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A roadmap for comparing readmission policies with application to Denmark, England, Germany and the United States

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ABSTRACT

Hospital readmissions receive increasing interest from policy makers because reducing unnecessary readmissions has the potential to simultaneously improve quality and save costs. This paper reviews readmission policies in Denmark, England, Germany and the United States (Medicare system). The suggested roadmap enables researchers and policy makers to systematically compare and analyse readmission policies. We find considerable differences across countries. In Germany, the readmission policy aims to avoid unintended consequences of the introduction of DRG-based payment; it focuses on readmissions of individual patients and hospitals receive only one DRG-based payment for both the initial and the re-admission. In Denmark, England and the US readmission policies aim at quality improvement and focus on readmission rates. In Denmark, readmission rates are publicly reported but payments are not adjusted in relation to readmissions. In England and the US, financial incentives penalise hospitals with readmission rates above a certain benchmark. In England, this benchmark is defined through local clinical review, while it is based on the risk-adjusted national average in the US. At present, not enough evidence exists to give recommendations on the optimal design of readmission policies. The roadmap can be a tool for systematically assessing how elements of other countries' readmission policies can potentially be adopted to improve national policies.

1. Introduction

Health care systems around the world are under pressure to deliver value for money [1,2] with policymakers simultaneously aiming to control costs and improve the quality of care. Reducing unnecessary hospital readmissions seems to be an attractive means to that end, as fewer readmissions can potentially both reduce costs and improve the quality of care [3,4]. In England, in 2011–2012 the 28 days emergency readmission rate was 11.5% – an increase from 9% in 2002–2003 [5]. In the United States (US), 16% of Medicare beneficiaries who were discharged from hospital had an unplanned readmission within 30 days in 2011 [6].

Hospital readmissions have been of interest to researchers and policy makers since the late 1970s [7]. However, it is only relatively recently that policies were developed in several countries with the specific aim of reducing readmissions. Interest in the link between financial incentives and readmissions increased considerably in the early 1980s, when DRG-based hospital payment was introduced in the United States [8]. Under DRG-based

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payment, hospitals are paid a fixed amount per admission, with the amount depending on certain patient and treatment characteristics [9]. Consequently, incentives were introduced for hospitals to increase their income by admitting more patients, and possibly to readmit patients as new admissions for financial reasons [10]. Therefore, at the time, it was speculated that some readmissions might be "avoidable" under a different set of incentives [11–13]. Following the introduction of DRG-based hospital payment systems in most European countries [14], similar concerns emerged (for example in Germany [15], England [16], and France [17]).

Recent policy attempts to reduce readmission rates in England and the United States (US) have in common a reliance on financial penalties. It is perhaps less well known that Germany introduced similar financial incentives for hospitals to avoid readmissions more than 10 years ago. In comparison, in Denmark, readmission rates are monitored but there is no national policy concerning the use of financial incentives.

The use of financial penalties to reduce readmission rates has been met with some resistance from the medical communities in England and the US [18,19]. In the US, the importance of risk adjustment, and which factors to include in such adjustment has attracted particular attention, and it has been highlighted that for example community characteristics are likely to be important factors influencing readmission rates [19–22].

The debate has also focused attention on the fact that the specific incentives of different policies are decisive in determining whether a policy is successful [3,23]. Recognising the importance of different policy designs, a review of current national policy approaches to dealing with readmissions has the potential to provide valuable learning and inspiration for future reform across countries currently struggling with similar problems.

Currently, a systematic comparison of readmission policies across different countries is unavailable. This paper aims to fill this gap by providing and applying a roadmap for systematically comparing readmission policies across four high-income countries with different institutional settings: Denmark, England, Germany and the United States (Medicare inpatient prospective payment system, IPPS). These countries represent illustrative differences in dealing with readmissions and are informative cases for demonstrating the use of our roadmap. We begin by developing a roadmap of policies distinguishing between policies for the measurement and management of hospital readmissions. Subsequently, we apply the roadmap to readmission policies in the selected countries, and lessons arising from the comparison are discussed.

2. Methods: a roadmap for analyzing readmission policies

We gathered information and reviewed official documents and policy statements for relevant country-specific laws and regulations for the countries included in the study. The laws and regulations could be either specific readmission policies or policies that indirectly influence hospitals' incentives to reduce readmissions. The policies [24–27] were analysed in order to identify similarities and differences across countries, and to identify characteristic features of different policies.

Analysis of the identified policies led to the identification of two main dimensions of readmission policies: (1) readmission measurement and (2) readmission management (see Fig. 1). Policies can focus either on readmission of individual patients or on readmission rates. The aim of the policy and the intended audience determine the specific characteristics of how readmissions are measured and how this information is used for readmission management.

2.1. Readmission measurement

2.1.1. Focus of readmission policies: individual patients or readmission rates

Readmission policies can focus on measuring and managing readmissions of individual patients or they can focus on readmission rates. If the focus is on readmission rates, a denominator and numerator must be defined, and the level at which rates are calculated must be chosen [28]. Depending on the aim and audience, this level could be the nation, the region, the hospital or the hospital department.

A policy focussing on the readmission of individual patients has the advantage that it directs the attention to the question of how to avoid a specific readmission of an individual patient or a specific group of patients. A focus on readmission rates has the advantage that it enables benchmarking of readmission rates across the chosen aggregate units.

2.1.2. Definition of relevant readmissions

Independent of whether the focus is on individual readmissions or aggregate readmission rates, readmission measurement always requires a clear definition of what a relevant readmission is: in generic terms, a readmission is a second admission to a hospital within a specified period of time after a primary or index admission. The readmission is defined by criteria for the initial admission, criteria for the subsequent second admission, and the relevant time period between the two admissions [29–31]. Both admissions can be specified in terms of inclusion or exclusion criteria.

A relevant index- and second admission can be defined in terms of the patients' clinical characteristics (e.g. the diagnosis), demographic characteristics (e.g. age and gender), the specialty where patients were treated, or the admission type (e.g. emergency or elective admission). These specifications can be the same or different for the index and the second admission. For example, the definition of relevant readmissions could specify that only emergency admissions following an initial elective admission are to be included. If readmission rates are calculated, the index admission defines the denominator population, while the number of second admissions within the relevant time period defines the numerator.

The time period has to be specified in order to determine whether a second admission is to be considered a relevant readmission and not just another primary admission. Time can be measured from discharge of the index admission, or from the first day of the initial admission. The choice of criteria for the index admission, the second admission, and