‘Tele-nursing: the English and Swedish experiences’

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Abstract

This paper will compare tele-nursing in the UK and Sweden and explore how the formation of the same practice at different times and within different institutional and political contexts, shaped the work organisation outcomes for tele-nurses. It will examine whether a ‘dominant recipe’ is emerging on how to produce health care through the call centre format; or alternatively, whether institutional diversity between the two societies continues to produce national models of tele-nursing.

The two cases are critical, because in England a central plan for access to health care through a call centre format has been centrally driven by the state within an environment where the call centre industry is an established and powerful sector. Sweden has a regional organisation for health care and the development of tele-nursing has been heterogeneous. However to some degree the case of NHS Direct has been a background model for Swedish planners. Therefore the paper will address the question of diffusion or continued institutional diversity, with a strong focus on the effects of different systems on the work organisation of tele-nurses.

INTRODUCTION

International research on call centre work is developing through the Global Call Centre project (see Batt et al, 2006). Although to date there have been no published papers from this project. Therefore one can say that most research into call centres has been at the national level and paired, cross-national comparative research has been very limited - see Collin-Jacques and Smith, 2005 as an exception within the tele-nursing sector. An obvious advantage of comparison in this area is that it enables researchers to examine the relative importance of technology, occupation and timing of industry formation on the design and experience of actual call centre work in order to examine if cultural or national institutional factors are important in filtering this experience.

The aim of this paper is to examine tele-nursing in the UK and Sweden and investigate to what extent the formation and the development of the same activity – tele-nursing - at different times and in different institutional and political environments creates two different kinds of tele-nursing or a shared experience. Theoretically the paper goes beyond a simple compare and contrast style of cross-national analysis, where nations are considered in isolated and insulated ways – see ‘societal effects’ (Maurice, Sellier and Silvestre; Maurice and Sorge, 2000) and ‘national business systems’ (Whitley, 1992; 2005) models as instances of this approach. The main objective of this cross-national analysis is to examine whether a ‘dominant recipe’ (Smith and Meiksins, 1995; Smith and Elger, 2000; Smith, 2005) of tele-nursing call-centre delivery is emerging, or whether the institutional diversity of these two countries reproduces national models of tele-nursing that are robust and analytically distinct. In other words, do ‘societal effects’ override ‘dominance effects’ in the case of tele-nursing, which is a new form of health service delivery in the two countries?

In using the system, society and dominance effects (SSD) framework in this context, we are suggesting at the system level, both Sweden and England share the same political economy, namely capitalism, albeit in different forms – the UK neo-liberal and Sweden classical corporatist. Hence the two societies are noted as having different institutional characters in ordering of employment relations (Coates, 2000: 86-101). But another
reading of ‘system’ relates to common ‘technology’ (such as used in call centres) and hence the spread of call centres globally can be treated as a symbol of systemic rationalisation, and one that has potential standardising features and consequences. However, any such standards of efficiency delivered in this way interact within particular societal contexts, where, call centres might be embedded in particular and quite different ways. The Global Call Centre project has highlighted the fact that in most countries services are delivered for the local market, with only India having significant international market for its calls, and hence acting as a ‘global’ not ‘national player. National focus is even more evident in the case of a ‘public good’ (such as health) where one might expect the nation state to play a role which creates more internal differentiation, rather than systemic cross-national standardisation, simply because actors in the public sector, (nurses, doctors and their unions in health) are more nationally embedded institutionally speaking, and less globalized, when compared with Multinational companies which operate in the commercial call centre sector and have more opportunity and incentives to diffuse global ‘best practices’.

But states are also capable of learning from each other, and borrowing ideas and practices, and even evolving recipes of working practice or policy delivery that can be borrowed from ‘dominant practices’ or diffused as best practice if they have great efficiency at home. Hence, the third element of the SSD framework, namely ‘dominance effects’, while more likely to be associated with international agencies such as MNCs, than national actors, such as states, nevertheless we cannot rule out their influence in a new sector or new technology such as call centres. Collin Jacques and Smith (2005) for example, looked at technology providers supplying the healthcare sector (with common software, for example) acting as potential diffusion agents for standards across national boundaries. Therefore one dimension of the paper is to examine signs of borrowing or diffusion in practices between England and Sweden.

From a societal level (societal effects), these two countries show several differences which directly and indirectly affect the emerging sub-specialism of tele-nursing. NHS Direct is a 24 hour nurse-led telephone help-line, with coverage across England and Wales. In Scotland a more concentrated service (NHS24) offers provision across the country. NHS Direct was launched in 1998 at three pilot sites to provide easier and faster advice and information for people about health and illness (DoH, 1997, 2003). There were initially 22 NHS Direct call centres covering the whole of England, although this provision has been rationalised and concentrated recently. NHS Direct call centres are hosted in a variety of health care organizations, such as ambulance services, Primary Care Trusts, NHS Trusts N&E departments and GP-Co-ops

While Sweden has cases of single sites using telephone for health care advice from the 1930s (Wahlberg and Wredling, 1999), the ‘call centre’ health industry is a modern development. Wahlberg (2004) describes the very first Swedish use of the telephone for health care purposes (Sjukvårdcentralen) whose primary aim was to coordinate patients to hospitals within Stockholm, the capital. From the 1930s the service was extended to make appointments and to dispatch ambulances (ibid p. 15). These early precedents are however not linked to the modern idea of a call centre, with Automatic Call Distribution Switches (ACDs) technology at its heart. A national project for developing telephone advice nursing in the modern sense started in 1997, but tele-nursing call centres emerged on a broad scale first in 2000-2001, hence some years after NHS Direct in England. It also took a different format and developed in a different way; being less centralised and combining both public
and private delivery, and smaller in size compared to the British cases (both NHS Direct and NHS24).

All these national differences have an impact on the development of tele-nursing services. In both Sweden and England nurses provide health advice using software which guides and monitors their clinical decisions. In the English case nurses are obliged to use a Clinical Assessment System (CAS) when responding to caller/patient enquiries. We have elsewhere (Mueller et al. 2004; Smith et al. 2006) addressed the issue of whether this software restricts and/or facilitates the acquisition of knowledge by nurses within a call centre setting. In Sweden different types of software are used in different regional areas, but all share the system feature of being based on guidelines for questioning and assessing the problem, and not algorithms as in the UK case.

