Developing a Preliminary Model of Healthcare Matching as a Service - Usefulness and Barriers

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Abstract

Purpose The Swedish healthcare system is dealing with long waiting times for patients and an undeveloped degree of coordinating capacity to patients. Against this background, the purpose was to discuss and develop a preliminary conceptual healthcare matching model and discuss the barriers of healthcare matching.

Methodology. There was collaboration between academia and practitioners in the Skåne region during the period of 2013-2016. Studies of policy documents, scientific articles, reports, meetings with strategists and attendance at a so-called coordination meeting served as a basis for gathering empirical data. Theoretically, the study draws on the concepts of matching and coordination.

Findings. A useful healthcare matching requires an advanced matching in order to balance capacity to the needs of the patients. Matching accentuates the two-way interaction, i.e. co-creation between patients and providers. Both providers and patients could benefit from using matching. This implies the usefulness of healthcare matching.

Several barriers must be paid attention to. The barrier element concerns the legislation that includes minor incentives to cooperate across county council boundaries. The underlying tendencies concerning medico-technological developments and the organisational specialisation of healthcare, economies of scale and bureaucracy, are partially conflicting notions. The strong professional identity in healthcare also constitutes obstacles concerning matching.

Practical implications. In order to succeed in the notion of healthcare matching, there must be an understanding of mutual needs and cooperation by the stakeholders involved.

Originality/Value. This is the first study of healthcare matching in the Swedish healthcare.

Keywords

accessibility, barriers, co-creation, coordination, cooperation, healthcare matching, service

Introduction

Challenges in the Swedish healthcare

There is increasing pressures on health systems across the world to have connecting links that will create appropriately targeted and delivered services for patients (Saltman, 2014). In Scandinavian healthcare different models have been launched in order to improve coordination of healthcare services (Ahgren, 2014, Nordgren, 2011). Healthcare services are crucial to coordinate in order to increase accessibility for care-seekers (Nordgren and Ahgren 2010). The need of coordination of healthcare services in Sweden for patients is underlined by Iversen (2014) and by the official Swedish study of effective care (SOU 2016:2). If capacity is not coordinated optimally, the patient can end up on the "wrong care level" or in a queue, entailing medical risks to the patient (Nordgren, 2011).[1]

The current organisation of healthcare is unable to create healthcare of equally good accessibility throughout Sweden (Winblad and Hanning, 2013). One reason for this deficiency may be the fact that the Swedish organization of producing care within a limited economic and geographical framework, does not always match the demand for care. The coordination of capacity between different healthcare units within and between county councils is perceived being insufficiently evolved (Nordgren 2011, Iversen 2014). The consequence of this is that there may be resources available at one hospital while there is a shortage at another one (Nordgren, 2011).

Another problem, a barrier, is the fact that healthcare units, under the Swedish Healthcare Act, have been responsible for meeting the population's healthcare needs within their county council catchment area. This means that the county councils' interest in providing freedom of choice across county council´s boundaries have been limited (Winblad, 2007).

A further problem is that the vertical division of medical work leads to diminishing possibilities of coordinating care flows (Vinge, 2005). There are also the difficulties of transmitting the referrals and medical record information accompanying the patient (Nordgren, 2011).

Healthcare services cannot be stored (Berry and Bendapudi, 2007) and a characteristic of the cost structure is high fixed costs. Thus, it is of interest to utilize capacity well (Lovelock and Wirtz, 2007).

In order to solve the problem with long waiting times a healthcare guarantee was introduced in 2005 (Winblad and Hanning, 2013). It is summarized as 0 - 7 - 90 – 90. The numbers symbolise the number of days a patient needs to wait before gaining access to primary care, doctor's appointments, specialists, and treatment (Nordgren, 2012). This guarantee works if it is accompanied by sanctions on healthcare providers to ensure the guarantee is met or allows greater choice of providers.

