

## SELECTED FINDINGS

### Inpatient Data

- In 2021, Wisconsin hospitals reported 550,221 inpatient hospitalizations, with 550,189 hospitalizations having stays of less than 1,000 days, which qualified them for inclusion in this report. These resulted in 2.8 million days of care and total billed charges of \$25.1 billion (see Table 1 for details).
- On average, a hospital patient was charged \$45,687 per hospitalization during 2021. In general medical-surgical (GMS) hospitals, the average inpatient charge was \$46,701. In the non-GMS (specialty) hospitals, charges differed between long-term care and short-term specialty care. The average charge was \$250,062 in LTAC hospitals, \$17,311 in psychiatric hospitals, \$45,192 in rehabilitation hospitals, and \$30,029 at the state-operated mental health institutes (see Table 2 for details).
- The average hospital stay was 5.0 days. Patients stayed an average of 4.7 days at GMS hospitals, 35.3 days at LTAC hospitals, 6.2 days at psychiatric hospitals, 13.0 days at rehabilitation hospitals, and 24.8 days at the state-operated mental health institutes (see Table 2 for details).
- In 2021, there were 55,347 obstetrical hospitalizations and 60,571 neonatal hospitalizations. There were also 66,481 cardiovascular, 40,547 orthopedic, 39,751 psychiatric, and 15,026 AODA-related hospitalizations in Wisconsin (including rehabilitation hospitals and state-operated mental health institutes). Combined, these accounted for 50 percent of all hospitalizations in the state.
- The most common reasons for hospitalization were related to childbirths. These included Normal Newborn, Birthweight 2500+ grams (APR-DRG 640) and Vaginal Delivery (APR-DRG 560). Together, these two APR-DRGs represented 17 percent of all hospitalizations.
- Most neonatal stays were classified as Normal Newborn, Birthweight 2500+ grams (APR-DRG 640), accounting for 51,839 hospitalizations (86 percent of all neonatal hospitalizations) with an average charge of \$4,814 and an average length of stay of 1.9 days (see Table 5 for details).
- Seventy-five percent of all childbirths were classified as vaginal deliveries (APR-DRGs 541, 542, and 560). Vaginal-delivery childbirths accounted for 41,647 hospitalizations at an average charge of \$13,751. In 5.7 percent of these childbirths, there were complications or additional surgery at the time of delivery (e.g., sterilization, etc.) (see Table 4 for details).
- Twenty-five percent of all newborns were delivered by Cesarean section, also called C-sections (see Table 4 for details).
- Statewide, 5,608 patients had open-heart surgery at 31 GMS hospitals, with an average length of stay of 7.9 days and an average charge of \$179,158.
- Four GMS hospitals performed a total of 80 heart transplants (APR-DRG 002; MDC 05), with an average charge of \$1,210,880 and an average length of stay of 40.3 days.
- The most expensive APR-DRGs were Neonate with External Heart and Lung Oxygen Support (APR-DRG 583), at an average charge of \$1,336,958 and Heart and/or Lung Transplant (APR-DRG 002), at an average charge of \$1,129,417.

Combined, they accounted for only 135 hospitalizations, yet their complexity and length of stay resulted in \$156 million total charges and 5,420 patient days.

- The APR-DRGs generating the most total charges were Blood Infection/Septicemia (APR-DRG 720), at \$1.7 billion, and Respiratory Infections and Inflammations (APR-DRG 137), at \$1.1 billion.
- Females accounted for 55 percent of all hospitalizations. Eighteen percent of hospitalizations among females were obstetric-related.
- During 2021, injury-related hospitalizations and ambulatory surgeries accounted for \$6.1 billion in charges at hospitals and FASCs.

### **Ambulatory Surgery Data**

- Ambulatory surgery procedures were performed at 130 Wisconsin GMS hospitals and 66 FASCs in 2021. Data for 997,105 cases were collected: 779,664 from hospitals and 217,441 from FASCs.
- Lesion Removal Colonoscopy by Snare was the most frequently reported principal ambulatory procedure in 2021, with 78,868 cases.
- The principal procedure producing the highest median charge among the 20 common principal procedures was Total Knee Arthroplasty, at \$41,321. The least expensive among the top 20 most common principal procedures was Injection Interlaminar Lumbar/Sacral with a median charge of \$2,709.

### **Emergency Department Data**

- In 2021, Wisconsin hospitals reported over 1.7 million visits to hospital emergency departments.
- The most common primary diagnoses associated with emergency department visits was symptoms and signs involving the circulatory and respiratory system, representing about nine percent of all visits.
- Included in the 2021 emergency department visits were 395,742 visits (approximately 22 percent of the overall total) related to all types of injury and poisoning.
- Injury-related emergency department visits accounted for \$1.3 billion in charges (approximately 22 percent of the overall total).

## Comparison to 2020 Data

- Compared to 2020, the number of hospitalizations in 2021 increased by 2.1 percent while the number of patient days increased by 6.3 percent. The average length of stay increased by 4.1 percent (see Table 1 for details).
- Statewide, the average charge per hospitalization rose from \$42,479 to \$45,687 (7.6 percent) between 2020 and 2021 (see Table 1 for details).
- The average charge per hospitalization increased from \$43,332 to \$46,701 (7.8 percent) at GMS hospitals, from \$202,233 to \$250,062 (23.7 percent) at LTAC hospitals, from \$17,153 to \$17,311 (0.9 percent) at psychiatric hospitals, from \$43,928 to \$45,192 (2.9 percent) at the rehabilitation hospitals and decreased from \$30,446 to \$30,029 (1.4 percent) at the state-operated mental health institutes (see Table 3 for details).
- The average length of stay increased from 4.5 days to 4.7 days (4.4 percent) at GMS hospitals, from 34.6 days to 35.3 days (1.9 percent) at the LTAC hospitals and remained the same 13.0 days at the rehabilitation hospitals.
- The average length of stay decreased from 6.4 days to 6.2 days (3.1 percent) at psychiatric hospitals and decreased from 26.2 to 24.8 days (5.3 percent) at the state-operated mental health institutes.
- The 40 most frequently performed ambulatory surgery procedures comprised 60 percent of all reported cases. Charges for the top 40 procedures combined increased 34 percent from 2020. Some fluctuations in utilization may be observed compared to previous years.
- The number of reported emergency department visits increased by 14.7 percent, from 1.54 million in 2020 to 1.76 million in 2021.

## **READER'S GUIDE TO THE REPORT**

This Reader's Guide provides a basis for understanding and evaluating the data in this report. It explains the kinds of data collected and the terminology needed to understand it.

### **Data Source**

This report presents selected data from 2021 patient-level data submitted by Wisconsin hospitals and FASCs and collected by WHA Information Center, LLC.

The patient-level data submitted include items such as patient characteristics (age, sex, and race), diagnoses, procedures, and charges. Data is derived from billing forms and includes information on each patient served in a hospital or FASC. Patient name is not collected in order to maintain patient confidentiality. Hospitals and FASCs submit patient level data every three months.

### **What You Can Learn From this Report**

The following is a summary of the information presented in this report:

- The report identifies the average charges for selected medical or surgical inpatient and ambulatory treatments. It does not address how much an individual will actually be billed by the facility for that service because each case is different.
- The report does not provide information on physician charges because those data are not collected.
- The report identifies the variation in inpatient and ambulatory charges among facilities. Facility charges vary for many reasons.
- The report identifies trends in inpatient and ambulatory utilization and charges.
- The report provides information about the volume and types of services delivered through Wisconsin hospital emergency departments.

### **Charges vs. Revenues**

The amount a facility bills for a patient's care is known as the charge. The payment a facility actually receives is known as revenue. This report lists the average charges billed by facilities for selected services. These charges are derived from billing forms, which list the actual charges for each patient. However, government health care programs like Medicare and Medical Assistance (Medicaid) generally pay substantially less than the actual charges. In addition, facilities frequently negotiate discounts with insurance companies or other private purchasers of health care services. As a result, the amount actually collected by the facility may differ substantially from the amount billed. In addition, changes in charges from year to year do not necessarily imply that revenues are changing at the same rate.

### **Adjusting the Data for Patient Risk**

Many factors affect how much hospitals charge patients for care. One major factor is patient risk, or the severity of illness of patients served by a facility. Sicker patients tend to stay in the hospital longer, require more intensive care, and use more resources than patients who are less ill. Because these factors affect how much patients are charged, comparing charges among patients with the same illness but different degrees of severity is problematic. However, differences in severity of patient illness can be

estimated, and adjustments can be made that allow better comparisons of charges between patients with varying severity.

In recent years, a number of methods have been developed to measure and adjust for variations in hospital charges caused by illness severity differences in patients. WHA Information Center used a computer software product to risk adjust the inpatient data submitted by hospitals.

The risk adjustment software used for this report looks at the diagnosis and procedure codes, sex, age, and discharge status for each inpatient discharge to determine the base APR-DRG classification, and severity of illness. The severity of illness is then used to compute the risk adjusted charge. The risk adjusted charge is an estimate of what a patient's charges would have been if the patient's severity of illness was the same as the "average" patient's.

For example, if the hospital charge is \$100 and the patient is of "average" risk, then the risk adjusted charge is also \$100. If the charge is \$100 and the patient had a greater than average severity of illness, the risk adjusted charge would be higher than \$100. If the charge is \$100 and the patient had a less than average severity of illness, the risk adjusted charge would be less than \$100.

Once a facility's charges have been risk adjusted, they may be compared to other risk adjusted charges, such as those of another hospital or group of hospitals.

In this report, risk adjusted APR-DRG (All Patient Refined Diagnosis Related Group) charge data is presented for each GMS hospital and the following three comparison groups: analysis area, inpatient volume group, and all GMS hospitals as a single group. Analysis areas group GMS hospital geographically; inpatient volume groups allow comparisons between GMS hospitals of similar size; the "all GMS hospitals" data permit comparison to statewide totals and averages.

The report does not risk adjust charges for psychiatric and alcohol and other drug abuse (AODA) APR-DRGs because difference in charges for these APR-DRGs usually reflect program differences rather than variations in illness severity. For example, one hospital may treat psychiatric patients in longer-term inpatient programs, while another hospital may stabilize similar patients and then transfer them to residential facilities following a short inpatient stay.

### **Why Charges May Differ Between Facilities**

There are many reasons that charges may differ between facilities. Among them are the following:

**Payer mix** – As with other businesses, hospitals cannot survive if costs exceed revenues over a long period of time. Government programs (like Medicare, Medicaid, BadgerCare and General Relief) generally reimburse hospitals at rates that do not cover the costs they incur to provide care. Therefore, facilities that have a relatively high percentage of government-program patients are forced to recover a greater percentage of their operational costs from privately insured and self-pay patients through higher charges.

**Facility cost structures** – Facilities differ in their approach to pricing based on operational costs. Some facilities try to spread the cost of all services and equipment among all patients. Others establish charges for specific services based on the cost to provide each specific service. Furthermore, some facilities may decide, or be forced to provide certain services at a loss while other facility operations subsidize

the losses. Any of these situations can result in significantly different charges among facilities for a given type of service.

**New technology** - The equipment facilities use to provide services differs in age, sophistication, and frequency of use. Facilities with the latest technology may have higher charges than those with older, less sophisticated equipment.

**Staffing costs** - Salary scales may differ by region and are typically higher in urban areas than rural areas. Shortages of nurses and other medical personnel may affect different regions differently. Where shortages are more severe, staffing costs, and therefore charges, may be higher.

**Intensity of care** - Some facilities are equipped to care for more severely ill patients than others. Patients within the same diagnosis or procedure category may need very different levels of service and staff attention, causing variation in charges.

**Range of services provided** - Facilities differ in the range of services they provide to patients. Some may provide the full range of services required for diagnosis and treatment during the stay. Others may stabilize patients and then transfer them to another facility for more specialized or rehabilitative care.

**Service frequency** – The per-patient cost of services is generally higher if the type of service occurs infrequently at the facility. Furthermore, a single case with unusually high or low charges can greatly affect a facility's average charge if the facility reported only a few cases in a given time period.

**Differences in coding** - Facilities vary in their coding methods and personnel, and in the number of billing codes they routinely include on a billing form. This may result in similar types of services being classified differently from facility to facility.

**Capital expenses** - Facilities differ in the amount of debt and depreciation they must cover in their charge structure. A facility with a lot of debt may have higher charges than a facility not facing such expenses. Furthermore, facilities may choose to lease or purchase equipment or facilities. The choices made about financing of capital projects may affect charges in different ways.

## Basic Terms and Concepts

### Statistical Terms

**Distribution** – Distribution is term referring to a set of events, or data. The charges in the following example could be referred to as a distribution. The distribution can be described in many ways, such as the range, which indicates the low and high values in the distribution (in the case below, \$4,984-\$7,002).

**Mean (Average)** – The mean, or average, is the sum of all values in a distribution divided by the number of values in the distribution. For example, to determine the average charge per discharge for seven pneumonia patients at a particular hospital, the charges for each patient are added together and divided by seven. If the charges for the seven patients were \$6,216, \$5,425, \$4,984, \$5,733, \$7,002, \$6,558, and \$5,193, the average charge per discharge would be computed as follows:

$$\begin{array}{r} \$6,216 \\ 5,425 \\ 4,984 \\ 5,733 \\ 7,002 \\ 6,558 \\ + 5,193 \\ \hline \$41,111 \end{array} \qquad \$41,111 / 7 = \$5,873$$

**Median** – The median is the middle value in a distribution when all the values are ranked in order from low to high or high to low. To determine the median charge for the same seven pneumonia patients, the charges are first ranked in order:

\$4,984, \$5,193, \$5,425, **\$5,733**, \$6,216, \$6,558, and \$7,002

The median charge is the middle value: \$5,733

Averages (means) can be significantly affected by a few unusually low or high values (called “outliers”). Since median figures are not affected to such a degree by outliers, they may be more representative of the distribution. Notice if the highest charge for the seven pneumonia patients was \$10,502 instead of \$7,002, the average charge would climb from \$5,873 to \$6,373, but the median charge would remain at \$5,733. In this case the median charge is a better representation of the facility’s charges for pneumonia patients.

