



The Cost of Hospital Stays:

Why Costs Vary



Canadian Institute
for Health Information

Institut canadien
d'information sur la santé

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About the Canadian Institute for Health Information

The Canadian Institute for Health Information (CIHI) collects and analyzes information on health and health care in Canada and makes it publicly available. Canada's federal, provincial and territorial governments created CIHI as a not-for-profit, independent organization dedicated to forging a common approach to Canadian health information. CIHI's goal: to provide timely, accurate and comparable information. CIHI's data and reports inform health policies, support the effective delivery of health services and raise awareness among Canadians of the factors that contribute to good health.

For more information, visit our website at www.cihi.ca.

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Please note that the analyses and conclusions in this report do not necessarily reflect those of the individual members of the Expert Advisory Group or their affiliated organizations.

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Executive Summary

Health care spending in Canada has increased steadily since the mid-1990s, outpacing the overall economic growth rate. Many factors—including population growth, inflation and increases in public- and private-sector spending—account for rising health expenditures. Hospitals are a vital part of the health care system. In 2007, they accounted for about 28% of total health spending (forecast to be 10.6% of the gross domestic product [GDP]). However, while hospital spending has grown in recent years, it actually represents a shrinking part of an expanding pie. In 1975, for example, spending on hospitals accounted for roughly 45% of overall health expenditures.

Although understanding the big picture of how health care dollars are spent is important, it is also valuable to know how these monies are allocated at the hospital level. Hospital expenditures involve the provision of various services such as acute care, outpatient care, day surgery, emergency department services and other types of care. Overall, acute inpatient care tends to account for the majority of hospital costs—the focus of this report.

This report provides information about average acute care hospitalization costs for typical patientsⁱ for several conditions and/or procedures using a newly redeveloped case mix grouping methodology known as CMG+. Using this tool and CIHI data, we are able to determine why hospitalization costs can vary. Sometimes it can depend on the type of disease or condition being treated and how

ⁱ Typical patients refer to those who have undergone a normal and expected course of treatment. They exclude cases involving transfers between acute care facilities, deaths, sign-outs and long-stay cases.

many interventions are used during a patient's hospital stay. In other cases, the differences may be due to how and where a patient is treated, the type of patient (that is, age, number of illnesses) and the length of hospital stay. For example:

- A pregnant patient and a heart attack patient most likely will incur different hospitalization costs. However, costs can also vary by the types of procedures used on *similar* patients. For instance, the hospitalization costⁱⁱ for pregnancy and childbirth tends to differ by type of delivery—a vaginal delivery without any other interventions tends to be less costly on average (\$2,104 per delivery) than delivery by (primary) Caesarean section (\$4,108 per delivery).
- When we compare bypass surgery patients who had one intervention to those who had two during a single hospital admission, the costⁱⁱ nearly doubled; that is, \$11,561 compared to \$22,168.
- In the case of treating patients with Parkinson's disease, it tends to be more costly to treat older patients compared to younger ones. For adults aged 18 to 59, on average, it costⁱⁱ hospitals \$4,603, compared to \$8,397 for patients 80 years and older. The differences in hospitalization costs may be due to similar conditions requiring different types of services and tests and the time needed to heal or recover from treatments.

These are a few examples highlighted in this report. We hope that this information may be used to inform a variety of financial decisions, including those related to effective case and resource management, budgeting, program planning, restructuring, care planning, hospital funding and others.

For More Information on Acute Care Hospital Costs

This report provides information about how certain factors can affect average acute care costs for typical patients only (excludes patients who transfer between acute care facilities, die in hospital, sign out of hospital before completing recommended course of care and stay in hospital longer than those who have a similar condition and/or procedure).

For those who are interested in learning more about total costs by medical condition, the effects of the number of hospital stays and the magnitude of unit costs (that is, the average cost per stay for all patients) on total health expenditures should refer to *The Cost of Acute Care Hospital Stays by Medical Condition in Canada, 2004-2005*, available on the our website at www.cihi.ca.

ii Costs include typical cases only.



1.0

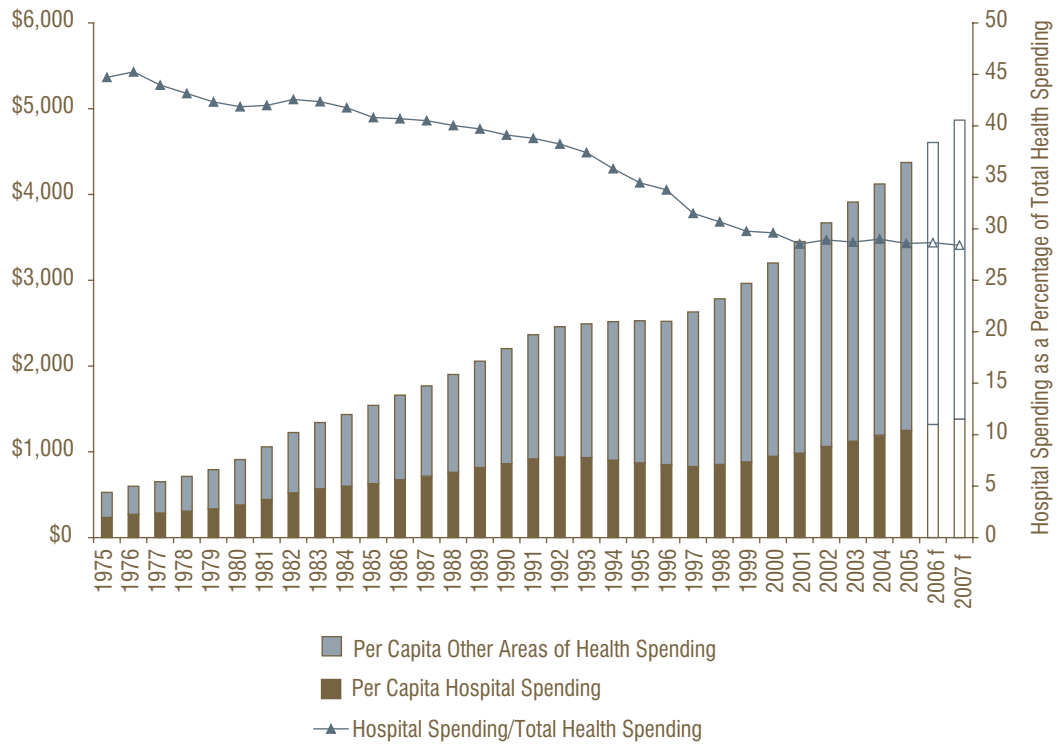
Overview of Hospital Spending in Canada

Understanding how much Canada spends on health care and how these dollars are allocated are important to those making funding and/or financial decisions. Health care expenditures include monies spent on hospital care, physician services, retail drugs, dental care, eye care, continuing care and mental health services, among others.

Hospitals have traditionally accounted for the largest single share of health expenditures in Canada. In 2007, Canada spent an estimated \$160 billion on health care (forecast to be 10.6% of the GDP). About \$45 billion of that total was spent on hospitals; however, spending on hospitals accounts for a shrinking share of the overall health care budget. For example, in 1975, spending on hospitals made up about 45% of total health expenditures, compared to 28% in 2007. In contrast, other areas of health expenditures have grown more rapidly. Spending on retail drugs (prescribed and unprescribed), for example, rose from less than 9% of total expenditures to 17% between 1975 and 2007.

1 Hospital and Other Health Spending in Canada

Hospital spending continues to rise, but other major areas of health care expenditure are growing more quickly. As a result, hospitals account for a smaller proportion of total health spending now than in the past. Note that the following results are not adjusted for inflation and data for 2006 and 2007 are forecasts.



Source: National Health Expenditure Database, Canadian Institute for Health Information.

Who Pays for Hospital Care?

As in many other Organisation for Economic Co-operation and Development (OECD) countries, Canada's health care system is financed by both the public and private sectors. Under the provisions of the *Canada Health Act*, Canadians are insured for medically necessary hospital services according to provincial and territorial health plans. In Canada, the public sector accounted for 91% of hospital spending in 2005. Public-sector financing for hospital services in other OECD countries ranged from 57% to 99% over this same year.¹

Canadian hospitals received about \$3.9 billion from non-public sources in 2005—up from \$2.4 billion a decade earlier. In 2005, almost half of that amount (\$1.7 billion) was paid for by individuals and private insurance firms to cover charges for private rooms and other preferred accommodation, care for non-residents, chronic care and uninsured services. Hospitals may also receive private-sector payments for some over-the-counter drugs and personal health supplies, ancillary fees (such as those for parking and food services), donations and investment income.

Where Does the Money Go?

Health care is not only about people who need care but also about those who provide it and the way it is delivered. The bulk of hospital spending goes toward operating costs, such as salaries and benefits for hospital staff. In 2005-2006, inpatient nursing services (37%) and diagnostic and therapeutic services (21%) accounted for over half of all hospital spending on compensation.ⁱ Operating rooms, and emergency and ambulatory care, respectively, accounted for an additional 4% and 13% of compensation-related expenditures.ⁱ Another 18% was spent on compensation for administration and support services staff.ⁱ

ⁱ Percentages do not include data from Quebec and Nunavut.

2 Spending on Compensation in Canadian Hospitals

Hospital spending varies across departments. The table below shows how much was spent in Canada's hospitals, outside Quebec and Nunavut, on staff compensation in 2005–2006 by various areas of the hospital.

| | Non-Physician Compensation* | Physician Compensation ^{††*} |
|---|---|---|
| Area | 2005-2006 Spending [†] (\$'000,000) | 2005-2006 Spending [†] (\$'000,000) |
| Administration and Support [‡] | 4,150.0 | 85.6 |
| Inpatient Nursing Services [§] | 7,749.3 | 639.2 |
| Operating Room ^{**} | 811.2 | 30.9 |
| Emergency | 966.5 | 142.0 |
| Ambulatory Care Services | 1,638.2 | 277.0 |
| Diagnostic and Therapeutic | 4,027.1 | 789.2 |
| Research and Education | 502.6 | 157.6 |
| All Other | 965.1 | 19.8 |
| Total | 20,810.0 | 2,141.3 |

Notes: All numbers are rounded to the nearest million.

* Compensation figures include salaries and benefits.

† Does not include data from Quebec and Nunavut.

‡ Includes spending in such areas as human resources, communications and finance. Support includes materiel management, housekeeping services, plant maintenance and operation, among other services.

§ Includes ambulatory care clients for facilities without ambulatory care functional centres and expenses for physicians contracted in specific inpatient nursing units.

** Units used for surgical interventions, including post-anesthetic recovery rooms.

†† Physician compensation does not include fee-for-service payments.

Source: Canadian MIS Database, Canadian Institute for Health Information.

Medical imaging is another area in which spending has grown. In 2005–2006, Canadian hospitals reported having spent an estimated \$2.2 billion—or just about 5% of their budgets—to buy and operate medical imaging equipment. This includes spending on salaries for the professionals who operate and maintain the imaging equipment and capital costs related to the equipment itself. The bulk of that amount (61%) went to pay physicians and other staff; supplies accounted for another 22%.

Breaking Down Hospital Spending

Hospital expenditures reflect the provision of acute care, outpatient care, day surgery, emergency department services and other types of care. Overall, acute inpatient care

tends to account for the majority of hospital costs.² The rest of this report will focus on average costs associated with acute inpatient care. In the following section, CIHI's redeveloped patient grouping methodology (CMG+) is introduced, illustrating how to calculate average inpatient costs for specific patient/Case Mix Groups (CMGs) in Canadian hospitals. The final section further elaborates on this methodology and shows how certain factors can affect the cost of treating typical acute care patients admitted to hospital for various conditions and/or procedures. At the end of the report you will find an appendix of tables that provides the average inpatient acute care costs for typical cases for many different procedures and/or conditions, organized by major clinical categories.



2.0 Measuring Average Acute In-Hospital Costs

So far this report has examined hospital spending through a wide lens—looking at how much Canada spends on hospitals and how hospital spending is broken down by functional centre and type of hospital service.

This section introduces a newly redeveloped tool that allows for the calculation of average inpatient costs for specific patient/Case Mix Groups. This methodology (CMG+) can be used to calculate the average acute care inpatient hospital costs and may be valuable for comparing costs across programs and across hospitals. The components of this methodology and how it is used are described below.

What Is CMG+?

The CMG+ methodology is used to create distinct patient groupings that are clinically similar and/or homogenous with respect to hospital resources used. By linking patient groups to resources used in their treatment, CMG+ provides a tool for analyzing resource utilization and costs.

The case mix grouping methodology was revised to make use of the most recent Canadian classification systems for diseases and related health problems and interventions. The CMG+ methodology assigns patient records to major clinical categories (MCCs) and Case Mix Groups (CMGs). Both MCCs and CMGs are based on either a diagnosis or condition described as being most responsible for the patient's stay in hospital—in clinical terms, the “most responsible diagnosis” (MRDx)—or based on an intervention that significantly affects the pattern of care and resources consumed by a patient.

What's New About CMG+: The Five Factors

CMG+ introduces five factors to account for variations in patient resource consumption. The first two factors—Age Category and Comorbidity Level—are similar to ones found in CIHI's previous case mix methodology (CMG/Plx). The remaining three factors—Flagged Intervention, Intervention Event and Out-of-Hospital (OOH) Intervention—allow for the use of interventions in differentiating how resources are consumed. The five factors allow for a greater level of specificity and therefore CMG+ provides more accurate information about resource utilization. A brief description of each of these factors is provided below:

- **Age Category:** Hospital stays for older patients tend to cost more than those for younger patients with similar health problems. This may result from the cost of related in-hospital services and tests, as well as the duration of hospitalization (length of stay). Depending on the severity of a disease and its progression, older patients may require more and/or costlier types of services and tests than younger patients. They may also take a longer time to heal and/or recover from treatments.
- **Comorbidity Level:** Comorbidity refers to other illnesses a patient has beyond the most responsible reason for hospitalization. The presence of other illnesses may require more complex care and/or increase the length of treatment, as well as the length of time spent waiting for treatment. This, in turn, may result in higher hospital costs.
- **Flagged Intervention:** Certain hospital procedures, such as radiotherapy and tracheostomy, are “flagged” because they tend to be associated with higher resource consumption. Care for patients who receive “flagged” interventions typically costs more than care for similar patients who do not, even though the interventions themselves may not be costly.

There are currently 14 flagged intervention categories used in the CMG+ methodology. These are:

- | | |
|---------------------------|---|
| 1. Feeding tubes (PEG) | 9. Dialysis |
| 2. Vascular access device | 10. Radiotherapy |
| 3. Tracheostomy | 11. Mechanical ventilation no less than 96 hours |
| 4. Chemotherapy | 12. Mechanical ventilation less than 96 hours |
| 5. Paracentesis | 13. Cell saver |
| 6. Heart resuscitation | 14. Parenteral nutrition |
| 7. Cardioversion | |
| 8. Pleurocentesis | |

- **Intervention Event:** Each individual visit (or “occurrence”) by a patient to an operating room or procedure suite during a single hospital admission that involves an intervention from a specified list of interventions is called an “intervention event.” Cases with multiple intervention events are usually more costly than those involving only one.
- **Out-of-Hospital (OOH) Intervention:** OOH Interventions are selective interventions carried out in a health care facility other than the treating/admitting facility. As a result, the facility where the patient is eventually admitted and/or treated does not incur the cost of the intervention itself. In most of these cases, therefore, the presence of an OOH Intervention indicates a lower cost for the admitting facility.

For more information on CMG+, please visit www.cihi.ca.



Using CMG+ and Other Tools to Calculate Average Costs

By introducing five factors to account for variations in patient resource consumption, the CMG+ refines the methodology used to measure Resource Intensity Weights (RIWs). The RIWs are one of the two main components needed to calculate average case costs. The other component is Cost per Weighted Case (CPWC).

Resource Intensity Weights

An RIW is an indicator representing the relative resources used by a patient. Specifically, RIWs are relative values that describe the expected resource consumption of an “average” patient within a Case Mix Group.

In the CMG+ methodology, RIWs are adjusted for five factors known to affect hospital costs. For example, patients who differ with respect to age, the presence of additional illnesses and/or type and number of interventions, may consume different resources. On average, older patients with more health problems who tend to consume more resources would have a higher RIW than their counterparts with fewer health problems.

RIWs are calculated and updated annually based on data from the Discharge Abstract Database (DAD) and from case-cost data provided by hospitals in British Columbia, Alberta and Ontario. Calculated RIW values found in the DAD represent relative resource consumption of different patient cases. The sum of all the RIWs in a health service or program is referred to as the “weighted cases” for that service or program.

Cost per Weighted Case

The CPWC provides a measure of the average financial cost a facility incurs to treat a single inpatient. It is calculated by dividing the net total inpatient cost for a facility by the total weighted cases in that facility.

The CPWC is calculated and updated annually from CIHI’s Canadian MIS Database (CMDB), based on data from all hospitals in Canada that report data to the CMDB and the DAD. The CMDB contains financial and statistical information from hospitals and regional health authorities across Canada that can potentially be used to evaluate the cost of activities in health service organizations, among other purposes.

The average inpatient CPWC is calculated by dividing the total net inpatient cost by the total weighted cases for the same period.

$$\text{Cost per Weighted Case} = \frac{\text{Net Total Inpatient Cost}}{\text{Total Weighted Cases}}$$

For example, if a hospital has 5,000 RIW weighted cases during a period and a net total inpatient cost of \$10 million, the average inpatient CPWC is \$2,000.

$$\text{\$2,000} = \frac{\text{\$10,000,000}}{5,000}$$

Note: Net total inpatient cost excludes physician compensation.

How to Estimate Total Costs

Once the average CPWC has been calculated, the average cost can be applied to the total weighted case volume for any service or program.

$$\text{Estimate of Total Costs} = \text{CPWC} \times \text{Total Weighted Cases}$$

As in the above example, if the same hospital has 250 weighted cases of a certain disease with an average inpatient CPWC of \$2,000, the approximate average total cost to the hospital treating these patients is \$500,000.

$$\text{\$500,000} = \text{\$2,000} \times 250$$

The RIW and the CPWC together provide a simple way of estimating average patient and program costs. This cost information can be used to inform a variety of financial decisions, including those related to effective case and resource management, budgeting, program planning, restructuring, care planning or hospital funding.