A new patient act, entailing freedom of choice for primary care throughout the country, was introduced in 2015. It implies that there should exist available information regarding the supply side of providers. Rules governing freedom of choice and the healthcare guarantee seem to have overestimated patients' willingness to opt for choice (Nordgren, 2010). The knowledge about the patient law as well as the obligations from the healthcare toward the patients is low among people. Furthermore, the patient law has not significantly changed the way in which the healthcare system works (Myndigheten för vård- och omsorgsanalys 2016).

In summary this introduction shows that healthcare in Sweden is dealing with problems regarding accessibility for patients.

Theoretical framework - introducing the concept of matching in healthcare

As pointed out above, the different initiatives of coordination in the Swedish healthcare sector have not been successful in creating equal accessibility to care-seekers. None of the initiatives has specifically looked into the capacity and needs in order to establish equilibrium between these aspects. This paper argues for the introduction of 'matching', as an approach to improve healthcare accessibility for the patient, given the difficulty to guarantee care access in the promised timing.

The general term of matching has its origins in economics. According to the Royal Swedish Academy of Sciences, which selected the winners of The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2012 “The combination of Shapley’s basic theory and Roth’s empirical investigations, experiments and practical design has generated a flourishing field of research and improved the performance of many markets.” Their research focuses on markets, which do not use prices to match supply and demand. In a general meaning matching occurs when one is able to cope with another. In economic discourse, matching is used in conjunction with the labour market (Diamond, 1982). According to Roth (2015, p. 4) “matching is economist-speak for how we get the many things we choose in life that also must choose us”. It is used in the matching of donors of kidneys and patients (Roth, 2015). Other examples of the use of matching are public school choice and medical match for new doctors (ibid.). Based on Roth´s research, Steiner (2010) discusses matching of donors to recipients in order to balance surpluses and deficits of organs. Steiner (p. 254) claims that: “Markets match supply and demand not simply by the price mechanism alone, but thanks to other forms of commerce, such as personal relationship and a wide variety of market devices.”

The intention with the specific concept of *healthcare matching*, which was introduced by Nordgren (2009, 2011), is to find the right match between the individual and the healthcare providers, concerning for example time and competence and to avoid mismatches. In Nordgren, 2011, healthcare matching is defined as “a tool for planning, controlling, and booking care efforts on the basis of matching the available capacity during a given production stage”. The care units having capacity in within a certain area is able to offer this to another unit and vice versa. Hence, healthcare matching is a more specified form of coordination, a term frequently used in healthcare, taking into account the recources in healthcare and the needs of the patients (ibid). The term coordinate, entails coordinating various operations and activities between units in the benefit of patients (Gulati, 2007). Cooperation encompasses the more general aspects of “working together” (Gulati et al., 2012).

Ahgren and Axelsson (2005) include five different stages of integration of healthcare services in a continuum. Starting with a zero point, called full segregation followed by a stage called linkage which includes interaction between existing organizational units, deciding what shall be done, by whom and when. The third stage, called coordination, includes interaction in networks, but still through existing units in order to share clinical information and coordinate different health services. The fourth stage is cooperation including network managers to improve contacts between managers. The last stage is full integration, where pooling of resources creates new organizations, which will meet the needs from patients.

Linking the healthcare matching concept, with the necessity of integration in healthcare, we argue that healthcare matching will as well be included in the continuum of increased integration and may take place at the different stages of integration. We indicate that a successful matching requires a certain level of integration. Hence, matching could be

included in the last stage of continuum, where pooling of resources implies an advanced matching in order to balance capacity to the needs of the patients.

A few articles concerning matching of healthcare services appear in the literature. One example is how professional service firms in the form of obstetrics practices, coordinate physicians specialized in certain medical problems and match these specialists with patients. Matching and increased specialization among physicians thereby represent two sides of the same coin: patients are matched when they are treated by specifically trained physicians and physicians are specialized by gaining experience from treating patients with a specific diagnose (Epstein et al., 2010). Another example is the use of advanced access scheduling, which requires matching of daily healthcare provider capacity with patient demand (Qu et al., 2007). Fieldston et al. (2014) as well discuss a form of scheduling describing a tool for defining and measuring workload and workforce in a hospital setting in order to match the two. Hall (2011) discusses matching of healthcare resources (providers, rooms, equipment, supplies, organs, devices and instruments) to patient needs in time and place as a matter of planning capacity. Duggal et al. (2015) propose a technical solution to the need of improving matching of patient records from disparate systems and providers in order to catch the right patient information in the right time, being matched to the right person. In the Swedish healthcare organization an evaluation of a system regarding the dimensioning and matching of hospital beds in a municipal is developed. The conclusion is that there is a lack of such a system (Landstingsrevisionen, 2013). Other examples are the HealthCare Guide, which provides care search advice by telephone, and the private health insurance, which delivers service to customers (Nordgren, 2011).