Our conclusions from previous research on NHS Direct point towards the interplay between occupational autonomy and organisational control within a new service that has not yet finalised its design for the job of a tele-nurse. While CAS software has been introduced in all the 22 NHS Direct tele-health centres, in Sweden the software varies according to the sites. In addition in Sweden nurse advisors are personally liable for the final decision to the caller, whereas in the UK liability is institutionalised. This implies a different level of autonomy over the labour process from a tele-health centre to another between the two societies.

Another important issue we aim to explore is whether there are ‘best practices’ of tele-nursing (dominance effect) and if these have been adopted or influenced the development of tele-nursing in the UK and Sweden. Although NHS Direct has adopted CAS, American software among all its call centres, at this stage we cannot argue that a global tele-nursing model exists.

This paper begins with a current debate on call centre literature with a particular focus on the occupational formation of tele-nursing within call centre work. Then we will examine the research design and methods. We will then summarise the evolution of NHS Direct and the Swedish tele-nursing call centres. Afterwards, we will explore the use of different software systems in the UK and Sweden and how it affects the labour process of nurses call centres.

This comparative piece of research explores the position of tele-nurses in the two countries through the details of the labour process, but filtered through the formation, character and institutional setting of the service in the two countries. In this way the paper contributes to the debate on the political character of the labour process, and the role of technology diffusion and institutional embeddedness for pre-forming work organisation.

THE CALL-CENTRE DEBATE AND TELE-NURSING

Call centre research has focussed on routine white-collar jobs are performed within commercial settings (Bain and Taylor, 1999, 2000; Taylor and Bain, 1999, 2001; Holtgrewe, et al 2002; Deery and Kline, 2004). The main discussion regarding this literature was on control, autonomy, resistance and work intensification (Callaghan and Thompson, 2001).

Within call centres, job ladders, career structures, training and development, as well as the nature of the labour process have become fractured and transformed. New skills, especially emotional labour, communication and inter-personal social skills have been intensified.
(Callaghan and Thompson, 2001; Lindgren & Sederblad, 2004). Batt and Moynihan (2002) have called this the ‘mass’ model of the call centre, with a parallel reference to mass production in manufacturing. As we can witness, the main focus of academic literature was on white collars workers, and the main stress on the transfer of a ‘mass production’ model into the service encounter. However, in a later article, Batt and Moynihan (2004) discern other models in the call centre industry, the ‘professional service model’ and the ‘mass customization model’. The professional model is regarded as the opposite to the mass production model, while the mass customization model is a ‘hybrid’, between the two other models. In this paper we look at a professional group, namely nurses, who have recently moved into call centres to offer health advice. That there is a more complex interplay between expert or qualified labour and call centre rationalisation forces is evident in the case of nurses for several reasons. Although there are some similarities between British and Swedish tele-nursing occupation and other type of call centre work, we will then explain what is distinctive about expert labour in call centres, using nursing as our case.

THE DEVELOPMENT OF TELE-NURSING IN THE UK AND SWEDEN

As this comparative study points out, the constant growth of the call centre sector has influenced the development of tele-nursing. However, as we could analyse in our cases, other institutional forces had an impact on this new profession. First, we will summarise the creation of NHS Direct in the UK and then tele-nursing in Sweden.

UK - NHS Direct

NHS Direct as 24-hour tele-health help-line was a key part of the current Labour governments 1997 proposals to modernise the NHS in England (Department of Health 1997). The ambition to make NHS Direct the main ‘gateway’ into the NHS in England, responsible for out-of hours booking, and eventually sending patient records electronically through the system, makes the service comparatively unique.

NHS Direct for England was created in response to growing problems of access to and cost of the NHS. In the mid 1990s rapid access to General Practitioners (GPs) was recognised as problematic, especially in urban areas, public awareness of alternative health care provision (e.g. Walk-In Centres) was low, and a large number of ‘minor injuries’ rather than ‘trauma and major illnesses’ were being treated by using expensive resources such as out-of-hours GP services and hospital A&E departments (Calman, 1996). In 1997, the British Government, in its White Paper The New NHS: Modern, Dependable (DoH, 1997), announced the creation of a 24-hour telephone advice line, NHS Direct, staffed by nurses. NHS Direct aimed to provide ‘easier and faster advice and information to people about health, illness and the NHS, so that they are better able to care for themselves and their families’ (ibid: 5). The service was launched in March 1998 at three pilot sites.

NHS Direct rapidly expanded so that, by October 2000, 22 call centres had been established covering the whole of England. Each site covers a catchment area of between 1.3 and 4 million people (NHS Direct 2001). At the time of this research was carried out all the call centres were hosted in a variety of health care organisations such as ambulance services, Primary Care Trusts, NHS Trusts A&E departments and GP co-ops.

On 1 April 2004 NHS Direct was established as special health authority under the NHS Direct Order 2004. It had its operating framework, including standing financial instructions. NHS Direct will be transformed from a special health authority to an NHS trust by April 2007. Between March 2005 and March 2006 the total number of patients
contacts rose from 1.65 million to 2.138 million per month and according to the planned expansions of the service, this number will rise again during 2006-07 (NHS Direct Annual Report and Accounts 2005-2006).

NHS Direct operates in a competitive environment within the health service; this means that one of its priorities is to deliver high quality care in the most efficient way. However, efficiency does not mean lack of quality. The clinical integrity and safety remain the main imperatives of NHS Direct. The safety of the service is guaranteed through highly qualified staff and sophisticated decision support technology. NHS Direct is based on a robust quality assurance. During 2005-2006 this service appointed a new Head of Clinical Governance and the National Clinical Governance Committee ensures that this organisation builds on clinical; strengths and continues to improve its performance. The key focus of 2005 has been has been ensuring that NHS Direct meets the Department of Health’s standards for better health. These standards have been introduced in 2004 and specify the level of quality that all NHS organisations in England are expected to meet in terms of safety, clinical and cost-effectiveness, governance, patient focus, accessible and responsive care, care environment and amenities and public health. This paper and previous ones (Mueller et al. 2004, Smith et al. 2006) highlight the importance of both efficiency and safety of this service. NHS Direct is now an independent service; this does not mean that it follows an independent route. The key guidelines of NHS are always present in it agenda and everyday tele-nurses’ practices.

