

Chapter 5

Using Case Costing Data and Case Mix for Funding and Benchmarking in Rehabilitation Hospitals

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ABSTRACT

The concern for Ontario hospitals in Canada is that the funding model has recently changed from global- to activity-based funding, which will affect hospitals' operational budget and cost management. Hospitals will be reimbursed based on a pre-set payment price for each patient type or case mix treated. Specifically, the purpose of this chapter is to describe how case costing data and case mix information are collected and used for funding. A framework is proposed for health administrators, policy makers, and researchers to understand the input variables for determining resource utilization and long stay trim point. A clinical decision-making tool is demonstrated to assist hospital administrators to define admission criteria and predict length of stay and volumes with clinical teams. The chapter highlights the importance of data quality and use of comparative data and concludes with 10 key success factors for better funding and benchmarking for rehabilitation hospitals.

INTRODUCTION

Case costing and case mix are widely used in health care systems internationally. In Ontario, Canada, case costing and case mix will be used as the funding model has recently changed from global funding to service based funding. Given this funding approach, it is crucial that hospitals manage their case costs and understand their vari-

ous patient populations (or case mix). As case mix of patients will determine the funding allocated, hospital administrators need to admit appropriate case mix of patients, manage their costs and monitor the volume of services provided. The chapter will describe and analyze case costing data and case mix and to optimize funding and benchmarking in rehabilitation hospitals. A “Shrub” framework will be provided to understand the input variables for determining resource utilization and long stay trim point. A clinical decision-making tool

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is demonstrated for defining admission criteria and predict length of stay and volumes. It is important health administrators, policy makers and researchers considers data quality when analyzing case costing data and case mix for funding and benchmarking.

The objectives of the chapter are:

1. To describe data collection systems:
 - a. Ontario Healthcare Reporting Standard Data.
 - b. Adult Inpatient Rehabilitation Minimum Data.
2. To provide a “Shrub” framework to understand the factors that impact funding:
 - a. Describe “Input Variables for Determining Resource Utilization” and “Long Stay Trim Point Illustration for a particular Rehab Patient Group (RPG)”.
 - b. Clinical implications for rehabilitation hospitals.
3. To demonstrate a clinical decision-making tool:
 - a. Defining admission criteria for rehabilitation hospitals.
 - b. Predicting length of stay and volumes with clinical teams.
4. How to optimize funding and benchmarking:
 - a. Ensuring data accuracy and quality.
 - b. Using comparative data with peer groups.
 - c. Collecting data across the continuum of care.

BACKGROUND

Ontario Case Costing Initiative

“In the early 1990s, the Ministry of Health and Long Term Care (MOHLTC) began considering moving to a rates and volume reimbursement system for hospitals” (Murray et al, 2005, p 6). The Ontario Case Costing Project (OCCP) was initi-

ated in 1992 to develop case weights for Ontario hospitals. The OCCP was renamed the Ontario Case Costing Initiative (OCCI) in April 2000 to collect case costing data and develop hospital funding methodologies. Ontario has adopted an approach known as “micro costing or bottom-up” (Murray et al., 2005, p 6). “In this method individual patient activities and resources associated with each activity are added together to arrive at the total” (Murray et al., 2005, p 6).

The Ontario Case Distribution Methodology (OCDM) is primarily based on the Ontario Healthcare Reporting Standards (OHRS), which is the mandatory reporting framework for the financial and statistical information. The Ontario Case Costing Methodology is based on activity-based accounting, and provides instruction on how to take hospital costs by department and assign them to individual patients to obtain a case-specific total cost” (Murray et al, 2005, p 7). According to Sutherland (2011), “activity-based funding (ABF) is associated with higher volumes of hospital care, shorter lengths of stay and has not been linked to poorer quality of care” (p. 2). As per Canadian Institute for Health Information, Institute of Health Economics and Canadian Health Services Research Foundation (2011), “ABF model encourages providers to treat more people, they may also result in a reduction in the number of services a person receives if the model used isn’t sufficiently sensitive to issues of severity” (p. 5).

Case Mix System in Inpatient Rehabilitation

In fall of 2002, Ontario MOHLTC mandated the collection of National Rehabilitation Reporting System (NRS) in all designated adult inpatient rehabilitation beds. The minimum dataset and reporting system was developed and is maintained by the Canadian Institute for Health Information (CIHI). Contained within the minimum dataset is the Functional Independence Measure (FIM™)¹,

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