The articles regarding matching in healthcare mentioned above, describe attempts to plan special course of events such as patient information reaching the right person, advanced personnel scheduling, patients being match to the right specialist etc. Based on these findings we argue that there is a knowledge gap regarding an overall healthcare matching model of capacity and needs in healthcare.

In this article healthcare matching is defined as the pooling of resources in order to balance capacity to the needs of the patients, i.e. a form of specified coordination (see also Nordgren 2011).

Purpose

Swedish healthcare is dealing with an undeveloped degree of coordinating capacity to patients. Against this background as well as the knowledge gap regarding matching of total capacity and needs in healthcare, this paper has a twofold aim: 1. to discuss and develop a preliminary conceptual model of healthcare matching based on empirical findings and earlier research, and 2. to discuss in general the main barriers of healthcare matching.

Methodological aspects and disposition of the text

Theoretically the study draws on the concepts of matching and coordination in healthcare (see above). Literature scanning was done for peer-reviewed articles, on the use of the concepts of matching and coordination in the context of healthcare. The selection criteria were to prioritize articles based on qualitative studies during the period 2003-2016 and being clearly included within the discourse of matching and coordination. The research method was inspired by the methodology of engaged scholarship '…a participative form of research...in studying complex problems.' (Van de Ven, 2007). This form of research emerged in the cooperation between the authors of this paper and practitioners (strategists

and physicians) in Region Skåne, where transfer of knowledge and experience were contributing in the research process.

In order to discuss how to develop a healthcare matching model, studies of policy documents, scientific articles, reports (Region Skåne, 2013; 2015), seven meetings, initiated by the researchers, and attendance at a so-called coordination meeting served as the basis for gathering empirical evidence. All meetings lasted between three and four hours and were recorded, transcribed and systematized according to topics such as coordination, matching, availability, care capacity and care needs in a healthcare matching model. Another topic discussed were how Region Skåne presently works and how they would like to work with coordination. These topics crystallized out and were chosen as essential after the first meeting. In this way, material from a previous meeting could be used in the next meeting. This was to facilitate both future meetings and the writing of the report.

Meetings took place at Region Skåne Malmö Office in the period 2014-12-10 to 2016-06-14. At the first seven meetings, present people were a health care strategist, and an accessibility and coordination coordinator, both at Region Skåne and two of the authors.

After each meeting a summary was written and analyzed in order to provide a basis for the next meeting. The researchers actively participated in the discussions, added knowledge and created theoretical frameworks for the discussions. At the coordination meeting (during 6 hours) seven accessibility coordinators from different hospitals in Region Skåne were present. The role of the researchers was to observe and note how a coordination meeting was conducted.

In the development of the healthcare matching model there has also been continuous discussions between one of the researchers and a physician (earlier head of a clinic at the University hospital in Skåne) regarding the development of a model of healthcare matching (see the section ‘Developing the preliminary conceptual healthcare matching model’). This discussion was inspired by the research concerning matching in Nordgren (2009, 2011).

One of the authors will use the knowledge he gained as a hospital director in Sweden between 1983 and 1999. During this period, he systematically made notes regarding events and important communications from the field (cf. Czarniawska, 2007). Experiences from cooperation with other hospitals in order to reduce waiting lists for patients as well as how to use capacity effectively (Nordgren, 2003), is knowledge that has inspired the discussion. Moreover barriers to cooperation were observed and discussed in the section “Barriers to healthcare matching”.