From 2005 new technological changes have been introduced within NHS Direct. A new Virtual Contact Centre has been introduced. This new system allows calls from anywhere in the country to be routed to any health advisors in England. This will be helpful for cutting waiting times and respond more quickly to changes in demand. Moreover, the efficiency and the safety of the calls have been improved by introducing a new call streaming technology. This new decision-making tool allows health advisors to identify the seriousness of calls and route them accordingly. The introduction of the ‘Virtual Contact Centre’ reinforces the ‘centralisation’ strategy adopted by the NHS.

By considering the constant evolution of this service, we can see how the institutional level is influencing the development of NHS Direct. We were able to find two main tendencies:

1) The ‘centralisation strategy’: although NHS Direct is now an independent service, it follows the main directives of NHS. NHS Direct has to meet the Department of Health’s standards for better health; all NHS call centres adopt the same software and finally now the ‘Virtual Contact Centre’ enables NHS Direct managers to route phone calls to any nurse advisor.

2) Quantity Quality: The main priority of NHS Direct is to offer high quality care in the most efficient way. By following the national tendencies of the NHS, both safety of the service and efficiency are considered as main priorities.

Sweden – TAN (Telephone Advisory Nursing)

Sweden has a decentralised health care system, placing decision-making as close to the activity as possible. The health services rest largely in the hands of regional politicians, directly elected, for 20 county councils/regions. Swedish citizens pay taxes to the local authority and to the counties/regions, which accordingly have a great deal of freedom to organise the activities in their area. Hence, it is the interests of national and local politicians that predominantly determine the shape of the agenda on health care provision and to a considerable extent that of the medical profession. (Dent, 2003, p 43-75).
In the late 1990s, the arguments in favour of TAN centres were seriously put forward in Sweden. In 1997, a national project was set up to evaluate the potential of a common telephone advice nursing for the Swedish counties. This happened at the same time as the British example of telephone advice nursing called NHS Direct was proposed (DoH 1997). However, the Swedish investigation concluded that a central implementation of TAN, i.e. a so called top-down-model, was not recommended (FCC 2002). Instead, it emphasised the need to follow the overall structure of Swedish healthcare based on the local independence of counties and regions.

This meant that quite different forms of tele-nursing emerged at the local and regional levels, due to different conditions such as geographical area and population density. There were some centres in the forefront of the development of tele-nursing, e.g. Östersund in the Middle of Sweden close to the Norwegian border and Kalix, up in the North very close to Finland. The latter centre is owned and operated by a private company, Med-Help. The company later expanded and opened a centre in the Stockholm area, and then one in the South of Sweden. This private company provides a service to more than 2 million people.

From the beginning of 2000 a national initiative originated from the social democratic party investigating the possibilities to connect the independent health call centres in the counties to each other and give them a common telephone number (1177). The project was launched and some of regions decided to join the project. In 2005 Skåne, the South region served by TAN South, affiliated to the national project. In June 2006, five pilot sites were connected to each other sharing the same technical system, including the same software for decision support and a common database with health information. The interlinked TAN’s are organised as a kind of matrix organisation, where national organisation (Vårdråd per Telefon) provide overall induction, training and meetings for exchange of experience, while the operations in each TAN are financed and shaped by the distinctive form of healthcare in each county.

In January 2007, after the new bourgeois government was elected, the Project Team (Vårdråd per Telefon) was merged with a former company for healthcare information (Infomedica) and together they constitute a public company (Sjukvårdsrådgivning.se). The private company in the business, Med-Help, is another important actor, as mentioned. Yet, we have noticed no official comments from the government of their strategy to develop the tele-nursing sector in Sweden. Due to the decentralised organisation of health care in Sweden, the possibilities for governmental action are restricted. It seems also plausible to assume that this structure has contributed to open up for private initiatives and, certainly, produced a differentiated pattern to tele-nursing compared with the more centralised pattern in England.

The expressed purpose of tele-nursing centres is to improve accessibility and security by offering the public a consistent source of professional advice on healthcare, 24 hours a day, so citizens can manage their problems at home or get referral to an appropriate level of care. The service is considered by healthcare politicians and management to be a good tool for steering flows of patients. This process involves coordination of the health care resources in order to improve efficiency for health care in general. The main priority of TAN is to provide better access to high quality healthcare. By following the principles of Swedish healthcare, both safety of the service and guaranteed access to medical service (efficiency) are considered the main priorities. Consequently, the tele-nurse’s encounter is considered as very important and her assessments may be significant not only for the ‘care-seeker’ (in the UK ‘caller’), but also for initiatives taken by other health care
organisations (Edwards, 1998).

In considering the evolution of this service in Sweden, we could equally see that the institutional level is sharpening the development of tele-nursing. The two main tendencies in Sweden are:

1) From a ‘decentralisation strategy’ to a ‘centralisation strategy’:
   Swedish tele-nursing has been sharpened according to an incremental implementation process over ten years following the decentralised structure of Swedish healthcare. Before the beginning of the 2000s telephone advice nursing developed independently, at different paces and forms according to healthcare in each self-governed county. From 2000 a national initiative started to transform tele-nursing into a national project. In 2006 five pilot sites become permanent parts of matrix organisation. Thus, the Swedish tele-nursing has entered a centralisation strategy, but with adaptation to local practice in each county.

2) Quantity/Quality: The main priority of tele-nursing is to provide better access to high quality healthcare. By following the national tendencies of Swedish healthcare, both safety of the service and guarantee access to medical service (efficiency) are considered as main priorities.

TELE-NURSING AND CALL CENTRE WORK IN ENGLAND AND SWEDEN

England

If we focus on the similarities, English nurses can be associated to CSRs (Costumer Service Representatives), i.e. employees in commercial call centre work in certain ways. First, they follow a script provided by the Clinical Decision Support Software (CDSS), also called CAS, which guides nurse’s questioning of callers and assesses the urgency of need and most appropriate course of action. As we will explore in this paper, English tele-nurses can upgrade or downgrade the dispositions of the software (such as home care, GP now, GP routine etc.), according to their clinical judgement, however their autonomy is often limited and in many cases they stick to the software for avoiding litigations.

Second, similarly to CSRs, Nurse Advisors, (the UK term for tele-nurses) are encountering patients as ‘caller/customers’, through a one-off interaction which focuses on the symptom rather than a long term interaction. Tele-nurses work becomes fragmented, since they cannot follow the ‘whole story’ of the patients (Wise, Smith, Valsecchi, Mueller and Gabe 2007).

