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Document Version
Accepted author manuscript

Published in:
Social Science & Medicine

DOI:
10.1016/j.socscimed.2020.112786

Publication date:
2020

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Citation for published version (APA):
Pedersen, K. Z., & Roelsgaard Obling, A. (2020). ‘It's all about Time’: Temporal Effects of Cancer Pathway Introduction in Treatment and Care. *Social Science & Medicine*, *246*, Article 112786. https://doi.org/10.1016/j.socscimed.2020.112786

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Journal article (Accepted manuscript*)

Please cite this article as:
Pedersen, K. Z., & Roelsgaard Obling, A. (2020). 'It's all about Time': Temporal Effects of Cancer Pathway Introduction in Treatment and Care. Social Science & Medicine, 246, [112786]. https://doi.org/10.1016/j.socscimed.2020.112786

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'It's all about time': Temporal effects of cancer pathway introduction in treatment and care

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Abstract

In the last decades, increased focus on time optimisation in healthcare services has led to introduction of new standardising technologies that alter the temporal structures of treatment-trajectories and work-practices. This paper presents a qualitative study of the temporal effects of introducing cancer pathways at a university hospital and a cancer rehabilitation centre in Denmark. Building analytically on a combination of Eviatar Zerubavel's and Norbert Elias's sociological studies on time, we show how the introduction of pathways has intensified the separation of cancer treatment and psychosocial support into two decoupled but mutually interdependent temporal orders. We furthermore demonstrate how pathway introduction has increased the focus on time as an overarching quality standard for treatment and care across organisational boundaries. Based on this analysis, we suggest that to understand current standardisation and optimisation processes and their unintended organisational effects, temporality should be treated as a research object of its own. Rather than analytically pre-empting temporal dichotomies or a priori assigning normativity to particular temporal structures, we call for thorough empirical investigation of temporal patterns in and between healthcare organisations.

Keywords: Denmark, time, cancer pathways, acceleration, standardisation, temporal patterns, rehabilitation

Introduction

This paper examines the temporal effects of cancer pathway introduction in healthcare services. During the last decades, healthcare services in western countries have experienced steadily growing pressures to streamline and optimise the basic functions and organisation of care and treatment. In this context, *faster* has often been corollary to *better* quality, not least within the cancer treatment field, where there has been significant political focus on reducing waiting and treatment times (Kreindler, 2010; World Health Organization, 2017). This increased focus on time has led to the introduction of new technologies to organise treatment and care. The ever-more popular integrated care pathway, also known as a clinical pathway, is a distinct organisational design inspired by industrial production enterprises. The major goal of pathway introduction is time optimisation, combined with standardised diagnostics and treatment and increased focus on joined up care and multidisciplinary cooperation (Allen, 2009, 2010, 2014; Bregato & Jacobs, 2003; Pinder et al., 2005; Martin et al., 2017).

As a standardising technology, the care pathway can be understood as part of a larger and well-described standardisation agenda in healthcare that accounts for attempts to standardise and monitor professional performance through protocols, guidelines, evidence-based medicine, audited practices, quality and safety systems and diverse managerial tools and performance indicators (e.g. Berg, 1997; Flynn, 2002; Power, 2000; Strathern, 2000; Timmermans & Berg, 2003). A key feature of new standardising technologies and processes is their ability to alter the interaction and mediation of different actors and social structures and thereby create new types of tensions in healthcare organisations, often with unintended consequences for clinical practices, relationships and accountability structures (e.g. Bevan &

Hood, 2006; Bowker & Star, 1999; McGivern & Fisher, 2012; Pedersen, 2018; Petrakaki et al., 2012; Roelsgaard Obling, 2012; 2018; Sharp et al., 2018; Timmermans, 2000; Waring & Bishop, 2010). Likewise, although pathways are introduced to solve tensions and smoothen relations between different medical specialities, treatment regimes, service users or organisational goals, they risk raising tensions to the surface or introduce new ones rather than resolving them (Allen, 2009; Pinder et al., 2005; Martin et al., 2017).

As implied in the much referred definition of standardisation as 'a process of constructing uniformities across time and space, through the generation of agreed-upon rules' (Timmermans & Epstein, 2010, p. 71; see also Bowker & Star, 1999), time is often implicit in studies of standardisation within medical sociology. This, Strauss et al. argued in 1985, can perhaps be understood as a more general problem of medical sociology. Although time and temporality are often part of analyses (e.g. Bowker & Star, 1999, pp. 177–184), temporal aspects of healthcare organisation and standardisation processes are only rarely treated as separate research objects.

This paper adds to previous sociological work on standards and standardisation of medical practice by focusing especially on temporal effects of current healthcare reorganisation through standardisation efforts. For this purpose, it is useful to look to sociologists of time, many of whom followed Durkheim's (1912/1965) structuralist approach, focusing primarily on the coordinating effects of temporal practices and routines (e.g. Sorokin & Merton, 1937; Zerubavel, 1976, 1979, 1980, 1981). Through the concept of *social time*, devices developed to measure and structure time (e.g. calendars, clocks and schedules) are here approached as standardising processes that help stabilise and regulate organisations, people and practices. Despite medical sociology's apparent 'lack of time consciousness' (Klingemann, 2000, p. 1232), some classic studies of temporal structuring within the healthcare field are notable. Glaser and Strauss (1965) presented groundbreaking work on the

temporal structure of dying patients' trajectories; Zerubavel (1979) provided a detailed field study of the temporal structure of a hospital's social organisation; Barley (1988) worked with temporal structures of professional work groups' collaboration and mutual understanding within hospital departments; and Sellerberg (1991) investigated time schedules as a means for collective actions and power plays in hospitals.

Adding to these classic studies, a small group of healthcare researchers' have adopted a temporal approach to the introduction of new technologies or interventions, managerial redesign, and current processes of rationalisation in healthcare organisations (Braithwaite & Westbrook, 2011; Georgiou et al.; Johnson et al., 2014; Klingemann, 2000; McBride-Stewart, 2013). With a focus towards change and reorganisation, these are studies that explore, for instance, synchronization challenges, temporal relations between old and new ways of organising or tensions between objective approaches to time and experienced time. As such, they are studies that largely resonate with more dynamic perspectives on temporal structuring (Adams, 2008; Elias, 1984/1992, 1939/2000; Orlikowski & Yates, 2002).