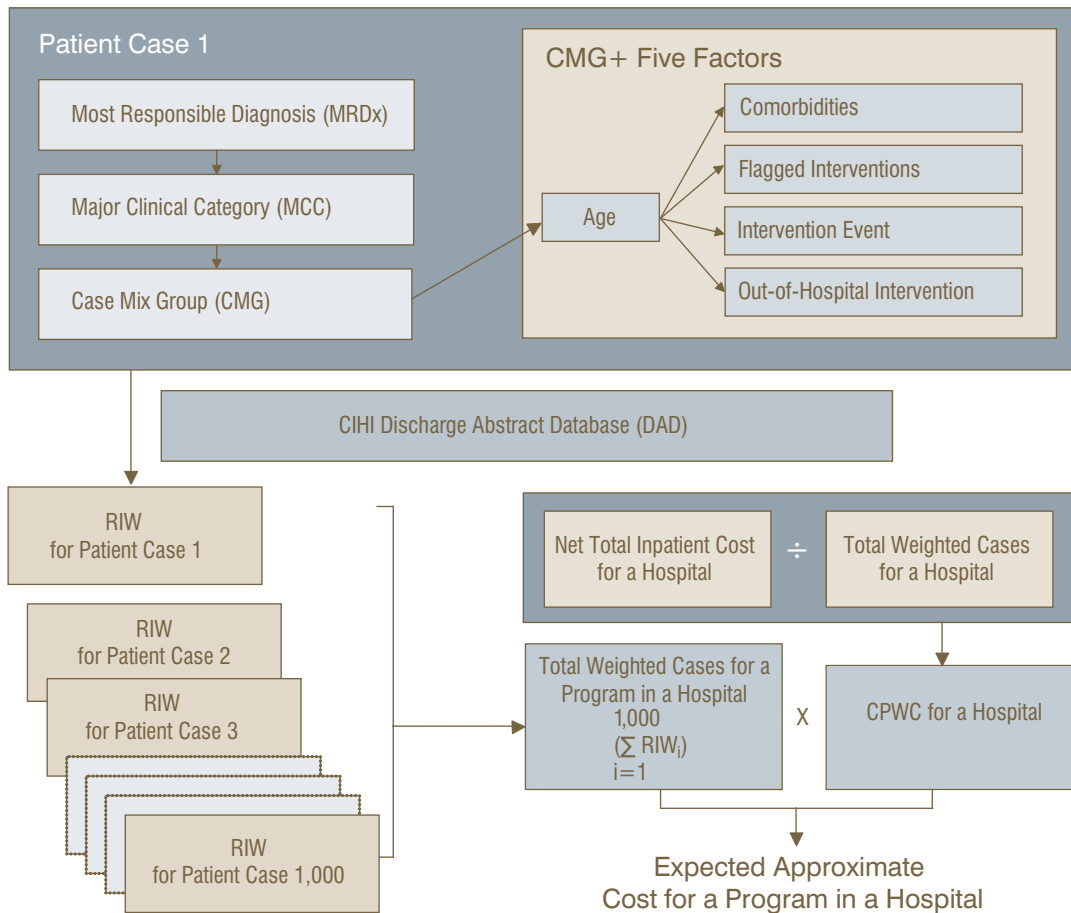
How Hospital Cost Information Can Be Used in Evidence-Based Decision-Making

Hospital-based health services managers and decision-makers can use costing information to inform decisions regarding strategic planning, program efficiency evaluation, resource management, proposal making, care planning, budgeting and hospital funding. Below are some examples of how hospital cost information can be applied to evidence-based decision-making:

- **Strategic Planning:** Hospital cost reports can be used to help assess the potential financial effects of strategic decisions. For example, if a hospital is considering the addition of a new program or physician, or proposing to expand a hospital's facility, the cost reports can be useful in estimating the potential financial effects of these changes. Furthermore, comparing the costs of programs or services may produce unexpected results. For example, the results may show that the proposed inpatient budget allocations are not consistent with planned areas of emphasis.
- **Evaluating Program Efficiency:** For those hospitals that have systems in place to measure the actual costs, the *overall CPWC* of the hospital can be compared to the *actual CPWC* case for each program. If the actual CPWC for a program is less, then the program can be considered to be less expensive than the hospital average.
- **Care Planning:** By using case-costing information, health care providers may be able to compare and identify the cost-effective models or practices of patient care.
- **Evaluating Emerging Technologies:** Case-cost data can be used to inform evaluation that takes into account both clinical volumes and financial performance.

3 Estimating Average Inpatient Costs

The following chart illustrates how average inpatient costs are calculated. In this example, 1,000 inpatient cases are treated in a clinical program in a hospital. To estimate average costs, CMG+ first assigns each patient case to an MCC and a CMG based on the MRDx and other information. After this, the RIW value is calculated for each case by adjusting the basic weight assigned to a CMG according to the patient's age and the rest of the five factors. By summing up all RIWs in that program, total weighted cases can be obtained for the program. In the same way, total weighted cases are calculated for all cases in that hospital by adding weighted cases for all the programs. The CPWC is then calculated by dividing the net total inpatient cost by the total weighted cases in that hospital. Finally, the expected approximate cost for that program in that hospital is calculated by multiplying the total weighted cases by the CPWC.





3.0 Looking Into Hospital Costs: Selected Examples

Earlier, this report illustrated the CMG+ methodology and how inpatient hospital costs can be calculated using average CPWC and RIWs. This section provides examples of how the CMG+ methodology is used to calculate average acute care hospitalization costs for typical patients.ⁱ Specifically, it focuses on factors that affect the cost of hospital stays for typical patients. It also provides examples of hospitalization costs for atypical patients (that is, costs for patients who are transferred from one hospital to another, patients who die and patients who sign themselves out before their full course of treatment is completed).

What Is a Typical Patient?

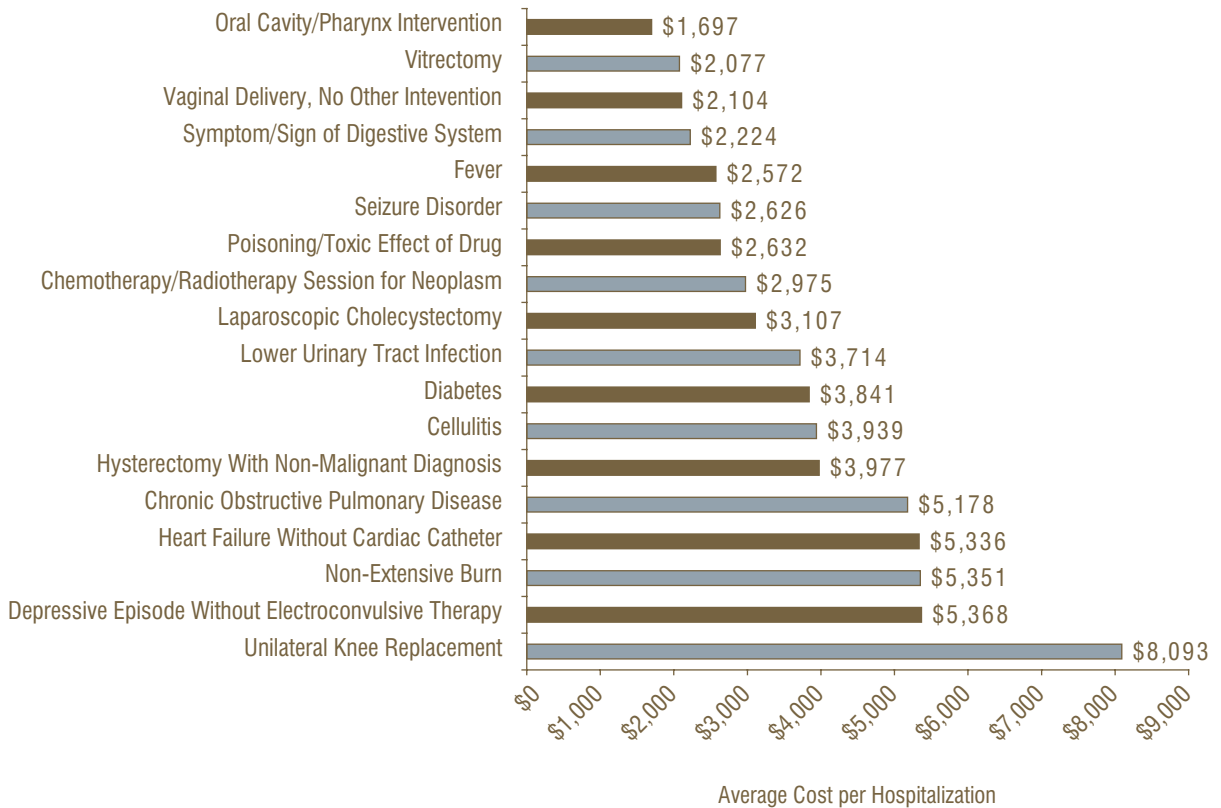
Typical patients are those who have undergone a normal and expected course of treatment. They exclude cases involving transfers between acute care facilities, deaths, sign-outs and long-stay cases.

While patients admitted for different conditions—for example, a pregnant patient compared with a heart attack patient—may incur different hospitalization costs, so can the types of procedures used on *similar* patients. The cost for pregnancy and childbirth for typical patients, for example, may differ by type of delivery—a vaginal deliveryⁱⁱ (\$2,104 per delivery) tends to be less costly on average than delivery by Caesarean sectionⁱⁱⁱ (\$4,108 per delivery).

ⁱ All cost data presented in this section are calculated using Cost per Weighted Case, which exclude physician compensation.

4 Average Costs for Typical inpatients With the Most Common Health Conditions

This figure shows the average hospital cost (2005–2006) for typical inpatients with the most common health conditions and/or treatments in each patient group from acute care facilities. Long-stay cases, deaths, sign-outs and cases involving transfers to or from acute care facilities were excluded.



Notes: Comparable data were not available from Quebec. Costs do not include physician compensation.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

Hospitalization costs can vary for other reasons, including how and where a patient is treated, the type of patient and the length

of hospital stay. There are many factors that can affect hospitalization costs beyond the type of procedure being performed.

ii Vaginal delivery refers to vaginal delivery with no other intervention.

iii Caesarean section refers to primary Caesarean section.

Factors Affecting Hospital Costs

Many factors affect the cost of treating a patient admitted to hospital. This is true even for patients with the same condition requiring the same or similar treatments. In this section we look at how the five factors described in Chapter 2—Age Category, Comorbidity Level, Flagged Intervention, Intervention Event and Out-of-Hospital Intervention—influence costs among typical patients being treated in hospital for similar conditions. It is important to note that where higher costs are associated with these factors, it does not imply that patients received unnecessary or inappropriate treatments or procedures.

Age Category

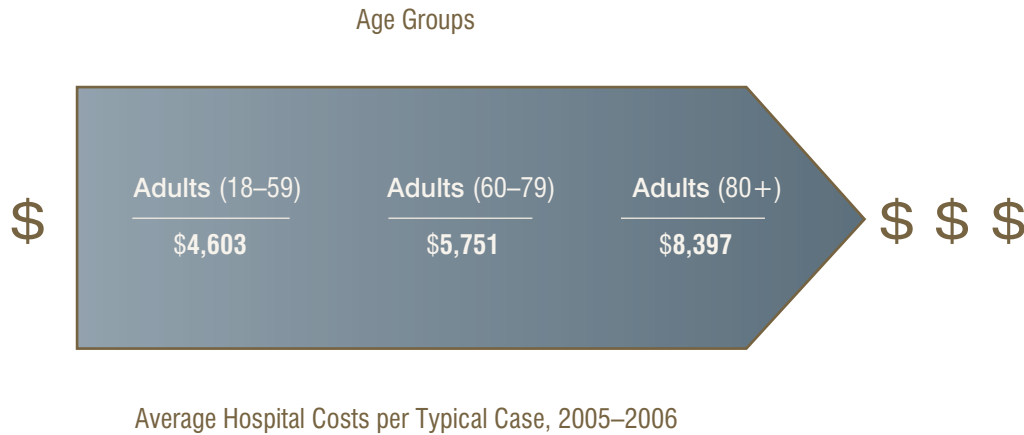
There may be sizable variations in hospitalization costs for patients in different age groups. These variations may result from the cost of in-hospital services

and tests as well as duration of admission. Depending on the type and severity of disease and its progression, patients in various age groups may require different types of services and tests and may take a longer or shorter time to heal or recover from treatments. Consider adult cases involving unilateral hip replacement among patients diagnosed with no other recorded illnesses who received similar treatments. The average cost per hospitalization for those (typical) patients aged 18 to 59 years was \$8,581; for those aged 60 to 79 years, \$8,777; and for those aged 80 years and older, \$9,661.

Another example involves patients who received no surgical interventions and who were generally similar except for differences in age. The average cost per typical case for hospitalizations for Parkinson's disease was almost double for patients aged 80 years and older compared to those aged 18 to 59 years.

5 Patients Admitted for Parkinson's Disease

The differences in hospitalization costs for typical patients by age group can be seen in the figure/diagram below. It shows that the average cost of hospitalization for treating Parkinson's disease increases as the age increases. In this case, care for older patients tends to cost more than for younger patients.



Notes: Comparable data were not available for Quebec. Costs do not include physician compensation.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

Comorbidity Level

Treating a patient for a condition when the patient suffers from additional illnesses (other than the most responsible diagnosis^{iv}) may cost more than treating a patient with the same condition *without* the additional illnesses. For example, the cost of treating typical patients aged 60 to

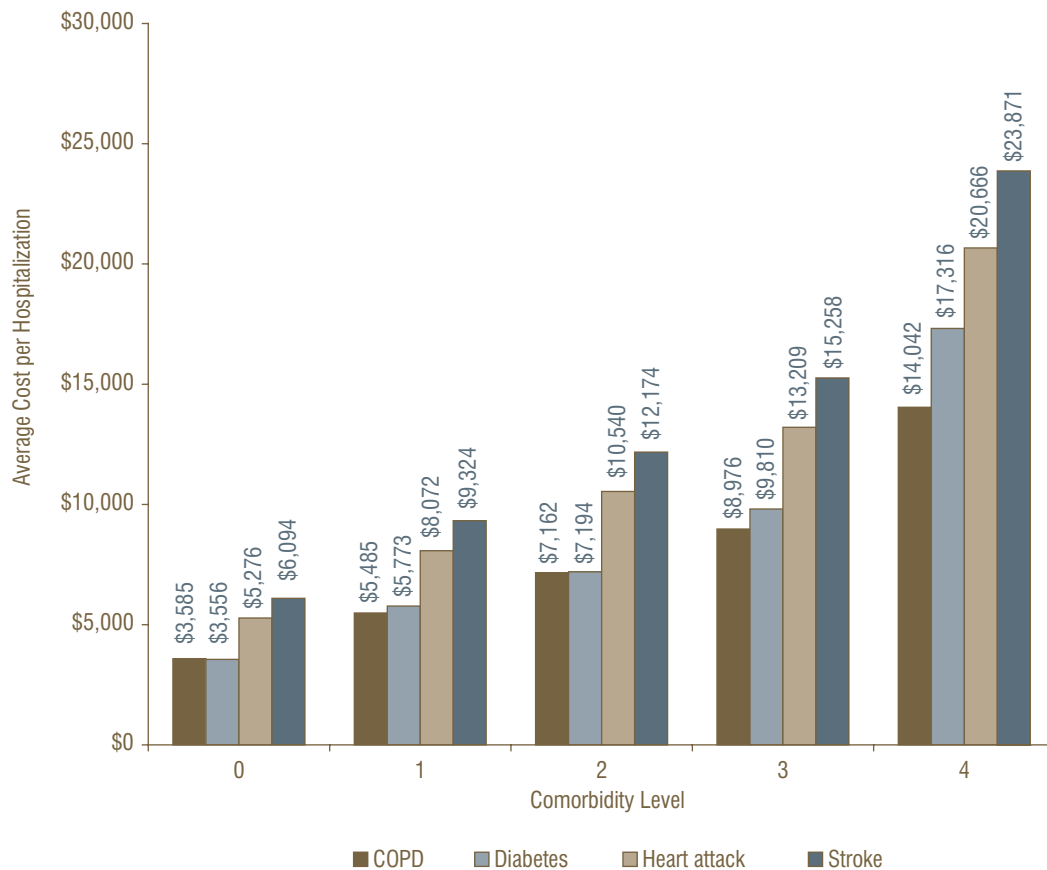
79 years who had a gallbladder^v removed was higher for those patients who had additional illnesses beyond why they were admitted into hospital; that is, the average cost of hospitalization was \$3,234 for a patient who had no additional illnesses compared to \$4,900 for patients with other illnesses.

iv The diagnosis that describes the most significant condition that is responsible for a patient's stay in the hospital.

v Laparoscopic cholecystectomy.

6 Hospital Costs Rise as the Number of Illnesses Rise

The graph below shows how hospitalization costs rise with increases in comorbidities (that is, illnesses other than the most responsible diagnosis) for four common conditions—diabetes, stroke, chronic obstructive pulmonary disease (COPD) and heart attack—for 2005–2006. In some cases the average cost of treating typical patients aged 60 to 79 years in hospital with a comorbidity level of 4 (higher comorbidity levels indicate higher resource consumption relating to the presence of other illnesses) is five times higher than treating similar patients with no comorbidities in hospital.



Notes: Comparable data were not available for Quebec. The CMG+ defines comorbidity levels as ranging from 0 to 4. Level 0 is for cases with no observed comorbidities from the comorbidity list. Levels 1 to 4 are defined by the observed cost effect of one or more comorbid conditions found on the comorbidity list. Cases in level 1 are evidenced as having a 25% to 49% increase in cost while comorbidity level 4 reflects an increase in cost of 125% or more. Costs do not include physician compensation.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

Different Procedures for Similar Patients May Result in Considerably Different Hospitalization Costs

In 2005–2006, the average cost per hospitalization for treating typical patients with diseases and disorders of the circulatory system was \$6,553. These groups of patients include those with heart transplants, cardiac valve replacement, bypass surgeries, angioplasty, myocardial infarction, arrhythmia, angina and other conditions. As a result of differences in diagnoses and treatments, some of these hospitalizations were less expensive than others. For example, typical patients treated for stable angina or chest pain without needing a catheter cost \$1,956, on average, compared to heart transplant patients, whose average cost per hospitalization for typical cases was almost \$74,576.

Similar patient groups are sometimes treated with different procedures. For example, bypass surgery and/or angioplasty are common methods of treating coronary artery disease or cardiovascular disease patients. A host of factors may be involved in deciding which procedure to use, including (but not limited to) patients' clinical conditions, physicians' practice patterns and patients' treatment preferences. Hospitalization costs may differ depending on the decisions made. Hospitalizations involving bypass surgery are, on average, more expensive than those for angioplasty. In 2005–2006, the average cost per hospitalization for typical bypass surgery cases was \$17,869 while that for typical angioplasty cases was \$7,829. However, the volume of angioplasty cases (n=18,295) was almost double that of bypass surgery (n=9,585).

Flagged Intervention

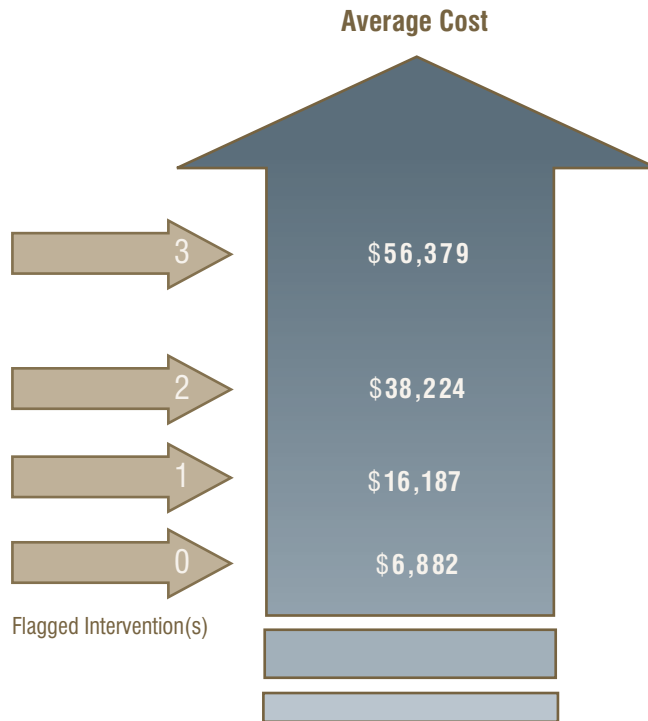
Some procedures, such as radiotherapy, chemotherapy, dialysis and others, tend to indicate that a patient's treatment in hospital will cost more. For example, the data show that for typical patients aged 60 to 79 years who were hospitalized for respiratory failure, the average cost per hospitalization was \$6,882 for cases with no Flagged

Intervention versus more than \$16,187 for cases with one or more Flagged Intervention(s) after removing the effect of the other factors. For patients aged 18 to 59 years with admissions involving pneumonia,^{vi} the average cost per case for those without a Flagged Intervention was \$3,056 versus \$16,753 for those with two Flagged Interventions.

vi Viral or unspecified pneumonia.

7 Flagged Procedure(s) for Respiratory Failure Patients

Hospital care for typical patients who undergo flagged procedures costs more on average than for those that do not. This is illustrated in the figure below for seniors (60 to 79 years) treated for respiratory failure in 2005–2006. The figure also shows that there is a significant change in average cost as the *number of flagged procedures* increases.