Thirdly, calls are continuously streamed to Nurse Advisors who experience a sense of being ‘paced by the machine’ akin to a worker on an assembly line. They cannot pace their phone calls, the queue of patients/callers put pressure on them and intensify the labour process (Collin-Jacques, 2003; 2004).

Fourthly, English tele-nurses, like CSRs, work on their own at a desk; interacting with callers through a form of Automatic Call Distribution Switches (ACDs). They are allowed to move around the call centre in order to seek advice. However they still have a fixed position which allowed management to monitor their individual workload (Callaghan and Thompson, 2001).

Finally, although tele-nurses are registered, they are not specialised to particular calls. They all have a different background, and are therefore generalists. For instance, call centre managers points out that 40 per cent of calls are paediatric in nature, however all
the nurses can give advice, even if they are not specialist in that area. This is possible since the CAS software can support them and compensate for the lack of specialist knowledge. NAs’ expertise is not reinforced by occupational knowledge and this make NAs’ task objectively similar to other CSRs work (O’Cathain et al 2004).

However, English tele-nurses also differ from conventional CSRs in a number of ways. First, in contrast to CSRs, English tele-nurses must have a specific professional qualification, they must be registered nurses and they must have previously worked in ‘conventional’ hospital settings. This clearly means that they hold previous occupational knowledge, while CSRs do not (Wise et al. 2007)

Secondly, individual nurses move back and forth between face-to-face and tele-nursing, unlike CSRs. While a CSR dealing with a customer bank account can be considered a replacement for a face to face service provided by an officer in a bank, this is not the case for tele-nurses. NHS Direct is a unique adjunct service, also because it is a national service (O’Cathain et al 2004; 281). Research also point out that English tele-nurses typically work part-time (Hanlon et al. 2005) and spit their job between call centres and other face to face clinical settings (such as hospital and walking centres.). Other research points out that NHS Direct can be also considered as a stepping stone in order to reach a managerial career (Gabe et al. 2005).

Finally, while in commercial call centres there is a more strict managerial division of labour, NHS Direct is a ‘nurse-led’ service. Nurses are considered the dominant group and NAs interact with a nurse manager rather than doctors.

**Sweden**

In Sweden, tele-nurses can use a computerised decision-support system for assessing the symptoms and giving advice or a referral. The systems developed on a local or regional level, sometimes resulting in systems not always adapted technologically to the users, that means the nurses. There is a new system developed in the national project. TAN South has been a pilot plant for testing the system, which is in use in the six regions that have joined the national system so far. Nurses, also from TAN South, have been involved in the development of the system and they are very pleased with it (interviews at TAN South). However, unlike the UK practice, this Swedish system uses no algorithms (scripts). The computer-system is still in both TAN West and TAN South only one among several tools available for carrying out work (others are literature, internet and communication with medical experts).

The Swedish tele-nurses also are a professional category and of course they must be registered nurses and have their license. In general, they have a very long experience, often 20 years or more working in health care e.g. as reception nurse in Primary Health centre, as district nurse or as school nurse. A majority of them have some kind of additional specialisation as for example operation, surgery, orthopaedics, haematology, gynaecology etc. It is quite common that they have worked as health care managers previously and most of them are used to work either independently or in teams. The Swedish tele-nurses experience and express professional vulnerability while being more autonomous than nurses in polyclinics (more like district nurses). They take professional responsibility for the decision given and their registration/licence might be withdrawn in the worst case. The (telephone) nurses are organized in a trade union, but like the physicians they have also formed a professional association. The trade union is, at least so far, the most important organisation e.g. often representing the nurses in public meetings and investigations.
It is unusual for Swedish tele-nurses to move back and forth between tele-nursing centres and face-to-face care. Instead, it is common that they have auscultations (i.e. a kind of apprenticeship, where the tele-nurses in this case visit and follow the clinical care for a half a day or one day in order to be up to date with clinical practice and changes). These visits to the conventional, clinical care situations take place during tele-nurses’ time reserved for personal development, usually 15-20 % of their working time. In TAN South, most of the nurses work full-time while in TAN West approximately 50 per cent of them worked part time. The nurses are offered lectures, seminars and courses in: Medical knowledge, communications skills, listening-in, medical documentation, introspective reflection in group and alone.

In Sweden, as in the UK, tele-nursing is basically a nurse-led service. The supervisor (who is nurse, as well) takes out all kind of statistics from the system. In case of “malpractice”, feedback is given to the nurse. Otherwise, feedback is given the employee in connection to the yearly appraisal discussion, which is followed by individual pay negotiations. There are no possibilities to listen into calls, i.e. get on the line when the nurse is talking to a care-seeker. In cases of “malpractice” of the telephone nurses, it is not an organisational matter, but a professional matter. The TAN has one general practitioner who is formally responsible for the medical setting, but the doctor is not physically present at the site. He or she is the medic, accountable for the whole TAN centre, but in the single case and for the single interaction with a care-seeker, the telephone nurse is accountable according to her registration.

The hierarchy in the Swedish tele-nurse centres is extremely flat; it consists of only two levels, the managers and the nurse advisors! Previously, when TAN South was operated by a private manning agency an attempt was made to have a separation between advisors and call-handlers (without nurse qualifications). The results were mainly negative, e.g. it often caused confusion, so the project was ended. One explanation for the preference of a flat hierarchy might be the small size of the Swedish centres. Now, TAN South has been expanding up to approx. 70 employees and the managers have some plans for introducing a more elaborated team organisation and a function as team leader (interview with TAN South manager, 2006). The drawback of a flat organisation is a lack of a career ladder and opportunities for the nurses, mentioned by some of the interviewed nurses.

We can see, therefore, both differences and similarities between health and other call centre environments and between English and Swedish tele-nurses. We will now look in more detail at these patterns through a comparative case study methodology. This will allow us to gather rich and detailed data from each tele-nursing setting.