**Percentile and percentile distribution** – A percentile marks a point in a distribution above and below which some percentage of the events, or data, fall. For instance, if \$2,000 represents the 25<sup>th</sup> percentile of charges for a certain APR-DRG or ambulatory surgical procedure, it means 25 percent of the patients who were in the APR-DRG or who had the procedure were charged \$2,000 or less. Conversely, 75 percent of the patients were charged \$2,000 or more. The 25<sup>th</sup>, 50<sup>th</sup> (median), and 75<sup>th</sup> percentiles are also referred to as quartiles, because they mark the points in the distribution above and below which lie one-quarter, one-half, and three-quarters of the data in the distribution.

**Standard deviation** – This is a measure of the average variation above or below the mean. When data are in a normal distribution, approximately 68 percent of the values

will fall within one standard deviation of the mean, 95 percent within two standard deviations, and 99.7 percent within three standard deviations.

### **Inpatient Data Terms**

**Analysis areas** – These are groups of counties originally established as health planning districts for federal and state governments. The analysis areas are: Southern (Area 1), Southeastern (Area 2A), Milwaukee County (Area 2B), Lake Winnebago (Area 3), Northeastern (Area 4), West Central (Area 5A), Southwestern (Area 5B), North Central (Area 6), and Western Lake Superior (Area 7).

**Average (mean) charge** – This is the sum of all charges for a service or facility or group of services or facilities divided by the number of discharges for that service or facility. The average charge is an approximation of what an average patient would be charged. The charges listed in these reports do not include fees for physician services.

**Average (mean) length of stay** – This is the total number of days spent in a hospital or group of hospitals by a group of patients divided by the number of discharges. Length of stay affects charges because longer stays generally produce higher charges. In addition, it is a rough indicator of hospital efficiency, assuming similar severity of illness or program philosophy. For example, two hospitals may have significantly different average stays for similar psychiatric diagnoses. These differences may indicate that a facility offers extended inpatient stays, which tend to have higher charges, or alternatives, such as outpatient treatment, which tend to have lower charges. Differences in physician practice patterns can also affect length of stay.

**Discharge** – A patient is discharged once he or she officially leaves the hospital. The number of discharges affects how a hospital is staffed, what types of services it offers, and how well it competes in the broader health care system. To some degree it also affects costs because, when viewed relative to the facility's capacity, the number of discharges is a partial indicator of efficiency. The number of discharges is used to calculate the average charge and average length of stay at a facility. In some cases, transfers of patients between distinct units of a hospital are submitted to WHA Information Center as separate discharges. This reflects standard billing guidelines and data submission requirements developed by the Wisconsin Bureau of Health Information.

**APR-DRG** – The basic unit of analysis for inpatient hospitalizations in this report is the All Patient Refined Diagnosis Related Group, or APR-DRG. It is one method of patient classification. Prior to the 2008 report, DRG (Diagnosis Related Group) was used as the unit of analysis for inpatient hospitalizations. The federal government established DRGs as a way to pay hospitals for care of Medicare patients. The DRG system focused on the resources consumed by patients. APR-DRGs expand the basic DRG structure by adding four subclasses to each DRG and considering the entire patient population, not just Medicare patients. The addition of the four subclasses addresses patient differences relating to severity of illness and risk of mortality. More than a third of the hospitals in the United States are using APR-DRG software to analyze comparative hospital performance.

For this report, WHA Information Center used APR-DRGs to classify all hospital inpatient stays, except those at rehabilitation hospitals. A description of each of the APR-DRGs referenced in this report is included in Chapter IV.

To describe patients at rehabilitation hospitals, WHA Information Center used a classification system developed by the federal Centers for Medicare and Medicaid



Services (formerly the Health Care Financing Administration). This system groups patients into rehabilitation categories (e.g., stroke, spinal cord injury, etc.). Appendix 2 – Methodology and Technical Notes describes in greater detail the methodology used to determine rehabilitation categories.

**External cause codes** – Health care providers and death certificate coders use external cause codes to describe an injury resulting in treatment or death. External cause codes are part of the International Classification of Diseases (ICD-10-CM codes), which are used to describe all diagnoses and some surgical procedures. WHA Information Center collected external cause codes for injury related hospitalizations, emergency department visits and outpatient surgeries in Wisconsin.

**Expected payer** – Data on expected payers are compiled from bills for hospital or FASC services. The bills indicate who the facility expects will pay for the services; however, the expected payer is not always the actual payer. A patient's insurance may not cover the particular procedure. The indicated insurer may not actually cover a patient. Therefore, expected pay sources are to be viewed as preliminary.

Expected pay sources include the following:

*Medicare* – reimbursement under Part A (facility care) of Title XVIII. Medicare is a federal health insurance program for the elderly and disabled.

*Medicaid/BadgerCare* – reimbursement from Wisconsin's Medicaid (Title XIX) and BadgerCare programs. Medicaid is a federal/state program that helps pay for health care for indigent and other eligible persons. BadgerCare provides Medicaid benefits to certain persons whose income would otherwise disqualify them from Medicaid eligibility.

*Other Government* – reimbursement from Tri-Care (formerly known as CHAMPUS, Civilian Health and Medical Program of the Uniformed Services – health benefits for military personnel and dependents), county general relief, county 51.42/51.437 programs, and other government sources. Reimbursement from Medicaid programs in other states is also included.

*Commercial or Private Insurance* – reimbursement from Blue Cross/Blue Shield and other traditional insurance companies, alternative payment systems (e.g., HMOs, PPOs), self-funded plans, and Worker's Compensation.

*Self-Pay* – reimbursement from a patient's own resources. Self-Pay may also include insurance that has not been assigned (i.e., reimbursement is made by the insurer directly to the patient, rather than to the facility).

*Unknown* – the facility had not yet determined from whom it expected reimbursement.

For more information regarding Payer Code Assignment, please refer to Appendix 2 – Methodology and Technical Notes.

**Hospital Types** – There are six types of hospitals providing services in Wisconsin:

*Alcohol and other drug abuse (AODA) hospitals* – provide diagnostic and therapeutic services to patients with drug or alcohol dependencies.

*General medical-surgical (GMS) hospitals* – provide diagnostic and therapeutic services to patients for a variety of medical conditions, both surgical and non-surgical.

*Long-Term Acute Care (LTAC) hospitals* – focus on patients who, on average, stay more than 25 days. They specialize in treating patients who may have more than one serious condition, but who may improve with time and care, and return home.

*Psychiatric hospitals* – provide diagnostic and therapeutic services to patients with mental, emotional, or developmental disorders.

*Rehabilitation hospitals* – provide a comprehensive array of restoration services for the disabled and support services necessary to help patients attain their maximum functioning.

*State-operated mental health institutes* – provide comprehensive and intensive diagnostic, therapeutic, and support services to patients with unusually complex or difficult mental, emotional, or developmental disorders.

**ICD-10-CM codes** – The tenth version of a coding scheme (International Classification of Diseases-Clinical Modification) used by health care providers and third-party payers to classify diagnoses and procedures.

**Inpatient volume groups** – A system for classifying hospitals based on the total number of discharges, adjusted yearly to account for patient mix. The number of patients within each APR-DRG at a hospital was multiplied by the statewide average charge for that APR-DRG. These adjusted charges were then totaled for each hospital, and the hospitals were ranked from lowest to highest adjusted total charges. Based on these data, six inpatient volume groups for GMS hospitals were created: the smallest, Volume Group 1, to the largest, Volume Group 6. All specialty hospitals were placed in a group by themselves (Inpatient Volume Group 7).

**MDC** – A broad grouping, or Major Diagnostic Category, of APR-DRGs according to type of disease, condition or body part treated.

**Median charge and median length of stay** – Charges and lengths of stay may also be presented as medians. The median charge is the midpoint between the highest charge and the lowest charge. The median length of stay is expressed as a number of days. Half the patients stayed in the hospital longer than the median length of stay, and half stayed a shorter period of time.

**Newborn** – A discharge reported in the range of ICD-10-CM codes Z381 through Z389 under *Principal Diagnosis*. The term refers to a baby born in a hospital or admitted on the day of its birth.

**Racial distribution** – Data on the racial background self-reported by patients. Racial groups appearing in this report include American Indian/Alaskan Native, Asian, Black/African American, Native Hawaiian/Pacific Islander, White, Multiracial, Declined, and Unavailable. Patients are not required by facilities to identify their racial background. The data are based solely on how patients classify themselves.

**Risk adjusted rate** – A modification of the unadjusted rate that takes into account a hospital's case-mix severity. It can be thought of as the rate that would be expected if the hospital had an "average" case mix. Generally, risk adjusted rates lower than the unadjusted rate suggests that case mix severity is greater than average. A risk adjusted rate higher than the unadjusted rate suggests that the case mix is less severe than average.

**Risk adjustment** – Also known as **severity adjustment**, the modification of hospital data to account for differences in the severity of illness of patients. By adjusting for variation caused by differences in patient risk or severity of illness, more valid comparisons of data (e.g., charges) can be made between hospitals.

**Severity adjustment** – see risk adjustment, risk adjusted rate.

**Specialty hospital** – A hospital other than a GMS hospital that provides services to patients with specified medical conditions or for special categories of patients. In Wisconsin, this includes long-term acute care (LTAC), psychiatric, alcohol and other drug abuse (AODA), and rehabilitation hospitals, as well as the state-operated mental health institutes. Specialty hospitals were placed in a group by themselves (Inpatient Volume Group 7).

### **Ambulatory Surgery Data Terms**

**Ambulatory surgery** – Also called outpatient surgery, ambulatory surgery refers to surgical procedures for which patients require less than a 24-hour stay. For purposes of this report, certain invasive diagnostic procedures are reported as ambulatory surgeries.

Patients undergoing ambulatory surgery are not necessarily comparable to those undergoing the same procedure on an inpatient basis. An inpatient may have greater severity of illness than an outpatient or may have additional, more complicated procedures performed at the same time. Physicians may differ regarding the choice of an inpatient versus an outpatient setting for surgery on the same type of patient.

However, there is probably little difference between the patients treated in hospital-based ambulatory surgery units and freestanding ambulatory centers (FASCs). FASCs tend to be located in urban areas and compete with hospitals for patients.

**Average (mean) charge** – see definition under **Inpatient Data Terms**

**Case** – Defined as one patient visit, even though more than one procedure may be performed during the same surgical episode. For instance, if a myringotomy (incision in the middle ear) is performed on each ear during one visit, only one case will be counted, even though two procedures are performed.

**CPT-4<sup>2</sup> codes** – A coding scheme (Physicians' Current Procedural Terminology) developed by the American Medical Association to classify procedures performed in an ambulatory setting.

**Freestanding ambulatory surgery center (FASC)** – A facility dedicated solely to the provision of surgery on an outpatient basis. FASCs are owned and operated independently of a hospital. WHA Information Center collects data only from FASCs certified to treat Medicare patients, although these facilities typically treat many patients whose services are reimbursed by a variety of third-party payers. The FASC data include data related to all patients who underwent ambulatory surgery, regardless of payer type.

**Hospital-based outpatient surgery unit** – A section of a hospital that provides ambulatory surgery. Such units may be part of a hospital campus or in separate buildings. They are owned and controlled by the parent hospital facility.

**ICD-10-CM codes** – see definition under **Inpatient Data Terms**

**Median charge** – see definition under **Inpatient Data Terms**

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**Number (#) of cases** – The number of cases at the facility for which the CPT-4 code was listed as the principal procedure.

**Percentile charges** – Mark the point above and below which some percentage of the patients' charges fall. For instance, half the patients were charged less than the 50<sup>th</sup> percentile, or median charge, and half were charged more. Similarly, 95 percent were charged less than the 95<sup>th</sup> percentile, and 5 percent were charged more.

**Procedure** – A surgical operation performed on a person during a patient visit, as identified by the CPT-4 procedure codes. A person may undergo more than one procedure during a single surgical operation. For example, a patient who had arthroscopy with tendon repair on one leg undergoes two separate procedures.

**Standard deviation** – A measure of the average variation above and below the average, or mean, charge. When charges are in a normal distribution, approximately 68 percent of the cases will fall within one standard deviation of the mean, 95 percent within two standard deviations, and 99.7 percent within three standard deviations.

**Three-digit ZIP code area** – Used for geographic comparisons of ambulatory surgery utilization and charge data. Each area contains all facilities whose ZIP code begins with the same three digits (e.g., 530, 537). Refer to the map in Appendix 3 for the three-digit ZIP code area boundaries.

### **Emergency Department Data Terms**

**External cause code** – see definition under **Inpatient Data Terms**

**Visit rate** – The number of visits per 100 or 100,000 population. The rate is calculated by dividing the total number of visits in a particular age, sex, or diagnosis category by the U.S. Census Bureau's 2021 population estimate for that age, sex, analysis area or statewide total, then multiplying the result by 100 or 100,000, as applicable.

