
Wisconsin Health Care Data Report

- Utilization and Charges: Hospitals and Freestanding Ambulatory Surgery Centers
- Emergency Department Visits

2020

August 2021

The data for the ***Health Care Data Report, 2020*** was collected from Wisconsin hospitals and freestanding ambulatory surgery centers (FASCs), under Chapter 153, Wisconsin Statutes. This report presents an annual summary of utilization and charges at those facilities. This publication is not an exhaustive compilation of all inpatient and FASC data collected.

The portion of the report devoted to inpatient data contains information on services provided to hospital inpatients, the primary reasons for hospitalization, charges for services received, and the most common diagnostic conditions. It also contains selected information for individual hospitals.

The section devoted to ambulatory surgery data reviews utilization and charges for patients undergoing selected principal ambulatory surgical procedures at hospitals and FASCs.

The section devoted to emergency department data contains information on services provided to different demographic groups of patients, the most common diagnostic conditions, and External Cause Code diagnostic reasons for visits.

General medical-surgical (GMS) and specialty hospitals (excluding federally operated facilities) provided inpatient data. This report includes data from 132 GMS hospitals, four long-term acute care (LTAC) hospitals, twelve psychiatric hospitals, one alcohol and other drug abuse (AODA) hospital, three rehabilitation hospitals, and two state-operated mental health institutes that reported data from 2020. Ambulatory surgery data were collected from 130 GMS hospitals and 83 FASCs.

WHA Information Center is responsible for collecting and disseminating Wisconsin hospital and FASC data under Chapter 153, Wisconsin Statutes.

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SELECTED FINDINGS

Inpatient Data

- In 2020, Wisconsin hospitals reported 538,808 inpatient hospitalizations, with 538,781 hospitalizations having stays of less than 1,000 days, which qualified them for inclusion in this report. These resulted in 2.6 million days of care and total billed charges of \$22.9 billion (see Table 1 for details).
- On average, a hospital patient was charged \$42,479 per hospitalization during 2020. In general medical-surgical (GMS) hospitals, the average inpatient charge was \$43,332. In the non-GMS (specialty) hospitals, charges differed between long-term care and short-term specialty care. The average charge was \$202,233 in LTAC hospitals, \$40,120 in the alcohol and other drug abuse (AODA) hospital, \$17,153 in psychiatric hospitals, \$43,928 in rehabilitation hospitals, and \$30,446 at the state-operated mental health institutes (see Table 2 for details).
- The average hospital stay was 4.8 days. Patients stayed an average of 4.5 days at GMS hospitals, 34.6 days at LTAC hospitals, 21.7 days at the AODA hospital, 6.4 days at psychiatric hospitals, 13.0 days at rehabilitation hospitals, and 26.2 days at the state-operated mental health institutes (see Table 2 for details).
- In 2020, there were 54,363 obstetrical hospitalizations and 59,483 neonatal hospitalizations. There were also 61,985 cardiovascular, 45,791 orthopedic, 37,432 psychiatric, and 14,469 AODA-related hospitalizations in Wisconsin (including rehabilitation hospitals and state-operated mental health institutes). Combined, these accounted for 51 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 51,139 hospitalizations (86 percent of all neonatal hospitalizations) with an average charge of \$4,727 and an average length of stay of 1.9 days (see Table 5 for details).
- Seventy-six percent of all childbirths were classified as vaginal deliveries (APR-DRGs 541, 542, and 560). Vaginal-delivery childbirths accounted for 41,321 hospitalizations at an average charge of \$13,029. 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-four percent of all newborns were delivered by Cesarean section, also called C-sections (see Table 4 for details).
- Statewide, 5,041 patients had open-heart surgery at 31 GMS hospitals, with an average length of stay of 7.8 days and an average charge of \$170,632.
- Five GMS hospitals performed a total of 106 heart transplants (APR-DRG 002; MDC 05), with an average charge of \$936,443 and an average length of stay of 32.6 days.
- The most expensive APR-DRGs were Neonate with External Heart and Lung Oxygen Support (APR-DRG 583), at an average charge of \$1,610,935 and Neonate Birthweight <1500g (APR-DRG 588), at an average charge of

\$1,275,776. Combined, they accounted for only 30 hospitalizations, yet their complexity and length of stay resulted in \$40 million total charges and 3,620 patient days.

- The APR-DRGs generating the most total charges were Blood Infection/Septicemia (APR-DRG 720), at \$1.6 billion, and Respiratory Infections and Inflammations (APR-DRG 137), at \$791 million.
- Females accounted for 55 percent of all hospitalizations. Eighteen percent of hospitalizations among females were obstetric-related.
- During 2020, injury-related hospitalizations and ambulatory surgeries accounted for \$5.4 billion in charges at hospitals and FASCs.

Ambulatory Surgery Data

- Ambulatory surgery procedures were performed at 130 Wisconsin GMS hospitals and 83 FASCs in 2020. Data for 826,004 cases were collected: 642,058 from hospitals and 183,946 from FASCs.
- Cataract Surgery with Intraocular Lens was the most frequently reported principal ambulatory procedure in 2020, with 57,290 cases.
- The principal procedure producing the highest median charge among the 20 common principal procedures was Total Knee Arthroplasty, at \$36,804. The least expensive among the top 20 most common principal procedures was Drain/Inject – Joint/Bursa with a median charge of \$2,164.

Emergency Department Data

- In 2020, Wisconsin hospitals reported over 1.5 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 2020 emergency department visits were 350,745 visits (approximately 23 percent of the overall total) related to all types of injury and poisoning.
- Injury-related emergency department visits accounted for \$1.1 billion in charges (approximately 22 percent of the overall total).

Comparison to 2019 Data

- Compared to 2019, the number of hospitalizations in 2020 decreased by 7.8 percent while the number of patient days decreased by 3.6 percent. The average length of stay increased by 4.6 percent (see Table 1 for details).
- Statewide, the average charge per hospitalization rose from \$39,356 to \$42,479 (7.9 percent) between 2019 and 2020 (see Table 1 for details).
- The average charge per hospitalization increased from \$40,049 to \$43,332 (8.2 percent) at GMS hospitals, from \$28,950 to \$40,120 (38.6 percent) at the AODA hospital, from \$161,269 to \$202,233 (25.4 percent) at LTAC hospitals, from \$16,737 to \$17,153 (2.5 percent) at psychiatric hospitals, from \$41,560 to \$43,928 (5.7 percent) at the rehabilitation hospitals, and decreased from \$31,527 to \$30,446 (3.5 percent) at the state-operated mental health institutes (see Table 3 for details).
- The average length of stay increased from 4.3 days to 4.5 days (5.6 percent) at GMS hospitals, from 34.1 days to 34.6 days (1.4 percent) at the LTAC hospitals, and from 16.0 days to 21.7 days (35.8 percent) at the AODA hospital.
- The average length of stay decreased from 6.5 days to 6.4 days (0.9 percent) at psychiatric hospitals and decreased and from 28.6 to 26.2 days (8.2 percent) at the state-operated mental health institutes.
- The 40 most frequently performed ambulatory surgery procedures comprised 58 percent of all reported cases. Charges for the top 40 procedures combined decreased 3.3 percent from 2019. Some fluctuations in utilization may be observed compared to previous years.
- The number of reported emergency department visits decreased by 15.7 percent, from 1.824 million in 2019 to 1.537 million in 2020.