**CASE STUDY RESEARCH IN ENGLAND AND SWEDEN**

**England: NHS Direct**

In England we researched two NHS Direct sites serving different kinds of localities with respect to population and patterns of service provision: a provincial/urban area (NHSD A) and a metropolitan area (NHSD B). We also took into account the size of each call centre by considering the number of staff in post, for both Nurses Advisers (NAs) and Call Handlers (CHs). We selected a medium sized call centre, NHSD A - which counts 52 full time NAs and 24 full time CHs and a small sized call centre, call NHSD B - composed of 24 full-time NAs and 14 full-time CHs. In total, we conducted 27 interviews with nurse
advisors, 11 with managers and with clinical directors, we also interviewed call handlers, healthcare information advisors, librarians, GPs and pharmacists but these are not referred to in this paper. The interviews took place between April 2003 and February 2004. Interviews lasted between forty-five minutes and one and a half hours and were tape-recorded and fully transcribed. The interviews with the NAs and managers focused on how nursing ‘on line’ differed from conventional nursing practice; how the work is organised and the level of autonomy that NAs can exercise over their work; the level of interaction between NAs, CHs and health information advisors, and to what extent inter- and intra-occupational knowledge is reinforced or transcended.

Non-participant observation was undertaken at both the case study sites for two 2 week periods approximately 6 months apart. The purpose behind doing two fieldwork investigations into the same sites was to capture changes due to the rapid evolution of this new service within the NHS. The observation involved sitting close by and listening to conversations between nurse advisors and callers, observing work dynamics within the call centre and sitting in on training sessions and nurses’ assessment days. Nurses’ interactions with other nurses, CHs and managers in the bureau (the term used to describe the work space) were also observed.

Younger, single, better qualified nurses were more likely to work part-time, and these nurses dominated Site B, the Metropolitan site; whereas more full-time and older, less formally qualified, married with children nurses were more present in provincial Site A.

Sweden: Telephone Advisory Nursing (TAN) Centres

Similarly to the UK case studies, the Swedish researchers used two sites serving a provincial/urban area (West TAN) and a metropolitan area (South TAN). Hence, different kinds of localities with respect to population and patterns of service provision.

The West TAN is an ‘in-house’ service within the region’s health care organisation, but located in own premises outside the clinics and the hospitals. The overall aim of the service is to provide the citizens in middle-sized cities and rural areas (app. 270 000 in this part Northern of Gothenburg) with telephone information, advice, caring and referral to adequate health care 24 hours a day. The staffs consist of 25 female nurses supervised by a head nurse and an assisting team-leader. We have followed the development of this centre since it started in 2002 and we have conducted about 80 interviews with politicians, managers, nurses and also made telephone-interviews with clients (300 in 2003 and 100 in 2006).

The South TAN has a background in the local TAN for Malmö (the third biggest city in Sweden) and has existed for approx. 25 years. In the end of 2001, the South TAN centre was opened using call centre technology and serving the whole Skåne region (approx. 1.1 million inhabitants). The aim for the centre is similar to the aim of centre West TAN, but the scale is much larger. The South centre was first operated by a telecom company and a temporary staffing agency, thus by private actors. In the beginning of 2005, the public Region Health Care took over the operation of the centre. The centre has been a pilot plant for new call centre technology aimed for the national tele-nursing system and the centre was integrated in the national system in 2006. During the last year, the centre has expanded and currently about 70 nurses are employed. This centre was been studied as a case study in early 2005, with interviews with 10 nurses, the 2 managers and the ICT-expert. Several follow-up interviews have been conducted since then.
THE SOFTWARE AND TELE-NURSES’ AUTONOMY IN THE TWO COUNTRY CASES

England: NHS Direct

The dialectic of decision support software

During the piloting phase in 1997, NHS Direct adopted three clinical decision support software systems: two US algorithm software systems and a British guideline software TAS (Munro et al., 2000). The final choice was the algorithms system software called CAS. It is based on a series of algorithms which Nurses Advisors (NA) must use for ensuring a safe telephone advice. CAS forced nurses to ask the caller one automated question at a time, with questions taking one of two forms: either a leading question with a “Yes”, “No” or “Uncertain”, or a list of symptoms that the callers should answer. Nurses could bypass the list of the questions, even when the NA realised that the algorithm was leading down an inappropriate medical track. The CDSS also included a ‘Free Text’ box where nurses could add further notes relating to the questions asked; however NAs had little freedom in the assessment process itself.

Evidence revealed that at first sight CAS protocols restricted and prescribed NAs’ autonomy, rendering their work repetitive and routinised. Previous research on NHS Direct (Collin-Jacques, 2004) suggested that CAS reflects the third principle of Taylorism (Braverman, 1974) according to which management directly control the labour process and its mode of execution. According to this analysis, within NHS Direct the rigid and scientific algorithms embedded in CAS determined a precise manner in which NAs should execute their tasks. Thus, CAS, through the algorithm based logic, fragmented the assessment process by prompting one question at a time, meticulously co-ordinated by the algorithms. Thus CAS restrained nurses’ clinical knowledge by preventing them from seeing ‘the whole picture’ of the assessment and hence narrowed their clinical reasoning. This is evident from this quote:

It [CAS] has its moments. ... It can be limiting sometimes, so sometimes you actually have to look at the broader picture and basically, not circumvent, but go through the Algorithm .... So it’s not interactive from that point of view...
(Nurse Advisor, NHSD B)

CAS did not prevent NAs using their critical thinking, and the interviews revealed that NAs used their previous clinical knowledge to bypass the system and still provide a safe advice. Initially NAs needed a minimum of five years’ post-qualification experience before starting to work for NHS Direct (National Audit Office, 2002:15). This was later reduced to three years. During these years, NAs acquired clinical experience and expertise utilised to ‘upgrade’ and ‘downgrade’ the software if they considered the final dispositions was not ‘safe’ according to their clinical knowledge and experience. Such operational autonomy was not discouraged by NHS Direct central managers:

.... We accept that these are nurses and are allowed and expected to use their critical skills, so we do see this range of raising the outcome or lowering the outcome and we’d expect to see somewhere around 15% - 20% changes. If it’s lower than that, then people aren’t thinking, they are just sticking to the system, so there has to be some variation. (Manager Central NHS Direct team)
Deviating from the software

The use of clinical knowledge and critical thinking is necessary for providing safe information. A key focus in 2005 was ensuring that NHS Direct met the Department of Health’s standards for better health. Many Nurse Advisors admitted that they deviated from the software, however safety was always an important consideration:

