



MERATIVE™ MARKETSCAN® RESEARCH DATABASES

Multi-State Medicaid Database User Guide

Data Year 2021 Edition

The authorized recipient of these materials shall treat the information contained therein as confidential proprietary information owned by Merative. The recipient shall not disclose or permit to be disclosed, in full or in part, to third parties any information contained therein. No part of these materials may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from Merative.

Requests for permission to make copies of any part of this report should be mailed to:

Merative
100 Phoenix Drive
Ann Arbor, MI 48108

Contents

Introduction.....	1
MarketScan Database Overview.....	1
Overview of tables.....	7
Medical/surgical tables.....	7
Overview of encounter records.....	11
Financial variables.....	12
Medical/Surgical financial variables.....	13
Prescription drug financial variables.....	18
Encounter record financial variables.....	19
Adjustment records.....	19
Unresolved adjustments.....	21
Person-level identifiers.....	22
Enrollee identifiers.....	22
Clinical variables.....	23
Data quality.....	26
Plan type definitions.....	29
Plan type.....	30
Glossary of acronyms, abbreviations, and terms.....	32
Appendix: Frequently asked questions.....	47
Bibliography	52

Introduction

MarketScan Database Overview

The Merative™ MarketScan® Research Databases capture person-specific clinical utilization, expenditures, and enrollment across inpatient, outpatient, prescription drug, and carve-out services. The data come from a selection of large employers, health plans, and government and public organizations. The MarketScan Research Databases link paid claims and encounter data to detailed patient information across sites and types of providers and over time. The annual medical databases include private-sector health data from approximately 350 payers. Historically, more than 20 billion service records are available in the MarketScan Databases. These data represent the medical experience of insured employees and their dependents for active employees, early retirees, Consolidated Omnibus Budget Reconciliation Act (COBRA) continuees, and Medicare-eligible retirees with employer-provided Medicare Supplemental plans and Medicare Advantage plans.

The Merative MarketScan Research Databases are composed of seven individual databases, which are described below and summarized in Exhibit 1.

Commercial Claims and Encounters Database

The Merative MarketScan Commercial Database (CCAE) contains data from active employees, early retirees, COBRA continuees, and dependents insured by employer-sponsored plans (i.e., individuals not eligible for Medicare).

The database has the following table structure:

- Inpatient Admissions Table (I)
- Facility Header Table (F)
- Inpatient Services Table (S)
- Outpatient Services Table (O)
- Outpatient Pharmaceutical Claims Table (D)
- Annual Enrollment Summary Table (A)
- Enrollment Detail Table (T)

Medicare Supplemental and Coordination of Benefits Database

The Merative MarketScan Medicare Database (MDCR) is created for Medicare-eligible retirees with employer-sponsored Medicare Supplemental and Medicare Advantage plans. This database contains predominantly fee-for-service plan data.

The Medicare Database table structure is identical to the Commercial Database table structure.

Both the Medicare-paid amounts and the employer-paid supplemental insurance amounts are included in this database. Only plans in which both the Medicare-paid amounts and the employer-paid amounts were available and evident on the claims were selected for this database.

Health and Productivity Management Database

The Merative MarketScan Health and Productivity Management (HPM) Database is an integrated database that contains absence, short-term disability, long-term disability, and worker's compensation experiences. This information is linkable to the medical, pharmacy, and enrollment data in the MarketScan Commercial Database for these employees, making the resulting database a unique and valuable resource for examining health and productivity issues for an employed, privately insured population.

A separate User Guide is provided to customers licensing the HPM database.

Health Risk Assessment Database

The MarketScan Health Risk Assessment Database comprises data derived from surveys completed by employees. The Health Risk Assessment Database links with the Commercial Database by enrollee identifier and contains variables reflective of biometric information, self-assessed health, mental health, productivity, health behaviors, and intent to change behavior. All of the medical and drug claims, as well as enrollment records, are linked with the health risk responses. In addition, for a subset of large employer contributors, enrollment, claims, and health risk data are linkable to the absence, short-term disability, and worker's compensation records of the Health and Productivity Management Database.

Benefit Plan Design Database

The Merative MarketScan Benefit Plan Design (BPD) Database consists of data for selected benefit plans represented in the MarketScan Research Databases from 1995 forward. A separate User Guide is provided to customers licensing the BPD Database. Benefit plan design information is available for the Commercial and Medicare Databases.

Multi-State Medicaid Database

The MarketScan Multi-State Medicaid Database reflects the healthcare service use of individuals covered by Medicaid programs in numerous geographically dispersed states. The database contains the pooled healthcare experience of Medicaid enrollees, covered under fee-for-service and managed care plans. It includes records of inpatient services, inpatient admissions, outpatient services, and prescription drug claims, as well as information on long-term care. Data on eligibility and service and provider type are also included. In addition to standard demographic variables such as age and gender, the database includes variables of particular value to researchers investigating Medicaid populations, such as federal aid category (income based, disability, Temporary Assistance for Needy Families) and race.

The database has the following table structure:

- Inpatient Admissions Table (I)
- Facility Header Table (F)
- Inpatient Services Table (S)
- Outpatient Services Table (O)
- Outpatient Pharmaceutical Claims Table (D)
- Long Term Care (L)
- Annual Enrollment Summary Table (A)
- Enrollment Detail Table (T)

MarketScan Lab Database

The Merative MarketScan Lab Database contains the pooled health care experience of more than one million covered lives, gleaned from sources that include both commercial and Medicare Supplemental coverage. It captures lab tests for a subset of the covered lives and mainly represents lab tests ordered in office-based practices. Linkage of lab results to claims supports analyses that are not feasible with claims alone, such as determining effectiveness of treatment, measuring severity of illness, identifying patients for whom treatment may be indicated, and verifying diagnoses recorded on claims.

Note: This User Guide is intended to cover the Multi-State Medicaid Database. The data you receive may contain some or all MarketScan data described herein.

Exhibit 1. Overview of the Merative MarketScan Research Databases

Database	Content	Covered Lives	Tables
Commercial (CCAE)	Healthcare coverage eligibility and service use of individuals in plans or product lines with fee-for-service plans and fully capitated or partially capitated plans	Active employees and dependents, early (non-Medicare) retirees and dependents, COBRA continuers	Medical/Surgical Inpatient Admissions (I) Facility Header (F) Inpatient Services (S) Outpatient Services (O) Prescription Drug (D) Enrollment (A,T)
Medicare (MDCR)	Healthcare coverage eligibility and service use of individuals in plans or product lines with fee-for-service plans and fully capitated or partially capitated plans	Medicare-eligible active and retired employees and their Medicare-eligible dependents from employer-sponsored Medicare Supplemental and Medicare Advantage plans	Medical/Surgical Inpatient Admissions (I) Facility Header (F) Inpatient Services (S) Outpatient Services (O) Prescription Drug (D) Enrollment (A,T)

Database	Content	Covered Lives	Tables
Benefit Plan Design (BPD)	Plan characteristics derived from the medical claims submitted by each plan. Additional information specific to each plan is available in the BPD User Guide.	Not applicable	Links to CCAE and MDCR Databases for a subset of plans included in those databases
Health and Productivity Management (HPM)	Absence, short-term disability, long-term disability, and worker's compensation experiences for a subset of the covered lives represented in the CCAE Database	Active employees	<ul style="list-style-type: none"> → Absenteeism (ABS) → Short-Term Disability (STD) → Long-Term Disability (LTD) → Worker's Compensation (WC) → Eligibility (Elig) <p>Linkable to the medical and prescription drug claims information appearing in the CCAE Database</p>

Database	Content	Covered Lives	Tables
Medicaid	Healthcare coverage eligibility and service use of individuals enrolled in state Medicaid programs for several states and/or Medicaid managed care programs	Medicaid recipients for several states	Medical/Surgical Inpatient Admissions (I) Facility Header (F) Inpatient Services (S) Outpatient Services (O) Long-Term Care (L) Prescription Drug (D) Enrollment (A,T)
Lab	Healthcare service use and eligibility for individuals enrolled in Commercial, Medicare Supplemental, and Medicare programs, along with lab test records and results	Individuals enrolled in Commercial, Medicare Supplemental, and Medicare Advantage programs	Medical/Surgical Inpatient Admissions (I) Facility Header (F) Inpatient Services (S) Outpatient Services (O) Prescription Drug (D) Enrollment (A,T) Lab Test Results (R)
HRA	Self-reported biometric and health-related behavioral data	Active employees	Links to CCAE and MDCR Databases for a subset of enrollees.

Abbreviation: COBRA, Consolidated Omnibus Budget Reconciliation Act.

Overview of tables

Note: All tables and databases described below are available in the MarketScan Multi-State Medicaid Database.

Medical/surgical tables

The MarketScan Databases contain inpatient and outpatient medical/surgical data stored in four tables: Inpatient Admissions, Inpatient Services, Facility Header, and Outpatient Services.

Inpatient Admissions Table (I)

The Inpatient Admissions Table contains records that summarize information about a hospital admission. Merative constructs this table after identifying all encounters or claims (service records) associated with an admission (e.g., hospital claims, physician claims, surgeon claims, and claims from independent laboratories). Facility and professional payment information then is summarized for all services. The summarized information is stored in an admission record in the Inpatient Admissions Table. Please refer to the section titled Financial Variables for definitions of key financial variables.

The admission record also includes data that can be identified only after all claims for an admission have been identified. These additional data include the principal procedure, principal diagnosis, major diagnostic category (MDC), and diagnosis-related group (DRG). Merative uses the Centers for Medicare & Medicaid Services (CMS) DRG Grouper to assign an MDC and DRG to the admission record.

In addition to the principal procedure and diagnosis codes, the admission record includes all diagnoses and procedures (up to 14 each) found on the service records that make up the admission. These additional codes (Diagnosis 2 through Diagnosis 15 and Procedure 2 through Procedure 15) are assigned chronologically on the basis of service dates and do not duplicate the principal code.

To be considered an admission, the grouping of these service records must meet certain criteria (e.g., a room and board claim must be present). If these criteria are not met, the records are stored in the Outpatient Services Table (O) and no admission record is created.

Facility Header Table (F)

The Facility Header Table contains complete header information from facility claims. A Facility Header Record identifier (FACHDID) exists on both the Facility Header Table and the Inpatient Services and Outpatient Services Tables to identify the individual service records that each header record comprises.

Facility inpatient service records are derived from the Uniform Billing (UB04) form. This form does not link financial information to specific procedures or diagnoses.

Inpatient Services Table (S)

The Inpatient Services Table contains the individual facility and professional encounters and services that the inpatient admission record comprises. A Cases and Services Link identifier (CASEID) exists on both the Inpatient Admissions and the Inpatient Services Tables to identify the individual service records that each admission record comprises.

Facility inpatient service records are derived from the UB04 form. This form does not link financial information to specific procedures or diagnoses. Physician services are derived from the CMS 1500 form.

Note: The Inpatient Services Table contains both facility and physician services associated with an inpatient admission. The Inpatient Admissions Table differs from UB04 discharge data in that Merative combines the facility charges with the physician services associated with an inpatient admission. UB04 revenue codes are retained in the MarketScan data when available; however, not all data contributors provide the codes on adjudicated claims.

Outpatient Services Table (O)

The Outpatient Services Table contains encounters and claims for services that were rendered in a doctor's office, hospital outpatient facility, emergency department, or other outpatient facility. A small percentage of claims in this table may represent inpatient services, because the claim was not incorporated into an inpatient admission (e.g., no room and board charge was found). These claims generally have an "inpatient" Place of Service (STDPLAC) code.

Outpatient Pharmaceutical Claims Table (D)

Outpatient pharmaceutical claims data are available for a large portion of the individuals represented in the medical/surgical and enrollment tables. The outpatient pharmaceutical data are linked by ENROLID to the medical/surgical data. Each record represents either a mail-order or retail program prescription drug claim.

Note: Before you begin your analysis, carefully determine which data sources (e.g., medical/surgical, outpatient pharmaceutical, enrollment) will be necessary to support your

analytic plan. If you require more than one of these data sources, it first may be necessary to use the various cohort flags to determine which data contributors or plans have the required data. These are found through the Cohort Drug indicator (DRUGCOVG), Mental Health and/or Substance Abuse Coverage (MHSACOVG) variables.

Long Term Care Table (L)

The Long Term Care Table contains claims for services that were rendered in a long term care setting as well as room and board claims from long-term care facilities.

Enrollment Tables (A, T)

The Enrollment tables contain person-level enrollment records with demographic and plan information on users and nonusers of services contained in the MarketScan Medicaid Multi-State Database.

The Annual Enrollment Summary Table contains a single record per person per year. The annual summary contains monthly arrays of certain variables such as indicators of enrollment (yes/no), days enrolled, data type, and plan type in each month during the year. There also are variables indicating the number of months during the year with enrollment and the total annual enrollment days.

The Enrollment Detail Table contains one record per person per month of enrollment for an individual enrollee regardless of whether any demographic values have changed from the previous month.

If you need to track changes in variables such as DRUGCOVG indicator or MHSACOVG indicator, use the Enrollment Detail Table.

Beginning with the 2001 data, all data contributors submit person-level enrollment information. When using MarketScan Database releases prior to 2001, the ENRFLAG variable allows the user to select only claims supported by person-level enrollment. When ENRFLAG=1, it indicates that person-level enrollment information is available for that data contributor.

Member Days (MEMDAYS)

When obtaining an underlying population or covered life count, evaluate the Date Enrollment Start (DTSTART) and Date Enrollment End (DTEND) data before summing Member Days (MEMDAYS). If a time-based subset or study period is required, the DTSTART and DTEND may be outside the beginning and ending dates of the subset criteria. If so, adjust the DTSTART and DTEND to match the study period and recalculate the member days before calculating an enrollee count.

For example, a record may have DTSTART and DTEND of 1/1/2021 and 1/31/2021, respectively. The MEMDAYS variable on this record is 31 days. If the study period of data begins on 1/15/2021, the DTSTART should be reset to reflect the 1/15/2021 beginning date and MEMDAYS should be recalculated to 16 days ($\text{MEMDAYS} = \text{DTEND} - \text{DTSTART} + 1$).

Overview of encounter records

Encounter records represent the service use and cost of individuals in partially and fully capitated plans and allow for the empirical investigation of health care under a variety of managed care arrangements.