The article starts with describing challenges in the Swedish health care system. The text continues with the purpose followed by methodological aspects. To illustrate the problems with accessibility there is an analysis of how Region Skåne works towards coordinating capacity for patients since 2005. Then follows a discussion regarding prerequisites for and the way concerning the development of a preliminary conceptual model of healthcare matching. Then there is a theoretical review of the field of cooperation across boundaries with the emphasis on discussing barriers to cooperation. Finally, the conclusion of the study is drawn.

Coordinating the patients of Region Skåne

Description of the overall coordination work of patients

In this section, we show how Region Skåne works towards clarifying areas that suffer from accessibility problems and where there are operational activities with released capacity in the healthcare catchment area. The basis of Accessibility coordinators (ACs) work is

included in certain praxis (Region Skåne, 2013). ACs at every hospital have the goal to optimise Region Skåne's joint resources for appointments, examinations, and treatments with the aim of working towards the care guarantee being honoured and Region Skåne's patients obtaining care within the publicly financed healthcare provided by Region Skåne. The network of ACs consists of people appointed by the respective hospital administrations, points of contact for publicly - financed private healthcare, the healthcare pilot (vårdlots) function, and an overall AC manager at the regional level. Since 2005, coordination models has been developed for the coordination of healthcare guarantee patients, coordination towards released capacity, coordination in the event of changed assignments, and for specific fields of operation.

Work conducted within the AC network aims at creating effective coordination of patients between various actors, i.e. the operational activities conducted within the home administration, existing "healthcare coordinators", and accessibility coordinators at other administrations. Furthermore, ACs must be up-to-date and able to communicate the home administration's assignments and agreements with external healthcare providers, the home administration's waiting situations (range, problems, capacity and waiting times), as well as other administrations' waiting situations. ACs support activities within the home administration when there is a need to coordinate patients or patient groups. They are acting as a link between activities in the home administration and the healthcare pilot when there is a need to coordinate patients or patient groups to/from the Southern Healthcare Region and the rest of Sweden. The healthcare pilot is necessary to use when own and region - internal resources are lacking, and care has to be found outside the county. The usual thing for the AC is to contact the healthcare pilot who then explores the possibilities of obtaining care within the region. Then treatment outside the county is initiated.

On the instructions of the overarching accessibility coordinator, ACs request data from activities within the home administration regarding, for instance, assignments, production, inflow, and capacity. ACs must have good knowledge of the care guarantee and other patients' rights, and be able to answer general questions relevant to their home administrations.

The result of the work of the ACs networks is that the coordination of waiting patients for the care guarantee and to released capacity has increased between 2006 and 2016. In 2016, 22 079 patients were coordinated in total compared with 1 869 in 2006 (Nilsson, 2016).

The coordination of patients towards released capacity was analysed by Region Skåne's auditors (2013). One assessment made was that the coordinators' possibilities of implementing their assignments are dependent on close cooperation with the heads of administration and operations.[2]

The description above of the coordination activities points at the need of introducing healthcare matching as a method for coordinating patients in an effective way in Region Skåne.

Analysis of the work of coordination of patients

In the text above has been discussed how an overall system for coordinating patients and their capacity works in practice. Attending and analysing the coordination meetings as well as studying the reports stating the outcome of coordination, an important problem became apparent. It is clear that the present coordination work is not solving the accessibility

problems in healthcare. The work with coordination in Region Skåne began already in 2005 and since then it has developed and increased yearly. This was not the initial aim when the coordination started. Rather it was initiated as a temporary solution in order to solve the urgent problems (Nilsson, 2016).

Much of the coordination work is done by accessibility coordinators (ACs) and by an overall regional AC manager. The ACs can be seen as coordination 'champions'. Central for the work conducted within the AC network aims at creating effective coordination of patients between various actors, i.e. the operational activities conducted within the home administration, existing "healthcare coordinators", and availability coordinators at other administrations. It should be underlined that the healthcare pilot is necessary to use when own and region - internal resources are lacking, and care have to be found outside the county.

The coordination of patients requires information on care capacity and care needs. This coordination is currently being done manually at the coordination meetings. A further observation is that there is a lack of an IT-system, which could possibly do the coordination work (cf. Duggal et al., 2015).