I think sometimes I worry a little bit about upgrading or downgrading the final disposition, because sometimes you literally get a final disposition of ‘Home Care’ come up and you’ve known, from the onset of the call that you’re going to be sending them to Hospital. Or you might get, vice versa, the screen might come up with ‘Immediate Ambulance 999’, and you’re thinking “No” “Home Care’s” okay on this”. So it’s a little worrying, particularly if you’re downgrading from ‘999’ to ‘Home Care’, you’re wondering if you’re going to be pulled ‘over the coals’, for that particular reason. (Nurse Advisor, NHSD A)

This example points out that CAS allowed critical thinking since both NAs and managers were conscious that the software was over-cautious. However, under certain circumstances, especially were NAs are outside their specialist areas (O’ Cathain et al. 2004), they relied more on the software for the final disposition, mainly to protect themselves from litigation or management scrutiny. CAS was thus treated as a reference tool but not as a ‘global recipe’. Hence medical knowledge was embedded within particular institutional constraints, and not something, as one might expect, universal and standard. Despite being ‘imported’ from the USA however NAs by ‘upgrading’ and ‘downgrading’ the system were able to change some algorithms. In addition, during 2005-06 all algorithms were updated to ensure they reflected the latest guidelines from the National Institute for Health and Clinical evidence and from the Government’s National Service Frameworks. Therefore, the national level has an impact on the software as well.

CAS also facilitated the use types of managerial control employed in mass model call centres. Thus electronic and remote monitoring of data such as the lengths of calls, types of calls, frequency of calls, abandoned calls during the day, week, month and year were available to management. Nurse Advisors and managers indicated that, according to NHS Direct national standards, a telephone consultation ought to last 8-10 minutes. Many NAs highlighted the fact that there was pressure to follow both algorithms and call time protocols:

I suppose that you’re restricted in a certain way, because you’re taught during training that you have to respond in a particular way. You’re supposed to work methodically through the Assessment and through the Algorithms, not skipping over anything. You’re supposed to read the rationale. That can be quite difficult, because I mean, obviously people work at a different pace, they read at a different pace, and sometimes the rationale is a huge page that comes up with, you know every time the computer screen changes, and you don’t necessarily have time. You don’t have time to read through it all, you can only sort of skim very briefly over certain parts of it, but you’re very, very conscious that you have to be reacting according to how you’ve been taught and what’s expected of you. (Nurse Advisor, NHSD A)

Therefore in some ways the ‘call centre model’ comes into NHS Direct. However, this did not translate into performance and production values automatically dominating management discourse to the exclusion of other values. As we have argued elsewhere,
safety and service are very strong values, and could be used by NAs at those times when management or the pressures of the ‘queue’ could threaten to push the values of output and quantity at the expense of quality (Mueller et al. 2004). A NHS Direct manager made this point:

We do seem to talk a lot about productivity but what we are actually about is delivering a patient service. These are patients, it’s not like the rest of call centre industry “try to get as many calls out of it as possible because that’s where they make profit”. This is actually about patients and that’s the message we’re having to push really hard because I think it’s been forgotten. (Manager NHSD Team)

This example highlights how despite nurse’s professional values (e.g. taking care of patients) and the NHS guidelines being central values, NAs can, under the pressure of call times and delivery, focus on quantity and not quality. Hence it is sometime ‘management’ (according the above informant) that have to interject these values. This indicates the ever-present pressures from a wider centre culture despite the obvious differences in the character of tele-nursing.

**Call Handling – Nurses or others?**

In contrast to other tele-nurses service such as Canada (Collin-Jaques and Smith, 2005), Australia (Larsen, 2005) and Sweden (Sederblad and Andersson 2006), calls in NHS Direct are initially taken by call-handlers who re-direct some to NAs. In 2002 a system of prioritisation of calls has been introduced. This meant that Call Handlers no-longer routed all calls to nurses, but answered some directly, sent others to Health Information Advisors, and then ranked the seriousness of the call using a simple formula before being allocated to NAs. This was possible in NHS Direct because CHs take the initial calls and not Nurses as was the case in other countries. One Manager from NHSD A said this could be taken further with *call screening*:

Instead of our Call Handlers just asking a few questions, they’ll actually be having to ask several minutes worth of questions, but then, instead of jumping say just to the Nurse, you could actually go to a whole range of other resources, and in fact, if it was urgent, instead of even going to the Nurse, they could send people directly to Accident and Emergency, without even going to the Nurse.... Or it could be looked at in a much wider context, such as calls going directly to GP’s, or GP Out of Hours Centres, for example, and other calls coming into NHS Direct, and other calls coming into a Health Information Function. (Manager NHSD A)

Prioritisation and Call Screening are call centre industry strategies for managing call volumes. The same manager raised the issue of replacing nurses with another category of labour during the interview, but rather more cautiously. However the question is indicative of call centre managerialism, looking at labour substitution and costs, whereas a manager at the national level stressed the embedding of NHS Direct within the institutional norms and values of the NHS. But while in play this ‘discourse of transformation’ (converting nurses’ labour power along the lines of other workers in the sector) was in competition with operational practicalities of delivering ‘safe’ advice within a health sector context.

In the future, at some point, we don’t know obviously how long it’s going to take, but I mean there are always discussions about “is it even possible, maybe,
that we don’t have to have Nurses doing the Clinical bit of calls, could it be done with Paramedics?”

And what’s your view on that?

My view is that, conceptually, it is possible, because a lot of the Algorithms that we’re working to at the moment are very scripted, and they don’t need a lot of interpretation, but we need a lot more work on that to see how much interpretation is actually going into them by the Nurses, because Nurses can override them at the moment, and clearly if you’ve got somebody less qualified, you couldn’t do that. It has to be very much more rigid in the way those are approached, but those thoughts are going on. (Manager NHSD A)

The above manager had an IT not medical background, and call centre rhetoric and ideas were always present in NHS Direct management at all levels. But while in play this ‘discourse of transformation’ (converting nurses’ labour power along the lines of other workers in the sector) was in competition with operational practicalities of delivering ‘safe’ advice within a health sector context. Moreover, even IT managers were sceptical about the putting too much faith in the CAS rather than nurses. In CAS there is still a need for nurse’s clinical knowledge, as they were programmed with medical data for the ‘average’ symptom, when caller/patients may present symptoms that are not average. In other words, interpretive knowledge provided by the nurse as ‘expert’ was required.

Telephone advisory nursing in Sweden

Working without technical direction

In Sweden there is a different practice with regard to the balance of power between tele-nurses and technology. Tele-nurses are far more autonomous but have more responsibilities, and they operate a software which is not based on algorithms, and this influences the whole tele-nurse labour process experience.

