. The paper thus suggests that non-clinical rather than clinical differences are behind the differences in patient satisfaction.

Introduction

'I do *exactly* the same'. Many Danish orthopedic surgeons have a fulltime public job and a sideline occupation at a private clinic, and they unanimously state that they use the same procedures in both sectors. But sector apparently matters, because patients who have been operated at private clinics are more satisfied than the ones who have been operated at a public clinic.[i] This variation is puzzling in such a highly professionalized sector. The functionalist sociology of professions (and especially the professionals themselves) would have us think that orthopedic surgeons are totally guided by professional norms based on scientific evidence. But the different levels of patient satisfaction in the private and public sector indicate that there are important differences.

The literature does not say much about the effect of sector in highly professionalized sectors. Most public/private comparisons are made for technical, easily controllable services (e.g. Blom-Hansen, 2003; Domberger & Jensen, 1997), whereas analyses of services requiring discretion based on highly specialized, theoretical knowledge are more seldom (Andersen & Blegvad, 2006). This is probably due to the lack of comparable services, because most professionalized services have, at least in Europe, been produced in the public sector alone. But after the introduction of New Public Management, more of these services are also produced in the private sector, and we can begin to close the gab in the literature concerning the effects of sector on the production of highly professionalized services. In this paper, we analyze hip operations, because they are produced both in the public and private sector, and because orthopedic surgeons have firm intra-occupational norms and a highly specialized, theoretical knowledge. Additionally, a unique, high quality register (the Danish Hip Arthroplasty Register) contains information about both procedures and results for private and public clinics (7221 operations at public clinics and 465 at private clinics in 2007). To supplement these

register data, we have conducted 11 interviews with orthopedic surgeons employed in the private and public sectors. Appendix A contains a description of the sector.

The paper theoretically identifies the possible reasons for the higher level of patient satisfaction and empirically investigates whether these factors differ between private than at public clinics. The central argument is that although the 'core of professionalism' might be immune towards competition and profit effects, many things can in fact differ between the private and public sectors. For hip operations, we expect private clinics to deselect difficult patient and try to attract the lucrative patients, but we expect intra-occupational sanctioning of the professional norms to regulate the clinical part of the business. This implies that patient composition and the non-clinical factors differ between private and public clinics, whereas the clinical procedures and the results (for similar patients) are the same.

The next section presents the theoretical arguments in more detail followed by a brief discussion of the methodology and data. We then present the results, discussing the following questions: Do private and public clinics differ in their selection of patients? Do private clinics compete on visible, non-clinical parameters such as waiting time to attract these patients? Do the clinical procedures and results differ between private and public sector? And how does this relate to the professional norms of the orthopedic surgeons and the sanctioning of these? By answering these questions, we try to trace the possible reasons for the difference in patient satisfaction.

Theoretical expectations

Why should patient satisfaction differ between public and private health care clinics? The literature on patient satisfaction shows that both clinical and non-clinical factors influence patient satisfaction (Andaleeb, 1998), and this is also the case for patient characteristics such as age and educational attainment (Sitzia &Wood, 1997: 1835). If private and public clinics have different patients, this might

explain the different patient satisfaction, but the difference might also be due to different procedures and non-clinical factors. Many of the decisions on these factors are taken by the individual surgeons, and we therefore start with a discussion of their characteristics. After that, we deal with the fundamental differences between public and private clinics followed by a discussion of patient selection and the use of non-clinical factors and clinical procedures.

For hip operations, both public and private clinics have employed orthopedic surgeons to make the medical decisions and deliver the key clinical services. Public and private orthopedic surgeons have the same educational background and are integrated into the same professional network. They share strong professional norms, which are sanctioned within the entire occupation (both public and private). Hence, they constitute a profession that regulates the behavior of its members regardless of their place of employment (Friedson, 2007). Based on the functional sociology of professions, no differences between public and private orthopedic surgeons should then be expected in the provision of services – at least for the clinical procedures regulated by professional norms (Andersen & Blegvad, 2006; Goodrick & Salancik, 1996). Seen from this perspective, differences in patient satisfaction between public and private health organizations are not expected to result from dissimilar use of clinical procedures.