Notes: Comparable data were not available for Quebec. Costs do not include physician compensation.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

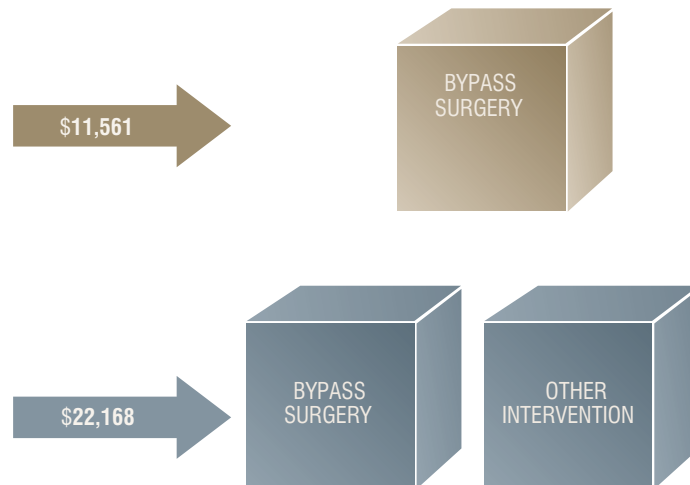
Intervention Event

Not all hospital admissions involve surgeries or visits to the operating room (74% in 2005–2006). Just over 1% involved two or more interventions. In general, the greater the number of surgeries or operating room visits,

the more costly the hospitalization. For example, hospitalizations of patients aged 60 to 79 years who underwent a colostomy or enterostomy cost almost double per case on average if patients had two intervention events during a single admission.

8 More Procedures, Higher Cost?

It may cost more to treat patients who visit the operating room more than once during their hospital stay. For example, when we compare typical bypass surgery patients who had one intervention event to those who had two during a single hospital admission, the average hospitalization cost nearly doubled (2005–2006).



Notes: Comparable data were not available for Quebec. Costs do not include physician compensation.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

Out-of-Hospital Intervention

Certain interventions that are carried out in a health care facility other than the treating/admitting facility are referred to as OOH Interventions.^{vii} These occur in less than 1% of all patient cases. When they do occur, they may result in a lower average case cost for the admitting hospital. For example, hospitalizations of patients aged 80 years and older admitted for a pacemaker implantation or removal who underwent the implantation or removal as an OOH Intervention cost the admitting hospital on average \$6,385 per typical case. However, the hospitalizations for those who had the intervention performed at the admitting/

treating facility cost, on average, about twice as much. Although the cost of an OOH Intervention may be lower to the admitting facility, the total cost of hospitalization shared between two facilities may be higher.

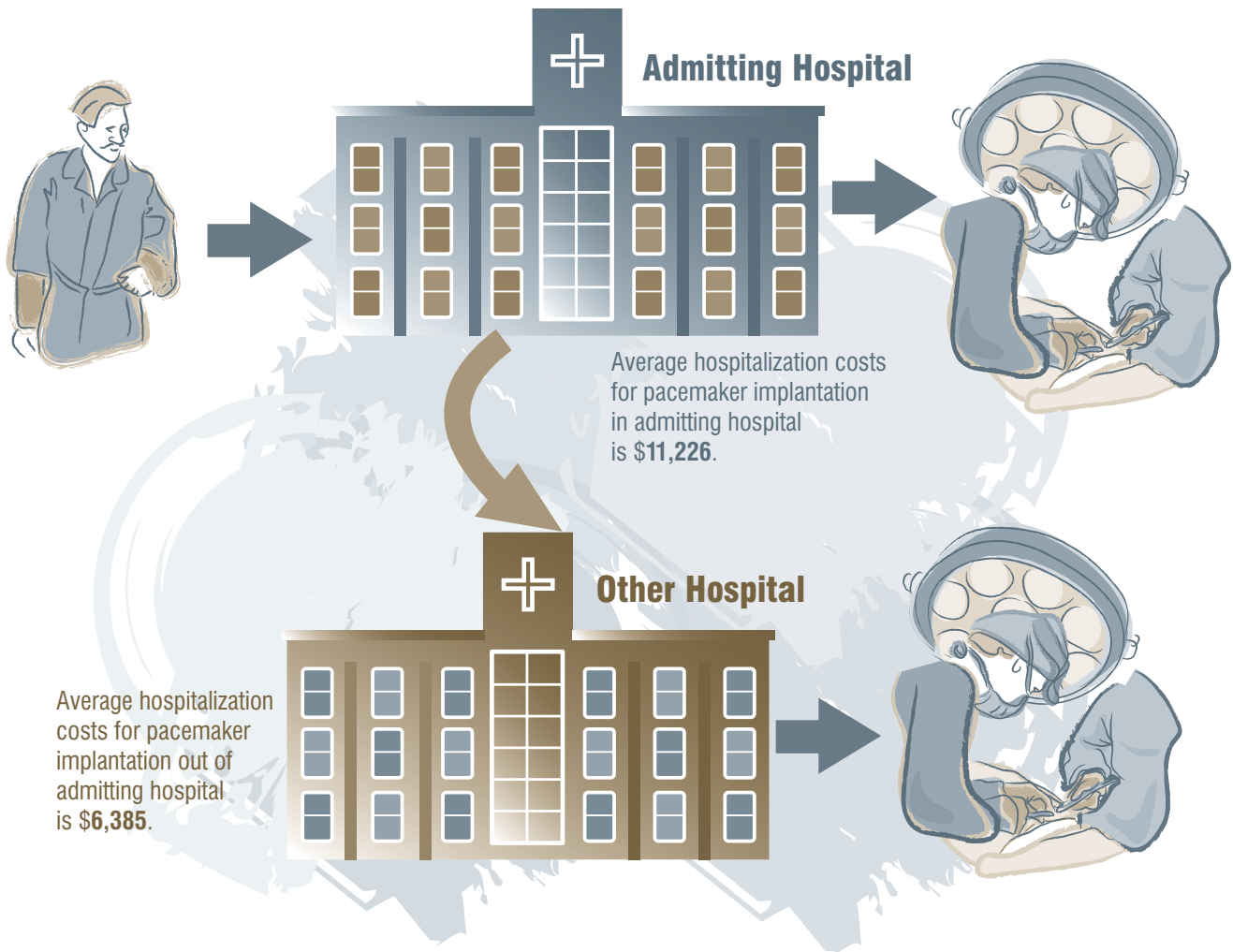
Also, the average hospitalization cost per typical case for 60-to-79-year-old heart attack patients who underwent an angioplasty as an OOH Intervention was almost half as much as the average hospital cost per typical case for similar patients treated in the admitting hospital.^{viii}

vii Patients who are sent to another facility for an OOH Intervention are not considered transfer patients because these patients are returned to the admitting hospital after the intervention has been performed in the other facility.

viii These patients did not have any other recorded illnesses or Flagged Intervention(s).

9 The Difference in Cost of a Pacemaker Implantation Performed in an Admitting Hospital Versus out of Hospital

The figure below illustrates the difference in average hospitalization cost for typical patients who received a pacemaker implantation in the admitting hospital versus receiving it out of the admitting hospital (2005–2006). The hospitalization cost incurred by the admitting hospital was almost twice as much when the procedure was done in the admitting hospital than when performed in another facility.



Notes: Comparable data were not available for Quebec. Costs do not include physician compensation.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

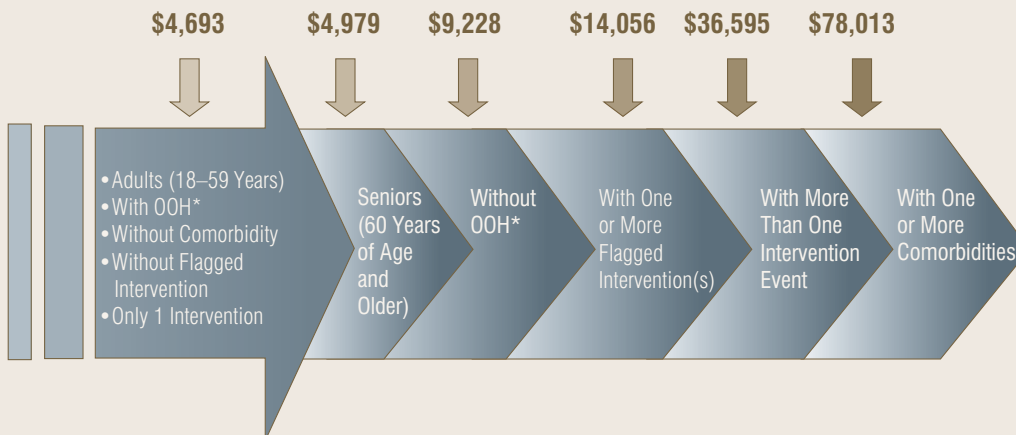
How Do the Five Adjustment Factors Affect Hospital Costs?

The CMG+ methodology makes use of five factors (Age Category, Comorbidity Level, Flagged Intervention, Intervention Events and Out-of-Hospital Intervention) to determine the RIW. As the weights vary, so do the average hospitalization costs.

The figure below provides an example of how these five factors could cumulatively affect the cost of treating typical inpatients who had an angioplasty after a heart attack. The overall average cost per hospitalization for these patients was \$10,553. However, the cost of hospital stays ranged from \$4,693 to \$78,013 after adjusting for the various factors.

10 How Costs Are Affected by the Factors

The figure below shows the cumulative effect of factors on hospitalization costs for 2005–2006. The average cost per hospitalization continues to rise as more factors come into play. For example, hospitalizations for typical patients 60 years and older who had an angioplasty performed in the admitting hospital (that is, did not have Out-of-Hospital Intervention), requiring one or more Flagged Intervention(s), who also had two or more interventions in a single hospital admission and had one or more other illnesses (beyond having a heart attack) cost almost 17 times more on average than hospitalizations involving younger typical patients (18 to 59 years of age) who had the procedure outside the admitting facility and had no other factors.



Notes: Comparable data were not available for Quebec. Costs do not include physician compensation.

*OOH=Out-of-Hospital Intervention.

Sources: Canadian MIS Database and Discharge Abstract Database, Canadian Institute for Health Information.

Cost of Treating Atypical and Long-Stay Patients

Looking at typical acute in-hospital costs only tells part of the story. In acute care settings there are patients that are “atypical,” that is, those who do not receive the normal or predicted course of treatment associated with inpatients in a specific Case Mix Group. This occurs because the patient arrived at, or left, the facility due to certain circumstances that made his or her total length of stay or costs less predictable. These patients include: those who die, those who transfer to and/or from other acute care institutions and those who sign out before completing their recommended course of care. They account for 15% of all hospital cases. Since these patients are likely to consume resources differently, the costs of their care

may be different from those of “typical” patients. In some cases, atypical cases may cost more, in others, less.

Those patients who die while in hospital or sign themselves out of hospital before their treatment is completed may cost more or less, depending on their overall length of stay and resource consumption. For example, patients who sign themselves out of hospital before they receive their full course of treatment may have lower average costs than those who stay until their treatment is completed because their length of stay is shorter and they may use fewer resources.

A patient may also be atypical if transferred from the admitting hospital to another facility for treatment, possibly because the admitting hospital did not have the resources to perform the treatment. Transfers can also result from



complications during a patient's hospital stay or other factors. Some acute care facilities, such as teaching hospitals, may handle more transfer patients and other atypical cases than other facilities. This may be, in part, due to the level of specialization, size and location of such hospitals. A complete picture of the cost of transfer patients can be constructed by building episodes of care that allow us to follow these patients through the health system. For example, the average cost per hospitalization for heart attack patients

who were not transferred during their episode of care^{ix} was \$6,910, versus \$8,300 per episode for transferred patients.^x

Patients who stay longer in hospital than others with similar conditions also tend to cost more. Longer hospitalizations can result from complications due to the types of conditions or treatments, the need for more or different interventions or tests and the need for longer post-surgery care, among other factors.

Other Factors Affecting Overall Hospital Costs

There are other factors associated with hospital costs that cannot be accounted for by the CMG+ methodology. These can include (but are not limited to) micro- and macro-factors within hospital infrastructure and certain patient or population characteristics. For instance, the severity of illness (above and beyond the patient's comorbidities) at the time of the hospitalization may affect the overall length of stay of the patient and costs.³

ix Typical cases.

x Transfer costs and other costs not used in the calculations of the RIWs were not included.

Information Gaps

What We Know

- How health and hospital spending vary across Canada and over time.
- How much Canada and other OECD countries spend publicly and privately on health care in general, and hospital care in particular.
- How certain factors such as age and where a patient is treated can affect average acute care costs for typical patients.
- How to calculate average inpatient costs using patient-specific Resource Intensity Weights (RIWs) and hospital-specific Cost per Weighted Case (CPWC) data.

What We Don't Know

- How do differences in the financing of hospital, physician and drug expenditures influence outcomes and cost efficiencies?
- How do different combinations of public and private financing and service delivery affect costs, access, quality, outcomes and satisfaction?
- To what extent do certain factors (for example, differences in staffing or practice patterns, the organization of hospital services and the availability and use of services outside of hospital) explain variations in hospital spending across the country?

What's Happening

- Starting with the first quarter data submission for 2007–2008, CIHI provided its clients with new and modified DAD reports (such as the Electronic Comparison of Hospital Activity Program, or eCHAP, and the Electronic Hospital Specific Report, or eHSR) that will provide detailed, comparative information on CMG+ factors, including Comorbidity Levels, Intervention Events, Flagged Interventions and Out-of-Hospital Interventions.
- CIHI will provide provincial/territorial ministries of health, regional health authorities and individual facilities with regrouped DAD data to reflect the new CMG+ methodology and associated indicators. Historical data files were provided in the fall of 2007.
- *Hospital Report 2007: Acute Care*, developed by CIHI in collaboration with the Hospital Report Research Collaborative, with the support of the Ontario Hospital Association and the Ministry of Health and Long-Term Care, provides updated data on financial performance and condition-specific indicators of hospitals that provide acute care inpatient services in Ontario.
- CIHI now provides an e-learning course, *Introduction to CMG+*, and a workshop, *An Advanced Look at CMG+*. The course and workshop will provide an overview of the CMG+ methodological changes to the grouping methodology and provide a clear understanding of how CMG+ may affect ongoing analyses at various institutions.

References

1. Organisation for Economic Co-operation and Development, *OECD Health Data, 2007 (CD-ROM)* (OECD, 2007).
2. J. Paul, N. Seeman, A. Gagliardi, S. Mahindra, P. Blackstein-Hirsch and A. D. Brown, *New Measures of Ambulatory Care Performance in Ontario: Preliminary System Snapshot, 2006* (Hospital Report Research Collaborative, 2006).
3. E. Yuen, "Severity of Illness and Ambulatory Care Sensitive Conditions," *Medical Care Research Review* 61, 3 (2004): pp. 376–391.





Appendix: Case Mix Groups by Major Clinical Categories

How to Use These Tables

This report provides information on the cost of providing health care to Canadians and specifically focuses on acute hospital care. The report highlights the use of the CMG+ methodology, which aggregates acute care inpatients into major clinical categories (MCCs) and assigns patients with similar clinical and resource utilization characteristics into Case Mix Groups (CMGs). The tables in the appendix show the average hospitalization costs for typical patients admitted into acute care facilities categorized into CMGs by MCCs. They also show the case distribution of “typical” and “atypical” cases for all CMGs. Technical notes regarding these data can be found at the end of this appendix.

MCC 01 Diseases and Disorders of the Nervous System

| CMG Code | CMG Description | Total Volume | Typical Cases Average Cost (\$) | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------------|--------|------------------------------|--------------------------|-----------|--------|--------------------|
| | | | Mean | Median | Typical Cases | Atypical Cases Transfers | Sign-Outs | Deaths | Long-Stay Outliers |
| 001 | Intracranial Vessel Intervention Except Extraction, Open Approach | 777 | 28,122 | 14,098 | 62.7 | 23.8 | 0.3 | 9.5 | 3.7 |
| 002 | Intracranial Vessel Intervention Except Extraction, Percutaneous Approach | 487 | 11,129 | 9,272 | 67.6 | 23.6 | 0.2 | 5.3 | 3.3 |
| 003 | Other Vascular Intervention With Nervous System Diagnosis | 978 | 8,165 | 6,089 | 87.3 | 5.9 | 0.1 | 1.5 | 5.1 |
| 004 | Craniotomy for Drainage | 235 | 20,627 | 8,863 | 41.3 | 40.4 | 0.0 | 13.2 | 5.1 |

CMG code and description refer to the illnesses or conditions used in classifying similar patients into a group, which is assigned a specific code.

Total volume refers to the total number of typical, atypical and long-stay outlier cases in the respective CMGs.

The average (mean and median) cost of typical acute care cases is calculated using data from the Discharge Abstract Database and the Canadian MIS Database, and applying the RIWs and the CPWC to the respective CMGs. Data do not include physician compensation.

Cases in the DAD used here are classified as typical, atypical and long-stay outliers, and their distribution is given as percentages of the total volume of cases. Atypical cases are further subdivided into patient transfers, sign-outs and deaths.

MCC 01 Diseases and Disorders of the Nervous System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 001 | Intracranial Vessel Intervention Except Extraction, Open Approach | 777 | 28,122 | 14,098 | 62.7 | 23.8 | 0.3 | 9.5 | 3.7 |
| 002 | Intracranial Vessel Intervention Except Extraction, Percutaneous Approach | 487 | 11,129 | 9,272 | 67.6 | 23.6 | 0.2 | 5.3 | 3.3 |
| 003 | Other Vascular Intervention With Nervous System Diagnosis | 978 | 8,165 | 6,089 | 87.3 | 5.9 | 0.1 | 1.5 | 5.1 |
| 004 | Craniotomy for Drainage | 235 | 20,627 | 8,863 | 41.3 | 40.4 | 0.0 | 13.2 | 5.1 |
| 005 | Insertion of Shunt/Brain Monitor | 1,472 | 25,127 | 11,162 | 64.7 | 18.5 | 0.3 | 12.6 | 3.9 |
| 006 | Cranium Intervention | 785 | 16,051 | 10,961 | 81.9 | 12.9 | 0.1 | 2.2 | 2.9 |
| 007 | Thoracic/Major Intervention on Spine/Spinal Canal/Vertebra | 1,019 | 12,832 | 9,238 | 86.1 | 9.5 | 0.1 | 0.8 | 3.5 |
| 008 | Other Site/Non-Major Intervention on Spine/Spinal Canal/Vertebra | 1,493 | 8,192 | 7,309 | 92.7 | 4.8 | 0.0 | 0.8 | 1.7 |
| 009 | Excision/Repair of Brain | 2,764 | 12,447 | 10,138 | 79.8 | 13.9 | 0.2 | 2.3 | 3.8 |
| 010 | Drainage/Release of Brain | 1,393 | 7,459 | 5,816 | 71.8 | 21.8 | 0.1 | 3.3 | 2.9 |
| 011 | Management of Nervous System Device/Other Minor Intervention | 931 | 6,801 | 5,608 | 77.1 | 14.6 | 0.2 | 2.7 | 5.4 |
| 012 | Open Carotid Endarterectomy | 2,542 | 6,324 | 5,530 | 92.1 | 2.5 | 0.2 | 0.4 | 4.8 |
| 013 | Major Nerve Intervention or Intervention on Other Site | 613 | 5,991 | 4,974 | 91.2 | 1.3 | 0.0 | 0.0 | 7.5 |
| 014 | Non-Major Intervention on Nerve | 262 | 2,868 | 2,549 | 92.7 | 0.4 | 0.4 | 0.4 | 6.1 |
| 023 | Parkinson's Disease/Other Parkinsonian Disorder | 1,360 | 8,903 | 8,397 | 77.8 | 7.5 | 0.4 | 5.4 | 8.9 |
| 024 | Other Degenerative Disease of Nervous System | 1,217 | 7,059 | 4,826 | 74.5 | 8.2 | 0.5 | 10.4 | 6.4 |
| 025 | Hemorrhagic Event of Central Nervous System | 5,273 | 10,143 | 6,300 | 40.2 | 24.1 | 0.5 | 32.2 | 3.1 |
| 026 | Ischemic Event of Central Nervous System | 12,500 | 8,829 | 6,094 | 67.3 | 13.2 | 0.4 | 13.7 | 5.5 |
| 027 | Cerebrovascular Disorder | 1,774 | 5,654 | 4,675 | 71.6 | 14.7 | 0.6 | 8.1 | 5.0 |
| 028 | Unspecified Stroke | 10,114 | 6,080 | 4,743 | 67.5 | 10.2 | 0.7 | 16.3 | 5.3 |
| 029 | Transient Ischemic Attack | 6,925 | 2,629 | 2,410 | 90.3 | 4.4 | 0.9 | 0.2 | 4.2 |
| 030 | Viral Meningitis | 767 | 2,233 | 2,071 | 91.0 | 5.5 | 1.3 | 0.0 | 2.2 |
| 031 | Meningitis Except Viral | 885 | 8,242 | 6,182 | 73.9 | 20.0 | 0.7 | 3.7 | 1.7 |
| 032 | Infection/Inflammation of Central Nervous System Except Meningitis | 1,096 | 10,080 | 6,574 | 60.9 | 26.1 | 1.4 | 6.7 | 5.0 |
| 033 | Neuropathy/Polyneuropathy | 957 | 8,083 | 5,136 | 76.8 | 16.7 | 0.6 | 2.3 | 3.6 |
| 034 | Other Disorder of Nerve | 1,544 | 3,896 | 2,880 | 86.7 | 7.6 | 0.6 | 0.8 | 4.3 |
| 035 | Neuromuscular Disorder | 604 | 8,945 | 7,182 | 78.6 | 14.9 | 0.2 | 3.0 | 3.3 |
| 036 | Multiple Sclerosis/Demyelinating Disorder | 1,437 | 5,866 | 4,099 | 83.5 | 9.5 | 1.0 | 1.0 | 5.1 |