The practice of advisory nursing in Sweden is based on the nurse’s skills in asking appropriate questions and encouraging the person to talk about him- or herself. Nurses have complete flexibility and autonomy to direct the conversation within the frame of their professional training. The work, i.e. the pattern of questioning, is not standardized, either in the form of prompt or by use of explicit questions. It is, therefore, the responsibility of the nurse to conduct interviews and take the opportunity to gain valuable information on the person’s problems, reaction to his/her illness and other factors that could influence the intervention step, such as a caller’s social and cultural background.

The Swedish situation has parallels with Canadian practice and experience (Collin-Jacques and Smith 2005:14-16). As in the Canadian case the Swedish system consists of guidelines, at the same time as it is based on a medical process of symptoms. The nurses are free to ask questions and make assessments according to their experience, knowledge and skills, but the support that they got from the system is mainly grounded in medical evidence and research. The practice in the Swedish HCC (Health Call Centres) followed the nursing process: assessments, planning, intervention and evaluations in several phases in order to open the conversation and interpret to the caller’s question/problem.

At the beginning of a call a nurse speaks to the caller by saying they have reached the health call centre and by introducing herself, using first names. Some tele-nurses also add their profession, for example ‘Marie, registered nurse’. Then nurses ask the caller for
his/her problem or how she can help. The nurse enters a kind of listening phase when she allows the caller to describe their problem/s, during which time the nurse actively listens. According to the prescribed practice in training and the induction on call routines, the dialogue between nurse and caller ought to vary in depth and length depending upon the caller’s particular problem. However from observations made in the call centre, variation also followed nurse’s practice. Several nurses felt it was very easy to intervene almost directly and give information and advice immediately (participant observations in TAN West May 2006). This was also confirmed by a National nurse trainer

“I perceive it as the tele-nurses sometimes were so anxious to help that they didn’t give the help seeker [caller] the time needed.’ (Nurse advisor and trainer March for II77 2007).

Despite such variation almost everybody (around 97%) of 400 users interviewed in two studies carried out in 2003 and 2006, said that they felt that the nurse had provided them with enough time to express their needs.

Software use in TAN West

Regarding the software used in TAN West it was a computerised knowledge infrastructure divided in three main parts following the nursing process: i) anamnesis and/or questions ii) reason of contact iii) self-care advice and iv) assessment, advice and measures. With help from the system the tele-nurses asked questions, made assessments, gave advice and educated as well as referred to appropriate care if necessary. For each call the tele-nurses filled in a ‘patient documentation’, i.e. the software a kind of call record card for each caller.

The first phase was leading into a situation, where the nurse asked all kinds of questions in order to capture important clues and analyse adequately the caller and their problem. The next phase concerned analysis/assessment. Here the nurse starts to note the callers’ anamnesis and/or questions put to the nurse. If it is possible the nurse writes directly into the computer – the descriptions that the caller is given, what kind of question(s) were in focus and the nurse tries to summarise the caller’s history in their own words as well as those of the caller? The part of the system called ‘reason for contact’ contains a long list with different main and sub-titles with different symptoms and diseases. For example under the title “Psychiatry” there is a sub-title called “anxiety and nervous disorders”. The ‘reason of contact’ is there in order to help the nurse with the description for a particular disease.

The nurse asks all kinds of questions in order to get a better picture of the caller, his or her symptoms and the urgency of treatment required. To help her she has the computerised decision support system, where different symptoms are described, including suggestions of questions to ask. She can also use books, ring up other healthcare staff or discuss things with the call with her colleagues.

The final phases consider the decision and the conclusion of the conversation: The tele-nurse gives her advice or referral, together with the explanation behind the decision. Moreover, at the end of some phone conversations tele-nurses advise the care-seeker to call back if the problems continue and in certain cases, especially with sick children, the nurse can agree on calling back the patient within one or two hours to assess how things have developed. Before the nurse takes a new call she should document the previous one’s symptoms and help given (advice, referral etc) and sign with her name that she has been
the one who has treated the care-seeker. There is an automatic break of three minutes between each call. However the nurse might regulate this break if she needs more time to document or if she wants to speed up the process. She is all the time aware of how many people are queuing to get through and how many nurses are working. Therefore an experienced tele-nurse might adjust the three minute break according to how she perceives the call volumes and labour availability.

Tele-nursing is based on clinical consultation and filtered through the nursing practice of the Swedish healthcare in general but also through the particular training, policies and technical requirement in the TAN West health call centre. The nurses use abstract knowledge and clinical judgements in order to assess peoples’ needs and this forms a holistic perspective considering the patient and their problem embedded in their particular social context. The Swedish system provides automation from the call centre (ACD) technology – the order and the pace of the calls and the tele-nurses have no say in what call to treat next. But tele-nurses can decide how long the call should take as, the length of call is socially created and a result of working methods and nursing practice. Hence, nurse advisors are not subordinated to designed algorithms which are fragmentising the nursing process.

The work process is in some way standardised through institutional factors, such as the socialisation of Swedish nurses in nursing universities and other places for education, training and formation including the clinical practice at work in hospitals, clinics, primary health centres and nursing homes as well as training, policies and practice provided by the health call centre. Furthermore, the interaction within each occupational group of nurses and tele-nurses as well as the interaction with other occupational groups (mainly the physicians) has decisive importance for the work practice. The medical process is the heart of healthcare and although separated in distance, it is the physician, symbolically represented by the medical content of the decision-system (here the ‘reason of contact’) is the platform for the health call centre. In a professional organisation like healthcare rules and regulations have a central role (e.g. Mintzberg 1979). Similarly, the Swedish Healthcare Act and other Acts consider the obligation to document all healthcare interventions and the privacy of patient information, all of which constitute a mandatory framework for the labour process in Swedish tele-nursing. But the technological aspect of the computerised system for decision-support, more precisely the software, frames tele-nursing.

Thus, Swedish tele-nurses have more autonomy over their work when compared with British tele-nurses. However, autonomy has its drawbacks as well. As we stated above, CAS represents both a restriction and a protection for NHS Direct NAs. In contrast, the Swedish telephone nurses experience and express professional vulnerability while being more autonomous than nurses in polyclinics (more like district nurses). They take professional responsibility for the decision given and their registration/licence might be withdrawn in the worst case.