Historically, not all fully or partially capitated health plans have maintained rigorous cost and utilization data collection systems. Many managed care services are prepaid in fixed sums for each member, which minimizes the need for administrative systems to collect financial encounter information at the time of service delivery. Therefore, unlike indemnity plans (which adjudicate claims for reimbursement), certain types of managed care plans do not process claims for the purpose of financial reporting. For these plans, service delivery information is disconnected from charge and payment information. Instead of generating a claim for reimbursement of prepaid capitated services, a managed care plan generates an encounter record.

An encounter record provides demographic information about the patient, provider characteristics, and diagnosis and procedure codes; however, in many instances it provides only limited financial information. This presents a certain challenge when using encounter records to analyze health care costs.

The challenge involves the correct measurement of reimbursement for capitated managed care plans. Many encounter records contain a Payment (PAY) amount of \$1 or \$0 for capitated services. The prepaid capitation amounts, whether in the form of per member per month fees or bulk capitation payments, were not contributed by the managed care plans represented in this database. However, managed care plans are beginning to enhance encounter records with fee-for-service-equivalent financial amounts. These amounts are intended to be approximate values for reasonable and customary charges or payments for medical services or procedures. See the Financial Variables section of this User Guide for other important information. The implementation of fee-for-service-equivalent financial amounts is in its early stages; as a result, financial variables are potentially understated. Financial measures derived from encounter records should be interpreted with caution, with the exception of Copayment (COPAY), Deductible (DEDUCT), and Coordination of Benefits and Other Savings (COB) amounts—all of which are recorded with reasonable accuracy.

In constructing the MarketScan Research Databases, encounter records are rigorously tested by overall plan-by-plan utilization rates to ensure that plans appearing to submit incomplete data are excluded.

Financial variables

Merative receives paid claims from approximately 350 data sources. Financial variables are defined consistently across all data contributors. Exhibit 2 contains an example of a financial variable calculation.

The definitions in Exhibit 3 apply to all MarketScan Research Databases. The definitions apply to the capitated encounter data, even though some of the financial variables are set to zero (0) or one (1) because encounter records may not contain fee-for-service charge and payment equivalents.

To protect business-confidential discount arrangements between our data contributors and their providers, information on submitted charges and allowed amounts are never licensed simultaneously on the same MarketScan dataset.

Exhibit 2. Example of a Merative Financial Variable Calculation

Charge Types ¹	Amount, \$	
Submitted charges	1,200.00	
Charges not covered	-100.00	
Eligible charges	1,100.00	
Price reductions	-100.00	
Description	Data Element	Amount, \$

¹ Charge types are not standard MarketScan variables.

Gross covered payments	Gross Covered Payments (PAY)	1,000.00
Remaining deductible	Deductible (DEDUCT)	-100.00
Coinurance at 20 percent	Coinurance (COINS)	-180.00
Penalty for no precertification	Coordination of Benefits and Other Savings (COB)	-270.00
Net payments	Net Payments (NETPAY)	450.00

Medical/Surgical financial variables

The following abbreviations indicate the tables on which the variable resides:

- I – Inpatient Admissions
- F – Facility Header
- S – Inpatient Services
- O – Outpatient Services
- D – Outpatient Pharmaceutical Claims
- L – Long-Term Care

Exhibit 3. Definitions of Medical/Surgical financial variables

Term	Definition ²	MarketScan Variable	Table
Total Payment	Total gross payment to all providers associated with the admission	Payments, Total Case (TOTPAY)	I
Payment	Total gross payment to a provider for a specific service; that is, the amount eligible for payment after applying pricing guidelines such as fee schedules and discounts and before applying deductibles, copayments, and coordination of benefits	Payment (PAY)	S,O,D,L
Deductible	Amount of gross covered payments applied toward the deductible	Deductible, Total Case (TOTDED) Deductible (DEDUCT)	I F,S,O,D,L

² These variables are formatted in dollars and cents.

Term	Definition ²	MarketScan Variable	Table
Coinurance/ Copayment	Amount of coinsurance applied toward the stop loss and/or amount of copayment	Copayment, Total Case (TOTCOPAY)	I
		Coinurance, Total Case (TOTCOINS)	I
		Copayment (COPAY)	F,S,O,D,L
		Coinurance (COINS)	F,S,O,D,L
Net Payment	Payment received by the provider excluding patient out-of-pocket and coordination of benefits (i.e., employer or plan liability)	Payments, Net (NETPAY)	F,S,O,D,L
Total Net Payment	Total net payment to all providers associated with the admission (i.e., sum of service-level net) payments	Payments, Net Case (TOTNET)	I

Term	Definition ²	MarketScan Variable	Table
Hospital Payments	Total gross payments to the hospital for an admission	Payments, Hospital (HOSPPAY)	I
Physician Payment	Total gross payments to the principal physician (i.e., the professional who charges the most during the admission) ³	Payments, Physician (PHYSPAY)	I
Hospital Net Payment	Payment received by the hospital for an admission excluding patient out-of-pocket and coordination of benefits (i.e., employer or plan liability)	Net Payment, Hospital (HOSPNET)	I

³ Payments to physicians other than the principal physician are included in Payments Total Case (TOTPAY).

Term	Definition ²	MarketScan	Table
Physician Net Payment	Payment received by the principal physician (i.e., the professional who charges the most during the admission), excluding patient out-of-pocket and coordination of benefits (i.e., employer or plan liability)	Net Payment Physician, (PHYSNET)	I
Third-Party Payment	Payment received by the provider from a source other than the patient or the submitting plan	Coordination of Benefits and Other Savings, Total Case (TOTCOB)	I
	COB and Other Savings (COB)	F,S,O,D,L	

Prescription drug financial variables

The Outpatient Pharmaceutical Claims Table contains the Payment (PAY), Copayment (COPAY), Coinsurance (COINS), Deductible (DEDUCT), and Coordination of Benefits and Other Savings (COB) variables, as previously described.

Financial variables specific to prescription drug claims are provided in Exhibit 4.

Exhibit 4. Definitions of Outpatient Pharmaceutical Financial Variables in Table D

Term	Definition ⁴	MarketScan Variable
Average Wholesale Price ⁵	The average wholesale price charged by wholesalers for the specific drug	Average Wholesale Price (AWP)
Administrative Dispensing Fee	Administrative fee charged by the pharmacy for dispensing the prescription	Dispensing Fee (DISPFEE)
Ingredient Cost	The cost or charge associated with the pharmaceutical product ⁶	Ingredient Cost (INGCOST)

⁴ These variables are formatted in dollars and cents.

⁵ The Merative™ Micromedex® RED BOOK® Systems Licensed Content may be used only as a referential look-up tool and not for an automated claims processing system; use is for RED BOOK System Licensed Content only. The prices contained in the RED BOOK are based on data reported by manufacturers. Merative Micromedex® has not performed an independent analysis of the actual prices paid by wholesalers and providers in the marketplace. Thus, actual prices may vary from the prices contained in this database, and all prices are subject to change without notice. Further, Merative Micromedex does not warrant the accuracy of the database contents or the pricing information. Please refer to the Average Wholesale Price Policy in the RED BOOK product for more information.

⁶ The Ingredient Cost plus the Dispensing Fee and Sales Tax, if applicable, usually represents the entire cost of a prescription.

Term	Definition ⁴	MarketScan Variable
Sales Tax	The amount of sales tax applied to the cost of the prescription ⁷	Sales Tax (SALETAX)

Encounter record financial variables

Financial information is captured in a variety of ways for encounter claims. A capitated claim may have financial variables with amounts of zero because there is no associated paid claim. At other times, the copayment amount may be the only financial information on the claim. The CAP flag will indicate whether the patient was covered under a capitated arrangement at the time of service. If CAP=1, then the record could be an encounter. If a capitated claim does not include financial information, the financial variables are set to "0" or "1."

Adjustment records

Some claims have negative amounts in payment or other financial variables. These are adjustment records entered by claims processors to correct a payment error or any type of coding error.

Using strict criteria, adjustment records in MarketScan data have been resolved using one of two types of adjustment methods. Resolution of adjustments combines the financial variables on the original record with the financial variables on the adjustment. No information is lost when resolving adjustment records. The sum of the financial variables remains the same. However, instead of reading across multiple records to understand the services rendered, resolution of adjustments creates a single service-level record. Adjustment records are resolved on both the Outpatient Services Table and the Outpatient Pharmaceutical Claims Table. Adjustment records are not resolved on the Inpatient Services Table.

There are two methods that claims processors typically use for entering adjustment records: the Adjustment Method and the Void and Replace Method.

The Adjustment Method allows the entry of a new claim that exactly duplicates all the correct variables on the erroneous claim, including the date of service. In the case of financial information being incorrect, an adjusted dollar amount is entered in the appropriate financial

⁷ Calculation of the sales tax, if applicable, usually is based on the Ingredient Cost plus the Dispensing Fee.

variable(s) (e.g., PAY), and all other financial variables are \$0. In the case of a nonfinancial variable being incorrect, the data in the appropriate variable (e.g., DX1) are corrected, and all financial variables are \$0 on the adjustment record. This way, the sum of the financial variables of the erroneous claim and the adjustment claim equals the correct financial amounts. Under this method, therefore, two records represent a single transaction.

To resolve the adjustment, the MarketScan Database build process matches the adjustment with the original record, with the requirement that certain nonfinancial variables are exactly the same on both records. The financial information on the two records is summed, creating one resulting record. Exhibit 5 presents an example of the adjustment method.

Exhibit 5. Example of the Adjustment Method

Record Type	ENROLID	SVCDATE	DX1	PAY	NETPAYYYYY
Original	9876501	20210630	12345	100	70
Adjustment	9876501	20210630	12345	-20	0
Resulting	9876501	20210630	12345	80	70

The **Void and Replace Method** allows entry of a new claim that exactly duplicates all variables of the erroneous claim except that the financial variables are entered as negatives. In this way, the original erroneous claim is fully voided, and the claim is re-entered with complete correct data in each variable. Under this method, three records are present to represent a single transaction.

To resolve the adjustment, the MarketScan Database build process matches the void record with the original record, with the requirement that certain nonfinancial information is exactly the same on both records and the financial information on the void record is the exact negative of the original record. The void and original record are dropped from the database because the combined record is a record in which all financial information is zero. Only the replacement record remains. Exhibit 6 presents an example of the Void and Replace Method.

Exhibit 6. Example of the Void and Replace Method

Record Type	ENROLID	SVCDATE	DX1	PAY	NETPAY
Original	9876501	20210630	12345	100	70
Void	9876501	20210630	12345	-100	-70
Replacement	9876501	20210630	12345	80	70
Resulting	9876501	20210630	12345	80	70

Unresolved adjustments

Because strict matching criteria are required to resolve adjustments, some adjustment records remain unresolved; these account for less than 1 percent of the records in the MarketScan Outpatient Services Table. These records generally contain changes to a variable that normally would be used to match the original and adjustment records. For example, if the original Provider ID (PROV_ID) was incorrect and the adjustment record adjusted for that ID, the two records would not match because PROV_ID is a key variable. Both records would remain. When performing person-level analysis, or higher levels of analysis such as geographic region, all claims must be included.

Person-level identifiers

Enrollee identifiers

One of the major strengths of the MarketScan Research Databases is their ability to track patients and families longitudinally. The MarketScan Databases maintain person-level identifiers, consisting of family and member identifiers, across all years of data and across all tables, including medical/surgical and outpatient pharmaceutical claims.

The enrollee identifier (ENROLID) is the unique identifier assigned during MarketScan data build and cannot be linked to recipient ID, Social Security number, or any other external identifier. Enrollee identifiers are derived from all data contributors, not only those submitting person-level enrollment data. The methodology used to assign ENROLID differs depending on the level of information available from a particular data contributor.

Clinical variables

Diagnosis codes in MarketScan data use the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) classification system for service dates on or before September 30, 2015. For service dates starting October 1, 2015, the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) classification system is used. A Diagnosis Version (DXVER) field is included in the data to indicate which coding system is in use. Note that it is possible for one string to be valid in both systems.

ICD-9-CM diagnosis codes are three to five digits. The first character can be alphanumeric (0–9, E or V); characters two through five are numeric or blank. There are approximately 15,800 valid ICD-9-CM codes. In MarketScan data, the decimal point is implied between the third and fourth digit of the code. The data are left justified. Examples are provided in Exhibit 7a.

Exhibit 7a. Examples of ICD-9-CM diagnosis codes

ICD-9-CM	MarketScan Data Value
390	390 (followed by 2 spaces)
012.1	0121 (followed by 1 space)
223.89	22389

ICD-10-CM diagnosis codes are three to seven digits in length. The first character can be alphanumeric, the second character is numeric, the third character is alphanumeric, and the fourth through seventh characters are alphanumeric or blank. There are approximately 70,000 valid ICD-10-CM codes. In MarketScan data, the decimal point is implied between the third and fourth digit of the code. The data are left justified. Examples are provided in Exhibit 7b.

Exhibit 7b. Examples of ICD-10-CM diagnosis codes

ICD-10-CM	MarketScan Data Value
E02	E02 (followed by 4 spaces)
M86.9	M869 (followed by 3 spaces)
C72.20	C7220 (followed by 2 spaces)
B08.010	B08010 (followed by 1 space)
W00.9XXA	W009XXA

Up to four diagnosis codes (DX1, DX2, DX3, DX4) are recorded on every Inpatient Service record. The principal diagnosis on the Inpatient Admissions Table generally is identified as the discharge diagnosis on a hospital claim. Up to 14 secondary diagnosis codes (DX2 through DX15) from individual Inpatient Service records are included on the corresponding Inpatient Admission record. Up to four diagnosis codes (DX1, DX2, DX3, DX4) are recorded on each Outpatient Service record. Up to nine diagnosis codes (DX1 through DX9) are recorded on each Facility Header record.

Procedure codes in MarketScan data are three to seven digits, depending on the classification system used. The Current Procedural Terminology, 4th Edition^{8 9}, (CPT®-4) coding system is most prevalent. CPT-4 procedure codes appear on physician claims and many outpatient facility claims. CPT-4 codes are five-digit numeric codes.

ICD-9-CM procedure codes or International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) procedure codes are found on facility claims. These

⁸ CPT copyright 2022 American Medical Association (AMA). All rights reserved. Applicable Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) restrictions apply to government use.