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 2020 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:

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

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 25th 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 25th, 50th (median), and 75th 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-4² 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 50th percentile, or median charge, and half were charged more. Similarly, 95 percent were charged less than the 95th 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 2020 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 2020, the average length of stay has varied between 4.0 and 4.5 days. The upward trend in average charges at GMS hospitals continued, with average charges rising from \$40,049 in 2019 to \$43,332 in 2020. 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 the AODA hospital increased 38.6 percent from 2019 to 2020. The number of hospitalizations decreased 81.1 percent, patient days decreased 74.3 percent, and average length of stay increased 35.8 percent.

The average charge per stay at LTAC hospitals increased 25.4 percent from 2019 to 2020. The number of hospitalizations decreased 19.0 percent, patient days decreased 17.9 percent, and average length of stay increased 1.4 percent.

The average charge per stay at psychiatric hospitals increased 2.5 percent from 2019 to 2020. The number of hospitalizations decreased 3.0 percent, patient days decreased 3.9 percent, and average length of stay increased 2.5 percent.

The average charge per stay at rehabilitation facilities increased 5.7 percent from 2019 to 2020. The number of hospitalizations increased 6.6 percent, patient days increased 7.8 percent, and average length of stay increased 1.1 percent.

The average charge per stay at the state-operated mental health institutes decreased 3.4 percent from 2019 to 2020. The number of hospitalizations decreased 3.3 percent, patient days decreased 11.2 percent, and average length of stay decreased 8.2 percent.

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

	2020	2019	% Difference
Number of Hospitalizations	538,808	584,586	-7.8%
Total Patient Days	2,608,646	2,706,390	-3.6%
Average Stay (days)	4.8	4.6	4.6%
Hospitalizations per 1,000 population	92.4	100.4	-8.0%
Patient Days per 1,000 population	447.5	464.9	-3.7%
Total Charges	\$22,887,859,679	\$23,006,947,280	-0.5%
Average Charge per Hospitalization	\$42,479	\$39,356	7.9%

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 2020 there were 27 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, 2020

Type	Number of Hospitals	Number of Hospitalizations	Patient Days	Average Stay (days)	Average Charge per Day	Average Charge per Stay
AODA	1	14	304	21.7	\$1,848	\$40,120
GMS	132	508,699	2,292,538	4.5	\$9,615	\$43,332
LTAC	4	1,174	40,624	34.6	\$5,844	\$202,233
PSYCH	12	22,895	147,368	6.4	\$2,665	\$17,153
REHAB	3	2,280	29,588	13.0	\$3,385	\$43,928
STATE	2	3,746	98,224	26.2	\$1,161	\$30,446
TOTAL	154	538,808	2,608,646	4.8	\$8,774	\$42,479

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 2020 there were 27 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, 2019 to 2020

Type	Number of Hospitalizations	Patient Days	Average Length of Stay	Average Charge per Stay
AODA	-81.1%	-74.3%	35.8%	38.6%
GMS	-8.1%	-3.0%	5.6%	8.2%
LTAC	-19.0%	-17.9%	1.4%	25.4%
PSYCH	-3.0%	-3.9%	-0.9%	2.5%
REHAB	6.6%	7.8%	1.1%	5.7%
STATE	-3.3%	-11.2%	-8.2%	-3.4%
TOTAL	-7.8%	-3.6%	4.6%	7.9%

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 2020 there were 27 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, psychiatric, and AODA facilities. Patients in these facilities accounted for 98.9 percent of all Wisconsin hospitalizations in 2020.

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 2020, 54,363 women delivered babies (single and multiple births) in Wisconsin hospitals, down from 58,935 in 2019.

Most childbirths (71.7 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 4.3 percent of childbirths.

Statewide, the rate for Cesarean sections, also called C-sections (APR-DRG 540) decreased slightly to 24.0 percent of childbirths, from 26.2 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, ThedaCare Regional Medical Center, Neenah, had the highest C-section rate at 32.0 percent of all childbirths, Froedtert South, Kenosha, had a rate of 29.8 percent, and Aurora Lakeland Medical Center in Elkhorn had a rate of 28.6 percent.

Table 4. Childbirths in Wisconsin, 2020

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
540	Cesarean Delivery	13,042	3.4	\$25,701	\$22,693
541	Vaginal Delivery with Sterilization	733	2.3	\$22,798	\$20,901
542	Vaginal Delivery with Proc Except Sterilization	1,625	2.5	\$17,861	\$15,077
560	Vaginal Delivery	38,963	2.0	\$12,644	\$11,487
	Total Childbirths	54,363	2.4	\$16,069	\$13,385

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 decreased to 59,483 in 2020 from 62,326 in 2019.

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
580	Neonate, Transferred <5 Days Old, Not Born Here	152	1.4	\$12,174	\$9,743
581	Neonate, Transferred <5 Days Old, Born Here	1,432	1.2	\$4,635	\$2,327
583	Neonate with External Heart and Lung Oxygen Support	6	99.0	\$1,610,935	\$1,419,470
588	Neonate Birthwt <1500g with Major Procedure	24	126.1	\$1,275,776	\$1,112,398
589	Neonate Birthwt <500g or Gestational Age <24 weeks	89	17.9	\$170,783	\$1,430
591	Neonate Birthwt 500-749g without Major Procedure	66	75.4	\$551,704	\$542,162
593	Neonate Birthwt 750-999g without Major Procedure	113	63.4	\$417,644	\$382,036
602	Neonate Birthwt 1000-1249g with Respiratory Distress Syndrome	138	56.5	\$357,797	\$321,036
603	Other Neonate Birthwt 1000-1249g	13	43.1	\$190,927	\$166,115
607	Neonate Birthwt 1250-1499g with Respiratory Distress Syndrome	144	45.2	\$257,695	\$232,943
608	Other Neonate Birthwt 1250-1499g	39	31.4	\$142,956	\$132,062
609	Neonate Birthwt 1500-2499g with Major Procedure	18	68.2	\$705,425	\$533,904
611	Neonate Birthwt 1500-1999g with Major Anomaly	82	29.7	\$187,256	\$133,368
612	Neonate Birthwt 1500-1999g with Respiratory Distress Syndrome	268	29.0	\$150,891	\$128,089
613	Neonate Birthwt 1500-1999g with Congenital Or Perinatal Infections	9	23.2	\$108,410	\$87,539
614	Other Neonate Birthwt 1500-1999g	409	15.2	\$64,798	\$55,185
621	Neonate Birthwt 2000-2499g with Major Anomaly	103	15.2	\$90,470	\$65,193
622	Neonate Birthwt 2000-2499g with Respiratory Distress Syndrome	297	17.9	\$96,412	\$82,627
623	Neonate Birthwt 2000-2499g with Congenital Or Perinatal Infections	12	18.5	\$88,875	\$68,377
625	Neonate Birthwt 2000-2499g with Other Significant Condition	246	13.9	\$54,443	\$43,744
626	Normal Newborn Birthweight 2000g - 2499g	1,476	4.8	\$17,015	\$6,156
630	Neonate Birthwt >2499g with Major Cardiovascular Procedure	40	35.9	\$501,358	\$416,086
631	Neonate Birthwt >2499g with Other Major Procedure	68	32.3	\$339,065	\$242,043
633	Neonate Birthwt >2499g with Major Anomaly	707	8.1	\$54,206	\$12,536
634	Neonate Birthwt >2499g with Respiratory Distress Syndrome	1,074	10.6	\$64,303	\$40,499
636	Neonate Birthwt >2499g with Congenital or Perinatal Infections	98	7.9	\$38,914	\$24,107
639	Neonate Birthwt >2499g with Other Significant Condition	1,221	7.6	\$31,440	\$13,877
640	Normal Newborn, Birthweight 2500g+	51,139	1.9	\$4,727	\$3,876
Total Neonatal Hospitalizations		59,483	3.4	\$14,291	\$4,082

