



# Which hospitalisations are ambulatory care-sensitive, to what degree, and how could the rates be reduced? Results of a group consensus study in Germany



Leonie Sundmacher\*, Diana Fischbach, Wiebke Schuettig, Christoph Naumann, Uta Augustin, Cristina Faist

Department of Health Services Management, Ludwig Maximilians University Munich, Schackstrasse 4, 80539 Munich, Germany

## ARTICLE INFO

### Article history:

Received 8 April 2015

Received in revised form 13 July 2015

Accepted 12 August 2015

### Keywords:

Ambulatory care-sensitive conditions  
Preventability  
Avoidable hospitalisations  
Strategies  
Delphi  
Group consensus  
Regional variation  
Germany

## ABSTRACT

**Background:** Much has been written lately regarding hospitalisations for ambulatory care-sensitive conditions (ACSH) and their strengths and weaknesses as a quality management indicator. The idea underlying ambulatory care-sensitive conditions (ACSC) is that effective treatment of acute conditions, good management of chronic illnesses and immunisation against infectious diseases can reduce the risk of a specified set of hospitalisations.

**Methods:** The present paper applies group consensus methods to synthesise available evidence with expert opinion, thus identifying relevant ACSC. It contributes to the literature by evaluating the degree of preventability of ACSH and surveying the medical and systemic changes needed to increase quality for each diagnosis group. Forty physicians proportionally selected from all medical disciplines relevant to the treatment of ACSC participated in the three round Delphi survey. The setting of the study is Germany.

**Results:** The proposed core list is a subset of 22 ACSC diagnosis groups, covering 90% of all consented ACSH and conditions with a higher than 85% estimated degree of preventability. Of all 18.6 million German hospital cases in the year 2012, the panelists considered 5.04 million hospitalisations (27%) to be sensitive to ambulatory care, of which 3.72 (20%) were estimated to be actually preventable. If only emergencies are considered, the ACSH share reduces to less than 8%. The geographic distribution of ACSH indicates significant regional variation with particularly high rates and potential for improvement in the North Rhine region, in Thuringia, Saxony-Anhalt, northern and eastern Bavaria and the Saarland.

The average degree of preventability was 75% across all diagnosis groups. By far the most often mentioned strategy for reducing ACSH was 'improving continuous care'.

**Conclusion:** There are several good reasons why process indicators prevail in the assessment of ambulatory care. ACSH rates can however provide a more complete picture by adding useful information related to the overall patient outcome. The results of our analysis should be used to encourage debate and as a basis for further confirmatory work.

© 2015 Elsevier Ireland Ltd. All rights reserved.

## 1. Introduction

In many European countries, providers of ambulatory care are the first point of contact for patients. Ambulatory care is thus a cornerstone of health care and measurement of its quality can help to ensure that the system

**Abbreviations:** ACSC, ambulatory care-sensitive conditions; ACSH, hospitalisations for ambulatory care-sensitive conditions.

\* Corresponding author. Tel.: +49 89 2180 3110.

E-mail address: [sundmacher@bwl.lmu.de](mailto:sundmacher@bwl.lmu.de) (L. Sundmacher).

<http://dx.doi.org/10.1016/j.healthpol.2015.08.007>

0168-8510/© 2015 Elsevier Ireland Ltd. All rights reserved.

works effectively for the benefit of the patient [1]. However, ambulatory care outcomes are often difficult to assess because many patients suffer from chronic illnesses without distinct endpoints and it is not uncommon for patients to utilise several providers simultaneously [2]. Hard outcomes such as mortality may in some cases be attributable to ambulatory care but often occur long after the treatment has been given. Quality improvement schemes in developed health care systems therefore tend to rely on intermediate indicators of quality such as lowering blood pressure or immunisation rates. A sole focus on processes can however mean that a more holistic and outcome-oriented view of the patient's health status is neglected. For this reason, researchers in the USA began in the 1990s to consider potentially avoidable hospitalisations as a possible solution. The concept of ambulatory care-sensitive conditions (ACSC) was introduced to describe those conditions for which a large proportion of hospitalisations could be avoided given timely and effective ambulatory care.

A number of recent reviews have discussed the strengths and limitations of ACSC hospitalisations as a quality management indicator (for an overview see [3–5]). The concept rests on the assumption that hospitalisation rates can be reduced by effective ambulatory treatment of acute conditions, by effective management of chronic illnesses and by immunisation against infectious diseases. Increased hospitalisation rates for ACSC may thus be indicative of deficits in ambulatory care [6].