## CHAPTER I. OVERVIEW OF HOSPITAL INPATIENT UTILIZATION AND CHARGES

Since Wisconsin hospitals began publicly reporting inpatient data in 1989, the average length of stay at GMS hospitals declined until 2008. Between 1999 and 2007 the average length of stay decreased from 4.4 days to 4.0 days. From 2008 thru 2021, the average length of stay has varied between 4.0 and 4.7 days. The upward trend in average charges at GMS hospitals continued, with average charges rising from \$43,332 in 2020 to \$46,701 in 2021. It is important to recognize, however, that since hospitals do not collect their total charges, actual hospital revenues have increased at a much slower rate.

The average charge per stay at LTAC hospitals increased 23.7 percent from 2020 to 2021. The number of hospitalizations decreased 7.2 percent, patient days decreased 5.4 percent, and average length of stay increased 1.9 percent.

The average charge per stay at psychiatric hospitals increased 0.9 percent from 2020 to 2021. The number of hospitalizations increased 3.5 percent, patient days increased 0.4 percent, and average length of stay decreased 3.1 percent.

The average charge per stay at rehabilitation facilities increased 2.9 percent from 2020 to 2021. The number of hospitalizations decreased 2.3 percent, patient days decreased 2.3 percent, and average length of stay stayed the same.

The average charge per stay at the state-operated mental health institutes decreased 1.4 percent from 2020 to 2021. The number of hospitalizations increased 27.0 percent, patient days increased 20.3 percent, and average length of stay decreased 5.3 percent.

**Note:** In this report, the terms *hospitalization* and *discharge* are used interchangeably.

**Table 1. Comparative Summary of Utilization and Charges for Hospitalizations in Wisconsin, 2020 and 2021**

	2021	2020	% Difference
Number of Hospitalizations	550,221	538,808	2.1%
Total Patient Days	2,773,597	2,608,646	6.3%
Average Stay (days)	5.0	4.8	4.1%
Hospitalizations per 1,000 population	94.8	92.4	2.6%
Patient Days per 1,000 population	477.7	447.5	6.7%
Total Charges	\$25,138,119,198	\$22,887,859,679	9.8%
Average Charge per Hospitalization	\$45,687	\$42,479	7.6%

Note: Except for the state-operated mental health institutes, hospitalizations with lengths of stay greater than 100 days were not included when computing the charge data above. These hospitalizations **were** included to compute the number of hospitalizations, patient days, average length of stay, and population-based rates. All hospitalizations of more than 999 days were excluded entirely from the data. During 2021 there were 32 such hospitalizations. Lengths of stay for inpatients who remained in the hospital less than 24 hours were counted as one-day stays.

Source: Inpatient Data, WHA Information Center, LLC.

**Table 2. Summary data for Wisconsin hospitals, by type, 2021**

Type	Number of Hospitals	Number of Hospitalizations	Patient Days	Average Stay (days)	Average Charge per Day	Average Charge per Stay
GMS	133	518,442	2,440,163	4.7	\$9,922	\$46,701
LTAC	4	1,090	38,442	35.3	\$7,090	\$250,062
PSYCH	13	23,703	147,942	6.2	\$2,774	\$17,311
REHAB	3	2,228	28,913	13.0	\$3,482	\$45,192
STATE	2	4,758	118,137	24.8	\$1,209	\$30,029
<b>TOTAL</b>	<b>155</b>	<b>550,221</b>	<b>2,773,597</b>	<b>5.0</b>	<b>\$9,063</b>	<b>\$45,687</b>

Note: Except for the state-operated mental health institutes, hospitalizations with lengths of stay greater than 100 days were not included when computing the charge data above. These hospitalizations **were** included to compute the number of hospitalizations, patient days, average length of stay, and population-based rates. All hospitalizations of more than 999 days were excluded entirely from the data. During 2021 there were 32 such hospitalizations. Lengths of stay for inpatients who remained in the hospital less than 24 hours were counted as one-day stays.

Source: Inpatient Data, WHA Information Center, LLC.

**Table 3. Percent change in utilization and charges in Wisconsin hospitals, by type, 2020 to 2021**

Type	Number of Hospitalizations	Patient Days	Average Length of Stay	Average Charge per Stay
GMS	1.9%	6.4%	4.4%	7.8%
LTAC	-7.2%	-5.4%	1.9%	23.7%
PSYCH	3.5%	0.4%	-3.1%	0.9%
REHAB	-2.3%	-2.3%	0.0%	2.9%
STATE	27.0%	20.3%	-5.3%	-1.4%
<b>TOTAL</b>	<b>2.1%</b>	<b>6.3%</b>	<b>4.1%</b>	<b>7.6%</b>

Note: Except for the state-operated mental health institutes, hospitalizations with lengths of stay greater than 100 days were not included when computing the charge data above. These hospitalizations **were** included to compute the number of hospitalizations, patient days, average length of stay, and population-based rates. All hospitalizations of more than 999 days were excluded entirely from the data. During 2021 there were 32 such hospitalizations. Lengths of stay for inpatients who remained in the hospital less than 24 hours were counted as one-day stays.

Source: Inpatient Data, WHA Information Center, LLC.

## **CHAPTER II. SERVICES PROVIDED TO INPATIENTS**

This chapter has two sections. The first presents statewide information on six broad categories of hospitalizations: obstetrical, neonatal, cardiovascular, orthopedic, psychiatric, and alcohol and other drug abuse (AODA). Data reported include the number of hospitalizations, the average length of stay, the average charge, and the median charge per hospitalization.

The second section reviews the ten most common reasons for hospitalization, the top ten types of hospitalizations by average charge, and the ten types of hospitalizations that generated the greatest total charges. Three tables are presented, again containing the number of hospitalizations, the average length of stay, the average charge, and the median charge per hospitalization, or total charges.

This chapter's analysis is restricted to GMS, LTAC, and psychiatric facilities. Patients in these facilities accounted for 98.7 percent of all Wisconsin hospitalizations in 2021.

Patients in the state-operated mental health institutes and the rehabilitation hospitals are excluded because of their atypical characteristics (unusually long lengths of stay and high charges). Additional data on these specialty facilities are available upon request.

Patient hospitalizations are defined in terms of major diagnostic categories (MDCs) and All Patient Refined Diagnosis Related Groups (APR-DRGs). APR-DRGs are a method of classifying hospital stays according to the diagnosis of the patient, the procedures performed, and other factors, such as age and the presence of complications or comorbidities (other conditions that affect the amount of care required by a patient). MDCs are broad groupings of APR-DRGs. The APR-DRG system is widely used in many kinds of health data analysis. This report uses APR-DRGs to compare similar patients.

## Section 1: Hospitalization Categories

### Birth-Related Hospitalizations: The Mothers

In 2021, 55,347 women delivered babies (single and multiple births) in Wisconsin hospitals, up from 54,363 in 2020.

Most childbirths (70.9 percent) were normal and uncomplicated (APR-DRG 560). The remaining vaginal deliveries, including those with complicating diagnoses or concurrent procedures, such as sterilization (APR-DRGs 541 and 542), represented 5.7 percent of childbirths.

Statewide, the rate for Cesarean sections, also called C-sections (APR-DRG 540) increased slightly to 24.8 percent of childbirths, from 24.0 percent the year before.

Differences in C-section rates by hospital are often studied because they reflect individual physician practices, socioeconomic factors, access to and availability of prenatal care, and other factors. Hospitals with few childbirths may have higher C-section rates simply because small changes in the number of C-sections affect rates more when the number of childbirths is small than when it is large. However, hospitals with many childbirths may also have high C-section rates because they have programs aimed at treating high-risk pregnancies. Therefore, a C-section rate by itself is not an indicator of hospital quality or performance but may highlight an area for further review.

Among hospitals with more than 500 obstetric cases, Aspirus Wausau Hospital had the highest C-section rate at 31.6 percent of all childbirths, ThedaCare Regional Medical Center - Neenah had a rate of 30.8 percent, and Froedtert South, Kenosha, had a rate of 30.2 percent.

**Table 4. Childbirths in Wisconsin, 2021**

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
540	Cesarean Delivery	13,700	3.4	\$26,629	\$23,665
541	Vaginal Delivery with Sterilization	762	2.1	\$22,331	\$20,981
542	Vaginal Delivery with Proc Except Sterilization	1,626	2.5	\$19,021	\$16,250
560	Vaginal Delivery	39,259	2.1	\$13,366	\$12,163
Total Childbirths		55,347	2.4	\$16,939	\$14,288

Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.

Source: Inpatient Data, WHA Information Center, LLC.



## Birth-Related Hospitalizations: The Babies

Obstetric hospitalizations refer to the delivering mothers. The inpatient stays of newborn babies are referred to as neonatal hospitalizations. They include newborns and other neonates with conditions originating in the perinatal period.

Neonatal hospitalizations in GMS facilities increased to 60,571 in 2021 from 59,483 in 2020.

**Table 5. Neonatal Hospitalizations (MDC 15) in Wisconsin, 2021**

APR- DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
580	Neonate, Transferred <5 Days Old, Not Born Here	139	1.3	\$11,434	\$9,954
581	Neonate, Transferred <5 Days Old, Born Here	1,565	1.2	\$4,629	\$2,275
583	Neonate with External Heart and Lung Oxygen Support	15	67.9	\$1,336,958	\$1,162,416
588	Neonate Birthwt <1500g with Major Procedure	21	57.4	\$594,394	\$630,350
589	Neonate Birthwt <500g or Gestational Age <24 weeks	75	26.4	\$239,629	\$2,352
591	Neonate Birthwt 500-749g without Major Procedure	66	67.3	\$574,016	\$621,825
593	Neonate Birthwt 750-999g without Major Procedure	95	65.4	\$466,173	\$473,046
602	Neonate Birthwt 1000-1249g with Respiratory Distress Syndrome	135	57.9	\$389,455	\$351,417
603	Other Neonate Birthwt 1000-1249g	13	28.2	\$126,995	\$123,199
607	Neonate Birthwt 1250-1499g with Respiratory Distress Syndrome	149	45.3	\$286,594	\$261,490
608	Other Neonate Birthwt 1250-1499g	41	29.0	\$146,719	\$124,680
609	Neonate Birthwt 1500-2499g with Major Procedure	23	44.7	\$498,763	\$387,401
611	Neonate Birthwt 1500-1999g with Major Anomaly	84	28.3	\$162,991	\$137,834
612	Neonate Birthwt 1500-1999g with Respiratory Distress Syndrome	299	29.5	\$165,365	\$140,168
613	Neonate Birthwt 1500-1999g with Congenital Or Perinatal Infections	3	18.7	\$88,018	\$75,453
614	Other Neonate Birthwt 1500-1999g	377	13.6	\$62,055	\$50,337
621	Neonate Birthwt 2000-2499g with Major Anomaly	126	16.8	\$109,702	\$82,154
622	Neonate Birthwt 2000-2499g with Respiratory Distress Syndrome	317	18.6	\$103,746	\$87,422
623	Neonate Birthwt 2000-2499g with Congenital Or Perinatal Infections	9	12.1	\$53,065	\$44,631
625	Neonate Birthwt 2000-2499g with Other Significant Condition	205	12.8	\$56,782	\$41,664
626	Normal Newborn Birthweight 2000g - 2499g	1,496	4.5	\$16,530	\$5,931
630	Neonate Birthwt >2499g with Major Cardiovascular Procedure	34	61.3	\$942,888	\$415,223
631	Neonate Birthwt >2499g with Other Major Procedure	70	36.3	\$430,505	\$267,774
633	Neonate Birthwt >2499g with Major Anomaly	804	8.2	\$55,693	\$12,946
634	Neonate Birthwt >2499g with Respiratory Distress Syndrome	1,229	10.7	\$68,298	\$40,171
636	Neonate Birthwt >2499g with Congenital or Perinatal Infections	108	6.7	\$30,250	\$18,796
639	Neonate Birthwt >2499g with Other Significant Condition	1,234	6.9	\$30,450	\$13,213
640	Normal Newborn, Birthweight 2500g+	51,839	1.9	\$4,814	\$3,878
Total Neonatal Hospitalizations		60,571	3.3	\$14,984	\$4,088

Note: Includes newborns in the hospital of birth, newborns transferred to other hospitals, and low-birthweight infants readmitted when less than 28 days old after their initial hospital stay. Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.

## **Cardiovascular Hospitalizations**

In 2021, cardiovascular diagnoses accounted for 66,484 hospitalizations (up from 61,985 in 2020) (not including patients treated at rehabilitation hospitals or state-operated mental health institutes). These patients represented 12.1 percent of all hospitalizations and 19.2 percent of all inpatient charges, compared to 11.5 percent and 18.6 percent, respectively, the year before. Charges for cardiovascular-related hospitalizations in 2021 totaled \$4.8 billion, up from \$4.3 billion the previous year.

Thirty-one GMS hospitals performed open-heart surgery (APR-DRGs 162-163, and 165-167) on 5,608 patients, a 11.2 percent increase from 2020.

The largest number of open-heart surgeries (1,140) was performed by Aurora St. Luke's Medical Center in Milwaukee.

Four hospitals performed a total of 80 heart transplants in 2021. These four urban teaching hospitals performed all heart transplants in 2021. Aurora St. Luke's Medical Center, Milwaukee, performed 26 transplants, University of Wisconsin Hospital and Clinics, Madison, performed 26, Froedtert Hospital, Milwaukee performed 23, and Children's Wisconsin-Milwaukee Hospital performed 5.