MCC 01 Diseases and Disorders of the Nervous System (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|-------------------|--------|------------------------------|----------------|-----|------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| Mean | Median | Transfers | Sign-Outs | Deaths | | | | | |
| 037 | Other Dysfunction of Central Nervous System | 5,053 | 5,136 | 4,332 | 82.1 | 7.8 | 1.7 | 2.4 | 6.0 |
| 038 | Neoplasm of Central Nervous System | 3,850 | 6,313 | 5,166 | 56.9 | 24.2 | 0.5 | 13.2 | 5.2 |
| 039 | Status Epilepticus | 1,130 | 6,134 | 3,570 | 78.8 | 14.4 | 2.0 | 2.0 | 2.7 |
| 040 | Seizure Disorder | 13,832 | 2,626 | 2,259 | 86.0 | 6.2 | 3.0 | 0.5 | 4.3 |
| 041 | Migraine/Other Headache | 3,618 | 1,950 | 1,782 | 88.9 | 6.2 | 1.3 | 0.1 | 3.6 |
| 042 | Other Disorder of Central Nervous System | 2,947 | 5,590 | 3,274 | 59.9 | 17.3 | 1.1 | 17.8 | 3.9 |
| 901 | MCC 01 Unrelated Intervention | 1,498 | 18,947 | 10,836 | 69.1 | 11.8 | 0.2 | 12.9 | 6.0 |

MCC 02 Diseases and Disorders of the Eye

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|-------------------|--------|------------------------------|----------------|-----|-----|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| Mean | Median | Transfers | Sign-Outs | Deaths | | | | | |
| 050 | Orbit/Eyeball Intervention | 605 | 6,349 | 5,763 | 88.4 | 7.4 | 0.2 | 0.0 | 4.0 |
| 051 | Lens Extraction/Insertion | 833 | 2,729 | 2,674 | 94.5 | 1.2 | 0.0 | 0.0 | 4.3 |
| 052 | Vitrectomy | 2,875 | 2,077 | 2,074 | 96.7 | 0.7 | 0.0 | 0.0 | 2.7 |
| 053 | Extraocular Intervention Except Lacrimal System | 510 | 1,811 | 1,799 | 90.6 | 2.0 | 0.4 | 0.0 | 7.1 |
| 054 | Sclera/Choroid/Retina Intervention Without Vitrectomy | 719 | 1,612 | 1,590 | 97.6 | 0.4 | 0.0 | 0.0 | 1.9 |
| 055 | Lacrimal System Intervention | 139 | 1,365 | 1,378 | 92.8 | 1.4 | 0.0 | 0.0 | 5.8 |
| 056 | Other Ophthalmic Intervention | 654 | 2,111 | 2,064 | 91.9 | 2.9 | 0.5 | 0.0 | 4.7 |
| 063 | Inflammation of Orbit | 670 | 2,308 | 2,361 | 88.4 | 8.1 | 0.6 | 0.0 | 3.0 |
| 064 | Major Ophthalmology Disorder | 496 | 3,893 | 3,619 | 86.7 | 10.7 | 0.8 | 0.2 | 1.6 |
| 065 | Other Ophthalmology Disorder | 1,135 | 2,014 | 1,800 | 85.8 | 8.3 | 1.1 | 0.0 | 4.8 |
| 902 | MCC 02 Unrelated Intervention | 51 | 8,436 | 5,614 | 88.2 | 9.8 | 0.0 | 2.0 | 0.0 |

MCC 03 Diseases and Disorders of the Ear, Nose, Mouth and Throat

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|-------------------|--------|------------------------------|----------------|-----------|--------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| | | | Mean | Median | | Transfers | Sign-Outs | Deaths | |
| 070 | Cochlear Implant | 330 | 27,137 | 24,611 | 98.5 | 0.3 | 0.0 | 0.0 | 1.2 |
| 071 | Radical Excision of Head and Neck | 530 | 38,693 | 37,435 | 89.2 | 6.2 | 0.2 | 1.9 | 2.5 |
| 072 | Temporomandibular Joint Implant | 34 | 15,799 | 14,735 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 073 | Oropharynx Excision | 146 | 10,214 | 6,542 | 93.8 | 1.4 | 0.0 | 2.1 | 2.7 |
| 074 | Lymphatic Intervention With Ear/Nose/Throat Diagnosis | 640 | 11,427 | 5,900 | 93.9 | 1.7 | 0.2 | 1.1 | 3.1 |
| 075 | Larynx/Trachea Intervention With Ear/Nose/Throat Diagnosis | 363 | 9,593 | 3,895 | 86.5 | 8.8 | 0.6 | 0.3 | 3.9 |
| 076 | Artery Occlusion for Epistaxis | 99 | 6,452 | 4,777 | 83.8 | 11.1 | 0.0 | 0.0 | 5.1 |
| 077 | Partial Excision Musculoskeletal Tissue of Head | 271 | 4,378 | 3,258 | 91.1 | 1.1 | 0.0 | 0.0 | 7.7 |
| 078 | Other Musculoskeletal Intervention on Head | 4,241 | 4,808 | 4,526 | 97.3 | 0.3 | 0.0 | 0.0 | 2.3 |
| 079 | External Ear Intervention | 266 | 4,443 | 4,092 | 98.1 | 0.8 | 0.0 | 0.0 | 1.1 |
| 080 | Other Ear Intervention | 1,115 | 1,805 | 1,758 | 97.0 | 0.2 | 0.0 | 0.0 | 2.9 |
| 081 | Hard/Soft Palate/Gingiva Intervention | 832 | 3,528 | 3,356 | 96.6 | 0.2 | 0.2 | 0.0 | 2.9 |
| 082 | Mastoid Intervention | 837 | 3,281 | 3,155 | 94.3 | 0.5 | 0.1 | 0.0 | 5.1 |
| 083 | Ear/Nose/Throat Gland Intervention | 1,526 | 3,203 | 2,863 | 95.6 | 0.3 | 0.0 | 0.1 | 4.1 |
| 084 | Sinus Intervention | 1,713 | 2,210 | 2,175 | 96.1 | 0.2 | 0.0 | 0.0 | 3.7 |
| 085 | Glottis Intervention | 355 | 2,970 | 2,105 | 90.1 | 1.4 | 0.3 | 0.0 | 8.2 |
| 086 | Oral Cavity/Pharynx Intervention | 11,191 | 1,697 | 1,659 | 96.8 | 0.4 | 0.2 | 0.0 | 2.5 |
| 087 | Nose/Nasal Cartilage Intervention | 1,864 | 1,929 | 1,813 | 97.0 | 0.4 | 0.2 | 0.0 | 2.4 |
| 088 | Skin Intervention With Ear/Nose/Throat Diagnosis | 375 | 3,281 | 3,247 | 95.5 | 1.1 | 0.3 | 0.0 | 3.2 |
| 094 | Ear/Nose/Throat Malignancy | 1,199 | 9,248 | 5,244 | 67.4 | 12.2 | 1.0 | 13.3 | 6.2 |
| 095 | Sleep Apnea | 1,530 | 2,287 | 1,767 | 93.1 | 1.7 | 0.3 | 0.0 | 4.9 |
| 096 | Epiglottitis | 349 | 3,294 | 2,615 | 86.5 | 11.7 | 0.6 | 0.3 | 0.9 |
| 097 | Influenza/Acute Upper Respiratory Infection | 3,743 | 2,145 | 1,765 | 93.1 | 3.4 | 0.5 | 0.2 | 2.8 |
| 098 | Dysequilibrium/Hearing Loss | 6,450 | 2,137 | 2,062 | 93.6 | 1.8 | 0.7 | 0.1 | 3.8 |
| 099 | Epistaxis | 1,945 | 1,952 | 1,876 | 87.9 | 7.5 | 0.7 | 0.7 | 3.1 |
| 100 | Sinusitis | 626 | 2,267 | 2,017 | 93.5 | 3.7 | 1.4 | 0.0 | 1.4 |
| 101 | Disease of Oral Cavity/Salivary Gland/Jaw | 1,986 | 2,480 | 2,121 | 92.8 | 3.7 | 0.8 | 0.3 | 2.4 |
| 102 | Otitis Media With/Without Ventilation Tube | 885 | 1,986 | 1,733 | 94.8 | 2.6 | 1.0 | 0.0 | 1.6 |
| 103 | Tonsillitis/Pharyngitis | 4,739 | 1,231 | 938 | 94.2 | 2.4 | 1.1 | 0.0 | 2.3 |
| 104 | Croup | 2,424 | 1,013 | 956 | 94.3 | 2.3 | 0.5 | 0.0 | 3.0 |
| 105 | Miscellaneous Ear/Nose/Throat Disorder | 2,753 | 2,488 | 1,983 | 88.6 | 5.7 | 0.9 | 0.3 | 4.5 |
| 903 | MCC 03 Unrelated Intervention | 181 | 11,886 | 4,923 | 77.3 | 7.2 | 0.0 | 6.1 | 9.4 |

MCC 04 Diseases and Disorders of the Respiratory System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|-------------------|--------|------------------------------|----------------|-----------|--------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| | | | Mean | Median | | Transfers | Sign-Outs | Deaths | |
| 110 | Lung Transplant | 78 | 93,985 | 52,921 | 78.2 | 6.4 | 0.0 | 10.3 | 5.1 |
| 111 | Open Intrapericardial Lung Resection | 91 | 16,036 | 12,253 | 80.2 | 4.4 | 0.0 | 7.7 | 7.7 |
| 112 | Open Thoracic Lung Resection | 3,867 | 13,716 | 10,146 | 90.3 | 4.0 | 0.2 | 2.3 | 3.2 |
| 113 | Pleurectomy | 837 | 12,863 | 8,553 | 70.1 | 24.6 | 0.1 | 2.3 | 2.9 |
| 114 | Endoscopic Lung Resection | 1,019 | 7,353 | 6,085 | 90.2 | 6.2 | 0.1 | 0.9 | 2.6 |
| 115 | Respiratory Biopsy/Inspection | 1,416 | 9,431 | 4,739 | 81.5 | 9.6 | 0.1 | 5.8 | 3.0 |
| 116 | Pleurodesis | 140 | 7,113 | 6,328 | 81.4 | 7.1 | 0.0 | 7.1 | 4.3 |
| 117 | Other Respiratory Intervention | 1,729 | 13,303 | 6,597 | 71.3 | 15.6 | 0.3 | 9.5 | 3.2 |
| 118 | Bone Intervention With Respiratory Diagnosis | 174 | 11,802 | 7,051 | 84.5 | 6.3 | 0.0 | 2.9 | 6.3 |
| 119 | Lymph Node Excision/Biopsy With Respiratory Diagnosis | 389 | 4,427 | 3,440 | 82.5 | 9.5 | 0.3 | 4.4 | 3.3 |
| 120 | Other Intervention With Respiratory Diagnosis | 443 | 32,982 | 14,685 | 58.2 | 17.8 | 0.7 | 16.7 | 6.5 |
| 130 | Respiratory Failure | 3,888 | 25,827 | 11,104 | 40.9 | 18.0 | 0.7 | 37.7 | 2.7 |
| 131 | Failure/Rejection Lung Transplant | 43 | 9,876 | 7,802 | 81.4 | 7.0 | 0.0 | 9.3 | 2.3 |
| 132 | Malignant Neoplasm of Respiratory System | 11,319 | 7,074 | 5,225 | 55.5 | 11.0 | 0.4 | 29.3 | 4.0 |
| 133 | Infectious/Parasitic Disease of Respiratory System | 216 | 14,549 | 7,140 | 69.4 | 17.6 | 0.9 | 9.7 | 2.3 |
| 134 | Respiratory Tuberculosis | 500 | 10,122 | 8,272 | 72.6 | 15.8 | 3.4 | 4.4 | 3.8 |
| 135 | Aspiration Pneumonia | 4,931 | 11,004 | 6,239 | 62.8 | 6.8 | 1.0 | 25.9 | 3.6 |
| 136 | Bacterial Pneumonia | 2,987 | 8,868 | 5,254 | 72.9 | 9.7 | 1.5 | 12.1 | 3.8 |
| 137 | Bacterial Disease of Respiratory System | 203 | 9,204 | 5,550 | 77.8 | 14.3 | 1.0 | 5.9 | 1.0 |
| 138 | Viral/Unspecified Pneumonia | 45,173 | 4,327 | 3,958 | 82.0 | 5.5 | 1.2 | 7.9 | 3.4 |
| 139 | Chronic Obstructive Pulmonary Disease | 52,296 | 5,178 | 3,816 | 84.5 | 3.9 | 1.0 | 6.6 | 4.0 |
| 140 | Bronchiectasis | 692 | 5,469 | 4,403 | 90.0 | 3.2 | 0.4 | 3.3 | 3.0 |
| 141 | Upper/Lower Respiratory Infection | 10,888 | 2,740 | 2,527 | 91.7 | 4.9 | 0.6 | 0.2 | 2.5 |
| 142 | Other Lung Disease | 5,323 | 7,588 | 4,773 | 64.9 | 15.1 | 0.9 | 16.0 | 3.1 |
| 143 | Disease of Pleura | 3,378 | 5,126 | 4,154 | 74.5 | 14.9 | 1.4 | 5.9 | 3.4 |
| 144 | Pneumothorax | 1,701 | 2,734 | 2,138 | 75.7 | 18.6 | 0.6 | 2.4 | 2.7 |
| 145 | Postprocedural Respiratory Disorder | 1,532 | 3,311 | 2,269 | 82.2 | 11.2 | 0.6 | 2.6 | 3.5 |
| 146 | Burn of Respiratory Tract | 39 | 8,087 | . | 74.4 | 17.9 | 2.6 | 2.6 | 2.6 |
| 147 | Asthma | 17,140 | 1,918 | 1,779 | 93.8 | 2.7 | 1.4 | 0.1 | 1.9 |
| 148 | Other Respiratory Disorder | 2,750 | 3,923 | 2,795 | 77.7 | 11.9 | 0.8 | 3.2 | 6.4 |
| 149 | Symptom/Sign of Respiratory System | 5,270 | 2,727 | 2,592 | 85.4 | 8.0 | 1.7 | 2.2 | 2.7 |
| 904 | MCC 04 Unrelated Intervention | 2,112 | 33,811 | 15,844 | 59.4 | 13.7 | 0.3 | 22.1 | 4.5 |

MCC 05 Diseases and Disorders of the Circulatory System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|-------------------|--------|------------------------------|---------------|-----------|--------------------------|--------|
| | | | Average Cost (\$) | Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths |
| 160 | Heart Transplant | 143 | 74,576 | 56,255 | 62.9 | 17.5 | 0.0 | 13.3 | 6.3 |
| 161 | Implantation of Cardioverter/Defibrillator | 1,946 | 30,274 | 24,553 | 73.2 | 23.9 | 0.1 | 0.3 | 2.6 |
| 162 | Cardiac Valve Replacement | 5,069 | 23,341 | 20,386 | 72.5 | 18.8 | 0.1 | 5.1 | 3.6 |
| 163 | Major Cardiothoracic Intervention With Pump | 820 | 24,184 | 18,226 | 80.9 | 10.0 | 0.1 | 5.4 | 3.7 |
| 164 | Major Cardiothoracic Intervention Without Pump | 761 | 21,334 | 14,431 | 74.4 | 13.0 | 0.3 | 7.9 | 4.5 |
| 165 | Cardiac Valve Repair Except Percutaneous Transluminal Approach | 1,239 | 20,506 | 17,175 | 74.7 | 18.3 | 0.2 | 4.4 | 2.3 |
| 166 | Coronary Artery Bypass Graft With Cardiac Catheter With MI/Shock/Arrest With Pump | 1,389 | 30,608 | 27,153 | 54.0 | 37.6 | 0.0 | 6.7 | 1.7 |
| 167 | Coronary Artery Bypass Graft With Cardiac Catheter With MI/Shock/Arrest Without Pump | 160 | 31,443 | 29,282 | 70.6 | 23.8 | 0.0 | 3.1 | 2.5 |
| 168 | Coronary Artery Bypass Graft With Cardiac Catheter Without MI/Shock/Arrest With Pump | 1,592 | 22,331 | 20,795 | 57.9 | 38.7 | 0.1 | 1.8 | 1.6 |
| 169 | Coronary Artery Bypass Graft With Cardiac Catheter Without MI/Shock/Arrest Without Pump | 177 | 24,267 | 23,179 | 81.4 | 15.8 | 0.6 | 1.1 | 1.1 |
| 170 | Coronary Artery Bypass Graft Without Cardiac Catheter With MI/Shock/Arrest With Pump | 1,245 | 24,900 | 22,302 | 32.7 | 59.7 | 0.1 | 5.6 | 1.9 |
| 171 | Coronary Artery Bypass Graft Without Cardiac Catheter With MI/Shock/Arrest Without Pump | 165 | 26,206 | 24,334 | 30.9 | 67.3 | 0.0 | 1.8 | 0.0 |
| 172 | Coronary Artery Bypass Graft Without Cardiac Catheter Without MI/Shock/Arrest With/Without Pump | 9,789 | 15,173 | 15,910 | 73.5 | 21.1 | 0.1 | 0.7 | 4.6 |
| 173 | Minor Cardiothoracic Intervention | 379 | 13,959 | 10,143 | 68.6 | 20.3 | 0.3 | 7.4 | 3.4 |
| 174 | Pacemaker Implantation/Removal Except Cardioverter/Defibrillator Implant | 9,967 | 12,120 | 10,116 | 77.9 | 17.3 | 0.1 | 2.2 | 2.5 |
| 175 | Percutaneous Coronary Intervention With MI/Shock/Arrest/Heart Failure | 12,397 | 10,553 | 9,061 | 62.8 | 32.2 | 0.4 | 2.4 | 2.2 |
| 176 | Percutaneous Coronary Intervention Without MI/Shock/Arrest/Heart Failure | 15,442 | 5,810 | 5,901 | 68.0 | 28.3 | 0.2 | 0.1 | 3.4 |
| 177 | Management of Pacemaker/Epicardial Lead | 939 | 8,503 | 7,377 | 91.2 | 5.1 | 0.1 | 0.3 | 3.3 |
| 178 | Percutaneous Transluminal Cardiothoracic Intervention Except Percutaneous Coronary Intervention | 1,253 | 8,613 | 7,511 | 76.6 | 10.9 | 0.2 | 8.1 | 4.2 |
| 179 | Cardiac Conduction System Intervention | 2,110 | 4,061 | 3,583 | 85.3 | 4.5 | 0.2 | 0.0 | 10.0 |