The question is, however, whether the functionalist sociology of professions is a sufficient theoretical perspective to explain the level of patient satisfaction at public and private health care organizations. As indicated above, all procedures are not necessarily covered by professional norms. Especially non-clinical factors are not regulated, and differences in these might very well affect patient satisfaction. Further, public and private clinics face different economic incentives which might supersede the homogenizing forces of professionalism. The two types of health care organizations also

act under different institutional setups and might have partly different goals. The key differences between public and private health organizations are outlined below.

One difference between the private and public sector is the profit motive. Both public and private health care organizations have an interest in increasing the ratio of income to cost. Yet, while private organizations have an identifiable residual claimant (the owner, who gets the surplus), this is more unclear for public organizations. The ‘profit’ of a public organization normally remains in the organization and is transformed to higher costs (e.g. investments, higher production or workload reductions for individual workers). The public staff might want to increase the income of the organization, for example to be able to claim some of the excess resources in the form of slack, but this is subject to the usual problems of collective action (Dunleavy, 1991: 175).

Another difference is that the link between production and income is normally stronger in the private sector. Private clinics are paid purely on a fee-per-item basis, and the number of treatments affects the income proportionally. In contrast, the income of many public health organizations is only very weakly associated with the number of patients treaded. The system of activity based reimbursement is often combined with a system of frame based reimbursement, where the hospital receives a frame that is independent of actual activity (Ankjær-Jensen, Rosling & Bilde, 2006), and the link between production and income is further weakened by the incredibility of the reimbursement schemes (Serritzlew, 2006). Unless the clinics believe that they get the income if and only if they fulfill the terms in the reimbursement schemes, these schemes have low credibility. While private health care organizations have a legal contract with the users (individual patients or third parties such as private insurance companies or the government), public providers are located within in an administrative hierarchy led by elected politicians. The latter provides a less stable and credible setting for profit maximizing behavior, since prices and budget rules can be changed more easily than within a private

contractual regime. Furthermore, politicians are often tempted to confiscate surpluses or bail out inefficient providers. This makes it unlikely that the public clinic gets to enjoy the surplus generated by a beneficial ratio of income to cost (or is punished for the opposite), and this makes it less vital to get high income and low cost. Further, the link production and salary is much closer for the individual professionals in the private sector compared to the public sector where almost all the remuneration is a fixed monthly salary. Finally, private clinics are more dependent on a continuous patient demand for its service than public clinics, because they can go bankrupt. Public clinics are very seldom closed, only because they cannot hold their budgets.

The last important difference is that private organizations normally have much more freedom to determine the composition and number of produced services. While public health organizations cannot reject patients (unless they can send them to another public organization), private organizations have more freedom to select what treatments to provide and what patients to accept.

Together, the different goals and institutional settings give private providers a stronger incentive (and a higher ability) to optimize the ratio of income to cost. This can be done by increasing income by attracting many (lucrative) patients, and it can be done by minimizing the costs. Unless the efforts to do so are inhibited by professional norms, this can lead to differences in clinical procedures, non-clinical factors and patient selection and thus give rise to different levels of patient satisfaction between public and private clinics.

Patient selection can be used to increase profit by accepting only patients where the relevant treatment has a high ratio of income to cost. In Denmark, elective surgery is generally profitable, but due to different difficulty (complications etc.) some patients are very lucrative while the costs exceed the fee for others (Vibholt, 2007). If the private clinics do not treat the very difficult patients, it might explain some of the difference in patient satisfaction, because the results depend on the difficulty, and

the patient satisfaction probably depends on the results. The differences in patient satisfaction reported in the introduction are adjusted for different diagnoses, but the clinics might select different patients within the diagnosis groups. Within these groups, the fee does not exactly the match the cost of treating the individual patients, because the costs vary (depending on the specific treatment needed). Especially if the costs vary much within the groups, the ratio of income to cost can be increased by selecting the low cost patients and deselecting the high cost patients. The expectations about the cost can be formed based on the age and weight of the patients or the observed need for supplementary medical treatment. The selection of lucrative patients is called creaming, while the deselection of high cost patients is called dumping (Ellis, 1998).