As shown, the term coordination is frequently used in healthcare. In the discussion it is notable that the verb coordinate is used in the meaning of expressing an action followed by a thing or a person, for example coordinate referrals or patients. In the coordination process, a one-way communication is performed. Contrary to coordinate, matching also expresses an action, but between the patient and the physician, across boundaries and inside units. In that sense, matching indicates a two-way interaction. On that specific basis we claim that it is insufficient to use the one-way concept coordination when forming care processes that optimize the accessibility. Should Region Skåne and other healthcare providers rather benefit from using healthcare matching through a model reflected on in the next section?

Developing the preliminary healthcare matching model

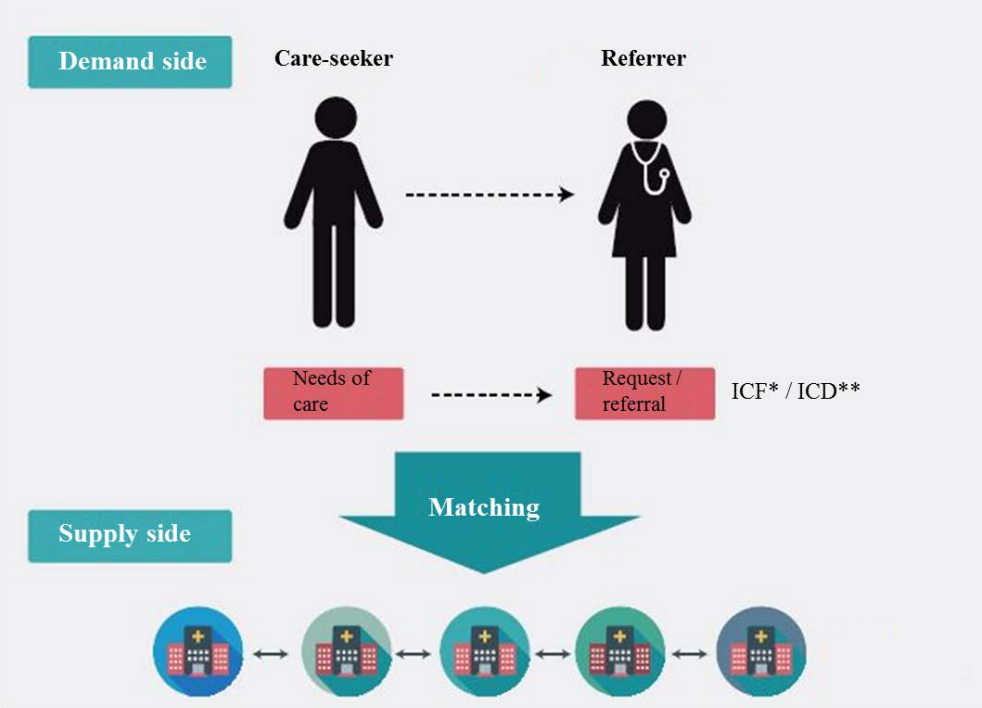
In this section we reflect on and develop a preliminary conceptual model of healthcare matching, based on analysis of empirical findings and the conditions of healthcare matching in Nordgren (2011). This article shows that there are several reasons for the deficient coordination of the care sequence as well as why systems for healthcare matching resources across organisational and geographical boundaries have not been developed. The patients themselves state that they value to have support in healthcare matching their needs. By analysing the empirical findings and the effects of the reforms on free choice and the care guarantee (Anell, 2008; Nordgren, 2010), the conclusion is drawn that a service system based on matching needs to be developed, whereby the accessibility of services could be monitored and the patient's choice of provider is matched. A functional matching is essential for hospital efficiency and satisfaction among staff (Fieldstone et al., 2014). These are also factors that will affect the accessibility to healthcare.

By the term healthcare matching Nordgren (2011) considers a specified form of coordination, taking into account the resources and needs for establishing an equilibrium between them. The aim is to find the optimal matching between the patient and the healthcare system, including time and skills, and avoiding mismatches. An example of the latter is when booked times are sent to patients, who cannot reach the intended time but need to rebook.