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 2020, cardiovascular diagnoses accounted for 61,985 hospitalizations (down from 71,417 in 2019) (not including patients treated at rehabilitation hospitals or state-operated mental health institutes). These patients represented 11.5 percent of all hospitalizations and 18.6 percent of all inpatient charges, compared to 12.2 percent and 19.6 percent, respectively, the year before. Charges for cardiovascular-related hospitalizations in 2020 totaled \$4.3 billion, down from \$4.5 billion the previous year.

Thirty-one GMS hospitals (nine less than 2019) performed open-heart surgery (APR-DRGs 162-163, and 165-167) on 5,041 patients, a 16.6 percent decrease from 2019.

The largest number of open-heart surgeries (965) was performed by Aurora St. Luke's Medical Center in Milwaukee.

Five hospitals performed a total of 106 heart transplants in 2020. These five urban teaching hospitals performed all heart transplants in 2020. Aurora St. Luke's Medical Center, Milwaukee, performed 45 transplants, University of Wisconsin Hospital and Clinics, Madison, performed 34, Froedtert Hospital, Milwaukee performed 16, Children's Wisconsin-Milwaukee Hospital performed 9, and Aurora Sinai Medical Center, Milwaukee, performed 2.

Table 6. Cardiovascular Hospitalizations (MDC 05) in Wisconsin, 2020

APR- DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
002	Heart Transplant	106	32.6	\$936,443	\$712,459
161	Defibrillator and Heart Assist Implant	37	31.3	\$860,422	\$804,491
162	Cardiac valve procedures w AMI or complex PDX	287	13.4	\$285,713	\$227,769
163	Cardiac valve procedures w/o AMI or complex PDX	1,449	7.4	\$181,010	\$154,946
165	Coronary bypass w AMI or complex PDX	993	9.4	\$178,461	\$162,076
166	Coronary bypass w/o AMI or complex PDX	1,822	6.6	\$139,769	\$125,287
167	Other cardiothoracic & thoracic vascular procedures	490	7.2	\$171,430	\$135,579
170	Pacemaker Implant with Heart Attack, Heart Failure or Shock	28	6.5	\$93,913	\$87,133
171	Pacemaker Implant without Heart Attack, Heart Failure or Shock	1,603	3.7	\$67,112	\$58,601
174	Percutaneous coronary intervention w AMI	5,319	3.0	\$77,623	\$66,786
175	Percutaneous coronary intervention w/o AMI	2,746	3.3	\$92,339	\$79,993
176	Pacemaker/Defibrillator Replacement	96	4.7	\$100,990	\$81,002
177	Pacemaker/Defibrillator Revision Except Replacement	104	5.1	\$80,515	\$62,120
190	Circulatory Disorders with Heart Attack	3,553	3.2	\$35,048	\$28,319
191	Cardiac catheterization for coronary artery disease	841	2.0	\$36,904	\$33,140
192	Cardiac catheterization for other non-coronary conditions	3,153	5.1	\$60,396	\$46,262
194	Heart Failure	15,964	4.8	\$32,077	\$24,516
196	Cardiac arrest & shock	409	4.5	\$62,834	\$46,923
198	Chest Pain with Angina Pectoris or Coronary Atherosclerosis	770	2.0	\$20,702	\$17,804
199	Hypertension	1,447	3.0	\$26,168	\$21,805
200	Heart Structural and Valve Disorders	200	4.8	\$35,429	\$21,215
201	Heart Abnormal Rhythm and Conduction Disorders	7,094	3.0	\$22,832	\$17,702
203	Chest Pain	338	2.0	\$20,983	\$19,074
204	Fainting and Collapse	1,167	3.0	\$26,628	\$22,372
206	Malfunction/ Reaction/Complication of Heart Device or Procedure	647	5.7	\$51,201	\$32,699
	All Other Cardiovascular Hospitalizations	10,716	5.6	\$109,468	\$78,559
	Total Cardiovascular Hospitalizations	61,985	4.6	\$68,712	\$39,834
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 45,791 hospitalizations in 2020 (not including patients treated at rehabilitation hospitals or state-operated mental health institutes). Orthopedic patients accounted for 8.5 percent of all hospitalizations and 12.0 percent of total inpatient charges.

Hip Replacement (APR-DRG 301) was the most frequent reason for Orthopedic Hospitalizations statewide and generated the eighth-highest total charges of all APR-DRGs in 2020. (See Table 12).

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
301	Hip Replacement	6,529	2.7	\$55,336	\$48,225
302	Knee Replacement	6,079	2.0	\$51,868	\$45,167
303	Dorsal and Lumbar Fusion with Principal Diagnosis of Back Curvature	191	4.7	\$162,966	\$138,584
304	Dorsal and Lumbar Fusion Without Principal Diagnosis of Back Curvature	3,241	3.7	\$109,050	\$89,717
305	Amputation of Lower Limb Except Toes	1,282	9.6	\$87,842	\$58,363
308	Hip & femur fracture repair	4,361	5.2	\$58,832	\$50,910
309	Other significant hip & femur surgery	634	5.3	\$78,410	\$62,490
310	Back/Neck Procedures Except Dorsal and Lumbar Fusion	649	3.8	\$53,947	\$45,435
313	Other Knee/Lower Leg Surgery	2,377	4.6	\$67,426	\$54,829
314	Foot/Toe Surgery	1,101	6.2	\$57,787	\$43,244
315	Shoulder, upper arm & forearm procedures except joint replacement	807	4.3	\$63,690	\$53,007
316	Hand/Wrist Surgery	293	3.4	\$43,553	\$35,444
321	Upper Spinal Fusion	1,577	3.6	\$84,352	\$71,889
340	Thigh Fracture	588	3.7	\$21,450	\$17,135
341	Pelvis Fracture/Hip Dislocation	474	3.8	\$23,791	\$20,072
342	Fracture or Dislocation Except Thigh, Pelvis, Back	925	3.7	\$26,897	\$21,815
343	Musculoskeletal Malignancy	392	6.6	\$54,190	\$39,907
347	Other Back/Neck Disorders, Fractures, Injuries	2,192	4.5	\$32,349	\$25,141
351	Other Musculoskeletal System and Connective Tissue Diagnoses	1,926	4.3	\$28,549	\$21,681
	All Other Orthopedic Hospitalizations	7,986	3.8	\$58,961	\$47,003
	Total Orthopedic Hospitalizations	45,791	3.9	\$59,780	\$47,828

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

Source: Inpatient Data, WHA Information Center, LLC.