Unless the individual patients pay the full cost of treatment, private clinics face stronger incentives to cream and dump patients, because they have a stronger profit seeking motive than public organizations. Accordingly, public providers might also select patients, but their incentive to do so is weaker, and they are (at least in Denmark) inhibited by the fact that they do not have the formal right deselect patients. But should we expect private clinics to cream and dump patients? The functionalist sociology of professions would not expect it to be the case if firm professional norms regulated the selection of patients. Otherwise, differences in the selection of patients are not contrary to the expectations derived from the functionalist sociology of professions. Whether such norms exist will be discussed in the empirical analysis.

Differences in the way private and public providers select patients can lead to different patient satisfaction both directly and indirectly. The fact that patients with different socioeconomic characteristics have different levels of satisfaction cannot explain the higher satisfaction in the private sector, because greater satisfaction is associated with lower levels of education and high age (Sitzia &Wood, 1997: 1835), and patient at the private hospitals are generally younger and have higher levels

of education than patients at the public hospitals. But "cognitive consistency theory" predicts that if patients have themselves invested in their treatment, they are more likely to report they are satisfied as a way of justifying the time and effort (ibid. 1836). As patients in the private sector have invested more by choosing the clinic actively, this might lead to a direct association between the patient composition and the level of satisfaction. The indirect association between these variables goes through the results of the clinic. If private health organizations to a higher degree have patients with a lower risk of complications than public providers, the private patients will also show better results, and better results can lead to higher patient satisfaction.

Another way to increase profit is to decrease the costs by not giving the patients the adequate procedures. This is also called skimping (Ellis, 1998). The quality shading argument claims that private provision of former publicly provided services lowers the quality of these services (see Domberger & Jensen, 1997: 71), because private providers have a stronger incentive to reduce the cost to increase the ratio of income to cost. The medical results and possibly also patient satisfaction at private clinics might be lower due to skimping. This argument does, however, assume that the users (third party payer or patients) do not observe the skimping and accordingly deselect the private clinic (Domberger & Jensen, 1997: 71; Hirschman, 1970). If they do, it might decrease the demand for the services and through this, the income of the clinic might be reduced.

If skimping decreases demand, the providers have an incentive not to skimp on the visible procedures that patients use to choose provider. Since private providers face stronger incentives to secure demand than public providers, they are expected to provide the procedures demanded by the users if the procedures are observable. This goes for both clinical procedures and non-clinical factors, but non-clinical factors are probably easier affected, because they are not expected to be regulated by professional norms. At the same time, factors such as waiting time, single rooms, and physician

attention probably affect patient satisfaction directly, and the literature indicates that especially the relationship between the patients' maximum acceptable waiting time and the actual waiting time is important (Conner-Spady et al. 2004). Since patients also choose clinic based on these visible non-clinical factors, private clinics have a stronger incentive to improve themselves on these factors than public clinics due to their stronger dependence on securing a continuous demand for their services. We therefore expect a higher standard of non-clinical factors among private providers than among public providers. Since non-clinical factors are seldom subjected to professional norms, this expectation does not conflict with the expectation of the functionalist sociology of professions.

Following the argument above, private clinics are expected to optimize the visible clinical procedures as far as these are valued by the patient. But if the medical results are visible for the patients, private clinics are expected to optimize the non-visible clinical procedures, if they significantly contribute to the results. Competition for patients might thus lead to better procedures and higher scores on medical performance measures among private than public providers. This is the opposite expectation of the quality shading argument. Yet, both arguments run counter to the argument from the functionalist sociology of professions that states that when clinical procedures are subjected to professional norms, no differences between public providers should be expected.

Based on the discussion, we expect that non-clinical factors and patient selection differ between private and public clinics, whereas differences in clinical procedures are not expected, because firm professional norms often regulate these procedures. Specifically, we expect private clinics to dump hip patients, where the costs exceed the fees, and try to attract the patients with a higher ratio between income and costs. To attract patients, private clinics are expected to optimize the non-clinical factors, but we cannot rule out the possibility that the clinical procedures also differ. After a brief discussion of the methodology and data, we thus investigate whether private clinics select hip patients with high

operation fees and relatively low costs, and whether the non-clinical factors such as waiting time and/or the clinical procedures differ between private and public sector.