MCC 05 Diseases and Disorders of the Circulatory System (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|-------------------|--------|------------------------------|----------------|-----------|--------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| | | | Mean | Median | | Transfers | Sign-Outs | Deaths | |
| 180 | Amputation of Limb Except Hand/Foot | 1,198 | 19,600 | 14,490 | 62.9 | 23.6 | 0.5 | 10.4 | 2.6 |
| 181 | Abdominal Aorta Intervention | 4,461 | 17,613 | 13,369 | 83.5 | 6.9 | 0.2 | 6.6 | 2.8 |
| 182 | Bypass/Extraction of Vein/Artery of Limb | 4,328 | 9,995 | 7,900 | 84.5 | 9.2 | 0.2 | 3.5 | 2.6 |
| 183 | Amputation of Hand/Foot | 328 | 7,674 | 5,943 | 83.5 | 11.6 | 0.3 | 2.4 | 2.1 |
| 184 | Vein Ligation/Stripping | 635 | 1,948 | 1,980 | 98.4 | 0.3 | 0.0 | 0.0 | 1.3 |
| 185 | Other/Miscellaneous Vascular Intervention | 3,232 | 8,631 | 5,835 | 86.9 | 7.6 | 0.4 | 2.6 | 2.5 |
| 193 | Myocardial Infarction/Shock/Arrest With Cardiac Catheter | 7,401 | 7,622 | 6,382 | 58.0 | 37.3 | 0.6 | 2.0 | 2.1 |
| 194 | Myocardial Infarction/Shock/Arrest Without Cardiac Catheter | 28,446 | 6,910 | 5,276 | 51.3 | 29.4 | 1.0 | 15.0 | 3.2 |
| 195 | Heart Failure With Cardiac Catheter | 1,396 | 9,319 | 7,434 | 71.4 | 22.9 | 0.4 | 2.7 | 2.7 |
| 196 | Heart Failure Without Cardiac Catheter | 39,617 | 5,336 | 4,553 | 79.0 | 6.0 | 0.7 | 10.0 | 4.2 |
| 197 | Hypertensive Disease Except Benign Hypertension | 893 | 5,914 | 4,802 | 85.0 | 8.1 | 0.7 | 3.1 | 3.1 |
| 198 | Congenital Cardiac Disorder | 362 | 5,438 | 4,822 | 72.1 | 18.8 | 0.3 | 1.7 | 7.2 |
| 199 | Cardiac Valve Disease | 2,375 | 7,511 | 5,079 | 53.7 | 33.7 | 3.5 | 6.7 | 2.4 |
| 200 | Pulmonary Embolism | 5,192 | 4,935 | 4,060 | 83.0 | 7.8 | 0.5 | 5.9 | 2.8 |
| 201 | Arrhythmia With Cardiac Catheter | 933 | 7,389 | 6,394 | 74.5 | 22.7 | 0.5 | 0.2 | 2.0 |
| 202 | Arrhythmia Without Cardiac Catheter | 29,216 | 3,358 | 2,928 | 85.6 | 8.7 | 0.8 | 1.7 | 3.2 |
| 203 | Unstable Angina/Atherosclerotic Heart Disease With Cardiac Catheter | 9,218 | 4,543 | 4,261 | 61.7 | 35.8 | 0.5 | 0.4 | 1.6 |
| 204 | Unstable Angina/Atherosclerotic Heart Disease Without Cardiac Catheter | 23,304 | 3,247 | 2,941 | 66.4 | 25.6 | 1.8 | 1.6 | 4.6 |
| 205 | Syncope | 9,889 | 2,579 | 2,462 | 90.8 | 3.4 | 1.4 | 0.4 | 4.0 |
| 206 | Benign Hypertension | 4,168 | 2,581 | 2,489 | 92.2 | 2.9 | 1.1 | 0.2 | 3.6 |
| 207 | Angina (Except Unstable)/Chest Pain With Cardiac Catheter | 4,893 | 3,839 | 4,007 | 82.3 | 16.0 | 0.3 | 0.1 | 1.3 |
| 208 | Angina (Except Unstable)/Chest Pain Without Cardiac Catheter | 29,458 | 1,956 | 2,028 | 90.2 | 3.6 | 2.0 | 0.1 | 4.1 |
| 209 | Other/Miscellaneous Cardiac Disorder | 11,309 | 4,382 | 3,602 | 76.5 | 14.6 | 1.1 | 3.9 | 3.8 |
| 210 | Embolism/Thrombosis Except Deep Vein Thrombophlebitis | 678 | 5,700 | 5,133 | 75.8 | 16.1 | 0.7 | 4.4 | 2.9 |
| 211 | Deep Vein Thrombophlebitis | 2,443 | 4,217 | 3,677 | 87.4 | 6.6 | 0.9 | 1.9 | 3.3 |
| 212 | Peripheral Vascular Disease | 1,052 | 3,962 | 3,321 | 65.9 | 19.5 | 0.9 | 8.6 | 5.2 |
| 213 | Other/Miscellaneous Vascular Disease | 3,698 | 4,835 | 3,986 | 67.3 | 17.9 | 0.9 | 11.3 | 2.5 |
| 905 | MCC 05 Unrelated Intervention | 2,286 | 13,282 | 9,969 | 70.4 | 11.6 | 0.6 | 13.8 | 3.6 |

MCC 06 Diseases and Disorders of the Digestive System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 220 | Major Upper Gastrointestinal Reconstruction/Excision | 989 | 20,531 | 11,986 | 79.1 | 8.9 | 0.3 | 7.8 | 3.9 |
| 221 | Colostomy/Enterostomy | 8,430 | 18,000 | 10,908 | 79.8 | 8.4 | 0.2 | 7.7 | 3.9 |
| 222 | Open Large Intestine/Rectum Resection Without Colostomy, Unplanned | 5,341 | 15,823 | 8,872 | 84.6 | 7.4 | 0.2 | 5.2 | 2.6 |
| 223 | Open Large Intestine/Rectum Resection Without Colostomy, Planned | 11,809 | 10,312 | 7,860 | 93.0 | 2.9 | 0.1 | 1.3 | 2.8 |
| 224 | Major Intervention on Esophagus | 421 | 31,576 | 21,260 | 82.4 | 6.4 | 0.2 | 6.4 | 4.5 |
| 225 | Non-Major Excision/Repair of Upper Gastrointestinal Tract, Unplanned | 4,330 | 13,703 | 8,841 | 80.6 | 8.6 | 0.4 | 7.2 | 3.1 |
| 226 | Non-Major Excision/Repair of Upper Gastrointestinal Tract, Planned | 5,435 | 7,900 | 6,219 | 93.4 | 3.5 | 0.2 | 1.0 | 2.0 |
| 227 | Endoscopic Large Intestine/Rectum Resection Without Colostomy | 1,931 | 7,844 | 6,820 | 94.9 | 1.9 | 0.1 | 1.1 | 2.1 |
| 228 | Complex Hernia Repair | 8,218 | 3,583 | 3,129 | 96.8 | 1.2 | 0.2 | 0.1 | 1.7 |
| 229 | Non-Complex Hernia Repair | 13,784 | 2,903 | 2,735 | 96.5 | 0.9 | 0.5 | 0.1 | 2.0 |
| 230 | Repair/Fixation and Other Moderate Intervention on Lower Gastrointestinal Tract | 689 | 5,520 | 5,133 | 93.9 | 2.5 | 0.1 | 1.0 | 2.5 |
| 231 | Minor Upper Gastrointestinal Intervention | 4,072 | 5,418 | 3,725 | 80.9 | 10.8 | 1.1 | 4.1 | 3.2 |
| 232 | Minor Lower Gastrointestinal Intervention | 5,818 | 3,521 | 3,165 | 91.5 | 3.7 | 0.3 | 1.3 | 3.1 |
| 233 | Complicated Appendectomy | 5,636 | 4,640 | 3,893 | 94.0 | 4.4 | 0.2 | 0.1 | 1.3 |
| 234 | Simple Appendectomy | 15,511 | 2,619 | 2,535 | 95.5 | 2.2 | 0.2 | 0.0 | 2.0 |
| 235 | Intervention on Anus Excluding Reconstruction | 2,448 | 2,166 | 2,003 | 95.1 | 0.9 | 0.4 | 0.1 | 3.4 |
| 236 | Simple Removal of Upper Gastrointestinal Foreign Body | 628 | 1,251 | 1,158 | 86.8 | 4.8 | 0.5 | 0.5 | 7.5 |
| 237 | Other Intervention With Gastrointestinal Diagnosis | 5,429 | 7,104 | 5,354 | 88.4 | 5.0 | 0.3 | 4.0 | 2.3 |
| 248 | Severe Enteritis | 5,547 | 5,166 | 3,989 | 81.1 | 5.7 | 0.3 | 9.3 | 3.6 |
| 249 | Enteritis | 26,084 | 1,953 | 1,794 | 93.7 | 2.3 | 0.9 | 0.4 | 2.8 |
| 250 | Digestive Malignancy | 5,962 | 6,235 | 5,199 | 62.0 | 10.4 | 0.3 | 22.3 | 4.9 |
| 251 | Complicated Ulcer | 1,027 | 4,281 | 3,161 | 78.4 | 12.4 | 2.1 | 3.2 | 3.9 |
| 252 | Uncomplicated Ulcer | 1,498 | 2,901 | 2,779 | 90.6 | 4.8 | 1.2 | 0.5 | 2.9 |
| 253 | Inflammatory Bowel Disease | 6,596 | 3,892 | 3,032 | 90.1 | 5.5 | 2.0 | 0.3 | 2.0 |
| 254 | Gastrointestinal Hemorrhage | 18,159 | 3,270 | 2,748 | 82.5 | 8.5 | 1.6 | 3.9 | 3.5 |

MCC 06 Diseases and Disorders of the Digestive System (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 255 | Gastrointestinal Obstruction | 17,943 | 3,004 | 2,580 | 84.4 | 9.2 | 1.0 | 2.8 | 2.6 |
| 256 | Esophagitis/Gastritis/Miscellaneous Digestive Disease | 19,994 | 2,861 | 2,776 | 91.7 | 3.8 | 1.2 | 0.7 | 2.6 |
| 257 | Symptom/Sign of Digestive System | 36,074 | 2,224 | 1,723 | 89.0 | 5.0 | 2.0 | 0.7 | 3.4 |
| 258 | Other Gastrointestinal Disorder | 10,093 | 3,434 | 2,785 | 78.6 | 14.4 | 0.8 | 3.0 | 3.2 |
| 906 | MCC 06 Unrelated Intervention | 1,964 | 8,188 | 5,932 | 82.1 | 9.0 | 0.3 | 5.2 | 3.4 |

MCC 07 Diseases and Disorders of the Hepatobiliary System and Pancreas

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 270 | Liver/Pancreas/Duodenum Transplant | 292 | 54,187 | 34,534 | 67.8 | 19.2 | 0.0 | 7.9 | 5.1 |
| 271 | Excision Pancreas With Duodenum | 464 | 27,703 | 21,124 | 82.8 | 9.5 | 0.0 | 5.4 | 2.4 |
| 272 | Drainage/Biopsy of Pancreas | 232 | 22,960 | 15,733 | 69.4 | 19.4 | 0.9 | 8.2 | 2.2 |
| 273 | Bypass/Excision of Pancreas | 260 | 30,705 | 19,029 | 80.8 | 10.8 | 0.8 | 5.0 | 2.7 |
| 274 | Major Hepatobiliary Intervention | 1,542 | 15,109 | 11,125 | 86.3 | 6.5 | 0.1 | 3.3 | 3.8 |
| 275 | Non-Major Hepatobiliary Intervention | 1,167 | 6,026 | 4,827 | 85.5 | 5.8 | 0.4 | 4.3 | 3.9 |
| 276 | Open Cholecystectomy With Common Bile Duct Exploration | 372 | 11,304 | 7,672 | 87.6 | 7.5 | 0.5 | 2.4 | 1.9 |
| 277 | Open Cholecystectomy Without Common Bile Duct Exploration | 2,494 | 8,173 | 6,405 | 89.7 | 6.1 | 0.1 | 1.6 | 2.5 |
| 278 | Laparoscopic Cholecystectomy With/Without Common Bile Duct Exploration | 15,423 | 3,107 | 2,755 | 95.0 | 2.1 | 0.2 | 0.1 | 2.5 |
| 279 | Hepatobiliary Drainage | 107 | 12,306 | 7,773 | 78.5 | 11.2 | 0.0 | 7.5 | 2.8 |
| 280 | Dilation/Drainage of Common Bile Duct | 1,634 | 6,282 | 4,894 | 83.7 | 9.1 | 0.2 | 4.7 | 2.4 |
| 281 | Extraction/Destruction of Calculus Common Bile Duct | 3,599 | 4,731 | 3,940 | 90.1 | 6.1 | 0.6 | 0.7 | 2.4 |
| 282 | Other Intervention Related to Hepatobiliary System | 1,057 | 5,430 | 4,232 | 80.6 | 6.9 | 0.9 | 6.9 | 4.7 |
| 283 | Failure/Rejection of Liver/Pancreas/Duodenum Transplant | 92 | 6,519 | 5,075 | 80.4 | 10.9 | 1.1 | 5.4 | 2.2 |
| 284 | Hepatobiliary/Pancreatic Malignancy | 4,677 | 5,897 | 4,644 | 57.2 | 9.0 | 0.4 | 29.5 | 3.9 |
| 285 | Cirrhosis/Alcoholic Hepatitis | 6,599 | 5,513 | 4,353 | 67.4 | 9.6 | 2.8 | 16.6 | 3.6 |
| 286 | Liver Disease Except Cirrhosis/Malignancy | 2,534 | 4,406 | 3,183 | 76.0 | 12.7 | 1.8 | 6.3 | 3.2 |
| 287 | Disorder of Pancreas Except Malignancy | 11,656 | 3,672 | 2,478 | 86.2 | 7.1 | 2.9 | 1.6 | 2.2 |
| 288 | Disorder of Biliary Tract | 10,397 | 2,913 | 2,927 | 83.9 | 11.6 | 1.1 | 1.1 | 2.3 |
| 907 | MCC 07 Unrelated Intervention | 591 | 12,330 | 6,101 | 71.4 | 9.8 | 0.2 | 15.2 | 3.4 |

MCC 08 Diseases and Disorders of the Musculoskeletal System and Connective Tissue

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 300 | Joint Replacement With Malignant Neoplasm | 111 | 24,040 | 15,937 | 68.5 | 23.4 | 0.0 | 6.3 | 1.8 |
| 301 | Back/Neck Intervention With Malignant Neoplasm | 328 | 20,006 | 12,451 | 69.5 | 22.3 | 0.0 | 4.9 | 3.4 |
| 302 | Lower Limb Intervention With Flap/Graft With Malignant Neoplasm | 176 | 12,557 | 9,134 | 92.0 | 5.7 | 0.0 | 1.1 | 1.1 |
| 303 | Fixation of Lower Limb With Malignant Neoplasm | 117 | 13,756 | 9,422 | 66.7 | 20.5 | 0.0 | 9.4 | 3.4 |
| 304 | Other Lower Limb Intervention With Malignant Neoplasm | 187 | 8,073 | 6,212 | 91.4 | 4.3 | 0.0 | 1.1 | 3.2 |
| 305 | Craniofacial Bone Intervention With Malignant Neoplasm | 80 | 18,742 | 7,652 | 91.3 | 2.5 | 0.0 | 0.0 | 6.3 |
| 306 | Upper Limb Intervention With Flap/Graft With Malignant Neoplasm | 79 | 8,951 | 7,683 | 93.7 | 3.8 | 0.0 | 0.0 | 2.5 |
| 307 | Other Upper Limb Intervention With Malignant Neoplasm | 59 | 6,654 | 5,718 | 88.1 | 5.1 | 0.0 | 1.7 | 5.1 |
| 308 | Other Musculoskeletal Intervention With Malignant Neoplasm | 244 | 8,903 | 5,998 | 92.2 | 2.5 | 0.0 | 1.2 | 4.1 |
| 312 | C1/C2/Thoracic Spine Intervention | 907 | 21,064 | 14,676 | 87.8 | 6.4 | 0.3 | 0.4 | 5.1 |
| 313 | Spinal Vertebrae Intervention | 8,089 | 8,516 | 7,588 | 91.9 | 3.8 | 0.2 | 0.1 | 4.0 |
| 314 | Other Intervention on Back/Neck | 4,855 | 4,218 | 3,921 | 94.2 | 2.1 | 0.2 | 0.1 | 3.4 |
| 315 | Bilateral Hip/Knee Replacement | 1,146 | 12,332 | 11,359 | 95.5 | 2.0 | 0.1 | 0.6 | 1.7 |
| 316 | Revised Hip Replacement With Infection | 524 | 19,455 | 12,497 | 72.9 | 22.5 | 0.0 | 1.9 | 2.7 |
| 317 | Revised Hip Replacement Without Infection | 2,783 | 11,830 | 10,305 | 84.4 | 11.4 | 0.0 | 0.6 | 3.6 |
| 318 | Revised Knee Replacement With Infection | 551 | 16,610 | 11,145 | 81.3 | 15.1 | 0.4 | 0.4 | 2.9 |
| 319 | Revised Knee Replacement Without Infection | 1,727 | 10,264 | 9,394 | 92.4 | 4.5 | 0.2 | 0.1 | 2.9 |
| 320 | Unilateral Hip Replacement | 19,567 | 9,122 | 8,777 | 91.1 | 5.0 | 0.1 | 0.2 | 3.7 |
| 321 | Unilateral Knee Replacement | 31,080 | 8,093 | 7,806 | 94.6 | 3.4 | 0.1 | 0.1 | 1.8 |
| 322 | Open Knee Intervention Except Fixation With Infection | 250 | 10,775 | 9,200 | 86.0 | 10.4 | 0.4 | 1.6 | 1.6 |
| 323 | Open Knee Intervention Except Fixation Without Infection | 1,174 | 3,557 | 3,203 | 95.6 | 2.0 | 0.0 | 0.0 | 2.4 |
| 324 | Closed Knee Intervention Except Fixation With Infection | 272 | 9,999 | 6,239 | 80.5 | 15.4 | 1.1 | 0.4 | 2.6 |
| 325 | Closed Knee Intervention Except Fixation Without Infection | 3,135 | 2,895 | 2,848 | 96.1 | 0.3 | 0.2 | 0.0 | 3.3 |

MCC 08 Diseases and Disorders of the Musculoskeletal System and Connective Tissue (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 326 | Shoulder Replacement | 1,297 | 7,789 | 7,431 | 95.3 | 1.9 | 0.2 | 0.2 | 2.5 |
| 327 | Other Joint Replacement | 620 | 6,803 | 6,185 | 96.6 | 1.0 | 0.2 | 0.0 | 2.3 |
| 328 | Resection/Amputation of Pelvis/Leg With Infection | 585 | 12,707 | 10,002 | 76.9 | 16.1 | 1.0 | 2.2 | 3.8 |
| 329 | Resection/Amputation of Pelvis/Leg Without Infection | 886 | 6,004 | 4,939 | 84.4 | 9.3 | 0.3 | 1.4 | 4.6 |
| 330 | Fixation of Lower Limb Except Ankle/Foot | 1,785 | 7,308 | 5,494 | 86.2 | 9.6 | 0.1 | 1.5 | 2.7 |
| 331 | Osteotomy of Lower Limb Except Foot | 1,469 | 5,597 | 4,966 | 96.8 | 1.6 | 0.1 | 0.0 | 1.6 |
| 332 | Other Repair Bone of Leg Except Ankle/Foot | 948 | 3,986 | 3,214 | 91.1 | 4.1 | 0.6 | 0.2 | 3.9 |
| 333 | Major Foot Intervention Except Soft Tissue With Infection | 395 | 6,867 | 4,423 | 87.3 | 6.8 | 1.0 | 0.8 | 4.1 |
| 334 | Major Foot Intervention Except Soft Tissue Without Infection | 2,653 | 3,770 | 3,549 | 94.5 | 1.2 | 0.0 | 0.1 | 4.1 |
| 335 | Other Foot Intervention, Except Soft Tissue | 1,504 | 2,008 | 1,874 | 95.7 | 0.3 | 0.0 | 0.0 | 3.9 |
| 336 | Resection/Amputation/Fixation of Upper Limb Except Shoulder/Hand | 1,167 | 4,249 | 3,564 | 92.8 | 1.5 | 0.3 | 0.1 | 5.4 |
| 337 | Hand Intervention | 1,382 | 2,973 | 2,707 | 92.3 | 0.8 | 0.4 | 0.0 | 6.4 |
| 338 | Osteotomy of Upper Limb Except Hand | 273 | 2,976 | 2,870 | 97.1 | 0.4 | 0.0 | 0.4 | 2.2 |
| 339 | Other Upper Limb Intervention Except Hand | 152 | 2,481 | 2,331 | 96.7 | 0.7 | 0.0 | 0.0 | 2.6 |
| 340 | Elbow Intervention | 431 | 3,755 | 3,028 | 92.6 | 1.2 | 0.5 | 0.0 | 5.8 |
| 341 | Shoulder/Rotator Cuff Intervention | 4,596 | 2,738 | 2,605 | 96.2 | 0.2 | 0.1 | 0.1 | 3.4 |
| 342 | Biopsy/Invasive Inspection of Bone | 509 | 3,958 | 3,353 | 87.8 | 1.8 | 0.6 | 0.2 | 9.6 |
| 343 | Other Musculoskeletal Intervention Except Soft Tissue | 222 | 3,866 | 3,028 | 93.7 | 1.8 | 0.5 | 0.0 | 4.1 |
| 344 | Soft Tissue Intervention of Upper Limb | 389 | 4,007 | 3,009 | 93.6 | 2.8 | 1.3 | 0.5 | 1.8 |
| 345 | Soft Tissue Intervention of Lower Limb | 2,709 | 3,135 | 2,667 | 93.3 | 2.0 | 0.1 | 0.3 | 4.2 |
| 346 | Other Musculoskeletal Soft Tissue Intervention | 289 | 7,657 | 4,838 | 84.8 | 9.7 | 0.7 | 2.8 | 2.1 |
| 347 | Craniofacial Bone Intervention With Musculoskeletal Diagnosis | 882 | 6,574 | 4,371 | 93.2 | 1.1 | 0.6 | 0.2 | 4.9 |
| 348 | Skin Intervention With Musculoskeletal Diagnosis | 469 | 8,202 | 5,158 | 86.4 | 8.3 | 0.9 | 0.2 | 4.3 |
| 349 | Nerve Intervention With Musculoskeletal Diagnosis | 475 | 4,700 | 3,565 | 92.0 | 0.8 | 0.0 | 0.4 | 6.7 |
| 357 | Musculoskeletal Malignant Neoplasm | 2,354 | 8,829 | 6,659 | 60.6 | 19.3 | 0.7 | 16.0 | 3.4 |