The question of which hospitalisations are sensitive to effective and timely ambulatory care depends to a large extent on context. For example, the boundaries of the ambulatory care sector,<sup>1</sup> relevant public health problems (e.g. infectious diseases prevail in Brazil [7]), physician training, difference in practice norms, the quality of disease coding and the (technological) progress of medicine may all influence the designation of a condition as ambulatory care-sensitive [8]. While several context-specific ACSC lists do exist, it is often unclear how the lists were compiled and why some hospitalisations are considered ambulatory care-sensitive and others not. This may weaken both the acceptance and validity of the measure [9].

The relationship between effective ambulatory care and hospitalisations for ambulatory care sensitive conditions (ACSH) is moreover confounded by a number of exogenous factors, for example, patient demographics [10–14], disease burden [14–16], behavioural risk [15] and socioeconomic factors [2,5,10,14,16–18], the structure of the hospital sector [2,19] and patient preferences regarding use of care [15] and compliance [20]. Against this background, it would seem appropriate to pay careful attention to the reliability of the ACSH approach for quality monitoring purposes.

In order to encourage the acceptance of ACSH indicators and provide a measure of their reliability, reproducible methods are needed to assess the level of agreement for ACSC among physicians. In particular, it is necessary to analyse the degree to which ACSH are preventable in the

presence of potentially strong confounders and to provide a systematic discussion of strategies to reduce ACSH. Based on previous research [6,18,21], the present paper therefore applies group consensus methods which synthesise the available evidence with expert opinion in order to identify relevant ACSC. It contributes to the literature by evaluating the degree of preventability of ACSH and surveys for each diagnosis group the medical and systemic changes needed to increase quality. The setting of the study is Germany.

## 2. Methods

Relevant ACSC were selected using five criteria developed by Caminal et al. [21], Solberg et al. [22] and Weissman et al. [6] and supported by an empirical study of regional variation in German hospitalisation rates. The criteria are (i) evidence in the literature that the condition is ambulatory care-sensitive; (ii) the relevance of the diagnosis for public health; (iii) consensus among experts and clinicians that the hospitalisation is potentially avoidable by the effective and timely provision of ambulatory care; (iv) clarity regarding the definition and coding of the diagnosis and (v) the necessity of hospital treatment should the health problem related to the condition occur [21].

**Criterion (i)** was met by searching Medline, EMBASE, the Cochrane collaboration and the Internet using the terms ["ambulatory care sensitive" or "ACSC" or "ACSH" or "preventable hospitalisations" or "avoidable hospitalisations"] in June 2013 with an update in September 2013. In addition, the authors manually searched the reference lists of the identified studies to ensure completeness. The conditions were specified in terms of the World Health Organisation International Classification of Diseases (ICD) [23] and ordered by the number of times they were mentioned in the literature [8]. ICD-9 codes were converted to ICD-10 codes using official mapping tables.

Solberg et al. [22] and Weissman et al. [6] suggest that a diagnosis is relevant for public health (**criterion ii**) if it has a hospitalisation rate of least 1/10,000 and/or if it represents a 'risky health problem'. Diagnosis groups with a hospitalisation rate significantly below the recommended threshold were therefore excluded from the proposed list, with the exception of infectious diseases for which effective immunisation is available.

The requirement of expert consensus that the diagnosis is potentially avoidable by timely and effective ambulatory care (**criterion iii**), the validity of the coding (**criterion iv**) and the necessity of hospitalisation (**criterion v**) were evaluated by a panel of 40 physicians using Delphi techniques between September 2013 and January 2014.

The Delphi technique is a structured interactive method involving the repeated administration of questionnaires [24]. The main stages of our Delphi study included the identification of a proposed list of ACSC, the development of the questionnaires, the selection of the panelists, three rounds of anonymous iterative online surveys and, for the first and second round, the summarisation and feedback of the results.

The number of participants and their representativeness affect both the potential for ideas and the acceptance

<sup>1</sup> In Germany, about 36% of ambulatory practitioners are, for instance, general practitioners while the remaining 64% practice as medical specialists.

Download English Version:

<https://daneshyari.com/en/article/6239079>

Download Persian Version:

<https://daneshyari.com/article/6239079>

[Daneshyari.com](https://daneshyari.com)