Methodology and data

In order to shed light on the possible reasons for the sector difference in patient satisfaction, we analyze the mechanisms (Hedström & Swedberg, 1998: 7) which theoretically link the ownership form and satisfaction. This is done through a systematical comparison of patient selection, clinical procedures, clinical results, and non-clinical factors at public and private clinics. Such tracking of mechanisms makes it possible to trace the possible reasons why sector and patient satisfaction correlate. To take account for different types of composition of illnesses, we compare only one category of treatments, namely hip replacements, which both public and private clinics provide (appendix A contains description of the sector).

We use both quantitative and qualitative data for the comparisons. The general characteristics of the used data are discussed in this section, while we introduce the specific operationalizations as a part of the analysis. The qualitative data consist of 11 interviews with Danish orthopedic surgeons, specialized in hip replacements. Six of these were working exclusively at public clinics (yet two had prior experience at private clinics), while five interviewees worked at both public and private clinics. The physicians working exclusively in the public sector were sampled from the web pages of two non-university hospitals. The physicians working at both public and private clinics were selected from the home pages of two private clinics in the same geographic area. The 11 interviews were analyzed in two steps. Firstly, they were coded based on theoretically derived categories on patient on selection, professional norms, waiting time, and other competition parameters (for the complete list of codes see appendix B). Secondly, public and private clinics were compared in displays that systematically show

the quotations and interview statements for each node, separately for private and public interviewees. Each display inclusively reflect the different statements on a given subject within the qualitative data (Dahler-Larsen, 2002; Miles & Huberman, 1994).

The quantitative data consist of register data from several public registers. The data on patient satisfaction, duration of hospitalization, and acute hospitalization are from the quality database of the National Board of Health (www.sundhedskvalitet.dk). This database includes data on patient satisfaction from The Danish National Survey of Patient Experiences (www.patientoplevelser.dk), register data on waiting time from Patientinfo (patientinfo.sst.dk) and health performance measures from The National Patient Registry (www.sst.dk). Data on prophylactic procedures, acute rehospitalisation, and primary hip operations and revision are from the annual report of the Danish Hip Arthroplasty Register (Dansk Hoftealloplastik Register, 2007). This is the profession's own database for clinical data. It is considered obligatory for both public and private clinics to report clinical data on hip replacements to the register. The register is used for high quality medical research and hence the quality and completeness of the registry is very high (Mortensen, 2004). The quantitative comparisons are based on descriptive statistics with measures of proportions and averages.

Empirical Analysis

In this section, we analyze whether public and private clinics differ with regard to patient selection, clinical procedures (and results) and non-clinical factors, using the material described above. The first question is whether private clinics select hip patients with high operation fees and relatively low cost. We asked private and public orthopedists to describe the patient selection procedure in both sectors. Table 1 covers all the statements substantially in a concentrated form.

Table 1. Statement on private and public selection of patients from orthopedist employed in the public and/or the private sector. 2007.

	Statement about the selection of patient at private clinics	Statement about the selection of patient at public clinics
Orthopedic surgeons with both public and private employment	De besværlige ting vælges fra Vi har valgt primært at behandle dem, der er raske eller næsten raske Du er for syg til at blive opereret herude Det ligger i kortene Man vil undgå komplikationer og langlæggere Ender op med standardoperationer Det skal jo give overskud Har ikke ekstraudstyr og mandskab Der er ikke noget, jeg ikke kan lave derude [i det private]… der kommer også overvægtige patienter	Vi skal jo tage revl og krat [i det offentlige] Mangfoldigheden er i det offentlige Det svære i mit fag laver jeg kun her [i det offentlige]
Orthopedic surgeons with only public employment	De [private klinikker] får det, der er gods i [Private klinikker] tager kun det der kan betale sig [Private klinikker] undlader dyre operationer Det skal jo give overskud på alle behandlinger	Vi tager de tunge og besværlige patienter [i det offentlige] Vi laver det, der ikke er rentabelt Det offentlige tager fuldstændig skånselsløst alt [I det offentlige er der en] bred patientsammensætning [Vi] vil ikke gå på kompromis med omkostninger Offentlige sygehuse er ikke sat på denne jord for at lave forretning [som følge af DRG afregningen] vil der være nogle, der vælger noget fra, som er for risikabelt for dem, altså hvor man måske tidligere ville udføre nogle indgreb, vil man i dag skele til, om man med sikkerhed kan gennemføre det indgreb og have patienten mobiliseret og have dem af sted inden for den givne ramme, og er det ikke tilfældet, så vil man henvise patienten til en anden afdeling. For det, der er tungt og svært, sætter vi bare en lang venteliste