**Table 6. Cardiovascular Hospitalizations (MDC 05) in Wisconsin, 2021**

<b>APR- DRG</b>	<b>Description</b>	<b>Number of Hospitalizations</b>	<b>Average Stay (days)</b>	<b>Average Charge</b>	<b>Median Charge</b>
002	Heart Transplant	80	40.3	\$1,210,880	\$885,272
161	Defibrillator and Heart Assist Implant	40	29.4	\$945,960	\$964,082
162	Cardiac valve procedures w AMI or complex PDX	304	13.4	\$293,504	\$235,958
163	Cardiac valve procedures w/o AMI or complex PDX	1,672	7.5	\$186,548	\$158,684
165	Coronary bypass w AMI or complex PDX	1,028	9.5	\$185,496	\$164,889
166	Coronary bypass w/o AMI or complex PDX	2,030	6.8	\$148,448	\$131,278
167	Other cardiothoracic & thoracic vascular procedures	574	7.6	\$194,332	\$147,652
170	Pacemaker Implant with Heart Attack, Heart Failure or Shock	17	6.9	\$106,285	\$79,382
171	Pacemaker Implant without Heart Attack, Heart Failure or Shock	1,803	3.9	\$71,520	\$60,564
174	Percutaneous coronary intervention w AMI	5,340	2.9	\$78,907	\$67,955
175	Percutaneous coronary intervention w/o AMI	3,026	3.3	\$99,675	\$85,302
176	Pacemaker/Defibrillator Replacement	118	4.2	\$91,462	\$83,395
177	Pacemaker/Defibrillator Revision Except Replacement	88	4.2	\$77,696	\$62,983
190	Circulatory Disorders with Heart Attack	3,869	3.3	\$37,091	\$29,988
191	Cardiac catheterization for coronary artery disease	822	2.1	\$40,552	\$36,269
192	Cardiac catheterization for other non-coronary conditions	3,559	4.9	\$63,582	\$48,495
194	Heart Failure	17,427	4.8	\$33,671	\$25,660
196	Cardiac arrest & shock	436	4.1	\$61,795	\$43,679
198	Chest Pain with Angina Pectoris or Coronary Atherosclerosis	747	2.2	\$24,170	\$19,609
199	Hypertension	1,569	3.0	\$27,509	\$23,221
200	Heart Structural and Valve Disorders	241	4.5	\$39,151	\$25,993
201	Heart Abnormal Rhythm and Conduction Disorders	7,459	3.0	\$23,766	\$18,309
203	Chest Pain	296	1.9	\$22,773	\$21,263
204	Fainting and Collapse	1,201	3.3	\$30,437	\$24,685
206	Malfunction/ Reaction/Complication of Heart Device or Procedure	631	5.9	\$58,295	\$39,517
	All Other Cardiovascular Hospitalizations	11,503	5.5	\$116,477	\$84,369
	Total Cardiovascular Hospitalizations	66,484	4.6	\$72,622	\$42,594
Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.					
Source: Inpatient Data, WHA Information Center, LLC.					

## Orthopedic Hospitalizations

Diseases and injuries related to muscles and the skeletal system resulted in 40,547 hospitalizations in 2021 (not including patients treated at rehabilitation hospitals or state-operated mental health institutes). Orthopedic patients accounted for 7.4 percent of all hospitalizations and 10.6 percent of total inpatient charges.

Elective Knee Joint Replacement (APR-DRG 326) was the most frequent reason for Orthopedic Hospitalizations

<b>Table 7. Orthopedic Hospitalizations (MDC 08) in Wisconsin, 2021</b>					
<b>APR-DRG</b>	<b>Description</b>	<b>Number of Hospitalizations</b>	<b>Average Stay (days)</b>	<b>Average Charge</b>	<b>Median Charge</b>
303	Dorsal and Lumbar Fusion with Principal Diagnosis of Back Curvature	240	5.0	\$164,365	\$138,947
304	Dorsal and Lumbar Fusion Without Principal Diagnosis of Back Curvature	3,722	3.7	\$111,331	\$93,194
305	Amputation of Lower Limb Except Toes	1,347	10.1	\$91,872	\$63,901
308	Hip & femur fracture repair	4,314	5.5	\$63,720	\$54,320
309	Other significant hip & femur surgery	572	6.4	\$90,761	\$68,773
310	Back/Neck Procedures Except Dorsal and Lumbar Fusion	642	4.3	\$62,030	\$51,730
313	Other Knee/Lower Leg Surgery	2,209	5.3	\$75,526	\$59,339
314	Foot/Toe Surgery	1,191	6.3	\$59,453	\$46,063
315	Shoulder, upper arm & forearm procedures except joint replacement	838	4.6	\$70,867	\$57,827
316	Hand/Wrist Surgery	287	3.7	\$47,402	\$36,960
321	Upper Spinal Fusion	1,392	4.1	\$88,741	\$74,996
323	Non-elective or complex hip joint replacement	2,909	5.5	\$73,017	\$62,730
324	Elective hip joint replacement	3,350	1.9	\$54,317	\$50,260
325	Non-elective or complex knee joint replacement	985	4.3	\$91,393	\$81,891
326	Elective knee joint replacement	4,508	1.8	\$49,187	\$45,918
340	Thigh Fracture	565	4.3	\$24,810	\$18,685
341	Pelvis Fracture/Hip Dislocation	447	4.4	\$28,844	\$23,689
342	Fracture or Dislocation Except Thigh, Pelvis, Back	1,079	4.6	\$32,739	\$26,380
343	Musculoskeletal Malignancy	396	7.1	\$62,324	\$45,934
347	Other Back/Neck Disorders, Fractures, Injuries	2,449	4.8	\$36,772	\$29,204
351	Other Musculoskeletal System and Connective Tissue Diagnoses	2,125	4.6	\$32,466	\$24,281
	All Other Orthopedic Hospitalizations	4,980	5.8	\$68,566	\$51,007
	Total Orthopedic Hospitalizations	40,547	4.6	\$65,896	\$53,012
Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.					

## Psychiatric Hospitalizations

GMS, and psychiatric hospitals treated 35,558 psychiatric inpatients in 2021 (up from 34,182 in 2020). They represented 6.5 percent of all hospitalizations and 2.6 percent of total inpatient charges.

The number of psychiatric hospitalizations increased by 4.0 percent from 2020, and patient days increased by 2.6 percent.

The average charge for psychiatric hospitalizations increased by 4.4 percent in 2021 to \$18,310, from \$17,536 the year before.

**Table 8. Psychiatric Hospitalizations (MDC 19) in Wisconsin, 2021**

APR- DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
740	Mental Illness Diagnosis with O.R. Procedure	120	6.5	\$73,147	\$58,493
750	Schizophrenia	3,998	8.8	\$21,898	\$15,721
751	Psychoses	15,343	5.8	\$17,133	\$14,140
752	Personality and Impulse Control Disorders	413	3.7	\$12,621	\$10,273
753	Bipolar Disorders	8,055	6.1	\$17,151	\$14,008
754	Depression	3,268	4.1	\$12,882	\$10,508
755	Neuroses Other Than Depression	1,588	4.5	\$13,908	\$10,059
756	Acute Adjust React Psychosocial Dysfunction	1,240	4.7	\$20,621	\$15,883
757	Organic Disturbances and Mental Retardation	202	7.5	\$21,969	\$16,160
758	Behavioral disorders	351	6.0	\$18,710	\$15,939
759	Eating Disorders	486	15.9	\$56,714	\$43,618
760	Other Mental Disorders	494	11.1	\$40,894	\$26,884
Total Psychiatric Hospitalizations		35,558	6.2	\$18,310	\$14,094
Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.					
Source: Inpatient Data, WHA Information Center, LLC.					

## AODA Hospitalizations

Inpatient treatment of alcohol and other chemical dependencies accounted for 14,656 hospitalizations in 2021 in GMS and psychiatric facilities, up from 14,178 in 2020. The state's only dedicated AODA hospital, Libertas Center in Green Bay, closed their inpatient department in 2021.

**Table 9. AODA Hospitalizations (MDC 20) in Wisconsin, 2021**

APR- DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
770	Substance Abuse/Dependence, Left Against Medical Advice	1,283	2.1	\$12,633	\$8,141
772	Substance Abuse/Dependence with Rehab and/or Detox	173	3.8	\$12,548	\$10,685
773	Opioid Abuse/Dependence	2,641	4.1	\$15,731	\$13,082
774	Cocaine Abuse/Dependence	815	3.9	\$17,744	\$14,171
775	Alcohol Abuse/Dependence	9,030	3.9	\$19,740	\$13,892
776	Other Substance Abuse/Dependence	672	4.4	\$13,958	\$8,943
	All Other AODA Hospitalizations	42	12.4	\$149,338	\$81,829
	Total AODA Hospitalizations	14,656	3.8	\$18,306	\$13,110

Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.

Source: Inpatient Data, WHA Information Center, LLC.

## Section 2: Reasons for Hospitalization: Most Frequently Occurring, Highest Average Charges and Highest Total Charges

### Most Frequently Occurring APR-DRGs

The ten most frequently occurring APR-DRGs (see Table 10) accounted for 39.4 percent of all hospitalizations and 20.7 percent of all inpatient charges at GMS, LTAC, and psychiatric facilities in 2021.

Birth-related hospitalizations (APR-DRGs 540, 541, 542, and 560 and MDC 15) accounted for 21.3 percent of all hospitalizations at these facilities, but only 7.3 percent of charges.

The average hospital stays for patients with the most frequently reported APR-DRGs were relatively short at 3.9 days. Average charges were also relatively low for the most common APR-DRGs (\$24,176) compared to the average charge for all inpatients at GMS, LTAC, and psychiatric facilities (\$46,587).

**Table 10. Most Common Hospitalizations in Wisconsin, 2021**

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
640	Normal Newborn, Birthweight 2500g+	51,839	1.9	\$4,814	\$3,878
560	Vaginal Delivery	39,259	2.1	\$13,366	\$12,163
720	Blood Infection/Septicemia	31,003	6.3	\$53,797	\$35,224
137	Respiratory Infections and Inflammations	23,449	6.4	\$46,282	\$33,748
194	Heart Failure	17,427	4.8	\$33,671	\$25,660
751	Psychoses	15,343	5.8	\$17,133	\$14,140
540	Cesarean Delivery	13,700	3.4	\$26,629	\$23,665
775	Alcohol Abuse/Dependence	9,030	3.9	\$19,740	\$13,892
753	Bipolar Disorders	8,055	6.1	\$17,151	\$14,008
201	Heart Abnormal Rhythm and Conduction Disorders	7,459	3.0	\$23,766	\$18,309
Above Hospitalizations Total		216,564	3.9	\$24,176	\$14,739
Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.					
Source: Inpatient Data, WHA Information Center, LLC.					



## Highest Average Charges

The top ten APR-DRGs in 2021 based on the average charge accounted for only 0.2 percent of all hospitalizations but 3.5 percent of total inpatient charges among GMS, LTAC, and psychiatric hospitals in 2021 (see Table 11).

These APR-DRGs required specialized treatment and long hospital stays. Together, they represented only 1,074 hospitalizations.

<b>Table 11. Top 10 Hospitalizations by Average Charge in Wisconsin, 2021</b>					
<b>APR-DRG</b>	<b>Description</b>	<b>Number of Hospitalizations</b>	<b>Average Stay (days)</b>	<b>Average Charge</b>	<b>Median Charge</b>
583	Neonate with External Heart and Lung Oxygen Support	15	67.9	\$1,336,958	\$1,162,416
002	Heart and/or Lung Transplant	120	36.7	\$1,129,417	\$833,269
001	Liver Transplant	137	31.0	\$962,418	\$586,707
161	Defibrillator and Heart Assist Implant	40	29.4	\$945,960	\$964,082
630	Neonate Birthwt >2499g with Major Cardiovascular Procedure	34	61.3	\$942,888	\$415,223
009	Extracorporeal membrane oxygenation (ECMO)	86	26.7	\$801,032	\$529,548
004	Tracheostomy w MV 96+ hours w extensive procedure	546	47.0	\$761,675	\$587,318
841	Burns, 3rd Degree with Skin Graft	9	35.2	\$657,919	\$612,221
588	Neonate Birthwt <1500g with Major Procedure	21	57.4	\$594,394	\$630,350
591	Neonate Birthwt 500-749g without Major Procedure	66	67.3	\$574,016	\$621,825
Above Hospitalizations Total		1,074	43.6	\$836,484	\$635,138
Note: Data exclude hospitalizations at rehabilitation facilities and state-operated mental health institutes.					
Source: Inpatient Data, WHA Information Center, LLC.					



## Highest Total Charges

The ten APR-DRGs that generated the highest total charges accounted for 23.5 percent of all hospitalizations and 25.9 percent of total charges among GMS, LTAC, and psychiatric hospitals in 2021 (see Table 12). They included a mixture of high-cost conditions (e.g., Tracheostomy), high-volume APR-DRGs (e.g., Vaginal Delivery), and APR-DRGs that were relatively high both in volume and charges (e.g., Blood Infection/Septicemia).