‘She said they have destroyed her career…. In other businesses, faults and deviations are related to organisational mistakes and are classified accordingly, as an organisational matter. When a person complains about something at a tele-nursing site, it is a professional matter. Her licence might be withdrawn in the worst case. But it is also very difficult to be scrutinised as a person and the decisions you have made... To have your professional status questioned...it is very, very frustrating... and not only for the person accused of the mistake but for the whole work group and the entire organisation. You get stigmatised ... and
then there is the writings in the newspapers....’ (Nurse advisor TAN West May 2003)

Similar to NHS Direct nurses, Swedish tele-nurses’ work is intensified by management’s pressure. Although these nurses have much more autonomy, the ‘call centre model’ is again part of the tele-nursing environment. The control has equally become an internalised control and tele-nurses witness how they check their daily ‘production’ if they have answered the numbers of call recommended - 6-8 per hour - or if they have to speed up their work rate during last part of the shift, in order to get compliance with call centre statistics.

‘You feel the pressure that you shall handle the 6-8 conversations per hour. For many of us, it means that you like to check your statistics in the middle of a shift to know how much you have done that day and if you need to work a bit extra’ (Nurse advisor TAN West May 2006)

Participant observation revealed that certain nurses worked very hard in order to follow the pace of the system. The documentation of the caller (the anamnesis, the assessment and decided interventions, and outcome) took a lot of time to conclude. Nurses tried hard to document within the pause between two calls given by the system. While some struggled with time, other tele-nurses showed a more self-confident attitude and if they perceived that they needed a longer pause between two calls they pushed the bottom to hold a conversation and asked the next caller to wait. For them it seemed obvious that they might need more time to be professional.

‘Between each call I got there is a time of 3 minutes for me to conclude the care-seekers documentation. Sometimes that time is not enough and you have to ask the following person to wait. I used to ask “would you please be so kind and wait while a finish the previous case.” It is important that the documentation is correct, understandable and gives a good representation of the conversation’ (Nurse advisor TAN West May 2006)

As we have already highlighted in the paper, the issue of nurses’ professional values and providing a ‘safe advice’ are important issues for NHS Direct and Swedish tele-nurses. However in Swedish TAN it seems that nurses’ professionalism is much stronger. Professional values are enhanced mainly by two factors: one, the use of more restricted software and the other a different division of labour within TAN call centres. In contrast to NHS Direct, in Sweden the only group handling the calls are the nurse advisors – there are no call handlers, no health information advisors and no librarians. The hierarchy could be described as flat, especially in the smaller health call centre. The work the roles are not divided. The Swedish practice is that there is no difference between giving information and giving advice (cp FCC 2003). The fact that the nursing occupational group dominate TAN also facilitates informal cooperation and teamworking.

"Basically, it is individual work. However, the coherence in the group is strong and we often ask each other for advice. It is individual work in a group.” (Nurse advisor 1, TAN South, March 2005)
"We all now work with advice...we use our special expertise in the group, we have e.g. midwives and nurses specialized in child health care...No, (we do not use the technical possibility to communicate in phone between nurses) you need to get up and move sometimes ...It is nice to stretch and take some steps, I think.” (Nurse advisor 2, TAN South, March 2005)

As already pointed out in other papers (Smith et al. 2006), informal teamworking and co-operation among tele-nurses was part of NHS Direct call centres as well. Through these spontaneous practices NAs were able to exchange their previous clinical knowledge. However, it seems that teamworking is more widespread among Swedish tele-nurses. This might be the case that teamworking itself is widely utilised among other occupational groups and work environment (Lindgren and Sederblad, 2004). Again, specific institutional features influence the work process of tele-nurses.

CONCLUSION

Returning to our original research question, namely was there a ‘dominant recipe’ of tele-nursing influencing the development of this new service and the profession of tele-nursing? Up to now the answer is no. As our comparative study points out, a variety of institutional differences influence the tele-nursing profession. It is also true that NHS Direct has adopted an American Software already utilised by tele-nurses in Colorado. However as the paper highlights, the Clinical Assessment System (CAS) does not provide a ‘dominant template’ for tele-nursing profession. It is true that the software facilitated the use of a mass model, however, as our interviews pointed out, NHS Direct nurse advisors were still able to use their clinical knowledge and previous clinical experience, and could resist the ‘rigidity’ of the software.

Moreover, the software cannot be perceived as a ‘global recipe’ since we were unable to find other countries, apart from the UK and the USA which share the same technological supporting tool. And again, common decision support software does not mean that there is a commonality in the operation of the system. National difference will be still present (e.g. the introduction of new algorithms in CAS which reflect the NHS agenda and the different ways of deploy the systems by NAs).

It appears that national institutional rules over-ride any sign of a dominant best practice emerging. Many polarities come out from our comparison: public versus private, centralisation versus de-centralisation, restriction versus autonomy, protection versus personal accountability. These differences reflect the different institutional context of the two countries. However these contrasting points are not settled down. For instance, recent initiatives in Sweden, such as the adoption of a unique software in several TANs, put forward a ‘centralisation tendency’, which is similar to that one adopted by NHS Direct. An interesting point is that the two countries shares, is the focus on safety (within NHS Direct through the software and in TAN via nurses’ personal responsibility) and target orientation (call times look about the same between the two countries). In both countries these two aspects seems to contradict and complement each other. We do not yet know which one will win.

The country comparison highlights the fact that tele-nursing is new and evolving, and there is no settled work organisation or model of service delivery in either Sweden or the UK. The early pattern in the UK was for there to be competing clinical support software between different NHS Direct sites, with the service eventually adopting a common software across all sites and between NHS Direct and NHS24 (the Scottish service). In
Sweden, there has also been software diversity, as well as geographical and public-private differentiation, but we have seen that the State has been promoting a national standard, and encouraging participation in one software system. We might predict that convergence is more likely than divergence as the systems settle down, and therefore a national market for international medical decision making software might open up. In the Swedish context the existence of a private firm alongside public actors complicates the picture, but there is not reason to assume that the UK is not immune to privatisation as the service peels away from administrative controls within the NHS.

The theoretical explanation for these observations are that in comparison with the commercial sector, health care systems remain firmly embedded in national rules, which inhibits a ‘dominant recipe’ emerging and therefore, unless rules move to a EU level of policy action, we are likely to continue to see patterns of diversity.

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