⁹ Fee schedules, relative value units, conversion factors, and related components are not assigned by the AMA and are not part of CPT; the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

codes are three to four digits and are all numeric. There is an implied decimal point between the second and third digits for ICD-9-CM procedure codes; there is no decimal point in ICD-10-PCS procedure codes. Examples are provided in Exhibit 8.

Exhibit 8. Examples of ICD-9-CM and ICD-10-PCS procedure codes

ICD-9-CM, ICD-10-PCS	MarketScan Data Value
13.9	139 (followed by 4 spaces)
13.19	1319 (followed by 3 spaces)
001U3J7	001U3J7

Effective with the 2000 data year, the MarketScan Databases contain CPT-4 procedure code modifiers for some data contributors (see related references in footnotes on previous page).

The CMS Healthcare Common Procedural Coding System (HCPCS) procedure codes are found in MarketScan data less often than CPT and ICD procedure codes. These codes are five digits. The first character is alpha; all other characters are numeric. HCPCS codes beginning with "J" are included in the MarketScan Databases and represent injectable drugs.

One procedure code (PROC1) is stored on each Inpatient Services record. From the individual Inpatient Services constituting one Inpatient Admissions record, one procedure code is identified and assigned as the principal procedure (PPROC). Up to 14 secondary procedure codes (PROC2 through PROC15) from individual Inpatient Service

records are included on the corresponding Inpatient Admissions record. One procedure code (PROC1) is included on each Outpatient Service record. Up to six procedure codes (PROC1 through PROC6) are included on each Facility Header record. Most procedure codes on the Facility Header Table use the ICD-9-CM or ICD-10-PCS systems.

The variable Procedure Code Type (PROCTYP) identifies the type of procedure code (e.g., HCPCS, CPT-4). Use this variable in conjunction with the Procedure Code 1 (PROC1) variables on the Inpatient Services and Outpatient Services records to designate the coding system of interest.

The quality of diagnosis and procedure coding varies among the approximately 350 payers or administrators represented in the MarketScan Databases. Every effort is made to select the data contributors with the best coding. The diagnosis and procedure codes are validated and edited, if necessary. The Merative MarketScan Multi-Medicaid Database contains the pooled

health care experience of approximately seven million Medicaid enrollees from multiple states.

Each contributor database is constructed by collecting raw data from the appropriate payer(s). These raw data are service-level adjudicated paid claims and capitated encounters containing both inpatient and outpatient services. Financial, clinical, and demographic variables are standardized to common definitions, and variables specific to employers also are added. Clinical detail is added to the Outpatient Pharmaceutical Claims Table. Examples of such detail include therapeutic class, therapeutic group, manufacturer's average wholesale price, and a generic product identifier.

Merative then applies an admission construction methodology to assemble the inpatient paid services into one record per inpatient admission. During the admission creation process, variables such as Primary Diagnosis (PDX) are created and included on both the inpatient admission record and the inpatient service record.

Data quality

Edits on the reasonableness of data check the distribution of categorical fields to ensure that they are reasonable against norms. Validity checks are conducted for selected fields, including diagnosis codes, procedure codes, date(s) of service, sex, and age, to compare recorded values with lists of possible valid values for those fields. Improper coding is flagged to recommend data quality improvement actions to the carrier or data processor.

The MarketScan Databases are created by combining the standard variables of the individual databases (data contributors) and by creating links between years of data and across all data types. The MarketScan Databases are created as a snapshot in time and are based on a calendar-year incurred period. The MarketScan data flow is depicted in Exhibit 9.

Claims lag periods (the amount of time between the date of service on the claim and the date payment is made) vary considerably across the insurance carriers in the MarketScan Databases. Because of this, the data are collected when close to 100 percent of claims have been paid, which takes about 6 months after year end.

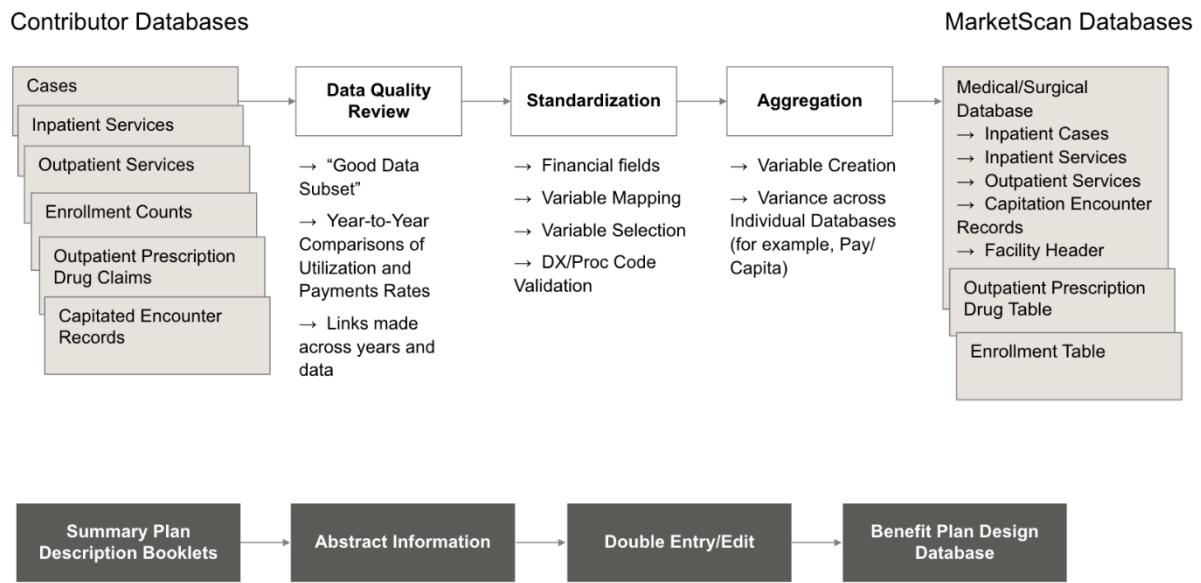
Additional enhancements to the data during the MarketScan Database creation process include the following:

- Comparing and validating diagnosis and procedure codes to codes that were in effect at that time
- Integrating benefit plan characteristics, enrollment, outpatient pharmaceutical claims, and medical/surgical data
- Adding MDCs and DRGs to claims

- Creating a common synthetic patient identifier, which enables a patient to be tracked over years across medical/surgical, outpatient, pharmaceutical, and enrollment files and across databases while ensuring patient confidentiality
- Identifying the type of plan for the patient, such as preferred provider organization (PPO), point-of-service (POS) plan, or comprehensive plan
- Verifying that both the experience and the denominator populations exist for all subsets of the data
- Standardizing place, service type, and provider type values.

Note: Data are not edited for concordance between diagnosis or procedure codes and demographic variables such as sex.

Exhibit 9. MarketScan data flow chart



Abbreviations: DX/Proc, diagnosis/procedure

Plan type definitions

The plan types in the MarketScan Databases are based on the definitions provided below. The summary grid identifies the basic differences between plan types.

Exhibit 10. Type of plan (PLANTYP)

Definition Number and Plan Type	Patient Incentive to Use Certain Providers?		Referrals		
	PCP Assigned?	Required?	From PCP to Specialists Required?	Out-of-Network Services Covered?	Partially or Fully Capitated?
1. B/MM	No	No	n/a	n/a	No
2. COMP	No	No	n/a	n/a	No
3. EPO	Yes	Yes	Yes	No	No
4. HMO	Yes	Yes	Yes	No	Yes
5. Non-Cap POS	Yes	Yes	Yes	Yes	No
6. PPO	Yes	No	n/a	Yes	No
7. PCCM	Varies	Yes	Varies	n/a	Yes
8. CDHP	Varies	No	n/a	Varies	No
9. HDHP	Varies	No	n/a	Varies	No

Abbreviations: n/a, not applicable; PCP, primary care physician. Plan type abbreviations are defined below.

Plan type

1. Basic/Major Medical Plan

There is no incentive for the patient to use a specific list of providers. Coverage is handled in two phases: a basic policy covers the first set of charges—usually a hospital admission—with no out-of-pocket charge. After the basic policy will no longer pay, a major medical policy assumes coverage, usually with a deductible and coinsurance.

2. Comprehensive Plan

There is no incentive for the patient to use a specific list of providers. Coverage is handled by only one policy with a deductible and coinsurance.

3. Exclusive Provider Organization Plan

Patients must choose from an approved list of providers for all nonemergency care. Each patient chooses a primary care physician (PCP) to manage all care. Referral from the PCP is required for treatment by specialists. The plan does not pay for services on a capitated basis.

4. Health Maintenance Organization Plan

Patients must choose from an approved list of providers for all nonemergency care. Each patient chooses a PCP to manage all care. Referral from the PCP is required for treatment by specialists. The plan pays for all services on a capitated basis.

5. Noncapitated Point-of-Service Plan

Patients are offered financial incentives through a lower copay or deductible to use an approved list of providers. Each patient chooses a PCP to manage all care. Referral from the PCP is required for treatment by specialists. No services are capitated, and patients may seek treatment outside the network, usually involving a severe financial penalty.

6. Preferred Provider Organization Plan

Patients have financial incentives, often through a lower copay or deductible, to use an approved list of providers. No PCP is required, nor are referrals necessary. No services are capitated. Patients may seek treatment outside the network but usually at a higher cost to the patient. The financial incentives may be offered only through discounted rates within the network.

7. Primary Care Case Management (PCCM)

Primary Care Case Management (PCCM) is a system under which: (1) A primary care case manager contracts with the State to furnish case management services (which include the location, coordination, and monitoring of primary health care services) to Medicaid beneficiaries; or (2) A primary care case management entity contracts with the State to provide a defined set of functions.

8. Consumer-Directed Health Plan

A consumer-directed health plan (CDHP) is a PPO plan coupled with a health reimbursement arrangement (HRA). The PPO plan typically has a relatively high deductible but may carve drugs in or out of the HRA and plan deductible. The HRA is a notional account that is 100 percent paid from employer funds; an HRA is not prefunded with employer monies.

9. High-Deductible Health Plan

A high-deductible health plan (HDHP) is a statutory HDHP (as defined in the Medicare Modernization Act of 2003) that is coupled with a health savings account (HSA). An employee is vesting 100 percent in HSA funds, and either the employer or employee can contribute to the HSA. The HSA is a tax-advantaged, portable savings account owned by the employee. HDHP plan design features such as deductibles and contribution limits are indexed each year by the Treasury Department. An HDHP must conform to the statutory plan design requirements in order to use an HSA to defray HDHP costs.

Glossary of acronyms, abbreviations, and terms

Acute care

- (1) Services within a hospital setting intended to provide patients with medical and surgical care over a relatively short period of time.
- (2) A hospital that provides short-term medical and surgical care.

Adjudication

The process of claims review by the carrier to determine whether the claims should be paid and, if so, how much money should be paid for each claim.

Adjustment records

Claims in some databases that represent financial adjustments to original claims. The dollar amounts of these adjustments may be negative, or the record may include an adjustment indicator that shows whether the adjustment is positive or negative. There also are specific terms that refer to adjustments as we receive them from carriers. A bulk adjustment is a single quarterly or annual adjustment for a hospital discount (not typically loaded on the database). A void adjustment is a record that simply cancels an earlier claim record. A replacement claim record usually follows it. A void and replace adjustment is a single record that stores both the cancellations of the earlier claim and the new claim. An adjustment to net pay just shows the difference between the original net pay amount and what the carrier actually paid.

Administrator

Person or firm that pays claims under an Administrative Services Only (ASO) contract—also known as a third-party administrator.

Admission

An acute inpatient hospital stay covered by the patient's benefit plan. To the extent that such care is covered, admissions may include hospital stays, psychiatric stays, psychiatric night care, and stays for alcoholism, substance abuse, and rehabilitative care. An admission also may be called a case or a stay.

Admission date

The date a patient begins a stay in a hospital or other overnight healthcare facility.

Ambulatory care

Medical services provided on an outpatient (nonhospitalized) basis. Services may include diagnosis, treatment, surgery, and rehabilitation.

Ambulatory surgery

Surgery for which there is no overnight stay in a hospital. The patient comes into and out of the hospital on the same day.

Annualization

A statistical technique for estimating a yearly rate using data collected over a shorter time period (for example, a quarter or month) or over a longer time period (for example, 30 months).

Average length of stay (ALOS)

The average number of days per hospital admission for a group of admissions. Analysts typically examine the ALOS for a single MDC or DRG at a given employee location or other variable and compare it with a norm, another location, or other measure. See **length of stay**.

Benefit

Conventionally defined as the amount payable for a loss under a specific insurance coverage (indemnity benefits) or as the guarantee that certain services will be paid.

Business coalitions

Groups of employers, which may or may not include health plans, that seek to control healthcare costs and ensure quality by aggressively regulating prices, assuming administrative tasks related to healthcare, and/or asking health plans to develop and provide data on measures of quality and outcomes.

Capitation

- (1) A predetermined amount prepaid to a provider for a specific group of services that are defined in the contract, usually in a health maintenance organization (HMO) arrangement. The provider is paid on the basis of the number of members who have selected him or her as their primary care physician (PCP).
- (2) A fixed, predetermined amount paid to a provider for each member who has elected to seek care from that provider. Total payment to the provider (sum of per person enrolled payment amount) is based on the number of people who enroll without regard to the actual number or nature of services provided to members. This is the characteristic payment method for primary care in HMOs.

Carrier

The party to the group contract that agrees to underwrite and provide certain types of coverage and service. Examples are commercial insurers (for example, Aetna®, Metropolitan Insurance Services, Prudential) and Blue Cross Blue Shield.

Carve-out

A program that is separate from the primary group health plan and designed to provide a specialized type of care, such as mental health services. **Carve-out** also may describe a method of integrating Medicare with an employer's retiree health plan (making the employer plan excess or secondary), which tends to produce the lowest employer cost.

Case level

A variable that is found in the Inpatient Admissions Table. Case-level variables may be demographic variables that are the same for the entire case (for example, patient age and sex, employee ID number), clinical variables that refer to the case as a whole (for example, MDC, DRG), or financial variables that summarize all services for a case (for example, total payments). See **service level** for comparison.