This paper contributes to the literature on time in healthcare research by developing an analytical framework that combines a structural and a dynamic perspective on time. The work of sociologist of time Eviatar Zerubavel (1976, 1979, 1980, 1981) inspired us to identify, conceptualise and understand temporal patterns and their structuring and coordinating effects. We supplement this perspective with insights from Norbert Elias's (1984/1992, 1939/2000) dynamic and more experiential understanding of time and temporal synchronisation challenges. This analytical approach enables us to focus on the relations between temporal patterns and temporal tensions or dualities within and between organisational contexts.

Empirically we explore intra- and inter-organisational temporal effects of introducing cancer pathways as a standardising technology. We base this analysis on a comprehensive

qualitative study conducted within two Danish healthcare sites – a major public university hospital and a cancer rehabilitation centre. In 2008, Danish hospitals implemented cancer pathways in an extraordinarily thorough and swift national process made possible through strict top-down management and massive financial support provided by the Danish Government (Vinge et al., 2012). Since 2009, cancer rehabilitation centres have been developed to deliver cancer rehabilitation and support the hospitals' reorganised, optimised services.

Through our analytical framework, we explore and compare the temporal patterns of tempo, duration, sequencing and timing in our research sites and show how introducing pathways has intensified the separation of cancer treatment and psychosocial support into two decoupled but mutually interdependent temporal orders. This separation has created new types of temporal tensions and intensified existing ones between acceleration and deceleration, fixity and flexibility, and synchronisation and desynchronisation. Based on this analysis, we suggest that to understand current standardisation and optimisation processes and their effects in and between healthcare organisations, temporality must be treated as a research object of its own.

Theoretical Framing

Following a Durkheimian (Durkheim, 1965) understanding of time as a dominant integrating and regulating social norm, Zerubavel is known for his analyses of time as a structuring and coordinating mechanism in the socio-temporal ordering of modern organisations; including the strict temporal routines that ordered life at medieval Benedictine monasteries (1980) and the hidden rhythms of organisational practices and work routines in hospitals (1979). Through detailed analyses, Zerubavel offers a lens through which to isolate and compare temporal patterns, including:

- *Tempo*, defined as 'the pace of activity' and 'the ratio of the "amount" of events to given periods' (1976, p. 90), which includes the tempo of recurrence rates and rhythms.
- *Duration*, defined as 'the time during which events last' (p. 89). Fixed durational spans can be standardised by calendar or clock (e.g. months and hours) or have socially inscribed necessity (e.g. military service or presidential terms). Although the latter are essentially alterable, their durational rigidity is often 'regarded as intrinsic to them' (1981, p. 6). Duration can also be a more qualitative, experience-based and flexible time pattern expressed through concepts such as, 'a moment', 'soon' or 'too long' (1976, p. 89).
- *Sequence*, defined in terms of its 'various limitations of simultaneity. … A sequential order is imposed to segregate social events in "before" and "after" in respect to one another' (1976, p. 89). Often, sequences are irreversible and include a specific juxtaposition of events. Sequential rigidity can be determined by nature or technique, but most often reflects social constructs that have become highly normative and ritualised (e.g. weddings, commencements, formal introductions; 1981).
- *Timin*g, defined as when an event occurs (1976). Similar to duration, the actual timing of events is either connected to a fixed, absolute time reference (e.g. calendar or clock) or defined by more experience-based, flexible standards and episodes, often called 'event times' (Tsoukas & Chia, 2002).

Zerubavel maintained that temporal patterns must be studied on different levels – either with attention to organisational features, such as their coordinating or dis-coordinating effects on tasks, work practices and roles, or to the meaning they convey for individuals who enact, reproduce and experience the patterns. Other studies of temporal structures echo Zerubavel's plea. For example, Barley (1988) argued that an organisation's temporal structure

serves two purposes: 'as a template for organising behaviour and an interpretive framework for rendering action in the setting meaningful' (p. 125).

In this way, the structural perspective on temporality recognises time's interpretative and experiential functions. However, the Durkheimian time-studies tradition has been criticised for being ill equipped to understand the relationship between social and individual time, to conceptualise how temporal norms are subject to variations in time, or to explain how change comes about in time organisation (Bourdieu, 1985; Tabboni, 2001). Therefore, to supplement Zerubavel's structural-functional approach with a more dynamic and experiential perspective, we turn to Elias's (1992, 2000) work. Although Elias (1992) agreed with Zerubavel (and the Durkheimian tradition) in that 'time has a co-ordinating and integrating function' (p. 53), he also drew attention to time as a meaning-making social symbol that varies in the course of the civilising process and is deeply anchored in individuals' habitus (Elias, 1992; Tabboni, 2001).

Three insights from Elias are of particular importance of this paper. First, Elias understood the rising demands for more exact and frequent scheduling and time management as a consequence of increased acceleration and interdependencies (in which everyone is linked to everyone else) of the modernisation process, which has resulted in an intensified need for coordination and synchronisation of social functions and actions. Thus, acceleration and formalisation are two sides of the same coin. Second, Elias sought to overcome common distinctions between the subjective and the objective and between the social and the individual in studies of time. He argued that time, as the regulation of 'people-in-nature' (1992, p. 8), depends on individuals' ability to train and internalise a particular habitus and capacity for synthesis and synchronisation. Third, although Zerubavel (1981, p. 65) was aware that differences in and between temporal orders could lead to temporal asymmetry, he primarily had an intra-organisational focus on the internal and stable temporal order within

sites such as hospitals. Elias (1992), in contrast, was more interested in time's dynamics, history and comparability and the 'problem of synchronization' (p. 45) that becomes more urgent in modern civilizations. Elias understood time as *timing*; i.e. as a human practice of 'connecting or synthesizing events in a specific way' (p. 96) and, more specifically, of relating one continuum of events to others. Thus, Elias focused on synchronisation and desynchronisation processes within and between different settings and periods. In that way, he also laid the groundwork for practice perspectives on time (Orlikowski & Yates, 2002) and dynamic perspectives on contradictions, tensions and changes in temporalities, including Rosa's (2013) focus on the dynamics of acceleration and deceleration in modern society and Adam's (2008) focus on temporal destabilisation as a 'clash of tempi' (p. 3).

Methodology

Research context

Cancer pathways were implemented into Danish hospitals in 2008 (National Board of Health, 2008, 2009) in response to an epidemiologic task force's conclusion that cancer patients had a lower survival rate in Denmark than in other Nordic countries (National Board of Health, 2000). By introducing standardised diagnostic procedures and accelerated medical and surgical interventions, the Danish Health and Medicines Authoritity sought to reverse the descending curve. The pathways' purpose was twofold: to 'diagnose and treat most [cancer] patients in *very fast* trajectories' (National Board of Health, 2008, p. 1; our emphasis) and to lead to a 'patient trajectory, where every single event has fixed demands regarding timing and content, and which follows a pre-booked plan' (National Board of Health, 2012b, p. 3). Since the programme's introduction, 34 cancer pathways have been systematically developed for cancer types. More than 135,000 patients underwent a pathway trajectory in 2018; of those,

more than 35,000 had confirmed cancer diagnoses or suspicions of further cancer illness (National Health Data Authority, 2019).