<b>APR-DRG</b>	<b>Description</b>	<b>Number of Hospitalizations</b>	<b>Average Stay (days)</b>	<b>Average Charge</b>	<b>Total Charges</b>
720	Blood Infection/Septicemia	31,003	6.3	\$53,797	\$1,667,880,249
137	Respiratory Infections and Inflammations	23,449	6.4	\$46,282	\$1,085,273,505
194	Heart Failure	17,427	4.8	\$33,671	\$586,787,550
710	Infectious & parasitic diseases including HIV w O.R. procedure	4,184	11.9	\$131,035	\$548,248,697
560	Vaginal Delivery	39,259	2.1	\$13,366	\$524,741,515
130	Respiratory System DX w/ Vent Support 96+ Hrs	1,868	22.1	\$266,773	\$498,332,076
174	Percutaneous coronary intervention w AMI	5,340	2.9	\$78,907	\$421,361,375
004	Tracheostomy w MV 96+ hours w extensive procedure	546	47.0	\$761,675	\$415,874,339
304	Dorsal and Lumbar Fusion Without Principal Diagnosis of Back Curvature	3,722	3.7	\$111,331	\$414,373,209
183	Percutaneous structural cardiac procedures	2,319	2.9	\$169,863	\$393,913,196
Above Hospitalizations Total		129,117	5.1	\$50,782	



### CHAPTER III. INJURY-RELATED HOSPITALIZATIONS AND AMBULATORY SURGERIES (External Cause Codes)

External cause codes are part of the International Classification of Diseases (ICD-10-CM) system that all hospitals and death certificate coders use for the disease or injury resulting in hospitalization or death. External cause codes are required to be reported when diagnoses are reported in a certain ICD-10-CM diagnostic range.

Ranges of external cause codes are reserved for broad categories of injuries, such as those arising from motor vehicle accidents, falls, firearms, and so forth. ICD-10 codes within the range of V00-Y99 are external cause codes. The range of T36-T65 is also included for poisoning, as external cause codes are not required for this diagnosis range. Only initial visits are included in the Wisconsin Injury tables. With ICD-10 external cause codes were greatly expanded so an individual code can provide the nature of the injury, the location of the injury, and also the intent (accidental, self-inflicted, assault, and undetermined).

In this report external cause codes have been grouped into broader categories, like those described above. These groups are similar to those being suggested nationally for reporting injury mortality and morbidity.

Although many categories are self-explanatory, some merit further explanation:

- *Motor vehicle traffic* accidents are those involving motor vehicles that occur on public roads.
- *Motor vehicle nontraffic* accidents are those involving a motor vehicle that occur entirely off public roads.

Motor vehicles are defined as mechanically or electrically powered devices that can transport people or property on a highway. They include both on-road (e.g., automobile, motorcycle, bus) and off-road (e.g., snowmobile, ATV) devices.

- *Other pedal cycle* accidents include bicycle or tricycle accidents that are either non-motor vehicle or motor vehicle nontraffic in nature.
- *Other transport* includes all types of accidents involving trains, watercraft, aircraft, or transport animals, but not involving motor vehicles or pedal cycles. For instance, watercraft accidents include injuries arising from collisions with other boats, overturning or sinking of boats, fires and explosions on boats, etc.
- *Natural/environmental* injuries include those caused by exposure, hunger, thirst, venomous animals and plants, other animals (e.g., dog bites), and cataclysmic storms, lightning, or earth movement (e.g., mudslides).
- *Striking/struck by* includes injuries caused by falling objects, accidentally striking against or being struck by objects or persons (e.g., sports accidents), unarmed fights, and being intentionally struck by blunt or thrown objects.

This chapter includes information on injuries for hospital inpatients and patients treated in hospital-based ambulatory surgery settings and FASCs. The database excludes persons treated in emergency rooms but not admitted to the hospital (because they either died or were treated and released). In Chapter VIII of this report, you can find similar information for emergency department visits.

The table on the next page presents statewide data; tables follow it for each of nine analysis areas dividing the state. The tables show the number of cases, the rate per

100,000 population (based on the 2021 population estimates acquired from the U.S. Census Bureau – see Appendix 1), and the total charges for each injury category. Totals are also shown for self-inflicted injuries and injuries caused by assault. Inpatient and ambulatory surgery data are combined.

The Analysis Areas referenced in the tables are located in Appendix 3, Wisconsin Analysis Areas.

This chapter concludes with two additional statewide tables: one displays data on self-inflicted injuries by sex; the other presents data on assaultive injuries by sex.

To be consistent with previous reports, “Legal Intervention” external cause codes were categorized as “Assault” for purposes of Tables 13-22.

**Table 13. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), All Analysis Areas - Statewide, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	2,244	38.1	\$60,720,266
Accidental	1,459	24.8	\$37,030,788
Self-Inflicted	655	11.1	\$16,442,940
Assault	118	2.0	\$6,998,523
Undetermined	12	0.2	\$248,017
Drown/Submersion	26	0.4	\$1,351,406
Accidental	20	0.3	\$986,414
Self-Inflicted/Assault/Undetermined	6	0.1	\$364,992
Falls	36,049	611.7	\$1,849,437,905
Accidental	36,018	611.1	\$1,846,896,439
Self-Inflicted/Assault/Undetermined	31	0.5	\$2,541,466
Fire/Flames	260	4.4	\$23,388,721
Accidental	222	3.8	\$19,560,991
Self-Inflicted/Assault/Undetermined	38	0.6	\$3,827,730
Firearms	817	13.9	\$97,589,871
Accidental	443	7.5	\$49,219,589
Self-Inflicted	45	0.8	\$6,016,222
Assault	305	5.2	\$41,649,430
Undetermined	24	0.4	\$704,629
Hot Objects/Scalds	759	12.9	\$29,494,192
Accidental	299	5.1	\$14,383,915
Self-Inflicted/Assault/Undetermined	460	7.8	\$15,110,277
Machinery	622	10.6	\$19,611,323
Motor Veh Traffic	4,061	68.9	\$376,913,003
Accidental	4,032	68.4	\$375,202,328
Self-Inflicted/Assault/Undetermined	29	0.5	\$1,710,675
Oth Pedal Cycle	783	13.3	\$36,972,111
Oth Mot Veh Nontraffic	1,149	19.5	\$66,208,445
Oth Transport	255	4.3	\$13,695,890
Natural/Environmental	33,860	574.5	\$1,148,389,533
Overexertion	4,739	80.4	\$110,996,952
Poisoning	34,310	582.1	\$2,145,109,700
Accidental	919	15.6	\$42,248,569
Self-Inflicted	1,346	22.8	\$28,893,904
Assault	2	0.0	\$36,861
Undetermined	32,043	543.7	\$2,073,930,366
Striking/Struck By	3,141	53.3	\$117,084,911
Accidental	2,655	45.0	\$95,272,841
Assault	486	8.2	\$21,812,069
Other Injury	715	12.1	\$23,735,867
Accidental	635	10.8	\$19,288,754
Self-Inflicted	16	0.3	\$903,587
Assault	41	0.7	\$2,169,307
Undetermined	12	0.2	\$409,023
Others	11	0.2	\$965,196
Total Injuries	123,790	2,100.4	\$6,120,700,096
Total Self-Inflicted	2,412	40.9	\$67,127,440
Total Assaults	973	16.5	\$74,257,343

Source: Inpatient Data, WHA Information Center, LLC.

**Table 14. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 1 - Southern, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	363	31.0	\$11,540,776
Accidental	275	23.5	\$7,014,141
Self-Inflicted	75	6.4	\$3,096,489
Assault	12	1.0	\$1,389,520
Undetermined	1	0.1	\$40,627
Drown/Submersion	5	0.4	\$444,195
Accidental	3	0.3	\$137,959
Self-Inflicted/Assault/Undetermined	2	0.2	\$306,236
Falls	6,567	561.1	\$376,339,092
Accidental	6,563	560.8	\$375,941,745
Self-Inflicted/Assault/Undetermined	4	0.3	\$397,347
Fire/Flames	99	8.5	\$8,780,579
Accidental	96	8.2	\$8,448,209
Self-Inflicted/Assault/Undetermined	3	0.3	\$332,370
Firearms	91	7.8	\$9,356,896
Accidental	61	5.2	\$5,654,710
Self-Inflicted	3	0.3	\$692,858
Assault	26	2.2	\$2,980,985
Undetermined	1	0.1	\$28,344
Hot Objects/Scalds	196	16.7	\$8,725,827
Accidental	105	9.0	\$5,769,012
Self-Inflicted/Assault/Undetermined	91	7.8	\$2,956,815
Machinery	134	11.4	\$4,781,662
Motor Veh Traffic	727	62.1	\$87,696,995
Accidental	725	61.9	\$87,656,992
Self-Inflicted/Assault/Undetermined	2	0.2	\$40,003
Oth Pedal Cycle	208	17.8	\$10,207,349
Oth Mot Veh Nontraffic	225	19.2	\$19,604,640
Oth Transport	54	4.6	\$4,498,336
Natural/Environmental	6,026	514.9	\$219,064,110
Overexertion	1,052	89.9	\$24,218,314
Poisoning	5,616	479.8	\$459,543,982
Accidental	179	15.3	\$10,065,514
Self-Inflicted	223	19.1	\$5,852,403
Assault	2	0.2	\$36,861
Undetermined	5,212	445.3	\$443,589,204
Striking/Struck By	575	49.1	\$23,351,176
Accidental	492	42.0	\$19,047,459
Assault	83	7.1	\$4,303,717
Other Injury	119	10.2	\$4,674,694
Accidental	107	9.1	\$3,768,597
Self-Inflicted	4	0.3	\$476,441
Assault	6	0.5	\$162,715
Undetermined	0	N/A	N/A
Others	2	0.2	\$266,941
Total Injuries	22,057	1,884.6	\$1,272,828,623
Total Self-Inflicted	351	30.0	\$11,676,808
Total Assaults	135	11.5	\$9,455,109

Source: Inpatient Data, WHA Information Center, LLC.

**Table 15. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 2A - Southeastern, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	271	24.4	\$9,218,476
Accidental	183	16.5	\$6,638,679
Self-Inflicted	76	6.9	\$2,206,037
Assault	10	0.9	\$300,747
Undetermined	2	0.2	\$73,013
Drown/Submersion	4	0.4	\$138,099
Accidental	2	0.2	\$121,313
Self-Inflicted/Assault/Undetermined	2	0.2	\$16,786
Falls	6,408	578.0	\$323,582,937
Accidental	6,404	577.7	\$323,452,524
Self-Inflicted/Assault/Undetermined	4	0.4	\$130,414
Fire/Flames	20	1.8	\$737,673
Accidental	11	1.0	\$499,780
Self-Inflicted/Assault/Undetermined	9	0.8	\$237,893
Firearms	46	4.1	\$2,081,121
Accidental	29	2.6	\$1,072,949
Self-Inflicted	5	0.5	\$191,104
Assault	11	1.0	\$811,508
Undetermined	1	0.1	\$5,560
Hot Objects/Scalds	118	10.6	\$4,443,355
Accidental	13	1.2	\$544,326
Self-Inflicted/Assault/Undetermined	105	9.5	\$3,899,029
Machinery	60	5.4	\$1,629,323
Motor Veh Traffic	382	34.5	\$23,938,949
Accidental	379	34.2	\$23,791,907
Self-Inflicted/Assault/Undetermined	3	0.3	\$147,041
Oth Pedal Cycle	93	8.4	\$4,296,171
Oth Mot Veh Nontraffic	111	10.0	\$5,120,353
Oth Transport	36	3.2	\$1,474,612
Natural/Environmental	6,697	604.1	\$206,940,596
Overexertion	658	59.4	\$18,667,121
Poisoning	5,723	516.2	\$296,177,203
Accidental	163	14.7	\$6,257,707
Self-Inflicted	112	10.1	\$2,678,089
Assault	0	N/A	N/A
Undetermined	5,448	491.4	\$287,241,407
Striking/Struck By	420	37.9	\$15,448,963
Accidental	375	33.8	\$13,929,056
Assault	45	4.1	\$1,519,907
Other Injury	83	7.5	\$2,234,221
Accidental	72	6.5	\$1,684,874
Self-Inflicted	3	0.3	\$50,002
Assault	3	0.3	\$21,087
Undetermined	2	0.2	\$83,095
Others	3	0.3	\$395,163
Total Injuries	21,130	1,906.0	\$916,129,173
Total Self-Inflicted	259	23.4	\$8,200,152
Total Assaults	70	6.3	\$2,670,315

Source: Inpatient Data, WHA Information Center, LLC.

**Table 16. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 2B - Milwaukee County, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	525	55.9	\$19,243,664
Accidental	304	32.4	\$10,919,081
Self-Inflicted	161	17.1	\$4,576,424
Assault	57	6.1	\$3,711,818
Undetermined	3	0.3	\$36,341
Drown/Submersion	7	0.7	\$283,796
Accidental	7	0.7	\$283,796
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	7,829	833.3	\$582,940,398
Accidental	7,820	832.4	\$582,161,802
Self-Inflicted/Assault/Undetermined	9	1.0	\$778,595
Fire/Flames	89	9.5	\$12,227,389
Accidental	76	8.1	\$9,140,647
Self-Inflicted/Assault/Undetermined	13	1.4	\$3,086,741
Firearms	571	60.8	\$79,827,280
Accidental	295	31.4	\$40,088,660
Self-Inflicted	14	1.5	\$3,716,557
Assault	246	26.2	\$35,477,180
Undetermined	16	1.7	\$544,883
Hot Objects/Scalds	209	22.2	\$9,972,643
Accidental	113	12.0	\$6,040,250
Self-Inflicted/Assault/Undetermined	96	10.2	\$3,932,393
Machinery	108	11.5	\$6,058,620
Motor Veh Traffic	1,422	151.4	\$175,958,445
Accidental	1,411	150.2	\$174,986,943
Self-Inflicted/Assault/Undetermined	11	1.2	\$971,503
Oth Pedal Cycle	182	19.4	\$12,644,316
Oth Mot Veh Nontraffic	187	19.9	\$14,812,368
Oth Transport	50	5.3	\$3,315,612
Natural/Environmental	6,942	738.9	\$360,065,228
Overexertion	664	70.7	\$19,521,121
Poisoning	10,965	1,167.1	\$914,236,134
Accidental	255	27.1	\$14,257,905
Self-Inflicted	364	38.7	\$8,889,036
Assault	0	N/A	N/A
Undetermined	10,346	1,101.2	\$891,089,193
Striking/Struck By	793	84.4	\$46,121,613
Accidental	595	63.3	\$35,293,103
Assault	198	21.1	\$10,828,509
Other Injury	162	17.2	\$9,031,373
Accidental	125	13.3	\$6,869,546
Self-Inflicted	1	0.1	\$66,262
Assault	28	3.0	\$1,940,109
Undetermined	7	0.7	\$120,618
Others	1	0.1	\$34,837
Total Injuries	30,705	3,268.3	\$2,266,260,000
Total Self-Inflicted	617	65.7	\$22,824,502
Total Assaults	538	57.3	\$52,761,528

Source: Inpatient Data, WHA Information Center, LLC.