Following Nordgren (2011) and according to the analysis of the coordination of patients in Region Skåne there are certain prerequisites that seems necessary to meet when developing the model:

- Knowledge of the patient's needs, desires and opportunities to co-create in the matching process
- Rules for care guarantee and freedom of choice of care which are made known
- Available information about capacity (services provided by various healthcare units)
- Coordinated IT systems for matching capacity, information management and administrative support, which are applied across county council boundaries

The healthcare matching model is illustrated in the following figure 1. This model, that is developed using Nordgren (2011) as a base, is further developed below, in cooperation with strategists and physicians of Region Skåne. It also uses the experience of the coordination of patients in the Skåne Region (see above).



* ICF – International Classification of Functioning, Disability and Health
** ICD – International Statistical Classification of Diseases and Related Health Problems

Figure 1. Preliminary healthcare matching model.

The starting point is that care-seekers want to use their freedom of choice and care guarantees. The model is based on cooperation between healthcare units with available capacity within a certain area, having the ability to offer this to another unit that lacks capacity and vice versa, with the aim of creating offerings for the care-seeker (cf. Qu et al., 2007). The units are being paired up through matching. Each unit is unique regarding the range of services, technology, premises, and delivery times.

A combined overview is required, of the range of available services for the respective healthcare unit and the possibility for care-seekers and their referrers to reserve this capacity. County council boundaries or public/private must not be an obstacle to making a reservation; instead, there must be incentives for cooperation.

The basics of healthcare matching can be divided into *a demand side* (the care-seeker's needs) and *a supply side* (services provided by various healthcare units). The demand side is about the referrer identifying, and making a description of, this need and being able to classify which healthcare measure needs to be carried out. This is done in a care request or a referral. If the referrer does not know which measures are needed; however, the need must always be able to be described. It is also possible for care-seekers to write referrals themselves. The need will then be assessed by the receiving clinic and who in turn can plan the necessary treatments. A standardised description of care requirements can be classified using ICF (International Classification of Functioning, Disability and Health) and/or ICD (International Statistical Classification of Diseases and Related Health Problems), e.g. impaired vision degree xx in left eye (ICF codable) due to cataracts (ICD). Following that, a care-request can be made by the referrer. This, too, is standardised and is normally constituted by the referral. In the care request, attention has to be paid to potential complications and to the care-seeker's specific profile when the care request is being produced. Once it has been implemented, each measure is given a certain value. For the referrer matching the care to the care-seeker, access to information is required concerning the range available.

The supply side consists of a description of the healthcare units and the services that these are able to provide. These services are defined according to a joint service catalogue, a supply catalogue. This range is classified using the National Board of Health and Welfare's codes for classifying healthcare measures, e.g. cataract operation, code zz. Exactly which services can be provided by the respective healthcare unit must be online so that there is certainty regarding which range is available. To the catalogue, it can also be appropriate to attach an open appointment book for doctors to enable the care-seeker to choose a suitable time.

The various actors interacting in the matching process include the care-seeker, the family doctor, the different healthcare units and an independent matching unit. Consequently, the matching is managed by an organisational matching unit on the regional or the national level, constituting an independent intermediary between the care-seeker and healthcare providers. This unit coordinates the demand and the supply sides, hence diminishing the surplus and the deficits of capacity of different healthcare units.

Several of the prerequisites for the development of a model for healthcare matching in turn place demands on cooperation between county councils, between hospitals, between hospitals and district health centres. These aspects as well as barriers to healthcare matching are being discussed in the next section.

Barriers to healthcare matching

Health-care matching is based on inter-organisational cooperation, which is not unproblematic. Cooperation strategies in general entail interactions between actors with different backgrounds, goals, and knowledge coming together for joint efforts. It is a matter, for instance, of roles, responsibility, and relationships and concerns issues of affiliation and shared conceptions. Many taken-for-granted principles of organising within one organisation can result in entirely different consequences in an inter-organisational relationship. Uncertainty, unclear boundaries, diffuse expectations, conflicts of interests and values, and cultural differences are all aspects which can often exist as problems when collaboration initiatives in general are put into practice (Planander, 2002, 2004; Huxham and Vangen, 2005; Gulati, 2009).