The introduction of cancer pathways was accompanied by a parallel interest in developing rehabilitation services outside the hospital. Danish municipalities are responsible for cancer patients' rehabilitation needs post-discharge. Since the introduction of cancer pathways, the municipalities have massively invested in cancer rehabilitation across Denmark. Moreover, non-profit organisations, most prominently the Danish Cancer Society, became increasingly involved in providing rehabilitation services and the society built several cancer rehabilitation centres inspired by the United Kingdom's Maggie's Centres (Heathcote, 2006). The centres are staffed by a variety of professional groups including cancer support specialists, nutritionists, therapists, nurses and psychologists.

In 2012, a rehabilitation pathway that obliged healthcare professionals in the hospital-treatment scheme to assess cancer patients' rehabilitation needs was developed to run parallel with illness-specific pathways. It specified that rehabilitation pathways include everyone that could be in need of rehabilitation, including patients in diagnostic and treatment phases, as well as patients that have survived cancer (National Board of Health, 2012a). An estimated 30% of all cancer patients require rehabilitation; however, the exact number using rehabilitation services is not well documented (http://www.cancer.dk). As the dominant organisational design in healthcare systems internationally (Allen, 2010), the hegemony of the pathway technology has effectively marginalised other systems for organising cancer care. Furthermore, intense political and public focus on meeting waiting-time targets have led to attentional and financial prioritisation of cancer care over other illnesses, such as lung or heart disease. Increased allocation of funds to cancer is a significant driving forces behind this prioritisation internationally (Funch, 2016; Kerr et al., 2018).

Data collection

Our analysis of the temporal effects of cancer pathway introduction in Denmark is based on comprehensive fieldwork. From October 2013 until January 2015, we conducted semi-structured interviews (N = 72) and observations (350 hours) at a major Danish university hospital and a cancer rehabilitation centre. Although this paper's analysis mainly presents interviews, the observations helped us to thoroughly understand work practices and the consequences of pathway introduction at each ethnographic site.

We conducted 31 semi-structured interviews with healthcare professionals – primarily surgeons – in the hospital's surgical departments for head-and-neck and gynaecological cancers, and 4 with patients undergoing treatment. The interviews where based on prior observations of interviewees primarily in the cancer ambulatories, where, for instance, first diagnostic consultations and examinations of newly referred 'cancer pathway patients' occurred. We further observed pathway coordination, medical conferences and everyday life at the departments. In all, we performed 150 hours of observation at the hospital.

At the cancer rehabilitation centre, we conducted 27 semi-structured interviews with rehabilitation workers and 10 with patients. These interviews were based on 200 hours of observing rehabilitation activities, such as training sessions, patient education workshops, counselling and staff meetings.

Our semi-structured interviews at both sites focused on the interviewees' experiences with cancer pathway introduction, paying specific attention to optimisation efforts, new time standards and re-organisation of work arrangements, collaborations and relationships. Although we based our interview guides on several common themes, we adjusted them to the interviewees by focusing specifically on prior observations. In this way, we were able to access thick empirical descriptions of and reflections on concrete empirical situations and dilemmas. Moreover, the specificity of our questions helped us limit more normative,

generalised or opinionated responses. All interviews were transcribed and coded with NVivo 11 software. Field notes were manually coded and refined in memos.

We supplemented our fieldwork with a structured analysis of the most important policy documents that have framed cancer pathway introduction in Denmark. Our selection included the two first national cancer plans (National Board of Health, 2000, 2005), which made cancer treatment a top priority in Danish healthcare policy, as well as the first cancer-pathway descriptions for the hospital-treatment (2009, 2012b) and rehabilitation (2012a), respectively.

Data analysis

We followed an inductive data-analysis approach using time as a 'sensitising concept' (Blumer, 1954). Understood as concepts that lack specific definition or specification of attributes at the outset, sensitising concepts are highly responsive to empirical data and useful for starting and orienting analyses: 'While definitive concepts provide prescription of what to see, sensitising concepts merely suggest direction along which to look' (Blumer, 1954, p. 7). Following the concept of time as guidance for analysis, we identified several temporal oppositions in the qualitative data, such as acute/chronic illnesses, fast/slow procedures, temporally standardised/non-standardised work practices, and closed-/open-ended time horizons. Concurrently, we revisited literature on temporality in organisations to identify temporal categories and refine and concretise our analysis. Here, we found Zerubavel's identification of temporal patterns and theory of temporal structuring useful for approaching and organising our empirical data. In what could be determined as a theory elaboration (Fisher & Aguinis, 2017; Strauss, 1987), we further sought to specifically introduce a dynamic element into Zerubavel's structural model that would allow us to identify differences and interrelations between temporal patterns across empirical settings. For this, we turned to Elias (1992, 2000), who drew our attention towards interrelations between

acceleration and formality on one hand and the organisational and the experiential on the other. Inspired by this dynamic perspective, we chose two overarching *temporal dualities* as our analytical categories: *acceleration/deceleration* to account for changes in the pace of events and activities, and *fixity/flexibility* to account for their rhythms in terms of standardisation, formalisation and predictability levels. *Dualities* are different from *dualisms* (Farjoun, 2010). Whereas dualisms are understood as opposites and mutually exclusive, dualities are often detectable only analytically and do not imply that one end of the duality is normatively worthier than the other.

With these analytical and empirical insights, we developed Table 1 based on Zerubavel's (1976) four temporal patterns (tempo, sequence, duration and timing) and the temporal dualities acceleration/deceleration and fixity/flexibility. Following Elias (1992, 2000), the table has no sharp division between actual and experienced temporal patterns.
<<Insert Table 1 about here>>

We then revisited our empirical data, focusing on identifying different temporal patterns in our two settings. Simultaneously, we attended to tensions, differences and interrelations among those patterns by approaching them as dynamics of acceleration/deceleration and fixity/flexibility.