The left column contains the statements on the selection at private clinics. We do not find evidence of creaming (that is, specific selection of the very lucrative patients), but the orthopedic surgeons who work at the private clinics as a sideline occupation from their public jobs generally agree that difficult patients are deselected in the private sector. According to the interviews, dumping of difficult patients is a normal procedure at private clinics, but one of the interviewees states that he also operates difficult patients in his private job (see the top left shaded citation in table 1). He is an internationally recognized capacity both practically and scientifically and functions as the 'flagship' of the relevant private clinic. Accordingly, he has insisted that he shall have the equipment to do all the treatments he performs in his public job. Still, he only operates patients, who pays themselves or has insurance. For these patients, the private clinic can set the fee so that even very difficult patients become lucrative. The statements of the public orthopedic surgeons (unsurprisingly) support the view that private clinics take only the lucrative patients.

The right column in table 1 contains the statements on patient selection in the public sector. The general picture from all the interviewees is that public clinics do not select on neither difficulty nor costs. Public clinics seem to have a broad patient composition where they also take the difficult, unprofitable patients, not including cost considerations in their clinical decisions. But there are deviations from this general pattern, shown by the shaded citations at the bottom of table 1. One of the public orthopedic surgeons states that due to the activity based reimbursement scheme (via the Danish case mix system with Diagnosis Related Groups) more (difficult) patients are send to other public clinics. Another public surgeon indicates that they can avoid difficult operations by increasing the expected number of weeks waiting time. Although there are statements pointing towards selection at public clinics and a single statement against selection at private clinics, the overall picture is that private clinics more than public clinics seem to dump difficult patients. The fact that none of the

interviews indicate creaming might reflect that the opportunities to cream are very sparse in the Danish system. Formally, private clinics are not allowed to pick and choose between patients where the fee is paid by the public sector – if they have an agreement concerning these patients, they are only allowed to refuse patients if they cannot handle them clinically. And how could creaming actually be done, when patients are referred from other orthopedic surgeons or contact the clinic themselves? The private clinics might use targeted advertisement, but it is probably easier to deselect the most difficult patients rather than selecting the easiest ones. Avoiding the most difficult patients seems to come naturally for the interviewees from the private sector, and some of the selection probably lies with the patients themselves and with the public health professionals who advise the patients. An existing study of patient selection based on used procedures and costs also concludes that private clinics "tend to dump heavy patients, whereas they do not cream the easy ones" (Vibholt, 2007:70 (our translation)).

The quantitative indicators of patient composition confirm the qualitative findings. Only 4 % of the hip operations at private clinics are the more difficult revisions (n=6 clinics) compared to 15 % at the public clinics (n=37). Finally, less fit patients stay longer at the clinic, and the duration of hospitalization at public clinics was on average 8.34 days (n=35) compared to 5.6 days at private clinics (n=8). This comparison thus suggests that public clinics have the most difficult patients. According to the interviewees, both public and private clinics try to minimize the length of stay at the clinic, but the reasons given for limiting the duration of the stay are different. In a concentrated form, table 2 shows all the interview statements on the policy concerning the patients' period of hospitalization and the reasons given for this policy.

Table 2. Statements on the duration of stay at public and private

	Policy concerning duration of stays	Reasons for chosen policy
Public	Quickly return patients to their homes	Concept of early mobilization and discharge Win-win situation (both ward and patient)
Private	Avoid long stays	Private clinics are normally closed in the weekends Longer hospitalization leads to extra costs

At public clinics, minimizing the duration of the stay is part of a concept that is perceived to be a win-win situation where both the patient and the ward benefit from early discharge. The statements on the motives at the private clinics point more directly towards the extra costs implied by long stays, especially if the patients must stay in the weekends. Both the qualitative data on patient selection and the quantitative data on patient composition thus indicate that private clinics dump the difficult patients. This raises two questions: How does this relate to the professional norms of the orthopedic surgeons, and can the different patient composition explain the different levels of patient satisfaction?