**Table 17. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 3 - Lake Winnebago, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	261	41.4	\$4,328,358
Accidental	156	24.8	\$2,066,895
Self-Inflicted	93	14.8	\$1,850,405
Assault	12	1.9	\$411,058
Undetermined	0	N/A	N/A
Drown/Submersion	0	N/A	N/A
Accidental	0	N/A	N/A
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	3,388	537.8	\$108,951,870
Accidental	3,383	537.0	\$108,428,988
Self-Inflicted/Assault/Undetermined	5	0.8	\$522,882
Fire/Flames	13	2.1	\$564,208
Accidental	10	1.6	\$531,738
Self-Inflicted/Assault/Undetermined	3	0.5	\$32,470
Firearms	15	2.4	\$801,884
Accidental	7	1.1	\$344,592
Self-Inflicted	4	0.6	\$257,427
Assault	4	0.6	\$199,865
Undetermined	0	N/A	N/A
Hot Objects/Scalds	69	11.0	\$1,858,646
Accidental	9	1.4	\$139,662
Self-Inflicted/Assault/Undetermined	60	9.5	\$1,718,984
Machinery	91	14.4	\$1,575,851
Motor Veh Traffic	348	55.2	\$19,871,884
Accidental	343	54.4	\$19,546,544
Self-Inflicted/Assault/Undetermined	5	0.8	\$325,340
Oth Pedal Cycle	84	13.3	\$2,113,260
Oth Mot Veh Nontraffic	110	17.5	\$3,949,088
Oth Transport	19	3.0	\$515,622
Natural/Environmental	2,776	440.7	\$57,139,252
Overexertion	531	84.3	\$8,360,929
Poisoning	3,020	479.4	\$99,296,953
Accidental	67	10.6	\$1,392,924
Self-Inflicted	159	25.2	\$2,307,348
Assault	0	N/A	N/A
Undetermined	2,794	443.5	\$95,596,681
Striking/Struck By	282	44.8	\$6,506,249
Accidental	238	37.8	\$4,224,760
Assault	44	7.0	\$2,281,489
Other Injury	100	15.9	\$1,351,995
Accidental	96	15.2	\$1,305,989
Self-Inflicted	3	0.5	\$32,671
Assault	1	0.2	\$13,335
Undetermined	0	N/A	N/A
Others	0	N/A	N/A
Total Injuries	11,107	1,763.1	\$317,186,049
Total Self-Inflicted	326	51.7	\$6,686,913
Total Assaults	61	9.7	\$2,905,748

Source: Inpatient Data, WHA Information Center, LLC.

**Table 18. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 4 - Northeastern, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	252	39.1	\$5,388,299
Accidental	178	27.6	\$3,786,076
Self-Inflicted	65	10.1	\$1,298,290
Assault	7	1.1	\$261,081
Undetermined	2	0.3	\$42,852
Drown/Submersion	4	0.6	\$143,772
Accidental	2	0.3	\$101,802
Self-Inflicted/Assault/Undetermined	2	0.3	\$41,970
Falls	4,101	636.1	\$175,053,393
Accidental	4,100	635.9	\$174,972,530
Self-Inflicted/Assault/Undetermined	1	0.2	\$80,864
Fire/Flames	13	2.0	\$350,316
Accidental	11	1.7	\$324,164
Self-Inflicted/Assault/Undetermined	2	0.3	\$26,152
Firearms	40	6.2	\$1,747,511
Accidental	21	3.3	\$730,848
Self-Inflicted	4	0.6	\$299,840
Assault	11	1.7	\$644,384
Undetermined	4	0.6	\$72,439
Hot Objects/Scalds	60	9.3	\$2,024,961
Accidental	22	3.4	\$932,589
Self-Inflicted/Assault/Undetermined	38	5.9	\$1,092,372
Machinery	76	11.8	\$1,614,188
Motor Veh Traffic	397	61.6	\$24,102,628
Accidental	394	61.1	\$24,011,585
Self-Inflicted/Assault/Undetermined	3	0.5	\$91,043
Oth Pedal Cycle	87	13.5	\$2,885,477
Oth Mot Veh Nontraffic	107	16.6	\$4,593,801
Oth Transport	20	3.1	\$663,756
Natural/Environmental	5,848	907.0	\$159,983,336
Overexertion	631	97.9	\$13,968,634
Poisoning	3,080	477.7	\$143,873,959
Accidental	79	12.3	\$3,157,440
Self-Inflicted	157	24.4	\$3,533,843
Assault	0	N/A	N/A
Undetermined	2,844	441.1	\$137,182,676
Striking/Struck By	420	65.1	\$10,082,802
Accidental	376	58.3	\$8,990,404
Assault	44	6.8	\$1,092,398
Other Injury	90	14.0	\$2,907,501
Accidental	85	13.2	\$2,290,946
Self-Inflicted	2	0.3	\$251,199
Assault	0	N/A	N/A
Undetermined	2	0.3	\$174,399
Others	1	0.2	\$190,957
Total Injuries	15,226	2,361.6	\$549,384,334
Total Self-Inflicted	261	40.5	\$6,227,330
Total Assaults	64	9.9	\$2,043,028

Source: Inpatient Data, WHA Information Center, LLC.

**Table 19. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 5A - West Central, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	245	48.9	\$3,819,870
Accidental	131	26.1	\$1,874,118
Self-Inflicted	107	21.4	\$1,756,153
Assault	6	1.2	\$182,174
Undetermined	1	0.2	\$7,424
Drown/Submersion	1	0.2	\$72,212
Accidental	1	0.2	\$72,212
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	2,596	518.1	\$89,464,869
Accidental	2,592	517.3	\$89,287,370
Self-Inflicted/Assault/Undetermined	4	0.8	\$177,499
Fire/Flames	13	2.6	\$386,978
Accidental	7	1.4	\$316,035
Self-Inflicted/Assault/Undetermined	6	1.2	\$70,943
Firearms	10	2.0	\$418,810
Accidental	6	1.2	\$134,602
Self-Inflicted	3	0.6	\$269,078
Assault	1	0.2	\$15,130
Undetermined	0	N/A	N/A
Hot Objects/Scalds	42	8.4	\$746,063
Accidental	11	2.2	\$191,872
Self-Inflicted/Assault/Undetermined	31	6.2	\$554,191
Machinery	57	11.4	\$1,338,828
Motor Veh Traffic	246	49.1	\$13,817,169
Accidental	244	48.7	\$13,783,664
Self-Inflicted/Assault/Undetermined	2	0.4	\$33,505
Oth Pedal Cycle	36	7.2	\$823,684
Oth Mot Veh Nontraffic	91	18.2	\$3,393,735
Oth Transport	26	5.2	\$1,366,655
Natural/Environmental	1,871	373.4	\$43,163,566
Overexertion	424	84.6	\$10,237,423
Poisoning	2,076	414.3	\$77,056,914
Accidental	64	12.8	\$2,190,852
Self-Inflicted	82	16.4	\$1,339,948
Assault	0	N/A	N/A
Undetermined	1,930	385.2	\$73,526,114
Striking/Struck By	216	43.1	\$4,854,775
Accidental	190	37.9	\$4,205,570
Assault	26	5.2	\$649,206
Other Injury	67	13.4	\$1,720,513
Accidental	63	12.6	\$1,648,735
Self-Inflicted	1	0.2	\$12,333
Assault	1	0.2	\$11,784
Undetermined	0	N/A	N/A
Others	2	0.4	\$47,660
Total Injuries	8,017	1,600.0	\$252,682,063
Total Self-Inflicted	219	43.7	\$3,725,316
Total Assaults	36	7.2	\$979,645

Source: Inpatient Data, WHA Information Center, LLC.

**Table 20. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 5B - Southwestern, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	133	47.7	\$3,756,667
Accidental	92	33.0	\$2,421,686
Self-Inflicted	33	11.8	\$800,336
Assault	6	2.1	\$509,371
Undetermined	2	0.7	\$25,274
Drown/Submersion	2	0.7	\$191,912
Accidental	2	0.7	\$191,912
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	1,480	530.3	\$53,341,021
Accidental	1,477	529.2	\$52,897,669
Self-Inflicted/Assault/Undetermined	3	1.1	\$443,352
Fire/Flames	4	1.4	\$83,766
Accidental	3	1.1	\$67,541
Self-Inflicted/Assault/Undetermined	1	0.4	\$16,225
Firearms	16	5.7	\$709,524
Accidental	8	2.9	\$277,467
Self-Inflicted	5	1.8	\$262,366
Assault	2	0.7	\$150,908
Undetermined	1	0.4	\$18,784
Hot Objects/Scalds	19	6.8	\$721,333
Accidental	7	2.5	\$393,591
Self-Inflicted/Assault/Undetermined	12	4.3	\$327,743
Machinery	30	10.7	\$790,302
Motor Veh Traffic	155	55.5	\$7,834,090
Accidental	154	55.2	\$7,772,859
Self-Inflicted/Assault/Undetermined	1	0.4	\$61,231
Oth Pedal Cycle	36	12.9	\$1,569,851
Oth Mot Veh Nontraffic	80	28.7	\$3,829,492
Oth Transport	17	6.1	\$482,868
Natural/Environmental	1,006	360.4	\$25,046,360
Overexertion	265	94.9	\$7,372,002
Poisoning	1,283	459.7	\$47,531,069
Accidental	39	14.0	\$1,815,076
Self-Inflicted	138	49.4	\$2,593,098
Assault	0	N/A	N/A
Undetermined	1,106	396.3	\$43,122,894
Striking/Struck By	152	54.5	\$3,996,156
Accidental	134	48.0	\$3,481,590
Assault	18	6.4	\$514,565
Other Injury	27	9.7	\$517,380
Accidental	25	9.0	\$497,519
Self-Inflicted	0	N/A	N/A
Assault	1	0.4	\$10,899
Undetermined	0	N/A	N/A
Others	1	0.4	\$8,961
Total Injuries	4,705	1,685.7	\$157,773,794
Total Self-Inflicted	192	68.8	\$4,482,870
Total Assaults	27	9.7	\$1,185,743

Source: Inpatient Data, WHA Information Center, LLC.

**Table 21. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 6 - North Central, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	178	37.7	\$3,231,755
Accidental	132	27.9	\$2,230,097
Self-Inflicted	37	7.8	\$746,418
Assault	8	1.7	\$232,754
Undetermined	1	0.2	\$22,486
Drown/Submersion	3	0.6	\$77,419
Accidental	3	0.6	\$77,419
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	3,304	699.4	\$131,806,008
Accidental	3,303	699.2	\$131,795,496
Self-Inflicted/Assault/Undetermined	1	0.2	\$10,512
Fire/Flames	8	1.7	\$246,556
Accidental	7	1.5	\$221,619
Self-Inflicted/Assault/Undetermined	1	0.2	\$24,937
Firearms	28	5.9	\$2,646,844
Accidental	16	3.4	\$915,763
Self-Inflicted	7	1.5	\$326,992
Assault	4	0.8	\$1,369,470
Undetermined	1	0.2	\$34,618
Hot Objects/Scalds	41	8.7	\$897,710
Accidental	19	4.0	\$372,613
Self-Inflicted/Assault/Undetermined	22	4.7	\$525,097
Machinery	65	13.8	\$1,813,597
Motor Veh Traffic	380	80.4	\$23,607,607
Accidental	378	80.0	\$23,566,598
Self-Inflicted/Assault/Undetermined	2	0.4	\$41,009
Oth Pedal Cycle	55	11.6	\$2,387,582
Oth Mot Veh Nontraffic	225	47.6	\$10,702,528
Oth Transport	32	6.8	\$1,356,355
Natural/Environmental	2,284	483.5	\$69,517,682
Overexertion	451	95.5	\$7,505,470
Poisoning	2,196	464.8	\$100,835,712
Accidental	64	13.5	\$2,979,552
Self-Inflicted	95	20.1	\$1,462,482
Assault	0	N/A	N/A
Undetermined	2,037	431.2	\$96,393,678
Striking/Struck By	252	53.3	\$6,238,685
Accidental	224	47.4	\$5,616,408
Assault	28	5.9	\$622,277
Other Injury	62	13.1	\$1,222,108
Accidental	57	12.1	\$1,146,464
Self-Inflicted	2	0.4	\$14,680
Assault	1	0.2	\$9,377
Undetermined	1	0.2	\$30,910
Others	1	0.2	\$20,677
Total Injuries	9,564	2,024.5	\$364,093,617
Total Self-Inflicted	158	33.4	\$2,849,850
Total Assaults	42	8.9	\$2,256,227

Source: Inpatient Data, WHA Information Center, LLC.