Centers for Medicare & Medicaid Services (CMS)

- (1) A division within the U.S. Department of Health and Human Services (HHS). This division oversees all regulatory and financing activities for Medicare and Medicaid.
- (2) The portion of the federal government responsible for payment of Medicare. Prior to June 2001, CMS was named the Health Care Financing Administration (HCFA).

Charges

The amount patients or third-party payers are billed for care.

Claims data

Information that comes from provider claims to third-party payers. Claims data usually include personal patient-identification information, the services performed, and the amount paid by the patient. Claim forms generally are used by enrollees of standard indemnity plans (that is, fee-for-service plans).

Claims lag

- (1) This lag generally refers to the period between the date a healthcare service is incurred and the date the claim for that service is submitted to the administrator for payment.

(2) The Merative definition is the period between the service date and the paid date on a claim. See **runoff**.

Coding

The handling process for the carrier's claims data. A **coding problem** indicates that the carrier has entered inaccurate or imprecise data into the claims record, has failed to fill in one or more data variables, or has failed to include one or more variables in the record extract.

Coinsurance

- (1) The percentage of a covered medical expense that a health plan or beneficiary must pay after a deductible is met.
- (2) A policy provision by which both the insured and the insurer share hospital and medical expenses in a specified ratio (commonly 20 percent to 80 percent), after the deductible is met. Coinsurance amounts are stored in the Merative variable COINS.

Completion factors

- (1) Factors that allow a quantitative measure of data completeness. These factors range in value between 0 (no data) and 100 (a full month of data) for services in any month. Completion factors are used to derive the number of months of data and an annualization factor for rate calculations. They also are used to derive weighted population averages.
- (2) A percentage that estimates how many of the cases that occurred in a given month are online in a client database. Completion factors of less than 100 percent are due to runoff or runup. The percentage of data missing for each month is used to annualize the cost and use rates for that month on clinical reports.

Comprehensive Omnibus Budget Reconciliation Act (COBRA)

- (1) A congressional act passed in 1985 that requires continuation of benefits to plan participants who previously would have been ineligible because of a qualifying event.
- (2) A program that gives employees who leave a firm the option of continuing their health coverage with that firm for a period of time. The employee pays the premium.

Coordination of benefits (COB)

- (1) After one insurance carrier has paid a claim, the second carrier pays an amount that covers the patient up to the benefit level of the second policy only.
- (2) COB coverage between carriers so that the insured does not receive double payment for services when a subscriber has coverage from two or more sources. An example is a husband and wife who work at different companies and choose to be

covered by both employers' insurance. COB policies also establish primary and secondary payment responsibilities. (In the Merative system for older databases, the COB variable may represent dollars saved for reasons other than COB, such as penalties for noncompliance.)

Copay or copayments

- (1) Copayments are generally a preset amount per covered visit or service (for example, \$10) paid by the patient.
- (2) A fixed payment, paid by the patient, for a given service or procedure. This payment customarily is made at the time of service. Copayment amounts are stored in the Merative variable COPAY.

Cost sharing

Arrangements whereby consumers pay a portion of the cost of the health services, sharing costs with employers. Deductibles, copayments, coinsurance, and payroll deductions (premium contributions) are forms of cost sharing.

Cost shifting

Occurs when a provider inflates charges for a given procedure or patient in order to cover losses associated with charges (payments received) for other patients or procedures.

CPT or CPT-4 codes

Physicians' Current Procedural Terminology codes.

- (1) Physicians' most commonly used coding scheme (five-digit codes) used to identify the medical or surgical procedure that occurred for a patient; most frequently used for billing by professionals. (It is often referred to as CPT-4, with 4 representing the fourth edition).
- (2) A system developed by the American Medical Association used to classify procedures and services rendered by physicians. Physicians use the CMS 1500 form to describe services rendered to a patient and to request payment for those services. See ICD-9-CM, ICD-10-CM/PCS, HCPCS.

Deductible

The portion of a subscriber's healthcare expenses that must be paid out of pocket before any insurance coverage applies. Commonly \$100 to \$300. It is not allowed in federally qualified HMOs. The deductible usually must be met again each benefit year before the insurer will begin paying for benefits. The deductible amount is stored in the Merative variable DEDUCT.

Dependent

An insured individual's spouse or (in many policies) domestic partner and unmarried children who meet certain eligibility requirements and who are not otherwise insured under the same group policy. The precise definition of a dependent varies by insurer or employer.

Diagnosis (Dx)

The determination of the nature of a disease based on the medical symptoms of a patient; a concise technical classification of a health situation. The diagnosis helps determine necessary procedures.

Discount

Arrangement whereby a payer has negotiated a reduced payment with a provider in return for a patient incentive.

Eligible

A contract holder and his or her spouse and dependents who are enrolled in a benefit plan.

Encounter

(1) A unit of measure denoting one patient-provider contact or appointment. Multiple services may be delivered during one encounter. Encounters can take place on an inpatient or outpatient basis.

(2) A patient visit to a capitated provider; no fee-for-service payment.

Encounter record

A record of a patient encounter reflecting who visited a given provider and which services were provided. The form used to capture encounter data applies to non-fee-for-service arrangements (capitated).

Enrollees

Employees, contract holders, spouses, and dependents who are enrolled in a benefit plan (also known as **covered lives**).

Exclusions

Services or procedures that are not covered according to the plan provisions.

Exclusive provider organization (EPO)

A preferred provider organization (PPO) in which patients are required to use the PPO network providers.

Fee-for-service (FFS)

A method of payment based on reimbursing providers for each unit of service or treatment provided.

Fee-for-service equivalent (FFSE)

An amount specified on claims records representing what would have been charged for a service if the service had not been covered by a capitation arrangement.

Gatekeeper

- (1) The PCP responsible for managing medical treatment rendered to an enrollee of a health plan.
- (2) A designated healthcare practitioner who provides primary care services and coordinates specialist and other care for health plan members. Members typically are charged extra costs for care that is not provided or coordinated by the gatekeeper.

Grouper

Software that assigns claims to a common clinical grouping. In the MarketScan Databases, groupers are used to assign a DRG and MDC to each inpatient admission. The assignment is based on diagnosis and procedure coding received from the carrier (provided the diagnosis and procedure coding from the carrier is adequate).

Healthcare Common Procedure Coding System (HCPCS)

- (1) A procedure coding system that includes all CPT-4 codes plus supplemental codes not included in CPT-4 (for example, ambulance, chiropractic services).
- (2) One of several schemes used to classify healthcare activity. HCPCS was based on CPT-4 coding and expanded to include nonphysician provider procedures. The acronym is pronounced “hick-picks.” See CPT-4, ICD-9-CM, ICD-10-CM/PCS.

Health maintenance organization (HMO)

- (1) An entity that accepts responsibility and financial risk for providing specified healthcare services to a defined population during a defined period of time at a fixed price. There generally is no coverage for non-emergency-department care panels of practitioners and providers.
- (2) The Health Maintenance Act of 1973 (PL93-222) defines an HMO as a legal entity or organized system of healthcare that provides an agreed-upon set of comprehensive

health services to a voluntarily enrolled population in exchange for a predetermined, fixed, and periodic payment. See **open-ended HMO**.

Hospital payments

Facility payments only.

Incurred but not reported (IBNR)

Claims for services that have been incurred but not yet paid by the carrier. See **claims lag**.

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)

A nationally uniform system for coding clinical conditions (diagnoses) that was used prior to October 1, 2015, by nearly all providers and claims payers. It also includes procedure coding used by hospitals. ICD-9-CM includes both diagnostic and procedure coding required by the Grouper to assign DRGs and MDCs. It is also known as I9. See **CPT-4, HCPCS, ICD-10-CM/PCS**.

International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS)

A nationally uniform system for coding clinical conditions (diagnoses), used effective October 1, 2015, by nearly all providers and claims payers. It also includes procedure coding used by hospitals. ICD-10-CM/PCS includes both diagnostic and procedure coding required by the Grouper to assign DRGs and MDCs. It is also known as I10. See **CPT-4, HCPCS, ICD-9-CM**.

Incurred date

The date on which the activity or service took place. See **paid date, claims lag, IBNR**.

Indemnity (traditional) insurance

- (1) A healthcare insurance plan designed to reimburse patients for losses due to healthcare costs; typically used to characterize fee-for-service payment plans.
- (2) The most common form of health insurance coverage in recent decades. The indemnity insurer usually administers claims and does not provide healthcare services. A typical coverage arrangement is 80 percent of a claim covered by the insurer and 20 percent covered by the patient or enrollee (also referred to as coinsurance). Indemnity plans typically also require that the covered person meet an annual deductible (for example, \$200) before the insurer will begin to pay a percentage of claims incurred.

Individual practice association (IPA)

A type of HMO. A group of physicians who practice independently but also provide services for an HMO under a contract agreement. An IPA physician also can and does provide “traditional” fee-for-service healthcare to patients not covered by an HMO.

Inpatient

- (1) Pertaining to the medical care of an individual admitted to the hospital for at least 1 night.
- (2) That portion of the base relating to hospital admissions. Length of stay (DAYS) will be at least one day.

Inpatient payments

All facility, professional and other payments related to a hospital admission.

Length of stay (LOS)

The number of days (DAYS) the patient was confined (spent in the hospital) during the inpatient admission. Also see **average length of stay**.

Long-term disability (LTD)

- (1) A significant period of disability generally ranging from 6 months to life.
- (2) Wage replacement insurance for individuals who are (partially or totally) permanently disabled.

Mail-order pharmacy

A company that receives prescriptions from physicians or patients via fax or mail and then mails the medication to patients. Meanwhile, the physician provides the patient with enough of the medication to last until the prescription arrives. Generally, the cost per prescription from mail-order pharmacies is lower than the cost at other pharmacies because of higher volume and lower overhead.

Major diagnostic category (MDC)

- (1) A classification system for grouping medical conditions into one of 25 categories. The first 16 categories refer to major body systems; the remaining categories encompass more than one body system.
- (2) A widely recognized classification system that groups medical conditions into broad classifications, mostly by body system. Each DRG is assigned to one MDC.

Managed care

- (1) Employing incentives at both the provider and patient level that encourage the efficient provision of healthcare services. Common elements of managed care include capitation, a primary physician acting as a gatekeeper, and patient copayments.
- (2) An organized system of healthcare services in contrast to the fee-for-service system.

Medical

Clinical in nature, as opposed to surgical.

Medicare

- (1) A system of medical insurance provided by the federal government for all Americans aged 65 years and older and for Americans who are permanently disabled or have renal failure.
- (2) A federal program under Title XIX of the Social Security Act that provides health insurance for individuals aged 65 years and older and for other specified groups. Part A of Medicare covers hospitalization and is compulsory (that is, automatically provided to any beneficiary who has qualified for participation in Social Security). Part B of the program covers outpatient services and is voluntary.

National Drug Code (NDC)

A standard 12-digit coding system used to identify drugs on drug claims.

Not elsewhere classified (NEC)

An abbreviation used to indicate the most generic category. There may be insufficient information to assign a more specific code.

Net pay

The portion of the charge for a healthcare service that the carrier paid to the employee or assigned provider. NETPAY is calculated as PAY minus DEDUCT minus COPAY minus COINS minus COB.

Network providers

Providers who have contracted to be part of a plan's network; they may be capitated or on a discounted fee-for-service arrangement. Patients who visit out-of-network providers generally pay greater out-of-pocket amounts.

Open-ended HMO

An HMO that allows the patient to receive services from a nonnetwork provider.

Although such services will be covered, the patient must pay higher-than-normal copayments and deductibles.

Out-of-pocket (OOP) costs

The portion of the claim that the patient or enrollee is obligated to pay (for example, copayments, coinsurance, deductible). There typically is an annual OOP maximum. If the maximum is met, the insurer pays 100 percent of the costs incurred by the enrollee for the remainder of the plan year.

Paid date

The date on which a claim is paid (PDDATE). Claims data usually are received from carriers on the basis of paid date. For example, a submitted data file may contain all claims that were paid during the fourth quarter of 2013, regardless of when the claims were incurred. See **incurred date, claims lag**.

Point-of-service (POS) plan

Replacement of an indemnity plan.

(1) A managed care plan that pays (reduced) benefits when patients receive healthcare services either from non-managed-care network providers or without proper referral by their primary care physician.

(2) A benefit plan design in which enrollees must access the healthcare system through a gatekeeper. In addition to differential coinsurance and copayment levels described under PPO, POS plans may include a differential deductible for in- and out-of-network services used (for example, in-network deductible may be \$250 and out-of-network deductible may be \$500).

Precertification or preauthorization

Permission from the administrator for the hospital admission to occur or the services to be performed. This is a form of utilization review based on the patient's health status and treatment needs.

Preferred provider arrangement or prudent purchaser arrangement (PPA)

Same as a preferred provider organization.

Preferred provider organization (PPO)

- (1) A health plan that gives patients lower rates if they use the physicians in the preferred group of providers. Patients may use doctors outside that list, but they usually pay more to do so. Participating physicians normally are under a contract and keep an independent practice in the community. They also typically enroll in other preferred provider programs. Physicians receive reduced rates in return for a larger patient flow—lower price for the promise of higher volume.
- (2) Providers (for example, hospitals, physicians) offering discounts or other reduced rates to a healthcare purchaser. Patients usually are “channeled” by receiving improved benefits (for example, lower/no deductibles or copayments). See EPO, point-of-service PPO.

Premium

An amount paid periodically to purchase health benefits; for self-insured groups that do not purchase insurance, the term may refer to the per employee or per family cost of health benefits and may be used for planning and analysis purposes, even when no contribution to coverage is collected from the employee.

Primary care physician (PCP)

The physician that a patient in a managed care plan must see first for any health problem; the PCP acts as a gatekeeper and determines whether and when the patient needs to see a specialist. PCPs generally are internists, pediatricians, family physicians, general practitioners, and occasionally obstetricians/gynecologists.

Procedure group

Outpatient procedure groupings based on CPT-4 and HCPCS procedure code values.

Provider

A person or organization that provides healthcare services, such as a physician or hospital.

Referral

- (1) Written authorization from a patient’s PCP for the patient to see a specialist.
- (2) An arrangement for a patient to be evaluated or treated by another provider.

Reimbursement

The dollar cost of covered products and services for which insurers pay.