The professional norms (if any) regulating patient selection were investigated by asking the interviewees first broadly about intra-occupational guidelines and norms and then more specifically about patient selection. None of the eleven interviewees said that patient selection is normatively wrong or against the informal conventions in the occupation, and the interviews therefore do not indicate that there is a professional norm within the profession that per se forbids the selection of patients. In Denmark, private sector dumping of difficult hip patients only means that the patients have to rely on the public health care that has universal coverage (but longer waiting time). Waiting longer for hip operations is not life-threatening, and all patients thus have a right to treatment regardless of wealth. Hence, the higher level of selection among private clinics does not contradict the expectation of

the functionalist sociology of professions, saying that public and private clinics do not differ on issues regulated by professional norms.

The next question is whether the different selection mechanisms can be linked to the different levels of patient satisfaction. This would be the case if the patients selected by the private clinics were initially more positive towards their clinics than the patients at the public clinics, or if the private clinics, due only to their different patients, had better aggregate clinical results than public clinics. But clinical results also depend on the clinical procedures used. We therefore turn to a comparison of the clinical procedures and then we will turn to the clinical results of private and public hip clinics.

The expectation from the functionalist sociology of professions is that private and public orthopedic surgeons use the same clinical procedures if these procedures are regulated by firm professional norms. The analyzed documents (Dansk Ortopædisk Selskab & Dansk Selskab for Hofte- og Knæalloplastik Kirurgi, 2006) show that the use of prophylactic antibiotic and thrombotic treatment is regulated by such a norm, and this is confirmed by a leading expert on the subject (Professor Kjeld Søballe). The norm says that this treatment should be used for all hip operations. The Danish Hip Alloplastic Register contains information on the use of this treatment for both public and private clinics, and table 3 shows that the both types of clinics use it for almost all hip patients. This indicates that the same clinical procedures are used at private and public clinics.

Table 3. Percentages of hip replacement patients who receive prophylactic antibiotic and thrombotic treatment at private and public clinics. 2006.

	Percentage of patients receiving prophylactic antibiotic and thrombotic treatment	**Number of clinics**
Public clinics	99,23	37
Private clinics	99,43	6
Total	99,31	43
Source: Danish Hip Alloplastic Register, Annual rapport 2007.		

To investigate the use of other procedures, we asked the eleven interviewees about the procedures used. For the orthopedic surgeons working both in a private and a public clinic, we recorded the statements separately and asked for differences between the procedures in the sectors. The most typical statement is “I do *exactly* the same”. Table 4, which contains the statements from surgeons working in both sectors, indicates that the procedures used are very similar. This corresponds to the expectation from the functionalist sociology of professions. There seems to be no skimping in the private sector, and a few of the statements actually indicate that the surgeons comply a little more carefully with the norms (stay on the straight and narrow) in their private job than in their public jobs.

Table 4: Statements from orthopedic surgeons employed in both public and private sector on the comparison of procedures used in private clinic and public clinic

- I do *exactly* the same
- The private solution must correspond to the public solution
- Stays on ‘the straight and narrow’, also because there can be complaints.
- More ‘on the toes’ in private due to the lacking safety net

In sum, patients do, from a clinical perspective, seem to receive the same treatment at public and private clinics, and differences in clinical procedures cannot explain different levels of patient satisfaction in the two sectors. But as the clinical results also depend on patient characteristics, the clinical performance measures might still be different in the two sectors.

We use three measures of clinical performance. First, we look at the percentage of all hip patients, who are acutely hospitalized within 30 days of discharge for elective hip replacement according to the quality data of the National Board of Health. As shown in table 5, this percentage is almost the same (8.4 % and 8.3 %) for public and private clinics. The next two indicators both come from the Annual report of the Danish Hip Arthroplasty Register (www.dhr.dk). The second indicator

registers the percentage of patients, who within 3 months after a primary hip replacement are hospitalized due to hip problems. As can be seen in table 5, this percentage is a little higher at the public clinics (4.97 %) compared to the private clinics (3.95 %), while there is almost no difference in the percentage of primary hip patients who are reoperated in the same hip within three month (the third indicator).