Psychiatric Hospitalizations

GMS, and psychiatric hospitals treated 34,182 psychiatric inpatients in 2020 (down from 37,814 in 2019). They represented 6.3 percent of all hospitalizations and 2.6 percent of total inpatient charges.

The number of psychiatric hospitalizations decreased by 9.6 percent from 2019, and patient days decreased by 8.2 percent.

The average charge for psychiatric hospitalizations increased by 5.1 percent in 2020 to \$17,536, from \$16,690 the year before.

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
740	Mental Illness Diagnosis with O.R. Procedure	78	6.9	\$57,194	\$50,840
750	Schizophrenia	4,304	9.4	\$21,987	\$15,664
751	Psychoses	13,718	5.7	\$16,239	\$13,662
752	Personality and Impulse Control Disorders	395	3.8	\$11,912	\$9,519
753	Bipolar Disorders	8,427	6.2	\$16,963	\$13,720
754	Depression	2,974	4.1	\$12,141	\$9,588
755	Neuroses Other Than Depression	1,680	4.4	\$12,993	\$9,707
756	Acute Adjust React Psychosocial Dysfunction	1,232	4.3	\$18,573	\$14,009
757	Organic Disturbances and Mental Retardation	184	8.6	\$26,560	\$16,844
758	Behavioral disorders	367	5.9	\$18,220	\$15,722
759	Eating Disorders	382	16.6	\$57,569	\$42,713
760	Other Mental Disorders	441	10.3	\$35,231	\$25,056
Total Psychiatric Hospitalizations		34,182	6.2	\$17,536	\$13,620

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 14,178 hospitalizations in 2020 in GMS, psychiatric, and AODA facilities, down from 14,793 in 2019. The state's only dedicated AODA hospital, Libertas Center in Green Bay, treated 14 inpatients in 2020, an 81.1 percent decrease from its 2019 total of 74. The average charge at Libertas Center increased 38.6 percent, to \$40,120 from \$28,950 in 2019, while the average length of stay increased 35.6 percent, to 21.7 days from 16.0 days.

Table 9. AODA Hospitalizations (MDC 20) in Wisconsin, 2020

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
770	Substance Abuse/Dependence, Left Against Medical Advice	1,210	2.0	\$11,786	\$8,317
772	Substance Abuse/Dependence with Rehab and/or Detox	178	4.9	\$14,070	\$10,758
773	Opioid Abuse/Dependence	2,528	4.2	\$14,983	\$12,874
774	Cocaine Abuse/Dependence	774	3.8	\$15,501	\$12,571
775	Alcohol Abuse/Dependence	8,839	3.8	\$17,856	\$12,991
776	Other Substance Abuse/Dependence	611	4.3	\$13,261	\$9,548
	All Other AODA Hospitalizations	38	13.7	\$124,651	\$75,541
	Total AODA Hospitalizations	14,178	3.8	\$16,738	\$12,564

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 38.8 percent of all hospitalizations and 20.5 percent of all inpatient charges at GMS, LTAC, psychiatric and AODA facilities in 2020.

Birth-related hospitalizations (APR-DRGs 540, 541, 542, and 560 and MDC 15) accounted for 21.4 percent of all hospitalizations at these facilities, but only 7.5 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 (\$22,539) compared to the average charge for all inpatients at GMS, LTAC, psychiatric, and AODA facilities (\$43,221).

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
640	Normal Newborn, Birthweight 2500g+	51,139	1.9	\$4,727	\$3,876
560	Vaginal Delivery	38,963	2.0	\$12,644	\$11,487
720	Blood Infection/Septicemia	31,565	6.1	\$50,624	\$33,311
137	Respiratory Infections and Inflammations	19,616	6.1	\$40,324	\$30,391
194	Heart Failure	15,964	4.8	\$32,077	\$24,516
751	Psychoses	13,718	5.7	\$16,239	\$13,662
540	Cesarean Delivery	13,042	3.4	\$25,701	\$22,693
775	Alcohol Abuse/Dependence	8,839	3.8	\$17,856	\$12,991
753	Bipolar Disorders	8,427	6.2	\$16,963	\$13,720
139	Pneumonia	7,860	4.1	\$27,927	\$21,436
Above Hospitalizations Total		209,133	3.9	\$22,539	\$13,855

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 2020 based on the average charge accounted for only 0.2 percent of all hospitalizations but 3.2 percent of total inpatient charges among GMS, LTAC, psychiatric, and AODA hospitals in 2020 (see Table 11).

These APR-DRGs required specialized treatment and long hospital stays. Together, they represented only 972 hospitalizations.

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Median Charge
583	Neonate with External Heart and Lung Oxygen Support	6	99.0	\$1,610,935	\$1,419,470
588	Neonate Birthwt <1500g with Major Procedure	24	126.1	\$1,275,776	\$1,112,398
009	Extracorporeal membrane oxygenation (ECMO)	28	38.8	\$1,101,795	\$652,751
001	Liver Transplant	176	32.7	\$923,456	\$545,861
002	Heart and/or Lung Transplant	133	29.4	\$886,998	\$710,684
161	Defibrillator and Heart Assist Implant	37	31.3	\$860,422	\$804,491
609	Neonate Birthwt 1500-2499g with Major Procedure	18	68.2	\$705,425	\$533,904
841	Burns, 3rd Degree with Skin Graft	8	35.3	\$684,573	\$493,439
004	Tracheostomy w MV 96+ hours w extensive procedure	476	42.5	\$644,397	\$520,793
591	Neonate Birthwt 500-749g without Major Procedure	66	75.4	\$551,704	\$542,162
Above Hospitalizations Total		972	43.4	\$766,243	\$590,424

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 25.9 percent of all hospitalizations and 24.8 percent of total charges among GMS, LTAC, psychiatric, and AODA hospitals in 2020 (see Table 12). They included a mixture of high-cost conditions (e.g., Respiratory System DX), 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).