Temporal patterns in hospital treatment

The first Danish national cancer plan's (National Board of Health, 2000) description of cancer illness it did not use the temporal terms (e.g. acute, fast or accelerated) that was to become dominate with the later introduction of cancer pathways. Instead, for instance, the plan emphasised the importance of 'reasonable time frames' (p. 6). This discourse changed radically in the 2005 follow-up cancer plan, which introduced 'standardised pathways' (National Board of Health, 2005, p. 8) as key elements to increase treatment efficiency, make

patient trajectories more coherent and standardised and – not least – 'eliminate waiting time' and ensure that diagnostics and treatment were executed 'without unnecessary delay' (p. 23). Moreover, and as something new, the follow-up plan defined cancer as an *acute* illness requiring 'acute intervention' (p. 23). Thus, with the introduction of pathways, standardisation and acceleration appeared simultaneously as dominating principles for reorganising cancer treatment.

Acceleration and standardisation of work practices

Cancer treatment reorganisation has been effectuated by creating a number of short, predetermined and invariant durational spans that identify maximum duration for each cancer diagnosis – from when a cancer suspicion is reported to when treatment begins. This durational indicator, normally 28 days, includes several sub-standards that determine maximum duration between cancer suspicion, first consultation, treatment plan and the initiation of treatment. In the hospital, new control and measurements systems ensure that each department's performance is measured relative to each durational step in the diagnostic process. These measurements are subject to intense public and political attention (e.g. the National Health Data Authority makes available monthly statistics). The acceleration caused by the durational contraction is accompanied by multiple agreed-upon procedures for diagnostic investigation, scanning and treatment that must be carried out in a specific order within each patient trajectory. Consequently, a more fixed and irreversible sequential logic has been introduced into the diagnostic scheme.

To live up to the short durational spans, work organisation has changed considerably. For instance, operations are pre-booked, and many activities (e.g. tests) that were earlier arranged sequentially are now conducted simultaneously. Within our field hospital, many respondents described this reorganisation and acceleration of clinical practices with some astonishment. As a head-and-neck surgeon remarked:

> When we introduced the cancer pathways back in 2008, it would sometimes take us up to 14 days to just see the patient. Today, patients will get a booking within 1 to 2 days. Sometimes they even get a booking the same day and they might find themselves on the operating table within 3 days. We pre-book operations, which have the effect that we sometimes only just have the diagnosis the same day the patient is scheduled for surgery. It is pretty crazy.

Scheduling, sequential simultaneity and coordination demands

The sequential simultaneity of the accelerated system has led to significant synchronisation and coordination demands among functions and departments. One result has been the introduction of a pathway-coordinator function. This new job category resembles what Lawrence and Lorsch (1967/1986) termed an 'integrator': a person who aligns tasks or functions within complex systems (pp. 137–140). For the cancer pathway coordinator, the main job is to secure temporal optimisation and increased simultaneity by constantly readjusting the schedules:

> It is extremely time demanding to work this way, and it is very dynamic. It means we are working on the schedules around the clock. Normally four or five people from here are working to adjust the schedule throughout the day to utilise the capacity in the best way possible (pathway coordinator).

This dynamic way of working ensures the complex synchronisation of the patient trajectory with, for instance, PET scans, blood tests and pathology answers and secures, for instance, the availability of surgical teams or that oncologists are prepared to receive patients for radiation or chemotherapy. Here, the multi-disciplinary team (MDT) conference, which became obligatory with pathways introduction, functions as another type of 'integrator' or synchronisation device. It ensures that treatment decisions are addressed at a conference with all relevant medical specialities and functions, synchronising each speciality's later

contributions to the patient trajectory. Thus, in alignment with Elias's (1992, 2000) articulation of the connection between formalisation and acceleration, pathway technology has increased the demands for timing practices in which various continuums and events align. In turn, this has resulted in increased formalisation of cooperation and synchronisation processes to ensure coordination of the complex web of patient trajectories and interdepartmental agreements.

Despite the introduction of coordinating and integrating devices such as MDT conferences and pathway coordinators, increased sequential simultaneity and coordination demands also have unintended effects. Many respondents complained that the pathways' accelerated pace and sequential fixity has made synchronisation and alignment with other treatment and care processes difficult. For instance, in cases where patients suffer multiple cancers or illnesses, synchronisation of hospital treatment with, for instance, psychological support, elder-care functions, medication regulation, long-distance treatment and the patient's everyday life is often difficult to obtain and likely to result in delays, disintegration, conflicts and continuous negotiations about sequential matters. The pathways' durational rigidity and sequential irreversibility have also caused clinical-judgment problems related to scheduling. A senior gynaecological surgeon explained:

> When the clinic is measured solely on cancer-pathway compliance, the system becomes extremely rigid. It is not possible to move patients around in the schedule according to our professional assessments.

Thus, the pathways' fixity can affect scheduling in ways that makes it more difficult to prioritise the most needy patients.

Sense of predictability and order

Whereas the pathways' new temporal fixity can create scheduling and coordination problems, the trajectories' formally sequenced steps and exact timing can also create a sense of predictability for health professionals.

> Cancer consultations have become easier because now we are all just part of this predetermined process, so everyone knows how to react. If you have a suspicion, you do this or that; we have pre-booked times and know exactly how each trajectory runs. And the scenario has been trained so many times that it has all become much easier. (Junior head-and-neck surgeon)

Consequently, pathway introduction has led to what our study's participants perceived as a more reliable temporal order – not unlike Zerubavel's (1976) diagnosis of hospitals in the 1970s: 'As far as hospital staff's need for predictability is concerned, it provides for a highly structured organisational order, but for a highly reliable cognitive order as well' (p. 125). This predictability is also important in the meeting with the patient. A senior gynaecological surgeon explained how she uses the pathway as an explanatory model to create a sense of order for the patient:

> I try to use [the pathways] to create structure in [the patients'] chaos. Because when I say 'cancer' to them, many simply stop listening. Many … are in a state of shock when they come here the first time. And then I try to show them an organised universe where someone takes charge and creates a sense of security to approach the chaos they experience.

A head-and-neck surgeon added, 'You give [the patients] a plan, and they can organise their chaos from some date-related points of reference; they can see that things are happening'. Important, then, is the possibility to provide a plan with actual and normative consequences for health professionals, who experience the consultation as easier (technically and

psychosocially), and for patients, for whom fixed duration and timing can function as stable reference points in a time of major life changes and insecurities. In this way, the pathways support what Fox (1957) described as the doctors' necessary affirmative attitudes towards their patients, even in cases of medical uncertainty. Moreover, providing patients with a plan might orient them towards the future, thereby installing hope (Delvecchio Good et al.,1990).

Sense of acuteness and problems of situated treatment, consent and coping

Whereas fixity creates some sense of order and predictability, work process acceleration and standardisation also have other, unwanted experiential consequences. Here, for instance, healthcare professionals' frequent reference to the work processes' high tempo indicate a high sense of acuteness. A senior head-and-neck surgeon stated:

> With the cancer pathways, you need the patient on the train and off its goes. You need to hurry because they will whistle in 2 minutes. The train needs to be at the next station within 6 days. So, it must all be done very speedy.