Table 5. Clinical performance measures for public and private clinics

	Public	Private	N
Percentage of patients acutely rehospitalized within 30 days (1)	8,40	8,34	Public: 34 Private: 9
Percentage of primary hip patients rehospitalized within 3 months due to hip problems (2)	4,97	3,95	Public: 37 Private: 6
Percentage of primary hip patients reoperated within 3 months in the same hip (2)	1,46	1,33	Public: 37 Private: 6
Sources: (1) Quality data from National Board of Health based on the Danish central patient register and (2) Danish Hip Alloplastic Register, Annual report 2007.			

As expected from the evidence on patient selection and patient composition, the clinical performance measures are slightly better for private clinics compared to public clinics, but the difference is not more than should be expected given that private clinics dump the very difficult patients. The difference in the clinical results is so small that can hardly explain the difference in patient satisfaction, so we now turn to the non-clinical factors.

According to the interviewees, the most important non-clinical factor is the waiting time. The categorization of waiting time as a non-clinical factor is, of course, linked to the fact that hip problems are not acute. The interviewed surgeons thus agree that it is not a clinical problem to wait for a hip operation. As shown in table 6, the waiting time is very much lower at private clinics than public clinics both in relation to preliminary examination and actual operation.

Table 6. Expected waiting time for primary hip replacements at public and private clinics

	Expected number of weeks waiting time between the clinic receives the referral and preliminary examination	Expected number of weeks waiting time between decision to operate and actual operation
Public	6,37	9,00
Private	0,64	1,55
N: Private = 11; Public = 30 Source: Quality data from National Board of Health based on the clinics' self-reported waiting times to the Waiting Time Data Base of the National board of Health.		

The statements of the interviewees strongly indicate that the short waiting time at the private clinics is a strategic decision. As shown in table 7, the interviewees said that short waiting times attract patients, and that the private clinics use their short waiting times to attract patients. The interviewees also mentioned other factors, which can potentially influence the demand for hip operations such as 'high quality', good surgeons and media coverage (e.g. the program 'Lægens bord'). More interestingly, they are very much aware that public clinics are often gate-keepers between patients and private clinics. Apart from self-paying patients and patients with separate insurances, the public clinics could eliminate the demand of the private clinics, because private operations are only publicly financed if the waiting time for a public operation exceeds a month. But the shortage of orthopedic surgeons makes this highly improbable for the time being.

Table 7: Statements from interviewees on factors affecting the demand for hip services.

Waiting time	Other factors affecting demand for hip operations
- Short waiting time attracts patients - There is extreme short waiting time in the private sector - [waiting time] is what the private can compete on - Patients goes to private clinics because of the short waiting time	- High quality attracts patients - Surgeons with a good reputation attract patients - Media coverage of treatment attracts patients - Public clinics are gate-keepers

If we had asked the patients themselves about the non-clinical factors, we might have had a longer list (including e.g. the physical facilities and the food), but based on the limited evidence provided at the home pages, these factors also seem to differ between private and public clinics. Still, the key competition parameter seems to be the waiting time. Together with the other non-clinical factors, the very big difference in the waiting time seem to be good candidate for explaining the difference in patient satisfaction, but we cannot definitively determine the reasons for the higher patient satisfaction at the private clinics without an investigation of individual patients (controlling for selection effects). But the present comparison of private and public clinics has shown that the clinical procedures are very much alike, whereas the patient composition differs (the difficult patients are deselected from the private clinics). Patient composition does not seem to have noteworthy indirect effect via the clinical results, but it might very well have a direct effect on the patient satisfaction, because patients are probably more satisfied with a clinic, they have actively chosen themselves. We do, however, argue that the most important difference in relation to patient satisfaction is the non-clinical factors, especially the waiting time.