APR-DRG	Description	Number of Hospitalizations	Average Stay (days)	Average Charge	Total Charges
720	Blood Infection/Septicemia	31,565	6.1	\$50,624	\$1,597,945,439
137	Respiratory Infections and Inflammations	19,616	6.1	\$40,324	\$790,987,870
194	Heart Failure	15,964	4.8	\$32,077	\$512,083,349
560	Vaginal Delivery	38,963	2.0	\$12,644	\$492,636,031
710	Infectious & parasitic diseases including HIV w O.R. procedure	3,913	11.1	\$121,935	\$477,132,805
174	Percutaneous coronary intervention w AMI	5,319	3.0	\$77,623	\$412,876,122
130	Respiratory System DX w/ Vent Support 96+ Hrs	1,605	21.6	\$234,903	\$377,019,693
301	Hip Replacement	6,529	2.7	\$55,336	\$361,291,404
304	Dorsal and Lumbar Fusion Without Principal Diagnosis of Back Curvature	3,241	3.7	\$109,050	\$353,431,739
540	Cesarean Delivery	13,042	3.4	\$25,701	\$335,194,174
Above Hospitalizations Total		139,757	4.5	\$40,861	

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

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 2020 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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	2,387	40.9	\$61,548,025
Accidental	1,561	26.8	\$37,385,592
Self-Inflicted	676	11.6	\$16,028,769
Assault	133	2.3	\$7,377,671
Undetermined	17	0.3	\$755,993
Drown/Submersion	22	0.4	\$637,885
Accidental	20	0.3	\$582,383
Self-Inflicted/Assault/Undetermined	2	0.0	\$55,502
Falls	35,998	617.2	\$1,701,550,023
Accidental	35,967	616.6	\$1,697,899,331
Self-Inflicted/Assault/Undetermined	31	0.5	\$3,650,692
Fire/Flames	269	4.6	\$28,801,133
Accidental	245	4.2	\$26,628,116
Self-Inflicted/Assault/Undetermined	24	0.4	\$2,173,017
Firearms	722	12.4	\$70,144,221
Accidental	381	6.5	\$32,016,376
Self-Inflicted	47	0.8	\$6,320,498
Assault	277	4.7	\$31,404,246
Undetermined	17	0.3	\$403,102
Hot Objects/Scalds	815	14.0	\$32,180,839
Accidental	290	5.0	\$13,593,346
Self-Inflicted/Assault/Undetermined	525	9.0	\$18,587,492
Machinery	706	12.1	\$20,822,295
Motor Veh Traffic	3,849	66.0	\$322,613,789
Accidental	3,830	65.7	\$321,825,744
Self-Inflicted/Assault/Undetermined	19	0.3	\$788,045
Oth Pedal Cycle	850	14.6	\$33,289,229
Oth Mot Veh Nontraffic	1,128	19.3	\$61,931,354
Oth Transport	280	4.8	\$12,032,032
Natural/Environmental	26,707	457.9	\$872,125,836
Overexertion	4,425	75.9	\$102,314,359
Poisoning	32,862	563.4	\$1,920,774,357
Accidental	903	15.5	\$41,539,015
Self-Inflicted	1,360	23.3	\$27,509,736
Assault	3	0.1	\$342,889
Undetermined	30,596	524.6	\$1,851,382,717
Striking/Struck By	2,951	50.6	\$98,399,687
Accidental	2,446	41.9	\$76,490,088
Assault	505	8.7	\$21,909,599
Other Injury	752	12.9	\$23,081,876
Accidental	678	11.6	\$19,840,795
Self-Inflicted	17	0.3	\$977,666
Assault	47	0.8	\$1,932,916
Undetermined	6	0.1	\$127,075
Others	4	0.1	\$203,424
Total Injuries	114,723	1,966.9	\$5,362,246,939
Total Self-Inflicted	2,417	41.4	\$63,868,590
Total Assaults	976	16.7	\$65,208,045

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	427	37.0	\$11,910,691
Accidental	313	27.1	\$7,007,749
Self-Inflicted	93	8.1	\$3,179,135
Assault	16	1.4	\$1,557,887
Undetermined	5	0.4	\$165,920
Drown/Submersion	6	0.5	\$188,163
Accidental	5	0.4	\$153,983
Self-Inflicted/Assault/Undetermined	1	0.1	\$34,181
Falls	6,626	573.5	\$333,541,027
Accidental	6,618	572.8	\$332,580,159
Self-Inflicted/Assault/Undetermined	8	0.7	\$960,867
Fire/Flames	89	7.7	\$8,467,162
Accidental	87	7.5	\$8,410,186
Self-Inflicted/Assault/Undetermined	2	0.2	\$56,977
Firearms	87	7.5	\$9,867,161
Accidental	55	4.8	\$4,856,585
Self-Inflicted	5	0.4	\$936,617
Assault	26	2.3	\$4,046,812
Undetermined	1	0.1	\$27,146
Hot Objects/Scalds	217	18.8	\$8,154,435
Accidental	105	9.1	\$4,844,023
Self-Inflicted/Assault/Undetermined	112	9.7	\$3,310,412
Machinery	151	13.1	\$5,702,070
Motor Veh Traffic	732	63.4	\$62,406,523
Accidental	728	63.0	\$62,214,543
Self-Inflicted/Assault/Undetermined	4	0.3	\$191,980
Oth Pedal Cycle	226	19.6	\$9,617,775
Oth Mot Veh Nontraffic	219	19.0	\$16,486,357
Oth Transport	53	4.6	\$3,311,543
Natural/Environmental	4,826	417.7	\$160,279,964
Overexertion	788	68.2	\$20,101,566
Poisoning	5,494	475.6	\$398,000,220
Accidental	188	16.3	\$8,459,254
Self-Inflicted	254	22.0	\$6,258,480
Assault	3	0.3	\$342,889
Undetermined	5,049	437.0	\$382,939,598
Striking/Struck By	550	47.6	\$20,148,529
Accidental	465	40.3	\$15,943,868
Assault	85	7.4	\$4,204,661
Other Injury	139	12.0	\$4,616,256
Accidental	124	10.7	\$4,055,449
Self-Inflicted	3	0.3	\$113,150
Assault	10	0.9	\$387,514
Undetermined	1	0.1	\$35,306
Others	1	0.1	\$24,838
Total Injuries	20,630	1,785.7	\$1,072,799,443
Total Self-Inflicted	413	35.7	\$12,986,530
Total Assaults	140	12.1	\$10,539,763