MCC 08 Diseases and Disorders of the Musculoskeletal System and Connective Tissue (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|-------------------------------------|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 358 | Pathological Fracture | 2,160 | 9,280 | 7,215 | 79.6 | 10.6 | 0.5 | 3.9 | 5.4 |
| 359 | Osteomyelitis/Septic Arthritis | 1,823 | 8,240 | 5,633 | 69.4 | 20.3 | 4.2 | 2.0 | 4.1 |
| 360 | Vertebral/Disc Disease | 4,491 | 4,328 | 4,141 | 85.5 | 8.9 | 1.0 | 0.8 | 3.8 |
| 361 | Systemic Connective Tissue Disorder | 1,734 | 5,327 | 3,875 | 83.4 | 9.0 | 0.8 | 2.2 | 4.6 |
| 362 | Arthritis | 4,619 | 4,442 | 3,867 | 90.7 | 4.1 | 0.5 | 0.5 | 4.2 |
| 363 | Other Soft Tissue Disorder | 1,532 | 4,986 | 4,288 | 81.8 | 9.1 | 2.9 | 2.0 | 4.2 |
| 364 | Back Pain/Strain | 5,516 | 2,961 | 3,043 | 90.8 | 3.9 | 1.8 | 0.5 | 2.9 |
| 365 | Pain/Stiffness, Except Back | 2,235 | 3,005 | 2,975 | 88.0 | 5.8 | 1.3 | 0.9 | 4.1 |
| 366 | Other Musculoskeletal Disorder | 1,096 | 7,276 | 5,799 | 72.4 | 17.7 | 0.8 | 4.5 | 4.6 |
| 367 | Other Syndrome/Deformity | 430 | 7,922 | 7,703 | 79.8 | 14.0 | 0.5 | 1.4 | 4.4 |
| 368 | Orthopedic Aftercare | 2,225 | 3,719 | 3,294 | 71.0 | 22.6 | 1.1 | 1.5 | 3.9 |
| 369 | Strain/Sprain/Joint/Tendon Disorder | 2,342 | 2,610 | 2,649 | 89.3 | 5.1 | 1.3 | 0.1 | 4.2 |
| 908 | MCC 08 Unrelated Intervention | 685 | 14,983 | 6,853 | 77.2 | 8.8 | 0.4 | 5.4 | 8.2 |
| 999 | Ungroupable | 2 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

MCC 09 Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 380 | Major Bone/Joint Intervention With Skin Diagnosis | 603 | 18,777 | 12,855 | 72.3 | 14.9 | 1.2 | 6.3 | 5.3 |
| 381 | Minor Bone/Joint Intervention With Skin Diagnosis | 650 | 10,503 | 5,063 | 86.8 | 7.2 | 1.4 | 0.9 | 3.7 |
| 382 | Muscle/Tendon/Soft Tissue Intervention With Skin Diagnosis | 2,334 | 6,209 | 4,745 | 89.3 | 4.9 | 1.9 | 1.0 | 2.8 |
| 383 | Other Non-Skin Intervention With Skin Graft | 320 | 10,689 | 6,996 | 86.9 | 9.1 | 0.3 | 0.9 | 2.8 |
| 384 | Other Non-Skin Intervention Without Skin Graft | 709 | 6,252 | 5,117 | 91.0 | 2.4 | 0.6 | 0.8 | 5.2 |
| 385 | Repair/Reconstruction of Breast | 1,557 | 6,307 | 5,964 | 99.0 | 0.1 | 0.1 | 0.1 | 0.8 |
| 386 | Bilateral Total/Radical Excision of Breast | 288 | 5,348 | 5,262 | 96.9 | 0.3 | 0.0 | 0.0 | 2.8 |
| 387 | Unilateral Total/Radical Excision of Breast | 5,868 | 3,903 | 3,767 | 95.8 | 0.6 | 0.0 | 0.1 | 3.5 |
| 388 | Partial Excision Breast With Malignant Breast Diagnosis | 4,108 | 3,444 | 3,337 | 96.0 | 0.1 | 0.0 | 0.0 | 3.8 |
| 389 | Partial Excision Breast Without Malignant Breast Diagnosis | 849 | 2,690 | 2,621 | 96.7 | 0.2 | 0.1 | 0.0 | 2.9 |
| 390 | Other Breast Intervention | 4,941 | 3,043 | 2,928 | 97.6 | 0.3 | 0.0 | 0.0 | 2.1 |
| 391 | Lymphatic System Intervention With Skin Diagnosis | 319 | 2,741 | 2,516 | 95.9 | 0.6 | 0.0 | 0.3 | 3.1 |
| 392 | Other Skin/Subcutaneous Tissue Intervention | 3,553 | 4,111 | 3,532 | 93.1 | 1.8 | 0.5 | 0.1 | 4.5 |
| 401 | Decubitus Ulcer/Ulcer of Lower Limb NEC | 1,370 | 11,153 | 8,254 | 77.2 | 11.1 | 2.3 | 4.1 | 5.3 |
| 402 | Diabetes With Foot Ulcer | 1,439 | 7,226 | 5,918 | 77.3 | 13.1 | 2.8 | 3.1 | 3.6 |
| 403 | Malignant Neoplasm of Skin | 244 | 5,922 | 4,642 | 58.2 | 6.1 | 0.8 | 26.6 | 8.2 |
| 404 | Malignant Neoplasm of Breast | 916 | 8,019 | 5,536 | 52.4 | 9.8 | 0.4 | 33.1 | 4.3 |
| 405 | Cellulitis | 12,563 | 3,939 | 3,719 | 88.1 | 4.8 | 2.7 | 0.8 | 3.6 |
| 406 | Abscess | 1,214 | 3,499 | 2,605 | 82.1 | 7.7 | 7.2 | 0.2 | 2.7 |
| 407 | Other Disease/Disorder of Skin/Subcutaneous Tissue | 4,185 | 3,216 | 2,543 | 89.7 | 4.9 | 1.5 | 0.8 | 3.0 |
| 408 | Trauma of Skin/Subcutaneous Tissue/Breast | 1,859 | 2,682 | 3,278 | 89.2 | 3.3 | 2.2 | 0.4 | 4.9 |
| 409 | Non-Malignant Breast Disorder | 245 | 2,228 | 1,951 | 90.6 | 2.9 | 1.6 | 0.4 | 4.5 |
| 909 | MCC 09 Unrelated Intervention | 347 | 10,638 | 6,308 | 84.1 | 6.6 | 0.9 | 4.0 | 4.3 |
| 999 | Ungroupable | 4 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

MCC 10 Diseases and Disorders of the Endocrine System, Nutrition and Metabolism

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 110 | Lung Transplant | 35 | 65,216 | – | 65.7 | 20.0 | 0.0 | 8.6 | 5.7 |
| 270 | Liver/Pancreas/Duodenum Transplant | 37 | 31,638 | 27,054 | 97.3 | 2.7 | 0.0 | 0.0 | 0.0 |
| 271 | Excision Pancreas With Duodenum | 3 | – | – | 66.7 | 33.3 | 0.0 | 0.0 | 0.0 |
| 273 | Bypass/Excision of Pancreas | 58 | 22,206 | 17,905 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 420 | Pituitary/Pineal Gland Intervention | 510 | 10,279 | 7,696 | 93.3 | 3.3 | 0.2 | 0.4 | 2.7 |
| 421 | Adrenal Gland Intervention | 369 | 8,268 | 6,666 | 95.1 | 1.4 | 0.5 | 0.3 | 2.7 |
| 422 | Reduction Gastroplasty/Stomach Bypass With Obesity | 703 | 8,961 | 7,287 | 98.3 | 0.1 | 0.0 | 0.6 | 1.0 |
| 423 | Size Reduction of Skin/Soft Tissue | 1,154 | 3,469 | 3,321 | 97.0 | 0.2 | 0.0 | 0.0 | 2.9 |
| 424 | Thyroid/Parathyroid/Thymus Gland Intervention | 9,040 | 3,412 | 3,214 | 95.9 | 0.1 | 0.0 | 0.1 | 3.9 |
| 425 | Other Intervention With Endocrine System Diagnosis | 86 | 19,854 | 9,209 | 74.4 | 9.3 | 1.2 | 12.8 | 2.3 |
| 432 | Cystic Fibrosis | 1,038 | 12,533 | 8,944 | 89.4 | 6.7 | 1.3 | 1.4 | 1.2 |
| 433 | Disorder Related to Nutrition | 2,235 | 6,958 | 5,417 | 82.7 | 9.2 | 1.4 | 3.8 | 3.0 |
| 434 | Disease/Disorder of Adrenal/Pituitary Gland | 1,141 | 4,862 | 4,222 | 86.0 | 8.6 | 1.0 | 2.1 | 2.4 |
| 435 | Disorder of Metabolism | 1,312 | 5,396 | 4,732 | 84.2 | 8.3 | 0.9 | 3.7 | 2.9 |
| 436 | Disorder of Fluid/Electrolyte Balance | 7,324 | 3,403 | 2,722 | 87.6 | 4.3 | 1.7 | 2.5 | 3.9 |
| 437 | Diabetes | 20,010 | 3,841 | 2,536 | 84.8 | 6.4 | 3.0 | 2.1 | 3.8 |
| 438 | Dehydration | 5,629 | 3,409 | 2,775 | 87.7 | 2.8 | 0.9 | 4.6 | 4.1 |
| 439 | Disease/Disorder of Pancreas | 941 | 2,871 | 2,140 | 87.5 | 5.2 | 2.4 | 1.5 | 3.4 |
| 440 | Disease/Disorder of Thyroid/Parathyroid Gland | 1,074 | 2,699 | 1,683 | 85.6 | 5.4 | 0.8 | 2.6 | 5.6 |
| 910 | MCC 10 Unrelated Intervention | 3,637 | 11,456 | 6,430 | 76.4 | 13.5 | 0.6 | 5.4 | 4.1 |

MCC 11 Diseases and Disorders of the Kidney, Urinary Tract and Male Reproductive System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 450 | Kidney Transplant | 752 | 21,609 | 14,668 | 95.6 | 2.4 | 0.1 | 0.3 | 1.6 |
| 451 | Kidney Donor | 384 | 7,031 | 6,873 | 99.5 | 0.3 | 0.0 | 0.0 | 0.3 |
| 452 | Radical Excision/Reconstruction of Bladder | 925 | 19,492 | 13,067 | 91.4 | 4.3 | 0.1 | 1.9 | 2.3 |
| 453 | Exteriorization of Upper Urinary Tract | 107 | 15,768 | 12,404 | 87.9 | 7.5 | 0.9 | 1.9 | 1.9 |
| 454 | Major Intervention on Upper Urinary Tract | 4,562 | 8,512 | 7,100 | 95.3 | 1.6 | 0.1 | 0.8 | 2.2 |
| 455 | Minor Intervention on Upper Urinary Tract, Percutaneous Endoscopic Approach | 3,026 | 6,461 | 4,745 | 92.1 | 3.6 | 0.3 | 1.0 | 2.9 |
| 456 | Minor Intervention on Upper Urinary Tract, External/per Orifice Approach | 7,985 | 2,628 | 2,287 | 90.5 | 4.9 | 0.2 | 0.2 | 4.1 |
| 457 | Major Intervention on Lower Urinary Tract | 705 | 7,684 | 5,936 | 94.3 | 2.3 | 0.3 | 1.3 | 1.8 |
| 458 | Non-Major Intervention on Lower Urinary Tract, Unplanned | 1,660 | 4,153 | 2,947 | 90.7 | 3.4 | 0.2 | 1.6 | 4.0 |
| 459 | Non-Major Intervention on Lower Urinary Tract, Planned | 7,025 | 2,305 | 2,229 | 94.5 | 1.4 | 0.1 | 0.1 | 3.9 |
| 460 | Major Intervention on Male Reproductive System | 1,750 | 3,212 | 2,768 | 91.0 | 2.6 | 0.3 | 0.3 | 5.8 |
| 461 | Non-Major Intervention on Male Reproductive System | 1,027 | 1,775 | 1,915 | 92.6 | 0.9 | 0.1 | 0.0 | 6.4 |
| 462 | Radical Excision of Prostate | 5,961 | 6,846 | 6,544 | 97.9 | 0.3 | 0.0 | 0.1 | 1.6 |
| 463 | Partial Excision of Prostate, Open Approach | 248 | 5,257 | 4,791 | 94.8 | 1.6 | 0.0 | 0.0 | 3.6 |
| 464 | Partial Excision/Destruction of Prostate, Closed Approach | 15,601 | 2,980 | 2,770 | 95.1 | 1.3 | 0.1 | 0.2 | 3.4 |
| 465 | Intervention Related to Dialysis, Unplanned Admission | 179 | 16,740 | 14,006 | 83.8 | 5.0 | 0.0 | 6.7 | 4.5 |
| 466 | Intervention Related to Dialysis, Planned Admission | 682 | 3,485 | 2,572 | 90.5 | 3.2 | 0.3 | 0.7 | 5.3 |
| 467 | Other Intervention With Urinary System Diagnosis | 788 | 8,841 | 5,500 | 86.5 | 7.0 | 0.1 | 3.9 | 2.4 |
| 477 | Renal Failure | 10,589 | 6,592 | 4,484 | 63.6 | 16.5 | 1.0 | 14.7 | 4.1 |
| 478 | Malignant Neoplasm of Urinary System | 1,507 | 5,863 | 4,860 | 60.7 | 12.9 | 0.1 | 20.2 | 6.1 |
| 479 | Malignant Neoplasm of Male Reproductive System | 1,224 | 5,117 | 4,311 | 61.6 | 11.1 | 0.3 | 21.2 | 5.8 |
| 480 | Kidney Disease | 2,011 | 4,999 | 3,379 | 73.9 | 16.3 | 1.0 | 3.9 | 4.9 |
| 481 | Other Disorder of Urinary System | 1,407 | 3,122 | 2,741 | 84.6 | 8.9 | 0.6 | 1.2 | 4.6 |

MCC 11 Diseases and Disorders of the Kidney, Urinary Tract and Male Reproductive System (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 482 | Other Disorder of Kidney/Ureter | 379 | 3,163 | 2,806 | 80.7 | 11.1 | 0.5 | 1.8 | 5.8 |
| 483 | Disease/Disorder of Male Reproductive System | 1,400 | 2,322 | 1,923 | 90.9 | 4.6 | 1.3 | 0.2 | 3.1 |
| 484 | Symptom/Sign of Urinary System | 4,248 | 2,265 | 2,057 | 87.7 | 7.2 | 0.5 | 0.7 | 3.9 |
| 485 | Urinary Obstruction With Percutaneous Drainage | 274 | 4,215 | 3,447 | 86.5 | 7.3 | 0.4 | 2.6 | 3.3 |
| 486 | Urinary Obstruction Without Percutaneous Drainage | 8,237 | 1,370 | 1,218 | 87.0 | 8.2 | 1.1 | 0.1 | 3.6 |
| 487 | Lower Urinary Tract Infection | 17,729 | 3,714 | 3,254 | 88.8 | 3.0 | 0.6 | 2.6 | 5.0 |
| 488 | Upper Urinary Tract Infection | 6,160 | 2,768 | 2,238 | 91.9 | 3.8 | 1.3 | 0.5 | 2.6 |
| 911 | MCC 11 Unrelated Intervention | 828 | 14,320 | 9,613 | 69.3 | 15.7 | 0.2 | 11.2 | 3.5 |

MCC 12 Diseases and Disorders of the Female Reproductive System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 500 | Radical Gynecological Intervention | 553 | 8,036 | 6,642 | 96.2 | 1.6 | 0.0 | 0.4 | 1.8 |
| 501 | Hysterectomy With Malignancy | 3,675 | 6,499 | 6,010 | 95.6 | 1.1 | 0.1 | 0.3 | 3.0 |
| 502 | Hysterectomy With Non-Malignant Diagnosis | 31,847 | 3,977 | 3,800 | 98.4 | 0.2 | 0.1 | 0.0 | 1.4 |
| 503 | Fixation/Occlusion/Removal Intervention on Female Reproductive System Except Tube/Ovary | 4,246 | 4,306 | 4,312 | 98.0 | 0.1 | 0.0 | 0.0 | 1.9 |
| 504 | Ovarian/Fallopian Tube Intervention With Malignancy Except Endoscopic Approach | 539 | 7,138 | 6,281 | 92.6 | 3.5 | 0.0 | 1.3 | 2.6 |
| 505 | Ovarian/Fallopian Tube Intervention With Non-Malignant Diagnosis Except Endoscopic Approach | 5,200 | 4,046 | 3,728 | 97.0 | 0.8 | 0.3 | 0.1 | 1.9 |
| 506 | Bladder Fixation | 4,643 | 3,174 | 2,981 | 98.5 | 0.3 | 0.0 | 0.1 | 1.1 |
| 507 | Repair/Brachytherapy/Other Intervention on Female Reproductive System Except Tube/Ovary | 3,961 | 2,734 | 2,865 | 97.8 | 0.3 | 0.1 | 0.0 | 1.8 |
| 508 | Other Intervention With Female Reproductive System Diagnosis | 886 | 5,694 | 4,603 | 92.4 | 2.7 | 0.5 | 1.8 | 2.6 |
| 509 | Therapeutic Intervention on Female Reproductive System, Laparoscopic Approach | 3,511 | 2,595 | 2,467 | 94.7 | 0.7 | 0.2 | 0.0 | 4.4 |
| 510 | Diagnostic Laparoscopy With/Without Biopsy | 400 | 2,514 | 2,179 | 91.3 | 3.3 | 1.5 | 0.0 | 4.0 |
| 511 | Vulva/Perineum Intervention | 919 | 1,567 | 1,447 | 94.1 | 0.7 | 0.3 | 0.0 | 4.9 |
| 512 | Dilation and Curettage/Other Minor Intervention on Uterus | 1,097 | 1,538 | 1,434 | 92.3 | 1.6 | 0.2 | 0.1 | 5.8 |
| 520 | Malignant Neoplasm of Female Reproductive System | 1,773 | 4,956 | 3,432 | 67.1 | 10.9 | 0.3 | 16.8 | 4.9 |
| 521 | Fibroid/Prolapse/Fistula/Other Disorder | 1,090 | 2,363 | 2,267 | 94.0 | 2.3 | 0.3 | 0.1 | 3.3 |
| 522 | Inflammatory Disorder of Female Reproductive System | 1,525 | 2,280 | 2,060 | 89.5 | 4.5 | 3.3 | 0.0 | 2.7 |
| 523 | Disorder of Fertility | 130 | 2,744 | 2,017 | 96.2 | 1.5 | 0.0 | 0.0 | 2.3 |
| 524 | Disorder of Menstruation/Endometriosis/Non-Inflammatory Disorder of Female Reproductive System | 2,672 | 1,304 | 1,253 | 89.2 | 5.4 | 1.1 | 0.0 | 4.3 |
| 912 | MCC 12 Unrelated Intervention | 167 | 7,889 | 3,738 | 76.6 | 9.6 | 0.6 | 10.2 | 3.0 |

