

Hospital Report 2005: Rehabilitation
Financial Performance and Condition Technical Summary

Dr. Ian McKillop
Imtiaz Daniel
Dr. Linda McGillis Hall
Dr. George Pink

Overview

In this section of *Hospital Report 2005: Rehabilitation* we provide the methodology used to select and calculate the measures of financial performance and condition for hospitals with designated rehabilitation beds. A brief overview of data sources used, together with the steps taken to verify and validate data prior to calculating indicators, is provided. This document concludes with a presentation of descriptive statistics for the indicators used in *Hospital Report 2005: Rehabilitation*.

Methods

Preparation of the Financial Performance and Condition quadrant of *Hospital Report 2005: Rehabilitation* required two research activities: identifying appropriate financial and statistical indicators; and collecting, organizing, and validating the data needed to calculate values for the indicators.

An extensive review of the literature related to inpatient rehabilitation services financial performance was undertaken during the preparation of the *Hospital Report 2003: Rehabilitation*. Articles were selected for review if they met either of the following criteria: 1) the article examined financial performance measurement issues related to inpatient rehabilitation services; or 2) the article described or discussed financial analysis of inpatient rehabilitation services.

For the *Hospital Report 2003: Rehabilitation*, an Advisory Panel of hospital executives, clinical directors, and managers with extensive knowledge of financial issues related to rehabilitation inpatient services in Ontario assisted the research team with the evaluation and assessment of indicators presented in this quadrant. The Advisory Panel began by adopting the set of financial indicator categories used in previous Hospital Reports. These categories are:

- **Efficiency** – defined as a comparison of hospital output with the cost of inputs required to produce the output.
- **Financial Viability** – defined as positive financial outcomes that ensure long-term financial health.
- **Liquidity** – defined as the ability of an organization to meet its short-term obligations.
- **Capital** – defined as the capacity of the organization to acquire and manage long-term assets such as major equipment.
- **Human Resources** – defined as the allocation of human resources by hospitals to patient care and non-patient care activities.

For *Hospital Report 2005: Rehabilitation*, the indicators reported were the same as those reported in *Hospital Report 2003: Rehabilitation*. These indicators are:

1. ***Percent Direct Rehabilitation Cost***
Measures the direct costs of providing nursing, diagnostic & therapeutic services, and food services, to rehabilitation clients as a proportion of the total costs associated with these clients.
2. ***Nursing Worked Hours***
Measures the proportion of time nurses spend working in the hospital on activities such as direct client care, charting, and in-service education, as a proportion of the total hours earned. The hours being measured are for those nurses who normally engage in activities related to client care, and excludes hours worked by nurses who fill management and administrative roles.
3. ***Percent UPP Nursing and Therapy Worked and Purchased Service Hours***
Measures the proportion of time nurses and therapists spend working in the hospital on activities such as direct client care, charting, and in-service education, as a proportion of the total hours earned. Unit-producing personnel (UPP) or unit-producing nurses/therapists are nurses/therapists who normally engage in activities related to client care, and excludes nurses/therapists who fill management and administrative roles.

Data Sources

The data used to calculate the indicators presented in this quadrant are submitted annually to the Ontario Ministry of Health and Long-Term Care (MOHLTC) using formats specified by the Ontario Hospital Reporting System (OHRS). The OHRS is a comprehensive multi-year database of financial and statistical information describing the activities of Ontario hospitals. The costs reported in the OHRS are categorized as direct and indirect using the methods described in the Ontario Cost Distribution Methodology (OCDM). (For a detailed examination of the OCDM applied to 2003/04 data, see MOHLTC Website www.mohltcfim.com) The Financial Performance and Condition quadrants in all volumes in the *Hospital Report* series use data extracted from the OHRS.

The financial data included in this report are for the 2003/04 fiscal year, which was the most recent data available during the research. Comprehensive indicator definitions, account codes and account definitions are provided in Appendix 1. Account descriptions have been added for completeness.

Data from all 54 hospital corporations with designated rehabilitation beds in Ontario were used to calculate provincial and regional means; hospital-specific data were shown for 45 of 54 hospital corporations that voluntarily agreed to participate in *Hospital Report 2005: Rehabilitation*.