Concerning healthcare matching, it is a matter of the care-seeker being offered, under the care guarantee, accessibility to different healthcare alternatives. This is based on a

situation in which many different actors are involved. For the customer, it is important for this cooperation between the actors to work in order for him/her to be able to experience continuity during the care process. However, the driving forces behind the evolution of healthcare are not primarily focused on facilitating the development of systems that coordinate care for the patients (Anell, 2004). Instead, it may be the case that many elements of the healthcare profession, and its practice, constitute obstacles to cooperation. The vertical division of medical work and the inadequate continuity for the patient are areas that counteract possibilities of cooperating (Vinge, 2005). Instead, the horizontal aspect of organising needs to be accentuated. It is a matter of transcending silos in the interest of patient needs (Gulati, 2007). The matching of competence and capacity to the customer could, in that case, be improved.

Concerning accessibility and healthcare matching, we could speak of barriers, which impede matching. In the previous section, several prerequisites were specified which must be met in order for a healthcare matching to be able to develop. It is a matter of advanced knowledge that concerns the care-seeker's needs, desires, and possibilities of interacting in the system, national rules governing the care guarantee and freedom of choice that are made known, available information of capacity across boundaries need to be developed, something also applicable to coordinated IT systems for administrative support and capacity matching. Likewise, incentives are needed, for cooperation across institutionalised boundaries between healthcare units (Nordgren, 2011).

It is thus a question of a complex situation containing different elements. It is a matter of several different changes to established work routines and *IT systems in healthcare* (concerning healthcare pathways) and, not least, the development of new work routines and IT systems (Dent and Eason, 2014).

Different cultures and cultivated routines are to be dissolved and new ones developed. Adaptation and understanding of the respective party's perspective and background constitute an important part of this collaboration process (Bihari Axelsson and Axelsson, 2009). The fact that the development of cooperation efforts across organisational boundaries costs and takes time is important but often overlooked. The involved actors' different backgrounds and cultures can constitute a very conspicuous barrier. The differing interests of separate actors can encourage direct or indirect resistance to current changes since these can entail shifts of power and encroach upon these different actors' influence or autonomy, in the case of politicians, county council managers and healthcare staff (Winblad, 2007).

Furthermore, the county council legislation was developed as far back as the 1860s and is based on the distribution of the county councils' self-governance whereby these are primarily responsible for their own citizens' welfare and wellbeing (Gustafsson, 1987). These organisational and institutional prerequisites constitute strong traditions, but also contain minor incentives to cooperate across county council boundaries. This also manifests itself in the politicians' reluctance to cooperate (Winblad, 2007).

Politically - inherited and interwoven traditions. The distribution of Sweden's political power is rooted in the strongly - developed devolution of political decision-making to county councils and municipalities (ibid.) This manifests itself, for example, in politicians seeing themselves as representatives of democracy on a highly superordinate level where strong traditions of public governance remain, despite notions of the individual's freedom of choice and autonomy (Winblad, 2007). We argue that these traditions of putting the home county council's citizens at the forefront are in partial conflict with the notion of the care guarantee, which concerns the need to also see to customers across county council

boundaries. Similarly, it is in conflict with the organisational cooperation across these institutional boundaries.

Professional identity and interests. One prominent group in healthcare is the physicians who represent a profession where specialisation, norms, and independence are especially characteristic (Berlin and Kastberg, 2011). It is not uncommon for these professions to have a strong desire to safeguard their own specialist area. The actors are strongly incentivised to develop their own knowledge and profession, to practice (Persson and Westrup, 2009). In this area, a tradition has also developed of seeing queues as something positive. To get to grips with the problems, the government has invested major economic resources in compensating county councils that have shortened queues (Nordgren, 2012).

The *economic and administrative systems (as budget systems)* constitute an extensive and important part of organising healthcare (Berlin and Kastberg, 2011). These systems often differ, however, between county councils, thus counteracting the coordination and healthcare matching notions.