MCC 13 Pregnancy and Childbirth

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|-------------------|--------|------------------------------|----------------|-----|--------------------|-----|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | Long-Stay Outliers | |
| Mean | Median | Transfers | Sign-Outs | Deaths | | | | | |
| 530 | Major Intervention Related to Obstetric Diagnosis | 103 | 11,053 | 9,363 | 84.5 | 10.7 | 0.0 | 0.0 | 4.9 |
| 531 | Major Intervention Not Related to Obstetric Diagnosis | 66 | 13,954 | 11,072 | 81.8 | 16.7 | 0.0 | 0.0 | 1.5 |
| 532 | Fetal Intervention | 38 | 4,424 | 3,671 | 92.1 | 5.3 | 0.0 | 0.0 | 2.6 |
| 536 | Repeat Caesarean Section | 28,014 | 3,064 | 2,931 | 96.2 | 1.2 | 0.1 | 0.0 | 2.5 |
| 537 | Primary Caesarean Section | 44,386 | 4,108 | 3,657 | 93.9 | 2.7 | 0.1 | 0.0 | 3.2 |
| 538 | Vaginal Birth After Caesarean With Forceps/Vacuum Delivery and Other Non-Major Intervention | 154 | 2,315 | 2,272 | 98.7 | 0.0 | 0.0 | 0.0 | 1.3 |
| 539 | Vaginal Birth After Caesarean With Forceps/Vacuum Delivery, No Other Intervention | 897 | 2,370 | 2,299 | 95.7 | 1.3 | 0.2 | 0.0 | 2.8 |
| 540 | Vaginal Birth After Caesarean Without Instrumentation, With Non-Major Intervention | 275 | 2,532 | 2,436 | 94.9 | 1.5 | 0.7 | 0.0 | 2.9 |
| 541 | Vaginal Birth After Caesarean Without Instrumentation, No Other Intervention | 4,674 | 2,172 | 2,091 | 96.2 | 1.5 | 0.2 | 0.0 | 2.1 |
| 542 | Forceps/Vacuum Delivery With Non-Major Intervention | 3,267 | 3,113 | 2,889 | 97.6 | 1.0 | 0.1 | 0.0 | 1.3 |
| 543 | Forceps/Vacuum Delivery, No Other Intervention | 24,021 | 2,785 | 2,609 | 97.0 | 1.0 | 0.1 | 0.0 | 1.9 |
| 544 | Vaginal Delivery With Non-Major Intervention | 5,124 | 2,705 | 2,552 | 96.2 | 1.2 | 0.1 | 0.0 | 2.5 |
| 545 | Vaginal Delivery, No Other Intervention | 154,689 | 2,104 | 2,007 | 96.5 | 1.1 | 0.1 | 0.0 | 2.3 |
| 546 | Ectopic Pregnancy Treated Surgically/Non-Major Intervention | 2,552 | 2,720 | 2,694 | 95.2 | 2.9 | 0.3 | 0.0 | 1.6 |
| 547 | Ectopic Pregnancy Treated Medically | 578 | 776 | 755 | 82.0 | 10.6 | 1.9 | 0.0 | 5.5 |
| 548 | Abortion for Fetal Anomaly Treated Surgically/Non-Major Intervention | 113 | 2,490 | 2,490 | 92.0 | 0.0 | 0.9 | 0.0 | 7.1 |
| 549 | Abortion for Fetal Anomaly Treated Medically | 570 | 2,558 | 2,557 | 97.4 | 0.9 | 0.4 | 0.0 | 1.4 |
| 550 | Abortion Diagnosis Treated Surgically/Non-Major Intervention | 6,235 | 976 | 975 | 95.4 | 2.2 | 0.3 | 0.0 | 2.1 |

MCC 13 Pregnancy and Childbirth (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 551 | Abortion Diagnosis Treated Medically | 3,219 | 1,436 | 1,439 | 86.9 | 6.6 | 1.8 | 0.0 | 4.8 |
| 552 | Postpartum Disorder Treated Surgically/Non-Major Intervention | 1,355 | 1,791 | 1,651 | 89.2 | 6.3 | 0.7 | 0.1 | 3.8 |
| 553 | Postpartum Disorder Treated Medically | 3,753 | 1,837 | 1,497 | 72.6 | 23.5 | 0.8 | 0.0 | 3.1 |
| 554 | Post Abortion Disorder Treated Surgically/Non-Major Intervention | 100 | 2,196 | 2,165 | 96.0 | 3.0 | 0.0 | 0.0 | 1.0 |
| 555 | Post Abortion Disorder Treated Medically | 319 | 1,236 | 1,221 | 93.7 | 3.8 | 1.9 | 0.0 | 0.6 |
| 556 | Antepartum Disorder Treated Surgically/Non-Major Intervention | 325 | 3,261 | 2,950 | 89.5 | 7.1 | 0.9 | 0.0 | 2.5 |
| 557 | Antepartum Disorder Treated Medically | 31,794 | 1,256 | 1,049 | 81.2 | 12.3 | 1.8 | 0.0 | 4.7 |

MCC 14 Newborns and Neonates With Conditions Originating in the Perinatal Period

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|---------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 570 | Newborn/Neonate 1500+ Grams With Major Gastrointestinal/Diaphragm Intervention | 347 | 26,433 | 18,835 | 31.7 | 59.4 | 0.0 | 4.3 | 4.6 |
| 571 | Newborn/Neonate 1500+ Grams With Major Cardiovascular Intervention | 409 | 66,223 | 40,478 | 11.0 | 76.0 | 0.0 | 4.6 | 8.3 |
| 572 | Newborn/Neonate 1500+ Grams With Major Neurological Intervention | 72 | 38,721 | – | 31.9 | 62.5 | 0.0 | 4.2 | 1.4 |
| 576 | Normal Newborn, Singleton Vaginal Delivery | 156,726 | 643 | 642 | 98.0 | 0.1 | 0.1 | 0.0 | 1.7 |
| 577 | Normal Newborn Multiple/Caesarean Delivery | 51,920 | 1,160 | 1,160 | 98.5 | 0.3 | 0.0 | 0.0 | 1.1 |
| 578 | Newborn/Neonate <750 Grams | 978 | 117,054 | 113,720 | 7.7 | 25.5 | 0.0 | 66.0 | 0.9 |
| 579 | Newborn/Neonate 750–999 Grams, Gestational Age <29 Weeks | 412 | 92,795 | 84,447 | 25.5 | 60.0 | 0.0 | 13.3 | 1.2 |
| 580 | Newborn/Neonate 750–999 Grams, Gestational Age 29+ Weeks | 387 | 98,095 | 77,973 | 14.2 | 71.6 | 0.0 | 11.6 | 2.6 |
| 581 | Newborn/Neonate 1000–1499 Grams, Gestational Age <29 Weeks | 389 | 66,802 | 51,573 | 34.2 | 58.6 | 0.0 | 6.7 | 0.3 |
| 582 | Newborn/Neonate 1000–1499 Grams, Gestational Age 29+ Weeks | 2,008 | 42,067 | 34,488 | 28.4 | 67.9 | 0.0 | 2.9 | 0.7 |
| 583 | Newborn/Neonate 1500–1999 Grams, Gestational Age <32 Weeks | 626 | 34,712 | 29,390 | 40.9 | 56.1 | 0.2 | 2.1 | 0.8 |
| 584 | Newborn/Neonate 1500–1999 Grams, Gestational Age 32–34 Weeks | 1,486 | 20,726 | 22,753 | 68.4 | 30.3 | 0.1 | 0.5 | 0.7 |
| 585 | Newborn/Neonate 1500–1999 Grams, Gestational Age 35+ Weeks | 2,556 | 14,658 | 13,029 | 36.4 | 59.5 | 0.1 | 1.2 | 2.8 |
| 586 | Newborn/Neonate 2000–2499 Grams, Gestational Age <35 Weeks | 2,199 | 16,016 | 14,643 | 74.0 | 24.0 | 0.0 | 0.8 | 1.2 |
| 587 | Newborn/Neonate 2000–2499 Grams, Gestational Age 35–36 Weeks | 2,995 | 5,224 | 3,455 | 91.3 | 6.1 | 0.2 | 0.4 | 2.1 |
| 588 | Newborn/Neonate 2000–2499 Grams, Gestational Age 37+ Weeks | 5,488 | 3,767 | 2,489 | 69.6 | 17.9 | 0.1 | 0.6 | 11.8 |
| 589 | Newborn/Neonate 2500+ Grams, Major Respiratory Complication | 1,520 | 9,117 | 5,025 | 63.5 | 33.6 | 0.2 | 0.2 | 2.6 |
| 590 | Newborn/Neonate 2500+ Grams, Aspiration Syndrome/Fetal Asphyxia | 2,076 | 4,357 | 2,105 | 76.1 | 19.2 | 0.0 | 2.1 | 2.6 |
| 591 | Newborn/Neonate 2500+ Grams, Other Respiratory Problem | 10,421 | 2,459 | 1,815 | 88.5 | 8.4 | 0.0 | 0.0 | 3.1 |
| 592 | Newborn/Neonate 2500+ Grams, Septicemia/Other Neonatal Infection | 1,585 | 5,474 | 3,972 | 85.0 | 11.0 | 0.1 | 0.5 | 3.4 |

MCC 14 Newborns and Neonates With Conditions Originating in the Perinatal Period (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 593 | Newborn/Neonate 2500+ Grams, Short Gestation/Low Birthweight | 5,786 | 3,278 | 1,682 | 87.6 | 8.3 | 0.1 | 0.1 | 4.0 |
| 594 | Newborn/Neonate 2500+ Grams, Jaundice | 9,404 | 1,748 | 1,781 | 95.0 | 1.8 | 0.1 | 0.0 | 3.1 |
| 595 | Newborn/Neonate 2500+ Grams, Anomaly of Nervous/Respiratory/Digestive System | 624 | 4,222 | 2,919 | 54.3 | 38.9 | 0.0 | 1.9 | 4.8 |
| 596 | Newborn/Neonate 2500+ Grams, Chromosomal/Multiple Anomaly | 314 | 8,233 | 2,284 | 55.4 | 34.4 | 0.0 | 2.9 | 7.3 |
| 597 | Newborn/Neonate 2500+ Grams, Cardiovascular Anomaly | 848 | 2,735 | 1,834 | 55.3 | 39.3 | 0.0 | 1.7 | 3.8 |
| 598 | Newborn/Neonate 2500+ Grams, Other Congenital Anomaly | 2,175 | 1,304 | 1,143 | 88.2 | 7.7 | 0.0 | 0.7 | 3.3 |
| 599 | Newborn/Neonate 2500+ Grams, Other Major Problem | 215 | 13,548 | 10,846 | 50.2 | 46.0 | 0.0 | 3.3 | 0.5 |
| 600 | Newborn/Neonate 2500+ Grams, Other Moderate Problem | 3,441 | 4,427 | 2,795 | 77.0 | 17.2 | 0.0 | 0.4 | 5.3 |
| 601 | Newborn/Neonate 2500+ Grams, Other Minor Problem | 19,967 | 1,596 | 1,298 | 90.3 | 5.6 | 0.1 | 0.1 | 3.7 |
| 999 | Ungroupable | 36 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

MCC 15 Diseases and Disorders of the Blood and Lymphatic System

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 610 | Bone Marrow/Stem Cell Transplant | 1,042 | 27,496 | 22,452 | 90.2 | 3.8 | 0.2 | 3.3 | 2.5 |
| 611 | Thymectomy | 88 | 11,482 | 6,904 | 96.6 | 1.1 | 0.0 | 0.0 | 2.3 |
| 612 | Splenectomy | 574 | 9,434 | 6,657 | 91.3 | 4.0 | 0.0 | 2.6 | 2.1 |
| 613 | Intervention With Leukemia | 259 | 49,803 | 25,030 | 74.1 | 10.4 | 0.0 | 13.5 | 1.9 |
| 614 | Intervention With Multiple Myeloma | 151 | 17,044 | 10,110 | 69.5 | 13.9 | 0.0 | 11.3 | 5.3 |
| 615 | Intervention With Lymphoma | 2,545 | 8,523 | 5,406 | 86.3 | 6.0 | 0.0 | 4.4 | 3.3 |
| 616 | Intervention With Neoplasm of Other Site | 863 | 9,533 | 6,133 | 87.0 | 5.7 | 0.1 | 5.7 | 1.5 |
| 617 | Intervention With Blood/Lymphatic System Diagnosis Except Neoplasm | 1,717 | 8,307 | 4,456 | 88.9 | 5.0 | 0.2 | 2.6 | 3.3 |
| 624 | Acute Myeloid Leukemia | 1,505 | 20,135 | 12,523 | 59.7 | 16.7 | 0.2 | 21.0 | 2.4 |
| 625 | Acute Leukemia Except Myeloid | 677 | 21,242 | 16,062 | 61.4 | 23.0 | 0.0 | 13.6 | 1.9 |
| 626 | Other Leukemia | 1,708 | 6,177 | 4,388 | 68.3 | 9.0 | 0.6 | 16.9 | 5.1 |
| 627 | Multiple Myeloma | 1,192 | 8,602 | 5,997 | 59.8 | 15.0 | 0.2 | 20.5 | 4.5 |
| 628 | Lymphoma | 3,495 | 9,472 | 7,316 | 63.2 | 15.4 | 0.3 | 17.9 | 3.3 |
| 629 | Aplastic Anemia | 859 | 6,572 | 4,478 | 80.8 | 11.2 | 0.9 | 4.4 | 2.7 |
| 630 | Malignant Neoplasm of Other Site | 1,179 | 7,868 | 5,299 | 49.8 | 10.7 | 0.3 | 34.4 | 4.8 |
| 631 | Non-Malignant Neoplasm of Other Site | 136 | 5,589 | 3,612 | 74.3 | 17.6 | 0.0 | 5.1 | 2.9 |
| 632 | Coagulation Defect | 806 | 4,810 | 3,698 | 85.0 | 6.9 | 0.2 | 4.2 | 3.6 |
| 633 | Agranulocytosis | 5,271 | 4,894 | 3,727 | 90.1 | 5.0 | 0.5 | 1.9 | 2.5 |
| 634 | Hemoglobinopathy | 1,192 | 3,913 | 3,034 | 92.0 | 2.9 | 3.2 | 0.2 | 1.7 |
| 635 | Other Anemia | 9,687 | 3,309 | 2,765 | 87.3 | 5.1 | 0.9 | 2.5 | 4.3 |
| 636 | Purpura/Other Hemorrhagic Disorder | 1,763 | 2,501 | 2,352 | 86.2 | 8.7 | 0.7 | 1.4 | 3.1 |
| 637 | Other Disease/Disorder of Blood/Lymphatic System | 1,209 | 3,978 | 3,043 | 85.6 | 9.3 | 0.6 | 1.7 | 2.9 |
| 638 | Chemotherapy/Radiotherapy Session for Neoplasm | 9,974 | 2,975 | 2,437 | 91.3 | 4.2 | 0.2 | 0.3 | 4.0 |
| 639 | Other Chemotherapy | 370 | 1,714 | 1,731 | 91.4 | 4.6 | 0.3 | 0.0 | 3.8 |
| 640 | Acute Lymphadenitis | 378 | 2,947 | 2,897 | 89.2 | 9.3 | 0.3 | 0.3 | 1.1 |

MCC 16 Multisystemic or Unspecified Site Infections

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 650 | Multisystemic/Unspecified Site Infection With Intervention | 1,708 | 25,688 | 15,404 | 57.1 | 15.3 | 0.8 | 23.4 | 3.4 |
| 653 | Septicemia Due to Staphylococcus Aureus/Pseudomonas/Enterococcus | 1,266 | 12,796 | 8,222 | 57.3 | 15.3 | 2.4 | 22.9 | 2.1 |
| 654 | Other/Unspecified Septicemia | 8,499 | 9,177 | 5,260 | 59.2 | 10.9 | 0.9 | 25.7 | 3.3 |
| 655 | HIV With Major Complication/Manifestation Except Respiratory | 392 | 17,648 | 9,383 | 52.8 | 12.8 | 14.8 | 17.6 | 2.0 |
| 656 | HIV With General Symptom/Infection/GI/Hepatobiliary/Ophthalmic Disorder | 355 | 7,400 | 5,176 | 68.5 | 5.4 | 14.4 | 7.9 | 3.9 |
| 657 | HIV With Major Respiratory Complication/Manifestation | 694 | 8,930 | 5,849 | 67.7 | 7.1 | 14.0 | 7.6 | 3.6 |
| 658 | HIV With Other/Miscellaneous Diagnosis | 262 | 6,930 | 4,672 | 62.6 | 6.9 | 16.8 | 10.7 | 3.1 |
| 659 | Chickenpox/Herpes Zoster/Cytomegaloviral Disease | 498 | 4,061 | 3,114 | 87.3 | 6.0 | 0.8 | 1.6 | 4.2 |
| 660 | Other Infectious/Parasitic Disease | 1,866 | 5,751 | 3,933 | 79.8 | 10.9 | 2.1 | 4.4 | 2.7 |
| 661 | Other/Unspecified Viral Illness | 4,018 | 1,862 | 1,728 | 94.4 | 3.1 | 0.6 | 0.1 | 1.8 |
| 662 | Fever | 4,889 | 2,572 | 2,166 | 88.8 | 6.0 | 1.9 | 0.3 | 3.0 |