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	309	28.0	\$9,155,514
Accidental	179	16.2	\$5,701,990
Self-Inflicted	118	10.7	\$3,077,714
Assault	10	0.9	\$359,510
Undetermined	2	0.2	\$16,300
Drown/Submersion	4	0.4	\$182,917
Accidental	3	0.3	\$161,596
Self-Inflicted/Assault/Undetermined	1	0.1	\$21,322
Falls	6,499	589.7	\$321,551,665
Accidental	6,499	589.7	\$321,551,665
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Fire/Flames	16	1.5	\$471,491
Accidental	12	1.1	\$276,573
Self-Inflicted/Assault/Undetermined	4	0.4	\$194,918
Firearms	42	3.8	\$1,952,620
Accidental	23	2.1	\$893,758
Self-Inflicted	4	0.4	\$185,445
Assault	12	1.1	\$740,230
Undetermined	3	0.3	\$133,188
Hot Objects/Scalds	150	13.6	\$4,432,192
Accidental	18	1.6	\$478,170
Self-Inflicted/Assault/Undetermined	132	12.0	\$3,954,022
Machinery	62	5.6	\$1,602,935
Motor Veh Traffic	364	33.0	\$18,927,231
Accidental	363	32.9	\$18,904,684
Self-Inflicted/Assault/Undetermined	1	0.1	\$22,548
Oth Pedal Cycle	106	9.6	\$4,251,372
Oth Mot Veh Nontraffic	115	10.4	\$4,632,765
Oth Transport	41	3.7	\$1,413,093
Natural/Environmental	4,735	429.6	\$162,080,978
Overexertion	784	71.1	\$21,138,443
Poisoning	5,506	499.6	\$256,772,575
Accidental	151	13.7	\$6,587,548
Self-Inflicted	115	10.4	\$2,346,813
Assault	0	N/A	N/A
Undetermined	5,240	475.5	\$247,838,215
Striking/Struck By	408	37.0	\$13,614,879
Accidental	362	32.8	\$12,347,526
Assault	46	4.2	\$1,267,353
Other Injury	84	7.6	\$2,097,978
Accidental	78	7.1	\$1,928,361
Self-Inflicted	4	0.4	\$131,687
Assault	2	0.2	\$37,930
Undetermined	0	N/A	N/A
Others	0	N/A	N/A
Total Injuries	19,225	1,744.4	\$824,278,649
Total Self-Inflicted	305	27.7	\$8,788,146
Total Assaults	70	6.4	\$2,405,023

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	554	58.6	\$21,330,318
Accidental	333	35.2	\$12,681,842
Self-Inflicted	143	15.1	\$4,075,491
Assault	76	8.0	\$4,548,535
Undetermined	2	0.2	\$24,450
Drown/Submersion	4	0.4	\$104,977
Accidental	4	0.4	\$104,977
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	7,504	794.1	\$517,769,326
Accidental	7,486	792.2	\$515,470,239
Self-Inflicted/Assault/Undetermined	18	1.9	\$2,299,087
Fire/Flames	104	11.0	\$18,570,040
Accidental	96	10.2	\$16,745,377
Self-Inflicted/Assault/Undetermined	8	0.8	\$1,824,663
Firearms	471	49.8	\$51,510,319
Accidental	231	24.4	\$23,562,253
Self-Inflicted	15	1.6	\$2,768,520
Assault	219	23.2	\$25,075,738
Undetermined	6	0.6	\$103,808
Hot Objects/Scalds	180	19.0	\$9,966,510
Accidental	89	9.4	\$5,516,968
Self-Inflicted/Assault/Undetermined	91	9.6	\$4,449,541
Machinery	109	11.5	\$6,048,940
Motor Veh Traffic	1,295	137.0	\$151,572,633
Accidental	1,291	136.6	\$151,247,738
Self-Inflicted/Assault/Undetermined	4	0.4	\$324,895
Oth Pedal Cycle	186	19.7	\$9,659,714
Oth Mot Veh Nontraffic	145	15.3	\$12,378,240
Oth Transport	47	5.0	\$3,321,712
Natural/Environmental	5,579	590.4	\$262,176,109
Overexertion	661	69.9	\$19,058,994
Poisoning	10,107	1,069.5	\$846,961,041
Accidental	277	29.3	\$17,698,441
Self-Inflicted	377	39.9	\$8,921,308
Assault	0	N/A	N/A
Undetermined	9,453	1,000.3	\$820,341,292
Striking/Struck By	776	82.1	\$36,127,914
Accidental	552	58.4	\$23,351,319
Assault	224	23.7	\$12,776,595
Other Injury	158	16.7	\$8,622,698
Accidental	131	13.9	\$6,909,838
Self-Inflicted	2	0.2	\$428,521
Assault	22	2.3	\$1,114,606
Undetermined	2	0.2	\$32,355
Others	1	0.1	\$137,378
	Total Injuries	27,880	\$1,975,179,485
	Total Self-Inflicted	586	\$20,170,073
	Total Assaults	548	\$45,616,323

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	284	45.6	\$3,728,941
Accidental	201	32.3	\$2,552,009
Self-Inflicted	73	11.7	\$939,756
Assault	9	1.4	\$223,649
Undetermined	1	0.2	\$13,528
Drown/Submersion	1	0.2	\$35,902
Accidental	1	0.2	\$35,902
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	3,273	525.4	\$95,690,695
Accidental	3,271	525.0	\$95,378,719
Self-Inflicted/Assault/Undetermined	2	0.3	\$311,976
Fire/Flames	11	1.8	\$134,017
Accidental	10	1.6	\$127,555
Self-Inflicted/Assault/Undetermined	1	0.2	\$6,462
Firearms	31	5.0	\$1,067,114
Accidental	24	3.9	\$669,660
Self-Inflicted	4	0.6	\$267,398
Assault	3	0.5	\$130,056
Undetermined	0	N/A	N/A
Hot Objects/Scalds	65	10.4	\$1,544,887
Accidental	8	1.3	\$154,601
Self-Inflicted/Assault/Undetermined	57	9.1	\$1,390,286
Machinery	103	16.5	\$1,647,307
Motor Veh Traffic	289	46.4	\$15,756,565
Accidental	286	45.9	\$15,650,528
Self-Inflicted/Assault/Undetermined	3	0.5	\$106,037
Oth Pedal Cycle	77	12.4	\$1,651,843
Oth Mot Veh Nontraffic	109	17.5	\$3,116,595
Oth Transport	19	3.0	\$371,453
Natural/Environmental	2,197	352.7	\$46,773,881
Overexertion	488	78.3	\$6,735,394
Poisoning	2,835	455.1	\$85,418,450
Accidental	67	10.8	\$2,110,272
Self-Inflicted	159	25.5	\$2,238,326
Assault	0	N/A	N/A
Undetermined	2,609	418.8	\$81,069,853
Striking/Struck By	234	37.6	\$4,961,330
Accidental	206	33.1	\$4,320,441
Assault	28	4.5	\$640,890
Other Injury	66	10.6	\$1,000,277
Accidental	61	9.8	\$747,379
Self-Inflicted	1	0.2	\$171,574
Assault	3	0.5	\$52,035
Undetermined	0	N/A	N/A
Others	1	0.2	\$29,289
Total Injuries	10,082	1,618.3	\$269,634,652
Total Self-Inflicted	293	47.0	\$5,306,367
Total Assaults	44	7.1	\$1,075,919