**Table 22. Wisconsin Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), Analysis Area 7 - Western Lake Superior, 2021**

<b>Injury Category</b>	<b>Number of Cases</b>	<b>Rate per 100,000 population</b>	<b>Total Charges</b>
Cut/Pierce	16	10.8	\$192,402
Accidental	8	5.4	\$80,014
Self-Inflicted	8	5.4	\$112,388
Assault	0	N/A	N/A
Undetermined	0	N/A	N/A
Drown/Submersion	0	N/A	N/A
Accidental	0	N/A	N/A
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	376	254.1	\$7,958,316
Accidental	376	254.1	\$7,958,316
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Fire/Flames	1	0.7	\$11,258
Accidental	1	0.7	\$11,258
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Firearms	0	N/A	N/A
Accidental	0	N/A	N/A
Self-Inflicted	0	N/A	N/A
Assault	0	N/A	N/A
Undetermined	0	N/A	N/A
Hot Objects/Scalds	5	3.4	\$103,654
Accidental	0	N/A	N/A
Self-Inflicted/Assault/Undetermined	5	3.4	\$103,654
Machinery	1	0.7	\$8,952
Motor Veh Traffic	4	2.7	\$85,235
Accidental	4	2.7	\$85,235
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Oth Pedal Cycle	2	1.4	\$44,420
Oth Mot Veh Nontraffic	13	8.8	\$202,441
Oth Transport	1	0.7	\$22,074
Natural/Environmental	410	277.1	\$7,469,405
Overexertion	63	42.6	\$1,145,938
Poisoning	351	237.2	\$6,557,773
Accidental	9	6.1	\$131,599
Self-Inflicted	16	10.8	\$237,656
Assault	0	N/A	N/A
Undetermined	326	220.3	\$6,188,518
Striking/Struck By	31	21.0	\$484,492
Accidental	31	21.0	\$484,492
Assault	0	N/A	N/A
Other Injury	5	3.4	\$76,083
Accidental	5	3.4	\$76,083
Self-Inflicted	0	N/A	N/A
Assault	0	N/A	N/A
Undetermined	0	N/A	N/A
Others	0	N/A	N/A
Total Injuries	1,279	864.4	\$24,362,443
Total Self-Inflicted	29	19.6	\$453,698
Total Assaults	0	0.0	\$0

Source: Inpatient Data, WHA Information Center, LLC.



**Table 23. Self-inflicted Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), 2021**

Injury Category	Number of Cases		Total Cases
	Male	Female	
Cutting/Piercing	232	423	655
Drowning/Submersion	2	3	5
Firearms And Explosives	41	4	45
Jumping From A High Place	6	11	17
Other Self-Inflicted Injuries	178	166	344
Poisoning	427	919	1,346
Total Self-Inflicted Injuries	886	1,526	2,412

Source: Inpatient Data, WHA Information Center, LLC.

**Table 24. Assaultive Injuries (to persons treated as hospital inpatients or in hospital-based ambulatory surgery settings and freestanding ambulatory surgery centers), 2021**

Injury Category	Number of Cases		Total Cases
	Male	Female	
Bite Of Human Being	8	7	15
Cutting/Piercing	93	25	118
Firearms And Explosives	249	46	295
Other Assaultive Injuries	40	34	74
Poisoning	2	0	2
Striking By Blunt Or Thrown Object	49	11	60
Unarmed Fight Or Brawl	282	127	409
Total Self-Inflicted Injuries	723	250	973

Source: Inpatient Data, WHA Information Center, LLC.





## CHAPTER IV. OVERVIEW OF INDIVIDUAL HOSPITAL INPATIENT TABLES

### Hospitals that Reported Data

Data were collected from 133 general medical-surgical hospitals, four long-term acute care hospitals (LTAC), thirteen psychiatric hospitals, three rehabilitation facilities, and two state-operated mental health institutes on all inpatients discharged between January 1, 2021, and December 31, 2021. The database includes partial-year data from hospitals that opened or closed during the calendar year. Please refer to Appendix 4 for all openings, closings, and mergers as they relate to facilities that submitted data in 2021.

### How to Read the Tables

#### GMS Hospital Tables

Each individual GMS hospital table contains the following two pages of information:

##### *First Page*

*Heading:* The heading identifies basic facility information. This includes the hospital's three-digit facility number, name, address, and telephone number; the hospital type (in this case, GMS); the county in which the hospital is located; and the analysis area and inpatient volume group to which it was assigned by WHA Information Center.

*Middle Section:* The middle section contains utilization data. This is divided into the following six subsections: Overall Hospital Utilization, Obstetrical Utilization, Psychiatric Utilization, AODA Utilization, Patient Discharge Status Distribution, and Expected Pay Source Distribution.

*Overall Hospital Utilization:* These data provide an overall picture of utilization and charges at the facility. Included are total discharges, total patient days, average length of stay, and average charge per discharge for the calendar year. These items describe the number of inpatients discharged by a facility, the total number of days those patients stayed at the hospital, the number of days an average patient stayed, and the average charge billed for patients at the facility.

*Obstetrical Utilization:* The obstetric data identify the number of mothers who gave birth at the hospital (Total Childbirths) and the percentage of those childbirths that were "normal," that involved C-sections, or that had complications or involved additional procedures (e.g., sterilization).

Below that, in the category "Total Newborns," appears the number of newborns reported by the hospital during the calendar year. The number of childbirths and newborns may differ because, for example, some babies may have died during delivery, and some mothers may have given birth to twins, triplets, etc. "Total Newborns" includes those who were born elsewhere but admitted on the day of their birth.

*Psychiatric/AODA Utilization:* These sections list the number of discharges and patient days attributed to those patients undergoing treatment for psychiatric disorders or alcohol and other drug abuse (AODA).

The table also lists the percentage of the hospital's total discharges and patient days that were attributable to patients in either psychiatric or AODA inpatient care. For example, if a hospital reported 10 patients discharged from psychiatric care out of 1,000 total discharges, then 1.0 percent of the hospital's discharges would be attributed to patients receiving psychiatric inpatient services.

***Patient Discharge Status Distribution:*** This section describes where patients went after being discharged from the hospital. It lists the percentage of patients who went home, were transferred to another GMS or CAH hospital, were sent to another facility (skilled nursing, intermediate care, rehabilitation facility or hospice), were sent to another type of institution (e.g., a half-way house or residential facility), were referred to a home health agency (for home care or intravenous drug therapy), left the hospital against medical advice, expired (i.e., died), were sent to jail, prison, or other detention facilities or were discharged to some other type of care (which includes transfer to a federal hospital, a Medicare approved swing bed, a Medicare certified long-term hospital, or a nursing facility certified under Medicaid but not certified under Medicare).

***Expected Pay Source Distribution:*** This section lists the primary payer that is expected to reimburse the hospital for services. The payer categories are Medicare, Medicaid/BadgerCare, other government (e.g., county general relief, 51.42 Boards), commercial insurance, self-pay, and unknown. The category "Commercial Insurance" includes traditional and self-funded plans, private alternate payment systems (e.g., HMOs, PPOs), and Workers' Compensation.

***Note:*** Primary payer data reflects the party billed for the service at the time of patient discharge. The actual payer may differ if the facility cannot collect from an expected payer or a third-party payer later finds a patient to be ineligible for coverage. Summary data on actual payers can be found in the *Guide to Wisconsin Hospitals*, published annually.

**Bottom Section:** This section describes patient characteristics including age, sex, and race.

***Age Distribution:*** This section presents the percentage of total discharges and patient days reported for various age groups. The groups are based on U.S. Census categories and have been expanded from previous years.

***Sex Distribution:*** This section presents the percentage of total discharges and patient days reported for males and females.

***Race Distribution:*** This section presents the percentage of total discharges and patient days reported for various racial groups. The groups are based on census categories and include American Indian/Alaskan Native, Asian, Black/African American, Native Hawaiian/Pacific Islander, White, Multiracial, Declined, and Unavailable. This information is not part of the standard billing form that hospitals use. Patients are not required to provide race information; hospitals rely on the cooperation of patients.

## **Second Page**

The second page of each GMS hospital table presents utilization and charge data for selected APR-DRGs. Data are presented for the individual hospital and for three comparison groups. The comparison groups include all GMS hospitals in the same analysis area, all hospital in the same inpatient volume group, and all GMS hospitals statewide.

APR-DRGs were selected by choosing the 15 most common APR-DRGs at hospitals in each of the inpatient volume groups. Therefore, the APR-DRGs used to compare hospitals in one inpatient volume group may differ from those used to compare hospitals in another inpatient volume group.

*Note: The Normal Newborn, Birthweight 2500g+ (APR-DRG 640) category will not always correspond with the number of newborns on page 1. Some babies who are admitted after the day of their birth are classified as APR-DRG 640.*

**Average Length of Stay (ALOS):** This section lists the number of discharges and the average length of stay at the hospital for each of the 15 selected APR-DRGs. The hospital averages are then compared to the average length of stay at the three comparison groups, and a ratio of that comparison is computed.

If the hospital reported a length of stay for a given APR-DRG that was greater than the average reported by hospitals in a comparison group, the ratio would be greater than 1.00; if it was equal, the ratio would be 1.00; if it was less at the hospital than in the comparison groups the ratio would be less than 1.00.

**Example:** If the average length of stay for an APR-DRG at Hospital A was 2.1 days and the analysis area average was 2.0, the ratio in the analysis area column would be 1.05 (2.1 divided by 2.0). This means that the average length of stay at Hospital A was 5 percent longer than the average stay for the analysis area as a whole.

**Average Charge:** This section displays actual and risk adjusted average charge data for the selected APR-DRGs. Actual average charges are presented for the hospital. Risk adjusted average charges are shown for the hospital and for the comparison groups. Risk adjusted average charges were calculated by removing the effect of severity variation from each patient's charges and averaging the results for the hospital and comparison groups.

The hospital's risk adjusted average charges may be compared to the risk adjusted average charges of the comparison groups. While risk adjustment attempts to remove severity differences, other "unadjusted" factors may influence variation. For example, differences in the accuracy and completeness of coding can affect the apparent severity of illness.

Some of these factors stem from the inherent constraints of using administrative data in risk adjustment. For example, administrative data may indicate that a patient has congestive heart failure, but relevant clinical details (e.g., left ventricular ejection fraction) may not be included in the billing record and therefore may not be available for use in calculating severity of illness.

The table lists the risk adjusted charge for each of the comparison groups (analysis area, inpatient volume group, and all GMS hospitals) and calculates the ratio of the hospital's risk adjusted average charge for an APR-DRG to that of the comparison group. These ratios are calculated and may be interpreted in the same manner as the ratios for average length of stay.

No ratios are calculated for an APR-DRG when a hospital had fewer than five discharges assigned to that APR-DRG.

## **Specialty Hospital Tables**

### **LTAC Hospitals, Psychiatric and State-Operated Mental Health Institutes**

The tables for the LTAC hospitals, psychiatric and the state-operated mental health institutes are presented on one page. They include much of the same descriptive data as the GMS tables, including data on APR-DRGs, but exclude risk adjusted data, and inpatient volume group and analysis area comparisons.

**Heading:** The top of the page contains the same information as the heading on a GMS hospital table, except that no volume group is listed since all specialty hospitals have been assigned to Inpatient Volume Group 7.

**Middle Section:** The middle section contains the utilization and patient characteristic data contained in the middle and bottom sections of the first page of the GMS tables, except obstetrical utilization. It is divided into the following eight subsections: Overall Hospital Utilization, Psychiatric Utilizations, AODA Utilization, Patient Discharge Status, Expected Pay Source Distribution, Age Distribution, Sex Distribution, and Race Distribution.

**Bottom Section for LTAC Hospitals:** This section of the table includes data on the 13 most common APR-DRGs in LTAC hospitals statewide. Facility-specific data are compared to statewide LTAC data for patients treated in LTAC hospitals only.

The first column lists the APR-DRG number and its description. The table then lists the number of discharges at the hospital for that APR-DRG.

In the columns under the broader heading “Average Length of Stay (ALOS),” the hospital’s average length of stay for the APR-DRG is compared to that of patients assigned to the same APR-DRG among all LTAC hospitals only, and a ratio of that comparison is computed. These ratios are calculated and may be interpreted in the same manner as the ratios for average length of stay at GMS hospitals.

In the columns under the broader heading “Average Charge per Discharge,” the hospital’s average charge for patients assigned to an APR-DRG is compared to the average charge for all patients assigned to that APR-DRG among all LTAC hospitals only. As with length of stay, a ratio computed from this comparison is also provided.

**Bottom Section for Psychiatric Hospitals:** This section of the table includes data on the 13 most common APR-DRGs in psychiatric hospitals statewide. Facility-specific data are compared to statewide psychiatric data for patients treated in psychiatric facilities only.

The first column lists the APR-DRG number and its description. The table then lists the number of discharges at the hospital for that APR-DRG.

In the columns under the broader heading “Average Length of Stay (ALOS),” the hospital’s average length of stay for the APR-DRG is compared to that of patients assigned to the same APR-DRG among all psychiatric hospitals only, and a ratio of that comparison is computed. These ratios are calculated and may be interpreted in the same manner as the ratios for average length of stay at GMS hospitals.