MCC 17 Mental Diseases and Disorders

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|---|--------------|-------------------|--------|------------------------------|----------------|-----------|--------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| | | | Mean | Median | | Transfers | Sign-Outs | Deaths | |
| 670 | Dementia | 8,472 | 11,609 | 10,214 | 78.7 | 7.2 | 0.5 | 5.9 | 7.8 |
| 671 | Organic Mental Disorder | 4,544 | 10,382 | 9,228 | 80.5 | 8.5 | 1.6 | 3.7 | 5.7 |
| 672 | Miscellaneous Mental Disorder | 1,382 | 6,326 | 5,793 | 80.0 | 4.3 | 4.8 | 5.0 | 5.8 |
| 673 | Eating Disorder | 1,290 | 16,139 | 16,831 | 83.1 | 8.8 | 5.7 | 0.3 | 2.1 |
| 674 | Puerperal Disorder | 359 | 4,905 | 4,706 | 84.1 | 5.3 | 6.7 | 0.0 | 3.9 |
| 675 | Other Behavioural Syndrome | 99 | 5,934 | 4,899 | 87.9 | 3.0 | 6.1 | 0.0 | 3.0 |
| 676 | Schizophrenia With ECT | 126 | 25,055 | 22,439 | 84.9 | 9.5 | 1.6 | 0.0 | 4.0 |
| 677 | Schizophrenia Without ECT | 12,722 | 8,506 | 7,803 | 81.4 | 10.3 | 5.9 | 0.1 | 2.3 |
| 678 | Schizotypal/Delusional Disorder | 7,167 | 6,805 | 5,796 | 79.2 | 12.5 | 6.4 | 0.1 | 1.8 |
| 679 | Schizoaffective Disorder With ECT | 226 | 22,145 | 20,898 | 85.0 | 7.1 | 1.8 | 0.0 | 6.2 |
| 680 | Schizoaffective Disorder Without ECT | 5,297 | 9,292 | 8,539 | 82.4 | 10.6 | 4.9 | 0.1 | 2.0 |
| 681 | Gender Identity/Sexual Preference Disorder | 21 | 5,674 | – | 95.2 | 4.8 | 0.0 | 0.0 | 0.0 |
| 682 | Habit/Impulse Disorder | 181 | 3,884 | 3,384 | 85.6 | 6.6 | 3.9 | 0.6 | 3.3 |
| 683 | Disorder of Adult Personality Behaviour | 3,837 | 3,127 | 2,844 | 83.9 | 5.0 | 8.5 | 0.0 | 2.5 |
| 684 | Obsessive Compulsive Disorder | 431 | 8,586 | 6,477 | 83.1 | 9.3 | 5.6 | 0.0 | 2.1 |
| 685 | Somatiform/Dissociative Disorder | 1,046 | 4,548 | 3,940 | 84.1 | 9.1 | 3.2 | 0.1 | 3.5 |
| 686 | Anxiety Disorder | 3,933 | 3,441 | 2,703 | 89.9 | 3.4 | 4.1 | 0.0 | 2.7 |
| 687 | Stress Reaction/Adjustment Disorder | 9,428 | 2,607 | 2,354 | 87.2 | 4.5 | 5.4 | 0.0 | 2.9 |
| 688 | Bipolar Disorder With ECT | 203 | 22,207 | 13,618 | 90.1 | 5.9 | 1.0 | 0.0 | 3.0 |
| 689 | Bipolar Disorder Without ECT | 11,894 | 7,900 | 6,851 | 80.5 | 11.1 | 6.3 | 0.1 | 2.0 |
| 690 | Bipolar Disorder, Severe Depression With ECT | 249 | 16,959 | 13,330 | 87.1 | 8.0 | 0.8 | 0.8 | 3.2 |
| 691 | Bipolar Disorder, Severe Depression Without ECT | 1,680 | 7,892 | 6,846 | 84.5 | 9.4 | 2.8 | 0.2 | 3.2 |
| 692 | Depressive Episode With ECT | 1,605 | 17,081 | 12,946 | 90.9 | 5.3 | 1.3 | 0.7 | 1.8 |
| 693 | Depressive Episode Without ECT | 26,874 | 5,368 | 4,388 | 85.7 | 7.8 | 4.5 | 0.1 | 1.9 |
| 694 | Mood [Affective] Disorder | 1,025 | 5,757 | 4,802 | 84.7 | 8.6 | 5.6 | 0.0 | 1.2 |
| 695 | Mental Retardation/Disorder of Development | 624 | 7,489 | 7,320 | 89.3 | 5.6 | 0.8 | 0.2 | 4.2 |
| 696 | Childhood/Adolescence Disorder | 1,964 | 7,219 | 6,228 | 90.8 | 5.4 | 2.5 | 0.0 | 1.3 |
| 697 | Mixed Disorder of Conduct/Emotion | 435 | 3,387 | 2,848 | 88.5 | 4.8 | 3.4 | 0.0 | 3.2 |
| 698 | Psychoactive Substance Use, Acute Intoxication | 2,897 | 1,815 | 1,688 | 82.7 | 2.0 | 9.4 | 0.2 | 5.7 |
| 699 | Psychoactive Substance Use, Harmful Use | 4,074 | 2,898 | 2,641 | 79.8 | 3.9 | 14.2 | 0.0 | 2.1 |

MCC 17 Mental Diseases and Disorders (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 700 | Psychoactive Substance Use, Dependence Syndrome | 6,135 | 3,374 | 2,920 | 80.2 | 3.1 | 14.0 | 0.1 | 2.5 |
| 701 | Psychoactive Substance Use, Withdrawal State | 3,795 | 3,119 | 2,728 | 83.5 | 2.7 | 11.2 | 0.1 | 2.5 |
| 702 | Psychoactive Substance Use, Withdrawal/Delirium | 1,304 | 5,052 | 3,881 | 84.0 | 4.2 | 8.5 | 0.5 | 2.8 |
| 703 | Psychoactive Substance Use, Residual/Late-Onset/ Psychotic Disorder | 2,502 | 5,261 | 3,914 | 83.0 | 5.7 | 8.3 | 0.1 | 2.9 |
| 704 | Psychoactive Substance Use, Amnesic/Other/Unspecified | 905 | 5,678 | 3,963 | 81.5 | 5.1 | 8.1 | 0.4 | 4.9 |

MCC 18 Burns

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--------------------------------------|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 710 | Extensive Burn With Skin Graft | 145 | 109,393 | 67,739 | 60.0 | 30.3 | 0.7 | 7.6 | 1.4 |
| 711 | Non-Extensive Burn With Skin Graft | 481 | 17,841 | 12,195 | 79.0 | 15.6 | 0.8 | 1.2 | 3.3 |
| 712 | Burn Intervention Without Skin Graft | 11 | 12,401 | – | 63.6 | 27.3 | 0.0 | 9.1 | 0.0 |
| 717 | Extensive Burn | 1 | – | – | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| 718 | Non-Extensive Burn | 1,252 | 5,351 | 3,915 | 78.8 | 16.0 | 1.3 | 2.0 | 1.9 |
| 918 | MCC 18 Unrelated Intervention | 12 | 32,289 | – | 75.0 | 8.3 | 0.0 | 8.3 | 8.3 |

MCC 19 Significant Trauma, Injury, Poisoning and Toxic Effects of Drugs

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 725 | Organ Transplant With Trauma/ Complication of Treatment | 29 | 75,582 | – | 89.7 | 0.0 | 0.0 | 10.3 | 0.0 |
| 726 | Hip Replacement With Trauma/ Complication of Treatment | 7,111 | 13,003 | 10,978 | 63.9 | 25.5 | 0.0 | 5.1 | 5.5 |
| 727 | Fixation/Repair Hip/Femur | 14,784 | 11,028 | 9,314 | 65.6 | 24.3 | 0.2 | 4.1 | 5.8 |
| 728 | Other Intervention on Hip/ Lower Limb With Trauma/ Complication of Treatment | 1,002 | 5,749 | 4,042 | 85.9 | 9.4 | 0.7 | 0.4 | 3.6 |
| 729 | Replacement/Fixation/Repair of Tibia/Fibula/Knee | 7,645 | 5,415 | 4,594 | 85.3 | 10.8 | 0.4 | 0.3 | 3.3 |
| 730 | Other Major Bone Intervention With Trauma/Complication of Treatment | 1,320 | 17,052 | 9,413 | 63.8 | 29.7 | 0.8 | 2.9 | 2.8 |
| 731 | Spinal Intervention With Trauma/ Complication of Treatment | 1,579 | 25,649 | 10,910 | 64.5 | 28.8 | 0.7 | 2.9 | 3.2 |
| 732 | Intracranial Intervention With Trauma/ Complication of Treatment | 1,637 | 23,044 | 9,041 | 54.3 | 26.5 | 0.7 | 15.1 | 3.4 |
| 733 | Major Thoraco-Abdominal/Vascular Intervention With Trauma/Complication of Treatment | 2,853 | 21,648 | 11,145 | 71.0 | 16.1 | 0.9 | 9.1 | 2.9 |
| 734 | Other Thoraco-Abdominal Intervention With Trauma/Complication of Treatment | 2,906 | 8,682 | 5,301 | 80.9 | 11.5 | 1.1 | 4.5 | 2.0 |
| 735 | Skull Intervention With Trauma/ Complication of Treatment | 120 | 11,663 | 6,549 | 82.5 | 14.2 | 0.8 | 0.0 | 2.5 |
| 736 | Skin/Soft Tissue Intervention With Trauma With Flap/Graft | 1,184 | 10,309 | 6,146 | 82.2 | 14.2 | 0.6 | 0.5 | 2.5 |
| 737 | Skin/Soft Tissue Intervention With Trauma Without Flap/Graft | 2,531 | 4,497 | 3,437 | 86.9 | 8.6 | 0.8 | 0.3 | 3.4 |
| 738 | Fixation/Repair of Shoulder Joint | 740 | 5,477 | 4,671 | 88.4 | 8.8 | 0.4 | 0.5 | 1.9 |
| 739 | Reduction/Fixation/Repair Upper Body/Limb Except Fixation/Repair of Shoulder | 11,278 | 2,927 | 2,831 | 90.3 | 4.6 | 0.3 | 0.1 | 4.6 |
| 740 | Internal Fixation of Facial Bone | 2,260 | 5,614 | 4,366 | 88.8 | 8.0 | 0.9 | 0.0 | 2.3 |
| 741 | Other Intervention on Facial Bone With Trauma/Complication of Treatment | 189 | 2,383 | 2,316 | 94.2 | 4.2 | 0.0 | 0.0 | 1.6 |
| 742 | Ear/Nose/Throat Intervention With Trauma/Complication of Treatment | 448 | 3,749 | 3,335 | 89.7 | 4.0 | 0.9 | 0.7 | 4.7 |
| 743 | Other Intervention on Bone of Upper Body With Trauma/Complication of Treatment | 1,606 | 3,814 | 3,118 | 88.4 | 6.2 | 0.2 | 0.1 | 5.2 |
| 744 | Muscle/Tendon/Minor Joint Intervention With Trauma/Complication of Treatment, Lower Limb | 705 | 3,504 | 3,002 | 88.2 | 5.8 | 0.0 | 0.0 | 6.0 |
| 745 | Nerve Intervention With Trauma | 1,349 | 3,388 | 2,944 | 86.5 | 6.2 | 0.6 | 0.0 | 6.7 |
| 746 | Reduction Lower Limb Except Ankle/Foot | 66 | 3,693 | 3,409 | 71.2 | 18.2 | 0.0 | 1.5 | 9.1 |

MCC 19 Significant Trauma, Injury, Poisoning and Toxic Effects of Drugs (continued)

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|---------------------------|--------|------------------------------|-----------|-----------------------------|--------|-----------------------|
| | | | Average Cost (\$) Mean | Median | Typical Cases | Transfers | Atypical Cases Sign-Outs | Deaths | Long-Stay Outliers |
| 747 | Reduction/Fixation/Repair of Ankle/Foot | 9,387 | 3,639 | 3,287 | 88.2 | 6.6 | 0.3 | 0.1 | 4.9 |
| 748 | Other Intervention for Trauma/ Complication of Treatment | 924 | 2,904 | 2,436 | 89.4 | 5.5 | 0.4 | 1.0 | 3.7 |
| 749 | Eye Intervention With Trauma/ Complication of Treatment | 212 | 4,241 | 3,595 | 88.2 | 8.0 | 0.5 | 0.9 | 2.4 |
| 750 | Muscle/Tendon/Minor Joint Intervention With Trauma/Complication of Treatment, Upper Limb | 681 | 2,264 | 2,256 | 91.9 | 1.9 | 0.3 | 0.0 | 5.9 |
| 751 | Removal Foreign Body Skin/Soft Tissue | 196 | 2,297 | 1,996 | 91.8 | 3.1 | 1.0 | 0.5 | 3.6 |
| 760 | Significant Injury/Exposure to Element | 426 | 7,162 | 4,327 | 63.6 | 15.7 | 2.8 | 16.2 | 1.6 |
| 761 | Fracture/Dislocation/Rupture of Pelvis/Sacrum/Coccyx | 3,859 | 7,200 | 6,197 | 76.7 | 15.1 | 0.6 | 2.5 | 5.1 |
| 762 | Complication of Transplanted Organ | 497 | 7,253 | 4,748 | 83.3 | 8.5 | 0.6 | 2.8 | 4.8 |
| 763 | Intracranial Injury With Injury to Other Organ | 321 | 19,997 | 11,796 | 44.5 | 26.2 | 0.3 | 24.9 | 4.0 |
| 764 | Multiple Intracranial Injury | 782 | 11,437 | 8,916 | 52.8 | 19.3 | 1.7 | 22.9 | 3.3 |
| 765 | Single Intracranial Injury | 3,394 | 4,554 | 3,119 | 62.8 | 19.9 | 2.3 | 11.2 | 3.8 |
| 766 | Fracture of Femur | 4,089 | 6,098 | 5,576 | 37.0 | 54.5 | 0.3 | 6.6 | 1.7 |
| 767 | Other Fracture Dislocation of Leg | 2,837 | 2,079 | 1,760 | 66.5 | 27.0 | 1.0 | 0.5 | 5.1 |
| 768 | Fracture of Patella/Upper Tibia/Fibula | 945 | 4,434 | 2,778 | 67.8 | 25.9 | 0.8 | 0.5 | 4.9 |
| 769 | Fracture of Shoulder/Upper Humerus | 1,843 | 4,568 | 2,844 | 76.4 | 14.8 | 1.0 | 2.0 | 5.9 |
| 770 | Other Fracture/Dislocation of Arm/Shoulder | 3,921 | 1,658 | 1,397 | 78.4 | 12.7 | 0.7 | 0.6 | 7.7 |
| 771 | Spinal Injury | 4,467 | 5,319 | 4,587 | 74.1 | 20.2 | 0.9 | 1.9 | 2.9 |
| 772 | Rib Fracture/Flail Chest | 2,247 | 5,039 | 4,067 | 84.6 | 8.4 | 1.9 | 2.0 | 3.0 |
| 773 | Multiple Injuries to Internal Organ | 613 | 8,884 | 4,868 | 80.1 | 15.2 | 1.3 | 2.0 | 1.5 |
| 774 | Single Injury to Internal Organ | 2,949 | 4,026 | 3,156 | 82.3 | 11.9 | 2.0 | 1.4 | 2.3 |
| 775 | Fracture of Skull/Facial Bone | 2,399 | 2,495 | 2,212 | 77.0 | 15.0 | 3.1 | 1.2 | 3.7 |
| 776 | Open Wound/Other/Unspecified Minor Injury | 9,811 | 2,088 | 1,619 | 84.7 | 7.5 | 2.8 | 0.9 | 4.0 |
| 777 | Other/Unspecified Fracture/Dislocation | 378 | 3,536 | 3,283 | 83.9 | 11.6 | 0.5 | 0.5 | 3.4 |
| 778 | Poisoning/Toxic Effect of Drug | 14,389 | 2,632 | 1,989 | 79.7 | 8.5 | 6.6 | 1.1 | 4.0 |
| 779 | Concussion | 2,206 | 1,710 | 1,610 | 87.9 | 5.7 | 2.0 | 0.1 | 4.3 |
| 780 | Post-Operative Complication Except Hemorrhage | 7,339 | 4,252 | 3,536 | 82.8 | 12.4 | 0.7 | 1.0 | 3.1 |
| 781 | Other/Unspecified Complication of Treatment | 4,294 | 2,173 | 1,737 | 89.3 | 4.6 | 0.8 | 0.7 | 4.6 |
| 782 | Post-Operative Hemorrhage | 4,456 | 1,790 | 1,635 | 90.0 | 5.7 | 0.3 | 0.3 | 3.6 |
| 783 | Fracture/Dislocation of Wrist/Hand/Ankle/Foot | 970 | 1,855 | 1,534 | 77.1 | 15.4 | 2.0 | 0.1 | 5.5 |

MCC 20 Other Reasons for Hospitalization

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--|--------------|-------------------|--------|------------------------------|----------------|-----------|--------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| | | | Mean | Median | | Transfers | Sign-Outs | Deaths | |
| 800 | Other Admission With Major Intervention | 1,950 | 45,044 | 52,080 | 82.5 | 10.3 | 0.2 | 2.9 | 4.2 |
| 801 | Other Admission With Non-Major Intervention | 3,100 | 16,050 | 5,591 | 75.4 | 10.2 | 0.1 | 6.7 | 7.6 |
| 805 | Rehabilitation | 8,631 | 18,796 | 13,875 | 45.4 | 49.2 | 0.4 | 1.9 | 3.1 |
| 806 | Convalescence | 20,356 | 2,678 | 2,554 | 31.5 | 53.9 | 0.6 | 1.6 | 12.4 |
| 807 | Prematurity and Growth Restriction, Age >28 Days | 646 | 26,449 | 18,220 | 5.1 | 92.9 | 0.0 | 0.3 | 1.7 |
| 808 | Multiple/Unspecified Congenital Anomaly | 60 | 7,934 | 7,087 | 76.7 | 15.0 | 1.7 | 3.3 | 3.3 |
| 809 | Awaiting Placement | 3,454 | 5,763 | 5,719 | 65.1 | 23.6 | 0.5 | 3.4 | 7.4 |
| 810 | Palliative Care | 16,894 | 7,984 | 6,714 | 27.6 | 4.3 | 0.2 | 63.0 | 4.9 |
| 811 | General Symptom/Sign | 13,430 | 4,847 | 4,133 | 82.5 | 5.7 | 1.9 | 3.5 | 6.4 |
| 812 | Other Factor Causing Hospitalization | 4,536 | 3,738 | 3,356 | 75.6 | 14.3 | 1.1 | 4.5 | 4.7 |
| 813 | Follow-up Treatment/Examination | 14,436 | 1,260 | 1,263 | 82.6 | 9.5 | 0.3 | 0.1 | 7.5 |
| 814 | Observation/Evaluation | 909 | 948 | 880 | 88.1 | 5.2 | 2.0 | 0.0 | 4.7 |
| 815 | Cancelled Intervention | 7,238 | 280 | 240 | 97.4 | 1.5 | 0.6 | 0.0 | 0.4 |

MCC 99 Miscellaneous CMG and Ungroupable Data

| CMG Code | CMG Description | Total Volume | Typical Cases | | Cases Distribution (Percent) | | | | |
|----------|--------------------------------------|--------------|-------------------|--------|------------------------------|----------------|-----------|--------|--------------------|
| | | | Average Cost (\$) | | Typical Cases | Atypical Cases | | | Long-Stay Outliers |
| | | | Mean | Median | | Transfers | Sign-Outs | Deaths | |
| 991 | Cadaver Donor | 17 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 992 | Stillbirth | 2,027 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 993 | Diagnosis Not Generally Hospitalized | 2,257 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 994 | Invalid Obstetric Diagnosis | 230 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 999 | Ungroupable | 116 | – | – | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Technical Notes

1. The data presented in these tables are from the Discharge Abstract Database (DAD) and the Canadian MIS Database (CMDB), for fiscal year 2005–2006. Analyses in the tables include only acute care inpatient data. Cost data do not include physician compensation.
2. The patient groups in the tables are based on CIHI’s CMG+ methodology, which aggregates acute care inpatients into major clinical categories (MCCs) and assigns patients with similar clinical and resource utilization characteristics into Case Mix Groups (CMGs).
3. Some CMGs listed in the tables may be assigned to more than one MCC. The MCCs presented in the tables for these types of CMGs are “Home” MCCs, which refer to the body systems in which the interventions are more often performed. For example:

| CMG Code | CMG Description | Home MCC | Other MCC |
|----------|------------------------------------|----------|-----------|
| 110 | Lung Transplant | 4 | 10 |
| 270 | Liver/Pancreas/Duodenum Transplant | 7 | 10 |
| 271 | Excision Pancreas With Duodenum | 7 | 10 |
| 272 | Drainage/Biopsy of Pancreas | 7 | 10 |
| 273 | Bypass/Excision of Pancreas | 7 | 10 |
| 999 | Ungroupable | 99 | 8, 9, 14 |

4. Average cost analyses in the tables include only “typical cases” (that is, stillbirths, transfers, sign-outs, deaths and patients who stay longer than the expected length of stay are excluded). Costs are assigned to patient groups using patient-specific Resource Intensity Weights (RIWs) and Cost per Weighted Case (CPWC) data.
5. For CMGs of typical cases with fewer than five records, mean and median cost data are not provided. For CMGs with greater than or equal to 5 but fewer than 30 records, median cost data are not provided. The rationale is based on the fact that the distribution of RIWs may not be well established and the mean or median data may not accurately reflect the true population mean or median. The mean or median data that are suppressed due to small cell sizes are represented with a symbol (–).
6. The atypical status of a case in the table is assigned according to the following hierarchy: death, sign-out and transfer. For example, a patient who was transferred into a facility and subsequently died would be coded as a death case; a patient who was transferred into a facility and subsequently signed out would be coded as a sign-out case. If a patient stayed longer than the expected length of stay, then the case was coded as a long-stay outlier, regardless of whether the patient died, voluntarily signed out or got transferred.