The surgeon's use of the train metaphor points not only to the treatment process's accelerated pace, but also the absence of slack in the highly standardised and irreversible treatment scheme. The train metaphor seems an epitomic symbol of pathway introduction understood as part of a larger movement towards modernising and rationalising medical work processes for better and worse (Harrison, 2002 – see also Weber, 1930/2002).

The standardised, speedy train ride also affects patients. A senior head-and-neck surgeon explained, 'The patients are generally happy about the speed, but they are also windblown. It is that feeling of jumping on a train that you cannot get off again'. Apart from coping-issues and feelings of acuteness, problems of patient orientation, choice, consent and situated treatment can also be identified. Many interviewed doctors argued that adhering to standard pathway procedures increased the time and energy spent on documentation and coordination which created reluctance to step outside the pathway. Relatedly, some

(especially younger) doctors described the problems of vulnerability and defensive medicine in relation to making decisions that go against departmental agreements. Our observational studies suggested that it often was difficult for doctors to choose treatment options or tests other than those prescribed by the pathway. Similarly, it was often challenging to remove patients from the pathway before it formally ended. Thus, doctors sometimes followed the diagnostic process to the end, even when they were sure from the outset the patient was cancer-free. A junior head-and-neck surgeon argued, 'You need to go whole hog, also when it is obvious a mistake has been made. These tracks are followed to the end, even when they are silly'. Others, especially senior staff, specifically referred to possible challenges of consent and involvement related to 'red numbers'; that is, the statistics of patients not treated within the pathways' durational standards. A senior oncologist described:

> Some patients sometimes say, 'I don't care about pathway dates. I do not want to start radiation in 10 days. … And here it is interesting with the pathways because I can sometimes sense that I get a little annoyed with the patients if they do not comply, because then they fall out in my statistics as someone who has failed.

The 'fast ride' itself – and the minimal time and space for reflection and contemplation along the way – can also create problems of consent and patient-choice. The durational subtraction of the diagnostic process has limited the space and time available for patient–doctor communication and reduced the possibility of involvement along the 'ride'. Time previously set for communication is now used for information delivery:

> The information requirements to the patient have increased. We must make many decisions early on, and these are to be explained to the patient. Previously, the patient had a meeting to get the result of the initial tissue samples and then one with the result of the CT scan. In these meetings, we

> repeated everything, one thing at the time, … Today, we draw all this information together on the same day. (Managing head-and-neck surgeon)

In interviews, both healthcare professionals and patients expressed that this focus on information overruled other concerns. In more rare instances, patients even expressed how doctors would cut them off directly:

> The doctor says, 'Well, we don't have much time, so what do you have?' I had prepared for this meeting and on an A4 paper, I had written down everything I wanted us to talk about. … I said to the doctor that I hoped there would be time for all my questions, but he replied, 'It depends on your questions', and then pushed his office chair to the end of the table and said, 'So, what is your most important question'? I said, 'The most important issue is my prognosis', and he said, 'Well, we can't tell you anything about that. … You can discuss the rest of your questions with the nurse'. (Cancer patient)

When the information delivery process is intensified in this way, the time to manage psychosocial aspects of cancer treatment and care is also highly reduced or, in some cases, eliminated. The patient's quote not only represents what Frank (2004) understood as a failed face-to-face encounter between caregiver and patient, but also raises the issue of how one staff group distributes tasks to another group – exemplified here as, 'You can discuss the rest of your questions with the nurse'. A senior head-and-neck surgeon described distributing comfort work to nurses as a matter of simple time optimisation:

> I know when patients walk out after the consultation and talk to a nurse, they often begin to cry and ask about things they didn't understand. But patients are the type of people who don't cry when the doctor is around. They pay close attention to the doctor. This is convenient for the temporal progress, because

> there is no space and time to be caring during the consultation. It's about how sick you are, the treatment we offer and the consequences of that treatment.

This strict temporal optimisation logic displaces to nurses the tasks of answering patients' concrete questions and comforting their emotional reactions and needs. However, nurses' time for managing psychosocial aspects of cancer care has also been reduced after the pathways were introduced. An ambulatory nurse described how it was easier to respond to patients' needs before pathway implementation:

> We could easily withdraw to another room with the patient if they broke down completely. We don't have time for that now. So, although it is optimised for patients, we do not always manage to follow up adequately.

To conclude, introducing cancer pathways in the hospital has resulted in accelerated tempo, time compression (shorter durational spans) and temporal fixity that have created little room for patient orientation or attention to coping and rehabilitation. As psychosocial aspects of cancer care are increasingly pushed outside the hospital organisation, a decoupled space for cancer care and rehabilitation emerges. The cancer rehabilitation centre, which we attend to next, was just one among many examples of cancer-support and counselling services built in the last 15 years in Denmark.

Temporal patterns in cancer rehabilitation

Before the introduction of cancer pathways, cancer rehabilitation was primarily understood as an integrated part of treatment within Danish hospitals. The first Danish cancer plan rarely mentioned rehabilitation but briefly described the handling of 'psychic shock and crisis mode in relation to diagnosis and treatment' as part of hospital treatment (National Board of Health, 2000, p. 143). However, with the emergence of the pathway discourse in the second cancer plan (2005), rehabilitation received greater attention as a mean to 'specifically and systematically manage the physical and psychological problems that a large proportion of

"surviving" patients experience during or after treatment' (National Board of Health, 2005, p. 57). The plan underscored the responsibility of municipalities, including primary caregivers, to deliver rehabilitation services. It simultaneously suggested 'establishment of rehabilitation units associated with the cancer outpatient clinics' to strengthen rehabilitation efforts (p. 58). Rehabilitation was no longer predominantly a hospital responsibility but separated from hospital treatment in content and place. The content of the new hospital-free understanding of rehabilitation was summarised in a rehabilitation pathway developed in 2012. It specified the roles and organisation of the many actors involved in cancer rehabilitation (National Board of Health, 2012a, 2018) and made it obligatory for hospital staff to make holistic and differentiated evaluations of every cancer pathway patient's rehabilitation needs. Moreover, the rehabilitation pathway introduced the concept of *general* rehabilitation, which differed from the specialised and illness-specific rehabilitation that mainly focused on retraining physical functions after surgery and cancer treatment – and that remained a hospital (and regional) responsibility. The new idea of general rehabilitation included a much broader rehabilitation definition in which physical health was only one of four dimensions, along with psychological, social, and existential/spiritual health.