Conclusion

This paper sat out to analyze the possible reasons for the higher level of patient satisfaction among patients clinics compared to public clinics. We argued that the profit motive made the incentives to secure demand stronger among private than public clinics and made them place a higher priority on patient selection and non-clinical factors than public clinics. On the other hand, since members of the profession of orthopaedic surgeons perform the operations at both public and private clinics, the expectation based on the functionalist sociology of professions was that clinical procedures governed

by professional norms would not differ between the clinics. The use of such procedures could thus not be behind different levels of patient satisfaction.

The empirical analysis showed that non-clinical factors like waiting time can potentially be an important factor behind the different levels of patient satisfaction. Waiting time is much lower at private clinics and seems to be a key competition parameter for private clinics. On the contrary, there were no indications of skimping of clinical procedures. The professional norm of giving prophylactic antibiotic and antitrombotic treatments was followed at both public and private clinics, and the interviewees consistently reported that the same procedures were used in both sectors. Hence, the professionally regulated clinical procedures did not differ as expected by the functionalist sociology of professions. Both interview statements and quantitative data indicated that private clinics dump very difficult patients to a higher degree than public clinics. On the other hand, the very limited difference in the performance measures between public and private clinics indicates that patient composition does not have an indirect effect on patient satisfaction via the clinical results. Hence, there is no sign of quality shading. Yet, the fact that the private patients have chosen clinic themselves, might influence their satisfaction irrespective of the clinical results.

The paper thus shows that even in highly professionalized sectors with overlap of the individual professionals, the public versus private distinction seem to matter in relation to the provision of services. Non-clinical factors are given a higher priority at the private clinics than at the public clinics, which is again potentially linked to the different levels of patient satisfaction. However, the differences are limited to the non-clinical factors and patient selection, while both clinical procedures and medical results do not differ. This indicates that professionalism neutralizes *some* of the sector differences.

Appendix A: Danish hip replacements

Hip replacement is an elective treatment that can be easily planned and does not in itself require advanced medical facilities and support functions. It is supplied both by public and private clinics, because the treatment is well-suited for the relatively small Danish private clinics that mainly employ part-time orthopaedic surgeons.

24 private clinics with an agreement with Danish Regions supply this treatment plus a few more clinics without such an agreement (Danske Regioner, 2008). The private clinics receive their funding from three sources. (1) Public funding due to the waiting list guarantee. If the public clinics cannot deliver the treatment within a month, the guarantee gives patients the right to have a publicly financed treatment at a private clinic with which Danish Regions have an agreement. Except for professional reasons or in situations with lacking capacity, the private clinics cannot formally refuse to treat patients who wish to use the guarantee (Danske Regioner, 2007). (2) Payments from insurance companies when the clinics treat patients with health insurances. The use of such insurances has grown dramatically in recent years (Pedersen, 2007). (3) Fees from self-paying patients. All three forms of funding depend entirely on activity.

37 public clinics perform hip replacements (Dansk Hoftealloplastik Register, 2007). These clinics are embedded in larger hospitals where less than 50 percent of the funding is based on activity (Indenrigs- og Sundhedsministeriet, 2005). Hence, the incentives are different for public and private clinics. Public orthopaedic clinics are less economically dependent than private orthopaedic clinics on patient demand.

Appendix B. List of used codes

Code	**Sub-codes**	**Description**
Patient selection	At private clinics At public clinics	All statements on the selection of patients, including a text search for the word 'patient'.
Professional norms	Concerning patient selection Sanctioning Written recommendations	All statements on procedural demands within the occupation
Period of hospitalization	Period Reason for limiting period	All statements on the patients' stay at the hospital
Competition parameters	Waiting time Other factors	All statements on attempts to attract patients and all statements on waiting time, including a text search on the word 'vente' (wait)
Procedures used	At private clinics At public clinics Patient age and procedures	All statements on actually used procedures.
Comparisons of results between private and public		All comparison of public and private results, both clinical and non-clinical.

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[i] In 2006, three times as many Danish public-sector patients were not 'satisfied' or 'very satisfied' with the total treatment - the average percentage of not satisfied patients at the 7 private clinics was 3 %, while the corresponding number of for the 49 public clinics was 9 %. The Danish National Survey of Patient Experiences was conducted the same way at the different clinics (see http://www.patientoplevelser.dk/log/medie/Rapporter/Survey_2006_english.pdf for an English summary).