We have discussed some of the political and organisational barriers in general and in healthcare. There are different tendencies within medico-technological developments and the organisational design, where specialisation, bureaucratisation, and economies of scale are powerful driving forces (from healthcare's point of view) that may be pulling in different directions bringing consequences which are partially in conflict with the intentions that exist around the care guarantee, freedom of choice and accessibility (from the customer's perspective). The discussion concerning accessibility and the care guarantee can sometimes be perceived more as a rhetorical element than as a real political desire to be put into practice (Nordgren, 2010).

What we are able to find as a common denominator in several of the different barriers discussed is the issue of understanding the whole and the element of incentive. In general, the creation of shared conceptions and the management of unclear boundaries and diffuse expectations are recurring themes when cooperation across organisational boundaries is discussed, regardless of whether it concerns the private or the public sector (Planander, 2002; Huxham and Vangen, 2005; Hibbert et al., 2008).

Finally, we argue that it is not least a matter of making visible the cooperation incentives for the actors involved, i.e. creating a win-win situation whereby the different actors involved feel that they themselves can "earn" from a changed attitude. The existing incentives, that are present in the political and organisational areas, can in the worst case, be seen as conflicting with a cooperation solution. At the same time, it may be the case that the multiple organisational changes that have taken place over the years have caused certain "tiredness" in the actors involved (especially healthcare staff), which can be an obstacle to further change. The notion of healthcare matching can then be a shared but independent organisational function that coordinates and matches supply and demand, and which constitutes an intermediary between patients and healthcare providers.

Conclusion

Healthcare matching is discussed as a concept, and is developed as an approach to improve accessibility (service quality) to care-seekers in Sweden. Matching enables to avoid ad hoc resource decisions in order to reduce queues. Healthcare matching implies a two-way interaction where account is taken to both needs and capacity of different kinds. Coordination, as it is performed in healthcare of today, is a one-way action with the goal of giving care, no consideration taken to specific patient-related wishes and desires.

The first conclusion is that there is a need for healthcare matching being useful at the different levels of integration of healthcare services. A successful matching requires a

certain level of integration. Thereby it indicates matching could be included in the last stage of a continuum where pooling of resources implies an advanced matching in order to balance capacity to the needs of the patients. Although matching could be seen as rather instrumental it still accentuates the two-way interaction, i.e. co-creation between patients and providers (referrers).

The second conclusion is that healthcare providers could benefit from using matching through a healthcare matching model, which is developed in this article. The matching takes place online via an independent matching unit offered to the care-seeker and the referrers.

In order to achieve this matching, several barriers of political, administrative and economic aspects must be paid attention to. The barrier element concerns the legislation that includes minor incentives to cooperate across county council boundaries. The underlying tendencies concerning medico-technological developments and the organisational specialisation of healthcare, economies of scale and bureaucracy, are partially conflicting notions about freedom of choice and accessibility seen from the patient's perspective.

Other barriers include the traditions of strongly devolved political decision-making and the associated sharp boundaries between county councils. The strong professional identity, whereby the safeguarding of your own profession's special field dominates, also constitutes obstacles concerning matching.

The implication of this article is that in order to create good accessibility to healthcare, it is of value to coordinate for example patients and referrals. This could be improved by matching to the applicable physicians and to treatment in time. Furthermore, it is necessary to cooperate between units and across boundaries and other barriers. The parties involved must then accept mutual needs and goals, shared risks and expectations.

Limitations

The result from this study comes from experiences within a single regional setting. The result might still be applicable since the organization of the healthcare system in Sweden does not differ between regions in a way that will impede a matching model to operate.

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[1] In Cederqvist (2008) several patients describe how they have had to wait, have met the “wrong” physician, have been misunderstood, and have not been considered party to their own care; descriptions which can be interpreted as mismatches. It is a matter of avoiding unnecessary deaths and suffering, and unwanted waiting times (Nordgren, 2009).

[2] The economic transfers were not routinely coordinated with the coordination of patients.