The rehabilitation pathway radically differs from the 34 illness-specific diagnostic and treatment-related cancer pathways. It has no agreed-upon durational standards between events and it recurrently stresses the need for flexibility and patient involvement in rehabilitation processes. Notably, whereas illness-specific diagnostic and treatment-related cancer pathways employ the rhetoric of acuteness, the rehabilitation pathway adopts one of chronicity. It states, 'The illness can retain a chronic character' (National Board of Health, 2018, p. 6) and, likewise, that a cancer survivor's late complications can obtain a chronic character.

Deceleration and the rehabilitation 'break'

Contrasted with the accelerated hospital-treatment scheme, the cancer rehabilitation centre's activities happen at a much slower pace – in terms of both actuality and expectations. The Danish Municipality (2009) described the centre as a 'non-institution … in which the hospital is toned-down to the widest possible extent' (p. 7), and the centre is meant to communicate 'a significant break with the institutional treatment milieu' (p. 3). The idea of slowness and the 'break' from the hospital's institutional environment is also visible in the centre's characteristic architecture. It incorporates open spaces, natural lighting, natural materials such as wood and green plants, and different plateaus and patios with fluid connections between inside and out to signal the centre's holistic intentions and create spaces for contemplation and interpersonal relationships.

Our interviews with rehabilitation workers and patients, who frequently called the centre a 'break' or 'a breathing space', echoed the architecture's intentional deceleration. The patients sometimes referred to the rehabilitation processes as a way to take a break from clinical procedures, such as chemotherapy, and the demands and expectations of relatives and the everyday life outside the centre. One patient explained, 'This has been my own place. … It is a place where you get better, the light here, the rooms, the staff, and people who are sick or have been. … One feels relaxed here'.

Rehabilitation workers often positioned themselves and their services as radically different from the hospital's temporal order. They pointed to how accelerated hospital trajectories have led to a decoupling of patients' physical and cognitive illness experiences. As one rehabilitation worker emphasised, 'At the hospital, the patients don't have time to cope with the processes they are going through. Everything is going so fast'. Several cancer patients supported this statement. One described her experience of hospital treatment: 'It all went so fast that perhaps I never had the time to just go into a hole and be shit scared'.

The focus on slowness and time for contemplation and coping has also affected how rehabilitation workers understand their work. 'Offering time' to patients has became a critical part of their job description. One worker expressed:

> The way I think we do [our job] best is by having time. … I frequently find that this is almost the best for [the patients]. … You get very far at the first meeting with the patients with having almost unlimited time. It is sometimes up to 2 hours where you simply say, 'I have time to hear almost your entire story'.

Another interview was strikingly similar:

> *Interviewer*: What defines a job well done?
>
> Respondent: Time.
>
> *Interviewer*: Time to conduct some specific work functions?
>
> *Respondent*: Yes, … to have time to just 'be in it', … to give your time to the citizen. Well, time alone is not enough and, of course, we need to deliver quality within the time we have. But if we just have enough time, then, I believe, we are all sufficiently quality oriented to be able to do a good job.

Others described how it has become a primary task to 'offer time to listen', 'have time available', and 'give patients time'. In this way, it seems that deceleration has come to counter-balance what rehabilitation workers often referred to as a lack of time in the hospital.

Temporal flexibility and sequential reversibility

In public-service delivery, rehabilitation must be understood as having a time-limited nature. For palliation, this limit comes naturally with death, whereas specific rehabilitation courses or programmes are formally (durationally) limited to, for instance, 3 months. However, most cancer patients at the centre are managing uncertainty in terms of treatment, prognosis and wellbeing; some are terminally ill, some are learning to live with chronic late

complications in their recovery, and others are cancer- and symptom-free but are managing psychological aftershock. Because of these uncertainties, and the many patient types and concerns, the patients' individual physical and mental fitness, wellbeing and instant needs rather than the formally set limits of courses and programs tend to form their trajectory at the centre.

The planning of rehabilitation trajectories is coordinated by contact persons assigned to each patient; together, the patient and the contact person create a rehabilitation plan with activities and set goals that they evaluate at every meeting. It was during the observation of such meetings that we noted how negotiations about when to end or change an activity was often approached as an event-based and individualised option (e.g. 'When you feel ready for the next step' or 'When you have reached your goal'). A rehabilitation worker explained:

> We must constantly pause and ask, 'How far have we come today? What goals did we agree on? Where are we now? Should we change something or just keep on the same track?' So, timeliness is also about stopping regularly to say, 'Have I come as far as I wanted? Am I ready to go and do other things now?'

Treatment flexibility and individualisation has also affected activity sequencing. On the one hand, sequential functions determine the rehabilitation centre's temporal order. For example, it is often proposed that patients must attend light-exercise and healthy-cooking classes before courses in 'everyday with or after cancer' and 'balance in your everyday life'. Rehabilitation workers explained that the latter courses need better-trained and prepared patients than the novice patients arriving straight from the hospital. On the other hand, the plans provided were organised relative to rehabilitation worker–patient agreements. Those plans were flexible and highly reversible. The patients' milestones could be redefined or postponed in case of physical or psychological changes in the patients' situations.

Ever-availability and focus on 'the here and now'

Tension between the rehabilitation services' formal limits and the actual flexibility of services can have unintended consequences. Whereas flexibility has made the rehabilitation workers responsive to patients' individual needs, that responsiveness comes with substantial responsibility to not set external limits to service:

> It is about having this freedom because we do not have packaged solutions or standard pathways. Therefore, it is a freedom where nobody tells you, 'We don't have room for more patients'. So, we can't lay the responsibility on government or management or others. We have the responsibility, right. Also for deciding when we shall end the services. (Rehabilitation worker)

This type of flexibility can potentially result in what Zerubavel (1981, p. 146) referred to as 'ever-availability' and Rosa (2013, p. 235) called 'a tendentially limitless extension of availability'. Some staff experienced this phenomenon as stressful because the absence of fixed time standards has made them individually responsible for setting the limits of their services. Thus, the rehabilitation workers continually engage in all types of bargains and negotiations with management and patients about their availability, especially in relation to determining when to end a rehabilitation trajectory.