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	298	47.2	\$6,272,069
Accidental	184	29.2	\$3,673,009
Self-Inflicted	98	15.5	\$1,845,965
Assault	13	2.1	\$384,580
Undetermined	3	0.5	\$368,516
Drown/Submersion	2	0.3	\$44,353
Accidental	2	0.3	\$44,353
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	4,086	647.7	\$157,424,630
Accidental	4,083	647.2	\$157,345,868
Self-Inflicted/Assault/Undetermined	3	0.5	\$78,762
Fire/Flames	15	2.4	\$394,285
Accidental	13	2.1	\$365,269
Self-Inflicted/Assault/Undetermined	2	0.3	\$29,016
Firearms	33	5.2	\$1,760,861
Accidental	18	2.9	\$521,748
Self-Inflicted	4	0.6	\$549,626
Assault	9	1.4	\$629,027
Undetermined	2	0.3	\$60,460
Hot Objects/Scalds	59	9.4	\$1,710,240
Accidental	23	3.6	\$600,273
Self-Inflicted/Assault/Undetermined	36	5.7	\$1,109,967
Machinery	95	15.1	\$1,660,367
Motor Veh Traffic	415	65.8	\$26,816,228
Accidental	414	65.6	\$26,795,146
Self-Inflicted/Assault/Undetermined	1	0.2	\$21,082
Oth Pedal Cycle	92	14.6	\$2,709,203
Oth Mot Veh Nontraffic	136	21.6	\$6,456,029
Oth Transport	23	3.6	\$537,654
Natural/Environmental	4,497	712.8	\$119,540,704
Overexertion	636	100.8	\$13,029,245
Poisoning	2,974	471.4	\$118,163,032
Accidental	80	12.7	\$3,049,526
Self-Inflicted	146	23.1	\$2,886,098
Assault	0	N/A	N/A
Undetermined	2,748	435.6	\$112,227,409
Striking/Struck By	360	57.1	\$8,316,793
Accidental	323	51.2	\$7,215,954
Assault	37	5.9	\$1,100,839
Other Injury	115	18.2	\$2,528,854
Accidental	106	16.8	\$2,294,060
Self-Inflicted	2	0.3	\$20,029
Assault	6	1.0	\$201,066
Undetermined	1	0.2	\$13,700
Others	0	N/A	N/A
	Total Injuries	13,836	\$467,364,546
	Total Self-Inflicted	277	\$5,750,531
	Total Assaults	66	\$2,381,921

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	233	47.1	\$3,721,422
Accidental	136	27.5	\$2,247,539
Self-Inflicted	90	18.2	\$1,178,721
Assault	4	0.8	\$130,883
Undetermined	3	0.6	\$164,279
Drown/Submersion	4	0.8	\$68,787
Accidental	4	0.8	\$68,787
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	2,706	546.8	\$88,279,713
Accidental	2,706	546.8	\$88,279,713
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Fire/Flames	16	3.2	\$160,994
Accidental	10	2.0	\$103,727
Self-Inflicted/Assault/Undetermined	6	1.2	\$57,267
Firearms	15	3.0	\$778,888
Accidental	5	1.0	\$203,131
Self-Inflicted	4	0.8	\$331,579
Assault	5	1.0	\$238,358
Undetermined	1	0.2	\$5,820
Hot Objects/Scalds	85	17.2	\$3,865,529
Accidental	18	3.6	\$479,103
Self-Inflicted/Assault/Undetermined	67	13.5	\$3,386,426
Machinery	57	11.5	\$649,967
Motor Veh Traffic	204	41.2	\$13,141,687
Accidental	200	40.4	\$13,074,994
Self-Inflicted/Assault/Undetermined	4	0.8	\$66,693
Oth Pedal Cycle	42	8.5	\$987,903
Oth Mot Veh Nontraffic	86	17.4	\$2,946,633
Oth Transport	38	7.7	\$891,045
Natural/Environmental	1,733	350.2	\$36,020,931
Overexertion	365	73.8	\$7,887,551
Poisoning	1,935	391.0	\$62,545,143
Accidental	53	10.7	\$1,215,954
Self-Inflicted	118	23.8	\$1,985,956
Assault	0	N/A	N/A
Undetermined	1,764	356.4	\$59,343,232
Striking/Struck By	224	45.3	\$4,329,555
Accidental	195	39.4	\$3,810,867
Assault	29	5.9	\$518,688
Other Injury	75	15.2	\$1,689,325
Accidental	72	14.5	\$1,625,145
Self-Inflicted	3	0.6	\$64,181
Assault	0	N/A	N/A
Undetermined	0	N/A	N/A
Others	0	N/A	N/A
	Total Injuries	7,818	\$227,965,073
	Total Self-Inflicted	247	\$4,104,144
	Total Assaults	38	\$887,929

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	117	42.5	\$2,828,565
Accidental	85	30.9	\$1,755,316
Self-Inflicted	29	10.5	\$987,848
Assault	3	1.1	\$85,402
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	1,521	552.5	\$50,848,342
Accidental	1,521	552.5	\$50,848,342
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Fire/Flames	2	0.7	\$28,442
Accidental	1	0.4	\$24,728
Self-Inflicted/Assault/Undetermined	1	0.4	\$3,715
Firearms	14	5.1	\$1,040,514
Accidental	6	2.2	\$341,035
Self-Inflicted	6	2.2	\$273,200
Assault	1	0.4	\$398,125
Undetermined	1	0.4	\$28,154
Hot Objects/Scalds	15	5.4	\$419,078
Accidental	5	1.8	\$189,628
Self-Inflicted/Assault/Undetermined	10	3.6	\$229,450
Machinery	41	14.9	\$1,138,162
Motor Veh Traffic	173	62.8	\$10,937,006
Accidental	173	62.8	\$10,937,006
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Oth Pedal Cycle	58	21.1	\$2,685,012
Oth Mot Veh Nontraffic	94	34.1	\$5,160,712
Oth Transport	28	10.2	\$1,354,819
Natural/Environmental	985	357.8	\$24,769,767
Overexertion	238	86.4	\$6,534,875
Poisoning	1,177	427.5	\$38,001,120
Accidental	27	9.8	\$708,478
Self-Inflicted	106	38.5	\$1,528,141
Assault	0	N/A	N/A
Undetermined	1,044	379.2	\$35,764,500
Striking/Struck By	138	50.1	\$3,952,177
Accidental	121	44.0	\$3,441,837
Assault	17	6.2	\$510,340
Other Injury	38	13.8	\$916,436
Accidental	36	13.1	\$796,611
Self-Inflicted	0	N/A	N/A
Assault	1	0.4	\$96,079
Undetermined	1	0.4	\$23,745
Others	0	N/A	N/A
Total Injuries	4,639	1,685.0	\$150,615,027
Total Self-Inflicted	152	55.2	\$3,022,354
Total Assaults	22	8.0	\$1,089,946