In the columns under the broader heading “Average Charge per Discharge,” the hospital’s average charge for patients assigned to an APR-DRG is compared to the average charge for all patients assigned to that APR-DRG among all psychiatric hospitals only. As with length of stay, a ratio computed from this comparison is also provided.

Psychiatric charge data were not risk adjusted because differences in charges among psychiatric patients typically reflect programmatic differences, rather than difference in severity of illness.

**Bottom Section for the State-Operated Mental Health Institutes:** This section of the table includes data on the 13 most common APR-DRGs in state-operated mental health institutes. It presents the number of discharges, ALOS, and average charge per discharge for patients in the state-operated mental health institutes.

Since patients at the state-operated mental health institutes are unique in terms of illness severity, charges, and length of stay, no comparisons are made to other groups and no ratios are calculated. Average charge data are not risk adjusted for state-operated mental health institutes.

### **Rehabilitation Hospitals**

Rehabilitation hospitals are dedicated solely to rehabilitation medicine and treat a unique class of patients. Because the federal government has not yet developed APR-DRGs for rehabilitation conditions, these facilities are exempt from APR-DRG reimbursement requirements imposed on other hospitals. In addition, the rehabilitation hospitals report data differently from other hospitals that have rehabilitation units within their facilities. For these reasons, APR-DRG-based comparisons of rehabilitation hospitals with other hospitals are not valid. Although comparisons are not currently possible, this report provides a summary of the rehabilitation hospitals' utilization and charge data.

**Heading:** The top of the page contains the same information as the heading on a GMS hospital table, except that no volume group is listed since all specialty hospitals have been assigned to Inpatient Volume Group 7.

**Middle Section:** The middle section contains the utilization and patient characteristic data contained in the middle and bottom sections of the first page of the GMS tables, except obstetrical utilization. It is divided into the following eight subsections: Overall Hospital Utilization, Psychiatric Utilization, AODA Utilization, Patient Discharge Status, Expected Pay Source Distribution, Age Distribution, Sex Distribution, and Race Distribution.

**Bottom Section for the Rehabilitation Hospitals; Selected Patient Groups:** Utilization and charge data for rehabilitation hospital patients are presented using the rehabilitation diagnostic categories of the federal Centers for Medicare and Medicaid Services (formerly the Health Care Financing Administration). This methodology aggregates patients into broad categories, such as stroke and amputation. The rehabilitation hospital tables list the number of discharges, average length of stay, and average charge for each of the following categories:

- Stroke
- Brain Injury
- Neurologic Conditions
- Spinal Cord Injury
- Arthritis
- Congenital Deformities
- Systemic Vasculidities
- Amputation
- Cardiac Disorders
- Debility
- Infections
- Medically Complex Conditions
- Pulmonary Disorders
- All Other Rehabilitation

*Note: The "All Other Rehabilitation" category is composed of all diagnostic codes not found in the other thirteen categories.*

Average charge data for rehabilitation hospitals are not risk adjusted.

## **APR-DRGs Used in this report**

Computer software was used to assign each hospitalization a particular APR-DRG. WHA Information Center used 3M™ Core Grouping Software which includes 3M™ APR-DRG Software to assign the APR-DRG to each hospitalization.

The grouping software used up to 30 diagnoses and 30 procedures, if submitted, for each record, along with sex, discharge status, birth date, date of admission, date of discharge, and birth weight of the patient. Since 2005, WHAIC has been collecting unlimited diagnoses and procedures on each record.

Prior to the 2007 report, WHA used DRG (Diagnosis Related Group) to classify the hospitalizations. Since there is no one-to-one crosswalk from DRGs to APR-DRGs, comparison of utilization and charges over several years may be affected.

The following APR-DRGs appear in the report:

<b>APR-DRG</b>	<b>Description</b>
001	Liver Transplant
002	Heart and/or Lung Transplant
004	Tracheostomy w MV 96+ hours w extensive procedure
009	Extracorporeal membrane oxygenation (ECMO)
042	Degenerative nervous system disorders exc mult sclerosis
045	Stroke and Precerebral Occlusion with Infarct
058	Other Disorders of Nervous System
059	Anoxic & other severe brain damage
113	Epiglottitis, Ear Infection, URI and Laryngotracheitis
130	Respiratory System DX w/ Vent Support 96+ Hrs
133	Respiratory failure
134	Pulmonary Embolism
137	Respiratory Infections and Inflammations
139	Pneumonia
140	Chronic Obstructive Pulmonary Disease
141	Asthma
161	Defibrillator and Heart Assist Implant
162	Cardiac valve procedures w AMI or complex PDX
163	Cardiac valve procedures w/o AMI or complex PDX
165	Coronary bypass w AMI or complex PDX
166	Coronary bypass w/o AMI or complex PDX
167	Other cardiothoracic & thoracic vascular procedures
170	Pacemaker Implant with Heart Attack, Heart Failure or Shock
171	Pacemaker Implant without Heart Attack, Heart Failure or Shock
174	Percutaneous coronary intervention w AMI
175	Percutaneous coronary intervention w/o AMI
176	Pacemaker/Defibrillator Replacement
177	Pacemaker/Defibrillator Revision Except Replacement

<b>APR-DRG</b>	<b>Description</b>
183	Percutaneous structural cardiac procedures
190	Circulatory Disorders with Heart Attack
191	Cardiac catheterization for coronary artery disease
192	Cardiac catheterization for other non-coronary conditions
193	Acute & Subacute Endocarditis
194	Heart Failure
196	Cardiac arrest & shock
198	Chest Pain with Angina Pectoris or Coronary Atherosclerosis
199	Hypertension
200	Heart Structural and Valve Disorders
201	Heart Abnormal Rhythm and Conduction Disorders
203	Chest Pain
204	Fainting and Collapse
206	Malfunction/ Reaction/Complication of Heart Device or Procedure
244	Diverticulitis & Diverticulosis
247	Intestinal Obstruction without Surgery
248	Major G.I. Bacterial Infections
249	Other gastroenteritis, nausea & vomiting
282	Disorders of Pancreas Except Malignancy
303	Dorsal and Lumbar Fusion with Principal Diagnosis of Back Curvature
304	Dorsal and Lumbar Fusion Without Principal Diagnosis of Back Curvature
305	Amputation of Lower Limb Except Toes
308	Hip & femur fracture repair
309	Other significant hip & femur surgery
310	Back/Neck Procedures Except Dorsal and Lumbar Fusion
313	Other Knee/Lower Leg Surgery
314	Foot/Toe Surgery
315	Shoulder, upper arm & forearm procedures except joint replacement
316	Hand/Wrist Surgery
321	Upper Spinal Fusion
322	Shoulder & elbow joint replacement
324	Elective hip joint replacement
326	Elective knee joint replacement
340	Thigh Fracture
341	Pelvis Fracture/Hip Dislocation
342	Fracture or Dislocation Except Thigh, Pelvis, Back
343	Musculoskeletal Malignancy
344	Osteomyelitis and Infectious Arthritis
347	Other Back/Neck Disorders, Fractures, Injuries

<b>APR-DRG</b>	<b>Description</b>
351	Other Musculoskeletal System and Connective Tissue Diagnoses
380	Skin Ulcers
383	Cellulitis & other skin infections
420	Diabetes
422	Hypovolemia
463	Kidney/Urinary Tract Infection
469	Acute kidney injury
540	Cesarean Delivery
541	Vaginal Delivery with Sterilization
542	Vaginal Delivery with Proc Except Sterilization
560	Vaginal Delivery
580	Neonate, Transferred <5 Days Old, Not Born Here
581	Neonate, Transferred <5 Days Old, Born Here
583	Neonate with External Heart and Lung Oxygen Support
588	Neonate Birthwt <1500g with Major Procedure
589	Neonate Birthwt <500g or Gestational Age <24 weeks
591	Neonate Birthwt 500-749g without Major Procedure
593	Neonate Birthwt 750-999g without Major Procedure
602	Neonate Birthwt 1000-1249g with Respiratory Distress Syndrome
603	Other Neonate Birthwt 1000-1249g
607	Neonate Birthwt 1250-1499g with Respiratory Distress Syndrome
608	Other Neonate Birthwt 1250-1499g
609	Neonate Birthwt 1500-2499g with Major Procedure
611	Neonate Birthwt 1500-1999g with Major Anomaly
612	Neonate Birthwt 1500-1999g with Respiratory Distress Syndrome
613	Neonate Birthwt 1500-1999g with Congenital Or Perinatal Infections
614	Other Neonate Birthwt 1500-1999g
621	Neonate Birthwt 2000-2499g with Major Anomaly
622	Neonate Birthwt 2000-2499g with Respiratory Distress Syndrome
623	Neonate Birthwt 2000-2499g with Congenital Or Perinatal Infections
625	Neonate Birthwt 2000-2499g with Other Significant Condition
626	Normal Newborn Birthweight 2000g - 2499g
630	Neonate Birthwt >2499g with Major Cardiovascular Procedure
631	Neonate Birthwt >2499g with Other Major Procedure
633	Neonate Birthwt >2499g with Major Anomaly
634	Neonate Birthwt >2499g with Respiratory Distress Syndrome
636	Neonate Birthwt >2499g with Congenital or Perinatal Infections
639	Neonate Birthwt >2499g with Other Significant Condition
640	Normal Newborn, Birthweight 2500g+



<b>APR-DRG</b>	<b>Description</b>
710	Infectious & parasitic diseases including HIV w O.R. procedure
720	Blood Infection/Septicemia
721	Postoperative and Post-Traumatic Infections
740	Mental Illness Diagnosis with O.R. Procedure
750	Schizophrenia
751	Psychoses
752	Personality and Impulse Control Disorders
753	Bipolar Disorders
754	Depression
755	Neuroses Other Than Depression
756	Acute Adjust React Psychosocial Dysfunction
757	Organic Disturbances and Mental Retardation
758	Behavioral disorders
759	Eating Disorders
760	Other Mental Disorders
770	Substance Abuse/Dependence, Left Against Medical Advice
772	Substance Abuse/Dependence with Rehab and/or Detox
773	Opioid Abuse/Dependence
774	Cocaine Abuse/Dependence
775	Alcohol Abuse/Dependence
776	Other Substance Abuse/Dependence
813	Complications Of Treatment
841	Burns, 3rd Degree with Skin Graft
861	Signs & Symptoms
862	Other Factors Influencing Health Status
951	Moderately Extensive Procedure Unrelated to Diagnosis

### **Caveats/Data Limitations for Inpatient Data**

1. The charge data in this report has not been audited. **As a result, the charge data provided in this report may differ from audited financial data.** All charge data provided has been rounded to the nearest whole number.
2. The reported payment sources are *expected* sources of payment at the time of billing rather than actual revenue sources. Therefore, the reported distribution of payment sources in this report may differ from the actual distribution of final revenue sources.
3. The utilization and charge figures in the narrative portion of this report were not adjusted for disease severity or any of a variety of other factors that could affect facility averages. However, risk adjustment was performed on hospital-specific APR-DRG charge data in the individual tables of GMS hospitals. In addition to differences in case mix and intensity of illness, regional pricing differentials and variations in services can affect utilization or charge figures. Also, differences in hospital patient record-keeping systems and internal information systems may affect the quality of the data submitted by individual facilities.
4. Care should be taken when comparing data from hospitals that reported small numbers of cases. A few unusual cases may unduly affect the average lengths of stay or charges for a given APR-DRG with a small number of total cases.
5. Lengths of stay for inpatients that remained in the hospital less than 24 hours were counted as one day in this report. In other analyses these may be considered zero-day lengths of stay.
6. In some cases, transfers of patients between distinct units of a hospital are submitted to WHA Information Center as separate discharges. This reflects standard billing guidelines and data submission requirements developed by the Wisconsin Bureau of Health Care Information.
7. Calculation of average charge per discharge in the following summary tables excluded any discharge with a stay longer than 100 days. An exception occurs for the two state-operated mental health institutes: charge data are included for all patients at these hospitals, except those whose length of stay was 1,000 days or greater.
  - Table 1: Comparative Summary of Utilization and Charges for Hospitalizations in Wisconsin
  - Table 2: Summary data for Wisconsin hospitals, by type
  - Table 3: Percent change in utilization and charges in Wisconsin hospitals, by type
  - Appendix 1: Comparison by Hospital Type
8. All hospitalizations of 1,000 days or longer were excluded from the data entirely.
9. Data from both rehabilitation facilities and state-operated mental health institutes were excluded from the following tables:
  - Table 4: Births in Wisconsin
  - Table 5: Neonatal hospitalizations in Wisconsin
  - Table 6: Cardiovascular hospitalizations in Wisconsin
  - Table 7: Orthopedic hospitalizations in Wisconsin

- Table 8: Psychiatric hospitalizations in Wisconsin
- Table 9: AODA hospitalizations in Wisconsin
- Table 10: Most common hospitalizations in Wisconsin
- Table 11: Top 10 hospitalizations by average charge in Wisconsin
- Table 12: Hospitalizations with the highest total charge-generating APR-DRGs in Wisconsin

10. Inpatient hospitalizations were categorized by APR-DRG in this report. Previous versions of this report categorized inpatient hospitalizations by “standard” (Medicare) DRG. APR-DRGs were developed by 3M<sup>™</sup> Corporation to be more applicable to the general patient population. There are more main categories within APR-DRGs than “standard” DRGs although differences in severities of illness or complications are generally recognized by the assignment of one of four severities of illness subcategories within each APR-DRG. “Standard” DRG’s would often distinguish between hospitalizations with and without complications by assigning the stays to different DRGs.