Data Quality

Although OHRS data submissions are subjected to a variety of edit routines before being added to the provincial database, inconsistencies in hospital reporting practices can create

data quality issues. The ability of a hospital to address the following data quality issues may affect the consistency of indicators calculated in this Report:

Allocation & Reporting Issues

A hospital’s organizational structure often does not match the reporting structure in the OHRS framework, requiring hospitals to reallocate costs and activities. For example, if an inpatient rehabilitation unit manager spends one-quarter of his/her time managing an ambulatory care clinic, the OHRS requires that 75% of the manager’s worked and non-worked hours be allocated to the inpatient rehabilitation unit and 25% to the ambulatory care clinic. Comparability of indicator values may be compromised if this re-allocation is not performed or is performed inconsistently.

Linkages with Hospital Payroll Systems

Where a hospital payroll system cannot accurately identify professional, non-professional and unregulated staff, comparability of indicator values that rely on this distinction may be compromised.

System-Level Findings

Table 1 shows descriptive statistics for each of the four hospital-specific indicators of Financial Performance and Condition for hospitals with designated rehabilitation beds, including mean, standard deviation, and quintile values (0, 20th, 40th, 60th and 100th percentiles). Just as the median is the value above and below which 50% of hospitals fall, percentiles provide the same information for different percentages of observations. For example, at the 20th percentile, twenty percent of hospitals had indicator values at or below that value in terms of performance evaluation and 80% of hospitals had indicator values above.

Table 1 – Descriptive Statistics for Hospital-Specific Indicators of Financial Performance and Condition

	Percent Direct Rehabilitation Cost	Nursing Worked Hours	Percent UPP Nursing Worked and Purchased Service Hours
Number of Hospitals	54	54	54
Mean [†]	74.0%	85.3%	85.5%
Standard Deviation	4.2	3.7	2.9
0 th percentile	58.8%	77.2%	80.4%
20 th percentile	71.8%	83.7%	84.2%
40 th percentile	73.8%	85.4%	85.4%
60 th percentile	76.4%	86.4%	86.3%
80 th percentile	78.1%	87.9%	88.5%
100 th percentile	83.2%	99.9%	96.9%

[†] This is a weighted mean of Ontario hospitals indicator values, not an arithmetic mean.

APPENDIX 1

1. Percent Direct Rehabilitation Cost

Numerator

<i>Description</i>	<i>Data Source</i>
Direct costs include inpatient nursing, ambulatory care, nursing administration, D&T services, community services and food services, net of recoveries and adjustments.	Ontario Cost Distribution Methodology (OCDM) Net Direct Costs allocated to Rehabilitation.

Denominator

<i>Description</i>	<i>Data Source</i>
Includes Direct Cost and Overhead Costs incurred related to rehabilitation patients.	Ontario Cost Distribution Methodology (OCDM) Net Direct & Overhead Costs allocated to Rehabilitation.

2. Nursing Worked Hours

Numerator

<i>Description</i>	<i>Data Source</i>
Includes worked and agency hours for nursing staff in the Rehabilitation Program.	OHRS account definition: (Using Sector Code 1*) <i>Primary</i> 71281 <i>Statistical Secondaries</i> 35010*, 35090*, 38010*, 38090*

Denominator

<i>Description</i>	<i>Data Source</i>
Includes earned hours (worked, benefit and purchased hours) of the nursing staff who work in inpatient rehabilitation program.	OHRS account definition: (Using Sector Code 1*) <i>Primary</i> 71281 <i>Statistical Secondaries</i> 350*, 380*

3. Percent UPP Nursing and Therapy worked & purchased service hours

Numerator

<i>Description</i>	<i>Data Source</i>
Includes worked and purchased service hours of nursing and therapies staff who worked in the Rehabilitation Program.	<p>OHRS account definition: (Using Sector Code 1*)</p> <p>For Nursing - <u>Primary 71281</u> and <u>Statistical Secondaries 35010*</u>, <u>35090*</u>; <u>38010*</u>; <u>38090*</u></p> <p>For Therapies functional centers - <u>Primaries 71444*</u> to <u>71490*</u>, and <u>Statistical 35010*</u>, <u>35090*</u> multiplied by % Rehabilitation calculated using Statistical Secondaries Ratio of <u>11612*</u> / <u>116*</u></p>

Denominator

<i>Description</i>	<i>Data Source</i>
Includes earned hours (worked, benefit and purchased hours) of nursing and therapy staff who work in inpatient rehabilitation program.	<p>OHRS account definition: (Using Sector Code 1*)</p> <p>For Nursing - Primary 71281 and Statistical Secondaries 350*, 350*;</p> <p>For Therapies functional centers - <u>Primaries 71444*</u> to <u>71490*</u>, and <u>Statistical Secondaries 350*</u> multiplied by % Rehabilitation calculated using Statistical Secondaries Ratio of <u>11612*</u> / <u>116*</u></p>