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	146	31.4	\$2,319,430
Accidental	119	25.6	\$1,626,888
Self-Inflicted	24	5.2	\$602,319
Assault	2	0.4	\$87,224
Undetermined	1	0.2	\$2,999
Drown/Submersion	1	0.2	\$12,785
Accidental	1	0.2	\$12,785
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Falls	3,391	729.3	\$129,141,184
Accidental	3,391	729.3	\$129,141,184
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Fire/Flames	16	3.4	\$574,701
Accidental	16	3.4	\$574,701
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Firearms	27	5.8	\$2,150,089
Accidental	18	3.9	\$959,153
Self-Inflicted	5	1.1	\$1,008,114
Assault	2	0.4	\$145,900
Undetermined	2	0.4	\$36,923
Hot Objects/Scalds	39	8.4	\$1,953,746
Accidental	23	4.9	\$1,305,223
Self-Inflicted/Assault/Undetermined	16	3.4	\$648,523
Machinery	84	18.1	\$2,325,342
Motor Veh Traffic	369	79.4	\$22,950,219
Accidental	367	78.9	\$22,895,409
Self-Inflicted/Assault/Undetermined	2	0.4	\$54,810
Oth Pedal Cycle	50	10.8	\$1,439,341
Oth Mot Veh Nontraffic	210	45.2	\$10,465,624
Oth Transport	29	6.2	\$779,222
Natural/Environmental	1,784	383.7	\$54,189,197
Overexertion	389	83.7	\$6,395,842
Poisoning	2,520	542.0	\$109,642,812
Accidental	52	11.2	\$1,604,165
Self-Inflicted	72	15.5	\$1,150,425
Assault	0	N/A	N/A
Undetermined	2,396	515.3	\$106,888,222
Striking/Struck By	217	46.7	\$6,305,089
Accidental	181	38.9	\$5,462,500
Assault	36	7.7	\$842,589
Other Injury	67	14.4	\$1,503,778
Accidental	61	13.1	\$1,394,756
Self-Inflicted	2	0.4	\$48,525
Assault	2	0.4	\$26,609
Undetermined	1	0.2	\$21,970
Others	1	0.2	\$11,919
Total Injuries	9,339	2,008.6	\$352,148,401
Total Self-Inflicted	119	25.6	\$3,295,570
Total Assaults	44	9.5	\$1,146,499

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, 2020

Injury Category	Number of Cases	Rate per 100,000 population	Total Charges
Cut/Pierce	19	13.4	\$281,073
Accidental	11	7.8	\$139,250
Self-Inflicted	8	5.7	\$141,823
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	380	269.0	\$7,044,109
Accidental	380	269.0	\$7,044,109
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Fire/Flames	0	N/A	N/A
Accidental	0	N/A	N/A
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Firearms	2	1.4	\$16,655
Accidental	1	0.7	\$9,052
Self-Inflicted	0	N/A	N/A
Assault	0	N/A	N/A
Undetermined	1	0.7	\$7,603
Hot Objects/Scalds	5	3.5	\$134,222
Accidental	1	0.7	\$25,357
Self-Inflicted/Assault/Undetermined	4	2.8	\$108,865
Machinery	4	2.8	\$47,204
Motor Veh Traffic	8	5.7	\$105,696
Accidental	8	5.7	\$105,696
Self-Inflicted/Assault/Undetermined	0	N/A	N/A
Oth Pedal Cycle	13	9.2	\$287,067
Oth Mot Veh Nontraffic	14	9.9	\$288,399
Oth Transport	2	1.4	\$51,491
Natural/Environmental	368	260.5	\$6,246,870
Overexertion	76	53.8	\$1,432,450
Poisoning	311	220.1	\$5,196,526
Accidental	8	5.7	\$105,378
Self-Inflicted	13	9.2	\$194,189
Assault	0	N/A	N/A
Undetermined	290	205.3	\$4,896,960
Striking/Struck By	44	31.1	\$643,420
Accidental	41	29.0	\$595,776
Assault	3	2.1	\$47,644
Other Injury	10	7.1	\$106,274
Accidental	9	6.4	\$89,197
Self-Inflicted	0	N/A	N/A
Assault	1	0.7	\$17,078
Undetermined	0	N/A	N/A
Others	0	N/A	N/A
Total Injuries	1,256	889.1	\$21,881,457
Total Self-Inflicted	25	17.7	\$444,876
Total Assaults	4	2.8	\$64,722

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), 2020

Injury Category	Number of Cases		Total Cases
	Male	Female	
Cutting/Piercing	259	417	676
Drowning/Submersion	0	2	2
Firearms And Explosives	42	5	47
Jumping From A High Place	12	10	22
Other Self-Inflicted Injuries	145	165	310
Poisoning	426	934	1,360
Total Self-Inflicted Injuries	884	1,533	2,417

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), 2020

Injury Category	Number of Cases		Total Cases
	Male	Female	
Bite Of Human Being	10	4	14
Cutting/Piercing	103	30	133
Firearms And Explosives	231	42	273
Other Assaultive Injuries	44	17	61
Poisoning	2	1	3
Striking By Blunt Or Thrown Object	53	14	67
Unarmed Fight Or Brawl	276	149	425
Total Self-Inflicted Injuries	719	257	976

Source: Inpatient Data, WHA Information Center, LLC.

CHAPTER IV. OVERVIEW OF INDIVIDUAL HOSPITAL INPATIENT TABLES

Hospitals that Reported Data

Data were collected from 132 general medical-surgical hospitals, four long-term acute care hospitals (LTAC), twelve psychiatric hospitals, one alcohol and other drug abuse (AODA) hospital, three rehabilitation facilities, and two state-operated mental health institutes on all inpatients discharged between January 1, 2020, and December 31, 2020. 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 2020.

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. Primary Payer assignment criteria can be found in Appendix 2 – Methodology and Technical Notes.

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 AODA Hospitals, and State-Operated Mental Health Institutes

The tables for the LTAC hospitals, psychiatric and AODA hospitals, 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 AODA Hospitals: This section of the table includes data on the most common (up to 13) APR-DRGs in the AODA hospital. It presents the number of discharges, ALOS, and average charge per discharge for patients in the AODA hospital.

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

Since there is only one AODA hospital, comparison data to 'all' AODA hospitals are not provided in this report.

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:

APR-DRG	Description
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
130	Respiratory System DX w/ Vent Support 96+ Hrs
133	Respiratory failure
137	Respiratory Infections and Inflammations
139	Pneumonia
140	Chronic Obstructive Pulmonary Disease
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
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

APR-DRG	Description
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
282	Disorders of Pancreas Except Malignancy
301	Hip Replacement
302	Knee Replacement
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
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
349	Complications Of Orthopedic Device Or Procedure
351	Other Musculoskeletal System and Connective Tissue Diagnoses
380	Skin Ulcers
383	Cellulitis & other skin infections
420	Diabetes
426	Non-hypovolemic sodium disorders
463	Kidney/Urinary Tract Infection
469	Acute kidney injury

APR-DRG	Description
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+
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

APR-DRG	Description
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: Childbirths 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™ 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.