> We have difficult patients, which are hard to get away from, right, who cling to us. So, we need to be really well-prepared when we phone them [to end the service]. … Some call us and say, 'Hey, please don't discharge me'. Because of that, many of us have a lot [of unended patient trajectories]. And that is really burdensome'. (Rehabilitation worker)

Other staff expressed that confronting patients with clear-cut endpoints to the rehabilitation process can provoke anxiety. It is difficult to release patients into what staff and patients described as 'the real-world outside'. Therefore, patients are sometimes offered

another activity or meeting with their contact person to extend the rehabilitation. Some staff also expressed guilt for ending patients' trajectory when patients were seriously or terminally ill. The workers felt they were giving up on people: 'We are their only line of support'. Thus, rather than discharging the patients, the centre was open to the opportunity to 'park the patients'. A rehabilitation worker explained, 'We might phone them up once a month. … And they really like this arrangement. That means that they are not dropped on the floor, well, they don't like the idea of getting discharged'.

The uncertainty of patients' illness progression and physical and mental recovery also affects the experience – and, possible addressing – of long-term, future-oriented questions in the rehabilitation scheme. On the one hand, durational spans can be long, or potentially 'endless' (e.g. when patients are 'parked'). Thus, in alignment with the rehabilitation pathway focus on chronicity (National Board of Health, 2012a), the centre largely operates with a chronic understanding of cancer equally for incurable patients and patients who experience long-term physical and psychological treatment side-effects and ever-present possibility for relapse. On the other hand, the uncertainty and unpredictability of cancer (and the fact that patients are sometimes terminally ill during rehabilitation) can make it uncomfortable or irrelevant for patients and rehabilitation workers to speak about the distant future. Therefore, the instantaneous and immediate (the 'here and now') play a crucial role in organising rehabilitation services. One respondent explained, 'We are here right now, right here, … so it is very much about what do you [the patient] want at this very moment. How do you feel and what do you need here and now?' Another respondent added:

> Well, we don't always have some goals or ends in relation to what the patients need to do differently or what concrete plan we should develop. It is very much about giving [them] permission to stay in the moment; in the here-and-now.

This focus on the immediate pushes both future and past events into the background. In some instances, it becomes a spoken rule not to refer to hospitalisation events during rehabilitation activities. In patient-education classes, for instance, we observed rehabilitation workers explicate, 'We don't talk about illness or your personal treatment history here'. The past and future were put in brackets, creating an almost standstill corresponding to the idea of 'break'. This could affect patients' possibilities to cope and come to terms with their hospital treatment trajectory and risk desynchronising their rehabilitation trajectory with their everyday life. This might explain why some patients talk about the end of rehabilitation as going 'back to normal': 'When I'm out on the other side again and I'm going to live a normal life … out in the real world. … I need to move forward'.

Discussion

As a specific type of standardising technology, cancer pathways are designed to optimise and standardise cancer treatment and coordinate relations between medical specialities, treatment trajectories, organisational functions and stakeholders, including management, clinicians and patients. However, as research on standards and new standardising technology suggest, standardisation processes might well have unintended, even counterproductive, organisational consequences that reinforce or create new types of tensions in healthcare organisations (e.g. Sharp et al., 2018; Waring & Bishop, 2010). Although care pathways coordinate activities and people in new ways over time and space, studies here showed that rather than just resolving the tensions they are designed to undo, care pathways often raise those tensions to the surface or introduce new ones (Allen, 2009; Pinder et al., 2005; Martin et al., 2017).

This paper adds to these studies by attending to the effects of pathway introduction on temporal patterns in and between healthcare organisations. Despite growing literature on new medical technologies, standards and standardisation, medical sociologists have largely

avoided conceptualising standardisation within a temporal framework. With this paper, we assert that a temporal framing can considerably advance our analytical understanding of and empirical sensitivity towards standardisation processes in healthcare organisations. Specifically, our study shows that by accelerating work processes, pathways add to hospitals' already complex organisation of professional work activities and interrelationships. We show, in alignment with Elias (1992, 2000), how this acceleration increases the necessity for formalisation, coordination and, accordingly, risk of desynchronisation. This risk becomes particularly evident when we attend not only to intra-organisational but also inter-organisational consequences of pathway introduction by studying the increased separation or decoupling of psychosocial aspects of cancer care from medical diagnostics and treatment. This decoupling itself is not necessarily a problem; however, decoupled systems become increasingly temporally asymmetrical because of oppositional mechanisms – on one hand, pushing towards accelerating and fixating temporal patterns in the hospital; on the other hand, striving towards deceleration, temporal pausing and flexibility in supporting rehabilitation services.

In Table 2, we summarise our analysis of the temporal patterns (tempo, duration, sequence and timing) in the hospital and cancer rehabilitation centre. The duality acceleration/deceleration accounts for changes in the event and work-activity pace; fixity/flexibility accounts for their rhythms, order and standardisation. The table depicts temporal patterns at the two empirical sites; what each pattern means empirically for the sites' temporal structuring and the meanings this structuring conveys. While the table reveals that the hospital's and rehabilitation centre's temporal orders in most respects oppose each other; our analysis also indicates the interrelatedness between the two sites' temporal orders. This is especially evident in how the rehabilitation centre offers deceleration, slowness and flexibility to compensate for the hospital-treatment scheme's acceleration, standardisation,

and temporal optimisation decrease patient communication and coping time. Thus, although psychosocial care and rehabilitation have increasingly been decoupled from cancer treatment, these care functions simultaneously work as services that support the pathway technology. To use Rosa's (2003, pp. 15–16) terminology, it creates a deceleration that 'aims at preserving the capacity to function and further accelerate within acceleratory systems'. What might appear to be a counterculture, 'a slow culture' sceptical towards productivity logics (Berg and Seeber, 2016, p. 21; Wajcman, 2015), may instead be understood as an institutional pausing – an indispensable presupposition for further acceleration of the hospital's patient trajectory. From this perspective, each dimension in the acceleration/deceleration duality exists and acquires meaning in relation to each other.

<<Insert Table 2 about here>>

Moreover, the unintended effects (wanted or unwanted) of pathway introduction into the hospital-treatment scheme link to several contrasting unintended effects (wanted or unwanted) in the rehabilitation scheme. In the hospital, the accelerated, pre-booked and sequential irreversible trajectory creates synchronisation and patient-orientation problems but delivers often-appreciated order and predictability for patients and healthcare professionals. At the rehabilitation centre, the decelerated and flexible temporal order creates room for patient orientation, contemplation and flexible coordination but risk creating problematic expectations of potentially unlimited availability and problems of ending trajectories.

It is worth remembering that one of Elias' (1992, 2000) greatest contributions to the sociology of time was his reasoning in terms of close interdependencies between tensions and dualities. Thus, instead of focusing on one side of a temporal duality (albeit analytically tempting), one must be aware that 'pure' temporal structures never exist in isolation. Scholars studying organisations' temporal structuring have suggested that people simultaneously enact a plurality of temporal structures that intersect in various ways (Orlikowski & Yates, 2002).