Risk sharing

An agreement whereby the risks of providing care under a capitated arrangement are shared by multiple parties. For example, a pharmaceutical manufacturer assumes a portion of the financial risk for the use of a product with the provider. A risk-sharing arrangement may include a capitated payment for the unlimited use of a product, promotion of appropriate usage by the manufacturer, or performance guarantees based on predetermined outcomes.

Runoff period

The period of time representing the number of months between a claim's service date and paid date. For example, if the runoff month's variable is equal to 6, it indicates that most claims are paid within 6 months of their service date.

Self-insurance

Funding of medical care expenses in whole or part through internal resources rather than through transfer of risk to an insurer.

Service date

The date that a medical care service is provided (SVCDATE).

Service level

A variable that is found in the Inpatient Services Table. These variables can be different for each service within an admission. Examples are service date, provider ID, diagnosis and procedure codes, and financial variables that contain only the amount for that service (for example, charge, payment). See **case level** for comparison.

Short-term disability (STD)

- (1) Wage replacement insurance for individuals temporarily disabled because of nonoccupational injury or illness.
- (2) Often considered to be a disability lasting not longer than 6 months.

Stop-loss (out-of-pocket max)

- (1) Usually, this refers to the maximum out-of-pocket amount that an individual or family could pay in a single plan year, including deductibles and copayment amounts. Alternatively, it may refer to the total dollar value of covered services after which the plan pays 100 percent.

(2) The maximum out-of-pocket liability for a patient each year for deductibles, copayment, and coinsurance.

Subrogation

The assumption by a third party (such as an insurance company) of another's legal right to collect a debt or damages. It is related to COB (for example, recoveries from auto insurance may reduce an insurer's health benefit liability).

Summary Plan Description (SPD)

A legally required document that summarizes a company's healthcare benefit plan.

Surgical

Pertaining to a service performed by a surgeon or involving surgery.

Third-party administration or administrator (TPA)

(1) Administration of a group insurance plan by some person or firm other than the insurer or the policyholder. TPAs also may pay claims.
(2) The administrator or claims administrator.

Total charges

Total eligible charges, prior to reductions for reasonable and customary limits and PPO discounts.

Total payments

Total eligible charges less any reasonable and customary amounts and discounts for PPO services, but prior to reductions for deductibles, copayments, and other savings.

Uniform Billing (UB)

A standardized billing format for hospitals to use when submitting data to third-party payers. The term usually is followed by a year that indicates when the format was last revised (for example, UB04).

Unbundling

Creative or fraudulent billing practices used by providers to increase payment by charging item-by-item for components of a medical procedure.

Usual, customary, and reasonable (UCR)

A method of payment to physicians based on the usual (U) charge of a particular physician for the procedure, the customary (C) charge for the procedure among physicians in the community, and a determination of what a payer's reasonable (R)

payment should be. This system is highly inflationary, because physicians typically increase their charges substantially to ensure that they attain a certain income. Plans often pay a percentage of UCR or a percentage of R and C. The patient is liable for the remainder, unless the physician is contractually obligated to accept the adjusted payment in full. (Balance billing is the practice of billing the patient for the remainder.)

Utilization review (UR)

- (1) A generic term referring to any program to control hospital runoff and runup admissions, lengths of stay, or both. Examples are second surgical opinion programs, length-of-stay certification, concurrent review, and preadmission certification.
- (2) A managed care process focused on the point at which care is (or is to be) provided, typically for expensive events; for example, in the case of hospital admission or outpatient surgery, the necessity and appropriateness of the procedure are reviewed against medical criteria by a third party.

Wellness benefits

A broad range of employer or union-sponsored facilities and activities designed to promote safety and good health among employees. The purpose is to increase worker morale and reduce the costs of accidents and ill health such as absenteeism, lower productivity, and healthcare costs. It may include physical fitness programs, smoking cessation, health risk appraisals, diet information and weight loss, stress management, and blood pressure screening.

Withhold amount/pool process

The dollar amount retained or withheld from the servicing provider and placed in a risk-sharing pool for future distribution.

Appendix: Frequently asked questions

Q1. How do I track individuals longitudinally across years and plans?

Merative maintains a unique person-level identifier that is consistent across all tables, plans, and years. Individuals who moved from state to state cannot be tracked, even if the states are all MarketScan Database contributors.

Q2. How do I identify continuously enrolled covered lives?

To determine whether an individual was enrolled for an entire calendar year, the sum of Member Days (MEMDAYS) for each enrollment detail record should equal 365.

Q3. How do I know whether a patient's lack of utilization data represents a lack of health care use or disenrollment from a plan?

You can match the patient's utilization data to enrollment information by following these steps:

1. Create a subset of medical and/or outpatient pharmaceutical claims.
2. Use Enrollee ID (ENROLID) from the claims utilization as the subset of criteria for the enrollment data.
3. The resulting subset contains the enrollment records for the patients in the corresponding claims.

You can establish a fixed window of continuous enrollment by following these steps:

1. Use the Enrollment Detail Table and subset records with enrolled months that are within the time window of interest (i.e., all MEMDAYS > 0).
2. Subset the utilization information (e.g., claims) to Date of Service Incurred (SVCDATE) within the time window of interest.
3. Sort the utilization information (e.g., claims) by ENROLID.
4. Merge restricted and sorted enrollment data with sorted utilization information by ENROLID in cases in which records appear in both sets.

For the sliding window continuous enrollment method, only those persons who actually used a health care service can be considered. Therefore, determining sliding window enrollment

status begins with the claims information (medical/surgical or pharmaceutical claims) to identify the event of interest; then, the enrollment information is considered. You can establish a sliding window of continuous enrollment as follows:

1. Determine the month and year of the utilization claim of interest. Utilization dates may be a SVCDATE, Date of Admission (ADMDATE), Date of Service Ending (TSVCDAT), the beginning of an episode of care, or the end of an episode of care.
2. Use the Enrollment Detail Table to determine the earliest and latest dates of continuous enrollment. Create variables to identify these dates. An individual may have multiple continuous enrollment periods.
3. Merge the utilization data with the enrollment data. Select the time period that includes the utilization date of interest.
4. If the user is interested in enrollment prior to the utilization date of interest or an ending utilization, then define those dates and determine whether the continuous enrollment period selected includes them.

Q4. How can I ensure that diagnoses, procedures, and demographic information are in concordance with each other?

Diagnosis and procedure codes are edited for validity. If they are invalid, they are set to missing.

Q5. What variables can I use to calculate a rate (e.g., per capita, per employee)?

Metrics that require a population-based denominator (e.g., procedures per 1,000 covered lives) can be calculated only by subsetting demographic variables that are contained in the Enrollment Detail Table. Typical subsets for such counts include the type of plan (PLANTYP) or the sex of the patient (SEX).

Please refer to the MarketScan Enrollment Detail Tables in the Database Dictionary for a full list of population-supported variables.

Q6. How do I calculate utilization rates and payments by procedure?

When calculating a utilization rate by procedure, using the count of claims as the number of procedures overstates the number of procedures because a single procedure can generate more than one claim (e.g., a surgeon's claim, an anesthesiologist's claim, and a facility claim). Follow these steps to construct a day-episode record for the procedure to collapse the related services for each of the procedures of interest:

1. Using the variable PROC1, subset the Inpatient Services Table and/or the Outpatient Services Table for the procedures of interest.
2. To eliminate multiple claims, aggregate the data on ENROLID, PROC1, and SVCDATE to create one record per patient per procedure for a single service date. Sum any other variables of interest (e.g., Payment [PAY], Payments Net [NETPAY]). The number of procedures performed equals the record count in the resulting subset.
3. Divide the procedure count by the number of covered lives to calculate a utilization rate.
4. To calculate the covered life counts, sum POPCNT on the Populations Table and divide the resulting number by the number of calendar quarters.
5. To calculate payments per procedure, sum PAY and divide by the number of procedures.

Q7. Can a diagnosis be linked to drug claims (and vice versa)?

The Outpatient Pharmaceutical Claims Table does not contain diagnosis variables because they are not provided regularly by the physician on a prescription form. Therapeutic class (e.g., corticosteroids) is provided on the pharmaceutical claims, representing the broad classification of the drug. However, to impute the diagnosis, one must access the related medical claims for the individual—usually the claims filed within a specific time window around the prescription:

1. Subset the National Drug Codes of interest on the Outpatient Pharmaceutical Claims Table.
2. Use ENROLID and SVCDATE as the selection criteria to subset all services from the medical tables (I, S, O) that fall within a predefined time window around the SVCDATE. The resulting diagnoses on the medical claims may be associated with the pharmaceutical claim.

These steps may be modified to identify the prescriptions associated with a specific diagnosis. First, subset a diagnosis in the medical claims, and then select all pharmaceutical claims for each person with the diagnosis (using ENROLID as the linkage variable) within a predefined time window around the date of the prescription.

Q8. How do I count emergency department (ED) visits, which can occur in the Inpatient Services Table or in the Outpatient Services Table?

The Service Subcategory (SVCSCAT) field can be used to identify most types of service. The field is structured so that the first three digits describe the facility type and the last two digits identify service type. To select ED visits, choose from the S or O table any records with a SVCSCAT value that ends in 20.

Because multiple claim records can be generated for a single ED visit, count the number of ED visits by creating day-episode records from the data table produced by aggregating ENROLID/SVCDATE combinations. Accumulate all analytic variables of interest.

Q9. The National Drug Code in the MarketScan Database is 11 digits long, but the codes I have from my Food and Drug Administration search are only 10 digits long. How can I convert them?

The 10-digit codes should be padded with zeros in the appropriate places until the 11 digit, 5-4-2 format is established.

Format	Change this...	To this...
4-4-2	XXXX-XXXX-XX	● 0XXXX-XXXX-XX
5-3-2	XXXXX-XXX-XX	● XXXXX-0XXX-XX
5-4-1	XXXXX-XXXX-X	● XXXXX-XXXX-0X

Q10. Why are there no geographic variables?

Under the agreement with the contributors to this database, Merative cannot reveal the identity of the states or health plans. Because certain states cover most of a single geographic region, geographic information on any level (from ZIP Code to census region) could not be included in this database.

Q11. Are prescription drugs covered under Medicare Part D in this database?

Prescription drugs covered under Medicare Part D are not included in this database, but some information about drugs for beneficiaries who were dually eligible for Medicaid and Medicare are available for data years before 2006, when Medicare Part D took effect. For individuals with dual Medicaid and Medicare coverage, Medicaid pays for certain services that are not covered by Medicare, but Medicare is considered the primary payer. When a claim is generated, Medicaid processes it only if Medicaid provides part of the payment. Historically, Medicare has not provided drug benefits, and Medicaid has provided drug benefits for individuals who are dually eligible. However, after the implementation of Medicare Part D, Medicare became the primary payer for outpatient prescription drugs for those with dual coverage. As of the 2006 data year, individuals who were dually eligible for Medicaid and Medicare in the MarketScan Multi-State Medicaid Database are noted as not having drug capture by the DRUGCOVG flag.

Bibliography

In preparing an analytic plan, it may be useful to refer to studies that have used the Merative MarketScan Research Databases. It also may be helpful to examine other references regarding analysis of administrative data from these databases. Since 1988, healthcare researchers have used MarketScan data to understand disease progression, treatment patterns, health outcomes, and their associated costs to patients, employers, health plans, and the government. The MarketScan Databases are fully compliant with the Health Insurance Portability and Accountability Act (HIPAA) of 1996. They are considered the gold standard in proprietary databases used for healthcare research in the United States. More than 3,000 publications are available in the literature using MarketScan Data since the first article by J.B. Hillman and colleagues appeared in the New England Journal of Medicine in 1990. Research using MarketScan data has made a substantial contribution to the body of literature used to formulate policy decisions and improve healthcare for Americans.

The following shows a selection of articles published in 2022. These and prior years can be accessed through PubMed and other sources.

MarketScan Studies: Abbreviated Bibliography

1: Cutler AJ, Keyloun KR, Higa S, Park J, Bonafede M, Gillard P, Jain R. Annual costs among patients with major depressive disorder and the impact of key clinical events. *J Manag Care Spec Pharm.* 2022 Dec;28(12):1335-1343. doi: 10.18553/jmcp.2022.28.12.1335. PMID: 36427344.

2: Evans KA, Pollack M, Portillo E, Strange C, Touchette DR, Staresinic A, Patel S, Tkacz J, Feigler N. Prompt initiation of triple therapy following hospitalization for a chronic obstructive pulmonary disease exacerbation in the United States: An analysis of the PRIMUS study. *J Manag*

Care Spec Pharm. 2022 Dec;28(12):1366-1377. doi: 10.18553/jmcp.2022.28.12.1366. PMID: 36427341.

3: Ghani KR, Rojanasarot S, Cutone B, Bhattacharyya SK, Krambeck AE. Economic burden of complicated ureteral stent removal in patients with kidney stone disease in the USA. *J Comp Eff Res.* 2022 Dec;11(17):1253-1261. doi: 10.2217/cer-2022-0153. Epub 2022 Oct 19. PMID: 36259761.