Rather than employing either/or mindsets, a growing community of paradox researchers suggest both/and approaches to understand how organisations and actors enact persistent but interrelated temporal tensions between, for instance, stability and change (Farjoun, 2010) or between short and long terms (Slawinski & Bansal, 2015 – see also Sharma & Bansal 2017; Slawinski & Bansal, 2017).

Our research suggests that in studying temporal effects of new standardising technology, we can benefit from these insights in understanding that contradictory elements and temporal dualities of acceleration/deceleration and fixity/flexibility are able to persist – and indeed operate effectively – while being both opposed and interdependent. In our study, the close interdependence between the temporal orders of the hospital and rehabilitation service is perhaps most evident in the renewed and intensified focus on 'time' – understood as the organisation's ability or competence to either accelerate or decelerate – as the measure and indicator of quality at both places. Thus, while hospital treatment is increasingly valued in terms of its ability to accelerate and optimise temporal processes, the rehabilitation site is defining its value largely in its ability to offer time. In this manner, whether dominated by acceleration or deceleration, 'time' is the primary standard on which both sites judge the quality of care – just as time has become the defining trait of cancer, understood as acute or chronic. In novel ways, time has become a primary moral and organisational concern deeply anchored in the habitus and 'patterns of self-constraint' (Elias, 1992, p. 11) of health professionals at both sites.

The interrelatedness of oppositional temporal orders in our study seems to signal some type of balancing act, functional interdependence or, at least, a division of labour. However, our analysis also indicates how the call for faster diagnosis and treatment and more integrated and standardised treatment schemes might result in temporal tensions, discontinuities or desynchronisations in work practices and treatment trajectories. While our

study takes a first step in identifying such discontinuities, more research is required into, for instance, the different types of intra-organisational effects of acceleration and optimisation on job-satisfaction and well-being of healthcare professionals in the hospital as well as the inter-organisational effects on cooperation efforts and possible desynchronizations between sites of care and treatment. Not least, more studies should attend to the patients' experiences of the accelerated trajectory and, for those who are rehabilitated, the coping processes related to shifting between radically different temporal orders.

This paper's descriptive focus on temporal patterns and dualities should also, however, be read as a comment on the often-heard critique of the accelerated, hyper-standardised hospital-treatment scheme as 'inhuman' or 'impersonal'. Such arguments find support in time research in organisations that follows in the slipstream of McLuhan's (1964, p. 226) proclamation, 'Acceleration is a formula for dissolution and breakdown in any organisation'. Aligning with that proclamation, time studies in care settings tend to work with too simple dichotomies between, for instance, clock time as 'task focused' and process or event time as 'patient focused' (Waterworth, 2003).

Following this paper's findings, the normative presumption that some temporal structures are inherently 'inhuman' and some inherently 'human' is often wrong or, at best, imprecise, when confronting the empirical reality of healthcare organisations. Aligning with similar calls within the sociology of standards and standardisation (Timmermans & Almeling, 2009; Timmermans & Epstein, 2010), we warn against totalising or dogmatic ideas about a link between, for instance, standardisation and dehumanisation per se. Although accelerated, standardised hospital treatment might threaten situated medical decision-making or patient choice and consent, cause over-diagnoses or leave patients windblown at the end of the treatment, the pathways' strict timetables, irreversible sequencing and durational standards simultaneously create order, predictability and meaning for professionals and patients.

Likewise, although the flexible temporal structuring of rehabilitation activities might be more attentive to patients' immediate psychosocial needs, the high flexibility level can cause problems of how to 'time' rehabilitation activities, including how and when to end a patient trajectory. Thus, our study illustrates that it is crucial not to assign a priori normative primacy to temporal structures, but rather to carefully explore specific consequences of standardising technologies and how these infuse and alter temporal orders in and between healthcare organisations.

Acknowledgements: This research was partially supported by the Danish Cancer Society. We thank Charles Bosk, Claus Rerup, members of the Center for Health Management (Copenhagen Business School), and the blinded reviewers for their helpful comments to earlier versions of this manuscript.

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Table 1

Temporal Patterns and Dualities

	Temporal duality			
Temporal pattern	Accelerated	Decelerated	Fixed	Flexible
Tempo	Fast	Slow	Regular rhythm	Irregular rhythm
Duration	Short, 'contraction of present	Long, 'endless'	Predetermined and/or invariant durational span	Undetermined and/or varying durational span
Sequence	Short interval and/or simultaneity	Long interval	Rigid, non-reversible	Flexible, reversible
Timing	-	-	Calendar/clock time	Event time

Table 2

Temporal Patterns and Dualities in Hospital and Rehabilitation Schemes

	Temporal duality			
Temporal pattern	Accelerated hospital treatment	Decelerated rehabilitation services	Fixed hospital treatment	Flexible rehabilitation services
Tempo	Faster booking, diagnosis and treatment; less consultation; subtracted communication spans; feeling of high speed	Slow pace; 'break' and 'breathing space'; time offered as a resource	Regular but highly temporal optimized rhythm	Subjectively defined rhythm, regular or irregular

	Temporal duality			
Temporal pattern	Accelerated hospital treatment	Decelerated rehabilitation services	Fixed hospital treatment	Flexible rehabilitation services
Duration	Shorter durational span in all parts of diagnostic process 'Sense of acuteness'	Potentially 'endless' durational span but simultaneous focus on 'here and now' Hard-to-end services 'Sense of chronicity'	Formally predetermined, fixed and invariant durational span in treatment trajectory Predictability and 'order' for patients and health professionals	Varying durational spans flexibly negotiated between patient and rehabilitation worker Flexible availability of the rehabilitation worker

	Temporal duality			
Temporal pattern	Accelerated hospital treatment	Decelerated rehabilitation services	Fixed hospital treatment	Flexible rehabilitation services
Sequence	Increased sequential simultaneity in tests, scans and diagnoses because of higher speed	Sequential order based on the temporality of individual patient's coping process and illness	Formally irreversibly sequenced steps of the diagnostic process Predictability in the medical encounter Risk of overtreatment, fragmentation and lack of coordination between parallel treatment schemes	Ordered sequentially but large degree of reversibility and flexibility in sequencing based on individual needs Milestones and treatment plans can be flexibly renegotiated

	Temporal duality			
	Accelerated hospital treatment	Decelerated rehabilitation services	Fixed hospital treatment	Flexible rehabilitation services
Temporal pattern				
Timing	-	-	Increased importance of calendar and clock time as synchronization device in organizing and communicating treatment trajectories Structuring function in the patient encounter	Timing of services often based on readiness or personal fitness rather than fixed times/dates