4: Healey MJ, Seal B, Princic N, Black D, Malangone-Monaco E, Azad NS, Smoot RL. Real-World Analysis of Treatment Patterns, Healthcare Utilization, Costs, and

- Mortality Among People with Biliary Tract Cancers in the USA. *Adv Ther*. 2022 Dec;39(12):5530-5545. doi: 10.1007/s12325-022-02342-8. Epub 2022 Oct 14. PMID: 36241962; PMCID: PMC9568962.
- 5: Rochlin DH, Matros E, Scheckter CC. Declining commercial market share in facial reconstructive surgery: Implications for academic plastic surgery and training future generations. *J Plast Reconstr Aesthet Surg*. 2022 Dec;75(12):4484-4493. doi: 10.1016/j.bjps.2022.08.071. Epub 2022 Aug 27. PMID: 36241505; PMCID: PMC9669143.
- 6: Wamkpah NS, Kallogjeri D, Snyder-Warwick AK, Buss JL, Durakovic N. Incidence and Management of Facial Paralysis After Skull Base Trauma, an Administrative Database Study. *Otol Neurotol*. 2022 Dec 1;43(10):e1180-e1186. doi: 10.1097/MAO.0000000000003721. Epub 2022 Oct 10. PMID: 36214506; PMCID: PMC9649848.
- 7: Baker MC, Vágó E, Liu Y, Lu R, Tamang S, Horváth-Puhó E, Sørensen HT. Sarcoidosis incidence after mTOR inhibitor treatment. *Semin Arthritis Rheum*. 2022 Dec;57:152102. doi: 10.1016/j.semarthrit.2022.152102. Epub 2022 Sep 25. PMID: 36182721.
- 8: Rodrigues AJ, Schonfeld E, Varshneya K, Stienen MN, Staartjes VE, Jin MC, Veeravagu A. Comparison of Deep Learning and Classical Machine Learning Algorithms to Predict Postoperative Outcomes for Anterior Cervical Discectomy and Fusion Procedures With State-of-the-art Performance. *Spine (Phila Pa 1976)*. 2022 Dec 1;47(23):1637-1644. doi: 10.1097/BRS.0000000000004481. Epub 2022 Sep 21. PMID: 36149852.
- 9: Wadhwa H, Leung C, Sklar M, Ames CP, Veeravagu A, Desai A, Ratliff J, Zygourakis CC. Utilization Trends, Cost, and Payments for Adult Spinal Deformity Surgery in Commercial and Medicare-Insured Populations. *Neurosurgery*. 2022 Dec 1;91(6):961-968. doi: 10.1227/neu.0000000000002140. Epub 2022 Sep 19. PMID: 36136402.
- 10: Chihara D, Johnston K, Bolatova T, Szabo S, Kalsekar A, Mutebi A, Yang H, Liu Y, Attinson D, Hutchings M. An Epidemiological Model to Estimate the Prevalence of Diffuse Large B-Cell Lymphoma in the United States. *Clin Lymphoma Myeloma Leuk*. 2022 Dec;22(12):e1092-e1099. doi: 10.1016/j.clml.2022.08.008. Epub 2022 Aug 21. PMID: 36109323.
- 11: Rahman M, Chen L, Daw J, Wright JD, D'Alton ME, Wen T, Friedman AM. Pregnancy costs with commercial insurance. *J Matern Fetal Neonatal Med*. 2022 Dec;35(25):10143-10151. doi: 10.1080/14767058.2022.2122037. Epub 2022 Sep 14. PMID: 36104042.
- 12: Logue TC, Huang Y, Benson RJ, Pack AM, Wright JD, D'Alton ME, Friedman AM. Use of antiepileptic drugs by trimester. *J Matern Fetal Neonatal Med*. 2022

- Dec;35(25):10158-10161. doi: 10.1080/14767058.2022.2122039. Epub 2022 Sep 11. PMID: 36093852.
- 13: Pulcini CD, Goyal MK, Hall M, De Souza HG, Chaudhary S, Alpern ER, Fein JA, Fleegler EW. Two-Year Utilization and Expenditures for Children After a Firearm Injury. *Am J Prev Med.* 2022 Dec;63(6):875-882. doi: 10.1016/j.amepre.2022.07.007. Epub 2022 Sep 6. PMID: 36075816.
- 14: Erickson BA, Miller AC, Warner HL, Drobish JN, Koeneman SH, Cavanaugh JE, Polgreen PM. Understanding the Prodromal Period of Necrotizing Soft Tissue Infections of the Genitalia (Fournier's Gangrene) and the Incidence, Duration, and Risk Factors Associated With Potential Missed Opportunities for an Earlier Diagnosis: A Population-based Longitudinal Study. *J Urol.* 2022 Dec;208(6):1259-1267. doi: 10.1097/JU.0000000000002920. Epub 2022 Aug 25. PMID: 36006046.
- 15: Sunaryo PL, May PC, Holt SK, Sorensen MD, Sweet RM, Harper JD. Ureteral Strictures Following Ureteroscopy for Kidney Stone Disease: A Population-based Assessment. *J Urol.* 2022 Dec;208(6):1268-1275. doi: 10.1097/JU.0000000000002929. Epub 2022 Aug 19. PMID: 35984646.
- 16: Sharma M, Jain N, Dietz N, Wang D, Ugiliweneza B, Drazin D, Boakye M. Incidence of new onset dementia and health care utilization following spine fusions: A propensity score matching analysis. *Neurochirurgie.* 2022 Dec;68(6):562-568. doi: 10.1016/j.neuchi.2022.07.010. Epub 2022 Aug 3. PMID: 35932885.
- 17: Vouri SM, Morris EJ, Wang GH, Hashim Jaber Bilal A, Hallas J, Henriksen DP. Association between gabapentinoids and oedema treated with loop diuretics: A pooled sequence symmetry analysis from the USA and Denmark. *Br J Clin Pharmacol.* 2022 Dec;88(12):5269-5294. doi: 10.1111/bcp.15447. Epub 2022 Jul 13. PMID: 35748326.
- 18: Jagannath S, Joseph N, He J, Crivera C, Fu AZ, Garrett A, Shah N. Healthcare Costs of Multiple Myeloma Patients with Four or More Prior Lines of Therapy, Including Triple-Class Exposure in the United States. *Oncol Ther.* 2022 Dec;10(2):411-420. doi: 10.1007/s40487-022-00198-0. Epub 2022 May 17. PMID: 35579821; PMCID: PMC9681939.
- 19: Zheng F, Huang Y, Wright J, Kuo JH. Out-of-Pocket Costs for Patients Undergoing Thyroid Surgery. *Ann Surg.* 2022 Dec 1;276(6):e937-e943. doi: 10.1097/SLA.0000000000005078. Epub 2021 Jul 14. PMID: 34261887.
- 20: Gyamfi-Bannerman C, Huang Y, Bateman BT, Benson RJ, Pack AM, Wright JD, D'Alton ME, Friedman AM. Maternal morbidity and mortality associated with epilepsy. *J Matern Fetal Neonatal Med.* 2022 Dec;35(25):7917-7923. doi: 10.1080/14767058.2021.1938528. Epub 2021 Jun 21. PMID: 34154486.

- 21: Krenitsky NM, Huang Y, Wen T, Ona S, Wright JD, D'Alton ME, Friedman AM. Longitudinal Risk Adjustment for Maternal End-Organ Injury and Death. *J Matern Fetal Neonatal Med.* 2022 Dec;35(25):6346-6352. doi: 10.1080/14767058.2021.1911999. Epub 2021 Apr 19. PMID: 33874835.
- 22: O'Shaugnessy F, Syeda SK, Huang Y, D'Alton ME, Wen T, Wright JD, Friedman AM. Receipt of anticoagulation after venous thromboembolism diagnoses during delivery hospitalizations. *J Matern Fetal Neonatal Med.* 2022 Dec;35(25):6353-6355. doi: 10.1080/14767058.2021.1912000. Epub 2021 Apr 15. PMID: 33855935.
- 23: Schuster M, Ananth CV, Gomez D, Huang Y, Gyamfi-Bannerman C, Wright JD, D'Alton ME, Friedman AM. 17-alpha hydroxyprogesterone caproate and risk for venous thromboembolism during pregnancy. *J Matern Fetal Neonatal Med.* 2022 Dec;35(25):6336-6337. doi: 10.1080/14767058.2021.1911997. Epub 2021 Apr 15. PMID: 33855933.
- 24: Ridenour R, Kowalski C, Ba D, Liu G, Bible J, Garner M, Leslie D, Aynardi M, Dhawan A. Opioid Use, Perioperative Risks, and Associated Postoperative Complications in Foot and Ankle Surgery. *Foot Ankle Spec.* 2022 Dec;15(6):528-535. doi: 10.1177/1938640020977988. Epub 2020 Dec 14. PMID: 33307812.
- 25: Kumar A, Lutsey PL, St Peter WL, Schommer JC, Van't Hof JR, Rajpurohit A, Farley JF. Comparative Risk of Hospitalized Bleeding of P2Y12 Inhibitors for Secondary Prophylaxis in Acute Coronary Syndrome after Percutaneous Coronary Intervention. *Clin Pharmacol Ther.* 2022 Nov 29. doi: 10.1002/cpt.2806. Epub ahead of print. PMID: 36448257.
- 26: Ramsey SD, Bender MA, Li L, Johnson KM, Jiao B, Devine B, Basu A. Prevalence of comorbidities associated with sickle cell disease among non-elderly individuals with commercial insurance-A retrospective cohort study. *PLoS One.* 2022 Nov 29;17(11):e0278137. doi: 10.1371/journal.pone.0278137. PMID: 36445914.
- 27: Araujo L, Kyatham S, Bzdek KG, Higuchi K, Greene N. Health economic outcomes of switching to alemtuzumab from other disease-modifying therapies in people with multiple sclerosis in the USA. *J Comp Eff Res.* 2022 Nov 28. doi: 10.2217/cer-2022-0127. Epub ahead of print. PMID: 36440609.
- 28: Scioscia NF, Edge P, Yanek LR, Handa VL. National Trends in Third-Line Treatment for Overactive Bladder Among Commercially Insured Women, 2010-2019. *Urology.* 2022 Nov 24:S0090-4295(22)00980-3. doi: 10.1016/j.urology.2022.11.006. Epub ahead of print. PMID: 36436671.
- 29: Rajbhandari-Thapa J, Chung SR, Hu H, Hall DB, Tiwari BB. Utilization of Counseling Services by Pediatric Patients with Obesity Using MarketScan Data (2017-2019). *Child Obes.* 2022 Nov 22. doi:

- 10.1089/chi.2022.0158. Epub ahead of print. PMID: 36413350.
- 30: Packnett ER, Winer IH, Larkin H, Oladapo A, Gonzalez T, Wojdyla M, Goldstein M, Smith VC. RSV-related hospitalization and outpatient palivizumab use in very preterm (born at <29 wGA) infants: 2003-2020. *Hum Vaccin Immunother*. 2022 Nov 22:2140533. doi: 10.1080/21645515.2022.2140533. Epub ahead of print. PMID: 36412253.
- 31: Nordstrom BL, Cai B, De Gregorio F, Ban L, Fraeman KH, Yoshida Y, Gibbs T. Risk of venous thromboembolism among women receiving ospemifene: a comparative observational study. *Ther Adv Drug Saf*. 2022 Nov 19;13:20420986221135931. doi: 10.1177/20420986221135931. PMID: 36420373; PMCID: PMC9677319.
- 32: Wu JJ, Suryavanshi M, Davidson D, Patel V, Jain A, Seigel L. Economic Burden of Comorbidities in Patients with Psoriasis in the USA. *Dermatol Ther (Heidelb)*. 2022 Nov 19. doi: 10.1007/s13555-022-00832-9. Epub ahead of print. PMID: 36402940.
- 33: Johnston SS, Johnson BH, Rai P, Grange P, Amos T, Ghosh S, Buchholz N. Trends and patterns of initial percutaneous nephrolithotomy and subsequent procedures among commercially-insured US adults with urinary system stone disease: a 10-year population-based study. *World J Urol*. 2022 Nov 19. doi: 10.1007/s00345-022-04210-0. Epub ahead of print. PMID: 36401135.
- 34: Kumar A, Lutsey PL, St Peter WL, Schommer JC, Van't Hof JR, Rajpurohit A, Farley JF. Comparative Effectiveness of Ticagrelor, Prasugrel, and Clopidogrel for Secondary Prophylaxis in Acute Coronary Syndrome: A Propensity Score-Matched Cohort Study. *Clin Pharmacol Ther*. 2022 Nov 18. doi: 10.1002/cpt.2797. Epub ahead of print. PMID: 36399019.
- 35: Labropoulos N, Raiker A, Gasparis A, Weycker D, O'Donnell T Jr. Clinical Impact of Severe Obesity in Patients with Lymphedema. *Eur J Vasc Endovasc Surg*. 2022 Nov 17:S1078-5884(22)00759-6. doi: 10.1016/j.ejvs.2022.11.014. Epub ahead of print. PMID: 36403939.
- 36: Durand WM, Ortiz-Babilonia C, Raad M, Kurian S, Reyes MC, Jain A. Variation in Commercial Insurance Type Impacts Access to Cervical Spine Surgery. *Spine (Phila Pa 1976)*. 2022 Nov 16. doi: 10.1097/BRS.0000000000004543. Epub ahead of print. PMID: 36395378.
- 37: Zhang J, Chen L, Gomez-Simmonds A, Yin MT, Freedberg DE. Antibiotic-Specific Risk for Community-Acquired *Clostridioides difficile* Infection in the United States from 2008 to 2020. *Antimicrob Agents Chemother*. 2022 Nov 15:e0112922. doi: 10.1128/aac.01129-22. Epub ahead of print. PMID: 36377887.
- 38: Fix J, Vielot NA, Lund JL, Weber DJ, Smith JS, Hudgens MG, Becker-Dreps S. Patterns of use of recombinant zoster vaccine among commercially-insured immunocompetent and

- immunocompromised adults 50–64 years old in the United States. *Vaccine*. 2022 Nov 14:S0264-410X(22)01347-0. doi: 10.1016/j.vaccine.2022.10.076. Epub ahead of print. PMID: 36396511.
- 39: Johnston SS, Chen BP, Rai P, Grange P, Dwarakanathan HR, Amos T, Johnson BH, Ghosh SK, Buchholz N. Incremental Healthcare Cost Implications of Retreatment Following Ureteroscopy or Percutaneous Nephrolithotomy for Upper Urinary Tract Stones: A Population-Based Study of Commercially-Insured US Adults. *Med Devices (Auckl)*. 2022 Nov 10;15:371-384. doi: 10.2147/MDER.S384823. PMID: 36389203; PMCID: PMC9662022.
- 40: Butler AM, Brown DS, Newland JG, Nickel KB, Sahrmann JM, O'Neil CA, Olsen MA, Zetts RM, Hyun DY, Durkin MJ. Comparative Safety and Attributable Health Care Expenditures Following Inappropriate versus Appropriate Outpatient Antibiotic Prescriptions among Adults with Upper Respiratory Infections. *Clin Infect Dis*. 2022 Nov 9:ciac879. doi: 10.1093/cid/ciac879. Epub ahead of print. PMID: 36350187.
- 41: Moll K, Lufkin B, Fingar KR, Ke Zhou C, Tworkoski E, Shi C, Hobbi S, Hu M, Sheng M, McCarty J, Shangguan S, Burrell T, Chillarige Y, Beers J, Saunders- Hastings P, Muthuri S, Edwards K, Black S, Kelman J, Reich C, Amend KL, Audrey Djibo D, Beachler D, Ogilvie RP, Secora A, McMahill-Walraven CN, Seeger JD, Lloyd P, Thompson D, Dimova R, MaCurdy T, Obidi J, Anderson S, Forshee R, Wong HL, Shoaibi A. Background rates of adverse events of special interest for COVID-19 vaccine safety monitoring in the United States, 2019–2020. *Vaccine*. 2022 Nov 8:S0264-410X(22)01373-1. doi: 10.1016/j.vaccine.2022.11.003. Epub ahead of print. PMID: 36404170.
- 42: Jin L, Vermund SH, Zhang Y. Trends in Prescription Opioid Use in Motor Vehicle Crash Injuries in the United States: 2014–2018. *Int J Environ Res Public Health*. 2022 Nov 4;19(21):14445. doi: 10.3390/ijerph192114445. PMID: 36361324; PMCID: PMC9657604.
- 43: Oddo ER, Simpson AN, Maldonado L, Hink AB, Andrews AL. Mental Health Care Utilization Among Children and Adolescents With a Firearm Injury. *JAMA Surg*. 2022 Nov 2:e225299. doi: 10.1001/jamasurg.2022.5299. Epub ahead of print. PMID: 36322057; PMCID: PMC9631226.
- 44: Lan YT, Chen YW, Niu R, Chang DC, Hollenbeck BL, Mattingly DA, Smith EL, Talmo CT. The trend and future projection of technology-assisted total knee arthroplasty in the United States. *Int J Med Robot*. 2022 Nov 2:e2478. doi: 10.1002/rcs.2478. Epub ahead of print. PMID: 36321582.
- 45: Bushnell GA, Gerhard T, Keyes K, Hasin D, Cerdá M, Olfson M. Association of Benzodiazepine Treatment for Sleep Disorders With Drug Overdose Risk Among Young People. *JAMA Netw Open*. 2022 Nov

- 1;5(11):e2243215. doi:
10.1001/jamanetworkopen.2022.43215.
PMID: 36413369.
- 46: Alanaeme CJ, Sarvesh S, Li CY, Bernatsky S, Curtis JR, Yun H. Adherence patterns in naïve and prevalent use of infliximab and its biosimilar. *BMC Rheumatol.* 2022 Nov 1;6(1):65. doi: 10.1186/s41927-022-00295-7. PMID: 36316762; PMCID: PMC9623955.
- 47: Cai CX, Kim M, Lundein EA, Benoit SR. Differences in receipt of recommended eye examinations by comorbidity status and healthcare utilization among nonelderly adults with diabetes. *J Diabetes.* 2022 Nov;14(11):749-757. doi: 10.1111/1753-0407.13328. Epub 2022 Oct 26. PMID: 36285845; PMCID: PMC9705799.
- 48: To TM, Exuzides A, Abbass IM, Patel AM, Ta JT, Surinach A, Fuller RLM, Luo J. Health care resource utilization and costs among individuals with vs without Huntington disease in a US population. *J Manag Care Spec Pharm.* 2022 Nov;28(11):1228-1239. doi: 10.18553/jmcp.2022.28.11.1228. PMID: 36282937.
- 49: Lokhandwala T, Acharya M, Farrelly E, Coutinho AD, Bell CF, Svedsater H. Within-trial economic analysis of resource use from COMET-ICE: A phase 3 clinical trial evaluating sotrovimab for the treatment of patients with COVID-19 at high risk of progression. *J Manag Care Spec Pharm.* 2022 Nov;28(11):1261-1271. doi: 10.18553/jmcp.2022.28.11.1261. PMID: 36282931.
- 50: Jiang S, Seslar SP, Sloan LA, Hansen RN. Health care resource utilization and costs associated with atrial fibrillation and rural-urban disparities. *J Manag Care Spec Pharm.* 2022 Nov;28(11):1321-1330. doi: 10.18553/jmcp.2022.28.11.1321. PMID: 36282926.
- 51: Zhu L, Ferries E, Suthoff E, Namjoshi M, Bera R. Economic burden and antidepressant treatment patterns among patients with major depressive disorder in the United States. *J Manag Care Spec Pharm.* 2022 Nov;28(11-a Suppl):S2-S13. doi: 10.18553/jmcp.2022.28.11-a.s1. PMID: 36242598.
- 52: Shah JP, Youn GM, Wei EX, Kandathil C, Most SP. Septoplasty Revision Rates in Pediatric vs Adult Populations. *JAMA Otolaryngol Head Neck Surg.* 2022 Nov 1;148(11):1044-1050. doi: 10.1001/jamaoto.2022.3041. PMID: 36201221; PMCID: PMC9539730.
- 53: Gibbons RD, Hur K, Lavigne JE, Mann JJ. Association Between Folic Acid Prescription Fills and Suicide Attempts and Intentional Self-harm Among Privately Insured US Adults. *JAMA Psychiatry.* 2022 Nov 1;79(11):1118-1123. doi: 10.1001/jamapsychiatry.2022.2990. PMID: 36169979; PMCID: PMC9520442.
- 54: Blauvelt A, Shi N, Burge R, Atiya B, Zhu B, Somani N, Ridenour T, Lew CR, Zimmerman NM, Murage MJ. Healthcare Costs Among Patients with Psoriasis

- Treated with Ixekizumab Versus Secukinumab in Real-World Settings Over 24 Months. *Pharmacoecon Open*. 2022 Nov;6(6):871-880. doi: 10.1007/s41669-022-00365-z. Epub 2022 Sep 26. PMID: 36155891; PMCID: PMC9596621.
- 55: Johnson TM 2nd, Walker D, Lockefeer A, Jiang B, Nimke D, Lozano-Ortega G, Kimura T. Mirabegron and antimuscarinic use in frail overactive bladder patients in the United States Medicare population. *Neurotol Urodyn*. 2022 Nov;41(8):1872-1889. doi: 10.1002/nau.25040. Epub 2022 Sep 13. PMID: 36098417.
- 56: Hu X, Brock KE, Effinger KE, Zhang B, Graetz I, Lipscomb J, Ji X. Changes in Opioid Prescriptions and Potential Misuse and Substance Use Disorders Among Childhood Cancer Survivors Following the 2016 Opioid Prescribing Guideline. *JAMA Oncol*. 2022 Nov 1;8(11):1658-1662. doi: 10.1001/jamaoncol.2022.3744. PMID: 36074473; PMCID: PMC9459898.
- 57: Simmering JE, Welsh MJ, Schultz J, Narayanan NS. Use of Glycolysis-Enhancing Drugs and Risk of Parkinson's Disease. *Mov Disord*. 2022 Nov;37(11):2210-2216. doi: 10.1002/mds.29184. Epub 2022 Aug 22. PMID: 36054705; PMCID: PMC9669185.
- 58: Karzon AL, Kadakia RJ, Coleman MM, Bariteau JT, Labib SA. The Rise of Total Ankle Arthroplasty Use: A Database Analysis Describing Case Volumes and Incidence Trends in the United States Between 2009 and 2019. *Foot Ankle Int*. 2022 Nov;43(11):1501-1510. doi: 10.1177/10711007221119148. Epub 2022 Sep 1. PMID: 36050924.
- 59: Park J, Bigman E, Zhang P. Productivity Loss and Medical Costs Associated With Type 2 Diabetes Among Employees Aged 18-64 Years With Large Employer-Sponsored Insurance. *Diabetes Care*. 2022 Nov 1;45(11):2553-2560. doi: 10.2337/dc22-0445. PMID: 36048852; PMCID: PMC9633402.
- 60: Cong Z, Tran O, Nelson J, Silver M, Chung K. Productivity Loss and Indirect Costs for Patients Newly Diagnosed with Early- versus Late-Stage Cancer in the USA: A Large-Scale Observational Research Study. *Appl Health Econ Health Policy*. 2022 Nov;20(6):845-856. doi: 10.1007/s40258-022-00753-w. Epub 2022 Aug 30. PMID: 36040661; PMCID: PMC9596506.
- 61: Levine DM, Samal L, Neville BA, Burdick E, Wien M, Rodriguez JA, Ganesan S, Blitzer SC, Yuan NH, Ng K, Park Y, Rajmane A, Jackson GP, Lipsitz SR, Bates DW. The Association of the First Surge of the COVID-19 Pandemic with the High- and Low-Value Outpatient Care Delivered to Adults in the USA. *J Gen Intern Med*. 2022 Nov;37(15):3979-3988. doi: 10.1007/s11606-022-07757-1. Epub 2022 Aug 24. PMID: 36002691; PMCID: PMC9400559.
- 62: Michaud JB, Zhuang T, Shapiro LM, Cohen SA, Kamal RN. Out-of-Pocket and Total Costs for Common Hand Procedures

- From 2008 to 2016: A Nationwide Claims Database Analysis. *J Hand Surg Am.* 2022 Nov;47(11):1057-1067. doi: 10.1016/j.jhsa.2022.06.018. Epub 2022 Aug 17. PMID: 35985865.
- 63: McIntyre RS, Laliberté F, Germain G, MacKnight SD, Gillard P, Harrington A. The real-world health resource use and costs of misdiagnosing bipolar I disorder. *J Affect Disord.* 2022 Nov 1;316:26-33. doi: 10.1016/j.jad.2022.07.069. Epub 2022 Aug 8. PMID: 35952932.
- 64: Charalambous LT, Rajkumar S, Liu B, Adil SM, Wong M, Hodges S, Amrhein TJ, Leithe LG, Parente B, Lee HJ, Lad SP. Treatment Patterns and Health Care Resource Utilization of Iatrogenic Spinal Cerebrospinal Fluid Leaks in the United States. *Clin Spine Surg.* 2022 Nov 1;35(9):E725-E730. doi: 10.1097/BSD.0000000000001363. Epub 2022 Jul 14. PMID: 35858207; PMCID: PMC9633342.
- 65: Alalwan AA, Friedman J, Park H, Segal R, Brumback B, Hartzema A. Comparative Safety of Sleeve Gastrectomy and Roux-en-Y: A Propensity Score Analysis. *World J Surg.* 2022 Nov;46(11):2715-2724. doi: 10.1007/s00268-022-06664-0. Epub 2022 Jul 15. PMID: 35840690.
- 66: Bhojani N, Paranjpe R, Cutone B, Rojanasarot S, Chew BH. Predictors and Health Care Utilization of Sepsis Post-Ureteroscopy in a U.S.-Based Population: Results from the Endourological Society TOWER Collaborative. *J Endourol.* 2022 Nov;36(11):1411-1417. doi: 10.1089/end.2022.0010. Epub 2022 Oct 5. PMID: 35822561.
- 67: Shaheen M, Koltsov JCB, Cohen SA, Langner JL, Kaur J, Segovia NA, Vorhies JS. Complication risks and costs associated with Ponte osteotomies in surgical treatment of adolescent idiopathic scoliosis: insights from a national database. *Spine Deform.* 2022 Nov;10(6):1339-1348. doi: 10.1007/s43390-022-00534-4. Epub 2022 Jul 10. PMID: 35810408.
- 68: Leung J, Anderson TC, Dooling K, Xie F, Curtis JR. Recombinant Zoster Vaccine Uptake and Risk of Flares Among Older Adults With Immune-Mediated Inflammatory Diseases in the US. *Arthritis Rheumatol.* 2022 Nov;74(11):1833-1841. doi: 10.1002/art.42261. Epub 2022 Sep 15. PMID: 35666070.
- 69: Stagg BC, Stein JD, Medeiros FA, Horns J, Hartnett ME, Kawamoto K, Hess R. The Frequency of Visual Field Testing in a US Nationwide Cohort of Individuals with Open-Angle Glaucoma. *Ophthalmol Glaucoma.* 2022 Nov-Dec;5(6):587-593. doi: 10.1016/j.ogla.2022.05.002. Epub 2022 May 20. PMID: 35605937; PMCID: PMC9675879.
- 70: Veluswamy R, Hirsch FR, Taioli E, Wisnivesky J, Strauss R, Harrough D, Tang B, Barnes G. Real-World longitudinal practice patterns in the use of PD-1 and PD-L1 inhibitors as First-Line therapy in patients with Non-Small cell lung cancer in the United States. *Cancer Med.* 2022

- Nov;11(22):4265-4272. doi: 10.1002/cam4.4785. Epub 2022 May 2. PMID: 35499294; PMCID: PMC9678105.
- 71: Haskins IN, Duchesneau ED, Agala CB, Lumpkin ST, Strassle PD, Farrell TM. Minimally invasive, benign foregut surgery is not associated with long-term, persistent opioid use postoperatively: an analysis of the IBM® MarketScan® database. *Surg Endosc*. 2022 Nov;36(11):8430-8440. doi: 10.1007/s00464-022-09123-y. Epub 2022 Feb 28. PMID: 35229211.
- 72: Trinh P, Rochlin D, Scheckter C, Moore W, Fox P, Curtin C. Use of Hand Therapy After Distal Radius Fracture: A National Perspective. *J Hand Surg Am*. 2022 Nov;47(11):1117.e1-1117.e9. doi: 10.1016/j.jhsa.2021.08.018. Epub 2021 Oct 16. PMID: 34666936.
- 73: Perez-Nieves M, Juneja R, Fan L, Meadows E, Lage MJ, Eby EL. Trends in U.S. Insulin Use and Glucose Monitoring for People with Diabetes: 2009-2018. *J Diabetes Sci Technol*. 2022 Nov;16(6):1428-1435. doi: 10.1177/19322968211028268. Epub 2021 Jul 5. PMID: 34218716; PMCID: PMC9631534.
- 74: Rajkumar S, Venkatraman V, Zidanyue Yang L, Parente B, Lee HJ, Lad SP. Health Care Economics of High-Frequency Spinal Cord Stimulation for Painful Diabetic Peripheral Neuropathy. *J Diabetes Sci Technol*. 2022 Oct 31:19322968221128321. doi: 10.1177/19322968221128321. Epub ahead of print. PMID: 36314587.
- 75: Bruno AM, Horns JJ, Allshouse AA, Das R, Paudel N, Silver RM, Metz TD. Physician cesarean delivery rates and severe perinatal morbidity among low-risk nulliparas. *J Perinatol*. 2022 Oct 27. doi: 10.1038/s41372-022-01540-0. Epub ahead of print. PMID: 36302848.
- 76: Mouchet J, Roumpanis S, Gaki E, Lipnick S, Oskoui M, Scalco RS, Darras BT. Disease Burden of Spinal Muscular Atrophy: A Comparative Cohort Study Using Insurance Claims Data in the USA. *J Neuromuscul Dis*. 2022 Oct 26. doi: 10.3233/JND-210764. Epub ahead of print. PMID: 36314213.
- 77: Sharma M, Wang D, Palmisciano P, Ugiliweneza B, Woo S, Nelson M, Miller D, Savage J, Boakye M, Andaluz N, Mistry AM, Chen CC, Williams BJ. Is intraoperative MRI use in malignant brain tumor surgery a health care burden? A matched analysis of MarketScan Database. *J Neurooncol*. 2022 Oct 26. doi: 10.1007/s11060-022-04142-0. Epub ahead of print. PMID: 36289149.
- 78: Wang CX, Buss JL, Keller M, Anadkat MJ. Factors Associated With Dermatologic Follow-up vs Emergency Department Return in Patients With Hidradenitis Suppurativa After an Initial Emergency Department Visit. *JAMA Dermatol*. 2022 Oct 26:e224610. doi: 10.1001/jamadermatol.2022.4610. Epub ahead of print. PMID: 36287553; PMCID: PMC9607935.
- 79: Huntington SF, Appukuttan S, Wang W, Du Y, Hopson S, Babajanyan S.

- Treatment Patterns of Follicular Lymphoma in the United States: A Claims Analysis. *J Health Econ Outcomes Res.* 2022 Oct 24;9(2):115-122. doi: 10.36469/001c.38070. PMID: 36348725; PMCID: PMC9603402.
- 80: Leung J, Dooling K, Marin M, Anderson TC, Harpaz R. The Impact of Universal Varicella Vaccination on Herpes Zoster Incidence in the United States: Comparison of Birth Cohorts Preceding and Following Varicella Vaccination Program Launch. *J Infect Dis.* 2022 Oct 21;226(Supplement_4):S470-S477. doi: 10.1093/infdis/jiac255. PMID: 36265856.
- 81: Rosario B, Zhang A, Patel M, Rajmane A, Xie N, Weeraratne D, Alterovitz G. Characterizing Thrombotic Complication Risk Factors Associated With COVID-19 via Heterogeneous Patient Data: Retrospective Observational Study. *J Med Internet Res.* 2022 Oct 21;24(10):e35860. doi: 10.2196/35860. PMID: 36044652; PMCID: PMC9591707.
- 82: Massa ST, Chidambaram S, Luong P, Graboyes EM, Mazul AL. Quantifying Total and Out-of-Pocket Costs Associated With Head and Neck Cancer Survivorship. *JAMA Otolaryngol Head Neck Surg.* 2022 Oct 20:e223269. doi: 10.1001/jamaoto.2022.3269. Epub ahead of print. PMID: 36264567; PMCID: PMC9585466.
- 83: Bolognesi MP, Habermann EB. Commercial Claims Data Sources: PearlDiver and Individual Payer Databases. *J Bone Joint Surg Am.* 2022 Oct 19;104(Suppl 3):15-17. doi: 10.2106/JBJS.22.00607. Epub 2022 Oct 19. PMID: 36260038.
- 84: Hamad Y, Nickel KB, Burnett YJ, Hamad T, George IA, Olsen MA. Prevalence and risk factors associated with readmission with acute kidney injury in patients receiving vancomycin outpatient parenteral antimicrobial therapy. *J Clin Pharm Ther.* 2022 Oct 18. doi: 10.1111/jcpt.13790. Epub ahead of print. PMID: 36257600.
- 85: Nabavizadeh B, Li KD, Hakam N, Shaw NM, Leapman MS, Breyer BN. Incidence of circumcision among insured adults in the United States. *PLoS One.* 2022 Oct 17;17(10):e0275207. doi: 10.1371/journal.pone.0275207. PMID: 36251658; PMCID: PMC9576047.
- 86: Jeong SS, Simpson KN, Johnson JM, Rizk HG. Assessment of the Cost Burden of Episodic Recurrent Vestibular Vertigo in the US. *JAMA Otolaryngol Head Neck Surg.* 2022 Oct 13:e223247. doi: 10.1001/jamaoto.2022.3247. Epub ahead of print. PMID: 36227614; PMCID: PMC9562102.
- 87: McKenzie NL, Ward RP, Nagele P, Rubin DS. Preoperative β -Blocker Therapy and Stroke or Major Adverse Cardiac Events in Major Abdominal Surgery: A Retrospective Cohort Study. *Anesthesiology.* 2022 Oct 13. doi: 10.1097/ALN.0000000000004404. Epub ahead of print. PMID: 36227278.

- 88: Yih WK, Kulldorff M, Dashevsky I, Maro JC. Sequential Data-Mining for Adverse Events after Recombinant Herpes Zoster Vaccination Using the Tree-Based Scan Statistic. *Am J Epidemiol.* 2022 Oct 13;kwac176. doi: 10.1093/aje/kwac176. Epub ahead of print. PMID: 36227263.
- 89: Goyal S, Monsour M, Ko JY, Curtis KM, Whiteman MK, Coy KC, Cox S, Romero L. Contraception claims by medication for opioid use disorder prescription status among insured women with opioid use disorder, United States, 2018. *Contraception.* 2022 Oct 12:S0010-7824(22)00389-4. doi: 10.1016/j.contraception.2022.09.129. Epub ahead of print. PMID: 36243128.
- 90: Okunseri C, Frantsve-Hawley J, Thakkar-Samtani M, Okunev I, Heaton LJ, Tranby EP. Estimation of oral disease burden from claims and self-reported data. *J Public Health Dent.* 2022 Oct 12. doi: 10.1111/jphd.12550. Epub ahead of print. PMID: 36224115.
- 91: Hugunin J, Davis M, Larkin C, Baek J, Skehan B, Lapane KL. Established Outpatient Care and Follow-Up After Acute Psychiatric Service Use Among Youths and Young Adults. *Psychiatr Serv.* 2022 Oct 12:appips202200047. doi: 10.1176/appi.ps.202200047. Epub ahead of print. PMID: 36223162.
- 92: Joo H, Maskery BA, Alpern JD, Chancey RJ, Weinberg M, Stauffer WM. Low Use of Standard-of-Care Antiparasitic Drugs and Increased Estimated Outpatient Payments for Treating Schistosomiasis in the United States, 2013-19. *Am J Trop Med Hyg.* 2022 Aug 22;107(4):841-844. doi: 10.4269/ajtmh.22-0254. PMID: 35995136; PMCID: PMC9651520.
- 93: Joo H, Maskery BA, Alpern JD, Chancey RJ, Weinberg M, Stauffer WM. Low Treatment Rates of Parasitic Diseases with Standard-of-Care Prescription Drugs in the United States, 2013-2019. *Am J Trop Med Hyg.* 2022 Aug 22;107(4):780-784. doi: 10.4269/ajtmh.22-0291. PMID: 35995133; PMCID: PMC9651536.
- 94: Koltsov JCB, Sambare TD, Alamin TF, Wood KB, Cheng I, Hu SS. Patient-level payment patterns prior to single level lumbar decompression are associated with resource utilization, postoperative payments, and adverse events. *Spine J.* 2022 Oct 11:S1529-9430(22)00958-5. doi: 10.1016/j.spinee.2022.10.002. Epub ahead of print. PMID: 36241040.
- 95: Varagur K, Zubovic E, Skolnick GB, Buss J, Snyder-Warwick A, Reinisch J, Patel KB. Porous Polyethylene Versus Autologous Costochondral Reconstruction for Microtia: Incidence and Analysis of Secondary Procedures. *Cleft Palate Craniofac J.* 2022 Oct 11:10556656221132034. doi: 10.1177/10556656221132034. Epub ahead of print. PMID: 36217745.
- 96: Tomicki S, Dieguez G, DeStephano D, Chang M, Cockrum P. Costs by Site of Service for Commercially-Insured Patients with Metastatic Pancreatic Cancer

- Receiving Guideline-Recommended Chemotherapy: Comparing Community Oncology and Hospital Outpatient Settings. *Clinicoecon Outcomes Res.* 2022 Oct 10;14:653-663. doi: 10.2147/CEOR.S373316. PMID: 36250036; PMCID: PMC9563737.
- 97: Kadakia A, Catillon M, Fan Q, Williams GR, Marden JR, Anderson A, Kirson N, Dembek C. The Economic Burden of Schizophrenia in the United States. *J Clin Psychiatry*. 2022 Oct 10;83(6):22m14458. doi: 10.4088/JCP.22m14458. PMID: 36244006.
- 98: Londhe AA, Holy CE, Weaver J, Fonseca S, Villasis-Keever A, Fife D. Risk of retinal detachment and exposure to fluoroquinolones, common antibiotics, and febrile illness using a self-controlled case series study design: Retrospective analyses of three large healthcare databases in the US. *PLoS One*. 2022 Oct 6;17(10):e0275796. doi: 10.1371/journal.pone.0275796. PMID: 36201545; PMCID: PMC9536641.
- 99: Nin DZ, Chen YW, Talmo CT, Hollenbeck BL, Mattingly DA, Niu R, Chang DC, Smith EL. Costs of Nonoperative Procedures for Knee Osteoarthritis in the Year Prior to Primary Total Knee Arthroplasty. *J Bone Joint Surg Am*. 2022 Oct 5;104(19):1697-1702. doi: 10.2106/JBJS.21.01415. Epub 2022 Sep 20. PMID: 36126140.
- 100: Karkare S, Zhdanova M, Pilon D, Nash AI, Morrison L, Shah A, Lefebvre P, Joshi K. Characteristics of Real-World Commercially Insured Patients With
- Treatment-Resistant Depression Initiated on Esketamine Nasal Spray or Conventional Therapies in the United States. *Clin Ther*. 2022 Oct 4:S0149-2918(22)00319-8. doi: 10.1016/j.clinthera.2022.09.005. Epub ahead of print. PMID: 36207167.
- 101: Wang J, Gagne JJ, Kattinakere-Sreedhara S, Fischer MA, Bykov K. Association between initiation of fluoroquinolones and hospital admission or emergency department visit for suicidality: population based cohort study. *BMJ*. 2022 Oct 4;379:e069931. doi: 10.1136/bmj-2021-069931. PMID: 36195324; PMCID: PMC9530980.
- 102: Elsaied MI, Li Y, Bridges JFP, Brock G, Minacapelli CD, Rustgi VK. Association of Bariatric Surgery With Cardiovascular Outcomes in Adults With Severe Obesity and Nonalcoholic Fatty Liver Disease. *JAMA Netw Open*. 2022 Oct 3;5(10):e2235003. doi: 10.1001/jamanetworkopen.2022.35003. PMID: 36205997; PMCID: PMC9547320.
- 103: Li J, Patil D, Davies BJ, Filson CP. Trends in Urethral Suspension With Robotic Prostatectomy Procedures Following Medicare Payment Policy Changes. *JAMA Netw Open*. 2022 Oct 3;5(10):e2233636. doi: 10.1001/jamanetworkopen.2022.33636. PMID: 36194414; PMCID: PMC9533184.
- 104: Simmering JE, Polgreen LA, Talan DA, Cavanaugh JE, Polgreen PM. Association of Appendicitis Incidence With Warmer

- Weather Independent of Season. *JAMA Netw Open*. 2022 Oct 3;5(10):e2234269. doi: 10.1001/jamanetworkopen.2022.34269. PMID: 36190731; PMCID: PMC9530968.
- 105: Suarez EA, Bateman BT, Hernández-Díaz S, Straub L, Wisner KL, Gray KJ, Pennell PB, Lester B, McDougle CJ, Zhu Y, Mogun H, Huybrechts KF. Association of Antidepressant Use During Pregnancy With Risk of Neurodevelopmental Disorders in Children. *JAMA Intern Med*. 2022 Oct 3;182(11):1149–60. doi: 10.1001/jamainternmed.2022.4268. Epub ahead of print. PMID: 36190722; PMCID: PMC9531086.
- 106: Lau BC, Varsheya K, Morriss N, Wickman J, Kirkendall D, Abrams G. Single-Stage Surgical Treatment of Multi-ligament Knee Injuries Results in Lower Cost and Fewer Complications and Unplanned Reoperations Compared With Staged Treatment. *Arthrosc Sports Med Rehabil*. 2022 Sep 6;4(5):e1659–e1666. doi: 10.1016/j.asmr.2022.06.012. PMID: 36312718; PMCID: PMC9596897.
- 107: Loftus CJ, Ahn J, Nguyen AM, Holt S, Cain M, Shnorhavorian M, Merguerian P, Hagedorn JC. Short term reoperation rates after artificial urinary sphincter placement in pediatric patients. *Can J Urol*. 2022 Oct;29(5):11318–11322. PMID: 36245203.
- 108: Senturias Y, Ali MM, West K. Psychotropic Medication Utilization Among Children Diagnosed With Fetal Alcohol Spectrum Disorder. *Pediatrics*. 2022 Oct 1;150(4):e2022056797. doi: 10.1542/peds.2022-056797. PMID: 36164844.
- 109: Kabir S, Mei J, Wang Y, Ichikawa N, Ino S, Lebedinsky C. MPN-386 Real-World Ruxolitinib Treatment Pattern in Myelofibrosis Patients With Thrombocytopenia. *Clin Lymphoma Myeloma Leuk*. 2022 Oct;22 Suppl 2:S336–S337. doi: 10.1016/S2152-2650(22)01458-6. PMID: 36164006.
- 110: Hasan SA, Dauner DG, Rajpurohit A, Farley JF. Direct-acting antiviral retreatment patterns for hepatitis C. *J Manag Care Spec Pharm*. 2022 Oct;28(10):1100–1110. doi: 10.18553/jmcp.2022.28.10.1100. PMID: 36125057.
- 111: Sharma M, Uddin SA, Hanna G, Ugiliweneza B, Kim TT, Johnson JP, Boakye M, Drazin D. Trends and Long-term Health Care Utilization of Computer-assisted Neuronavigation in Spine Fusions: An Exact Matched Analysis of National Administrative Database. *World Neurosurg*. 2022 Oct;166:e850–e858. doi: 10.1016/j.wneu.2022.07.116. Epub 2022 Aug 6. PMID: 35944855.
- 112: Siddiqui J, Samuel SK, Hayward B, Wirka KA, Deering KL, Harshaw Q, Phillips A, Harbour M. The economic burden of HIV-associated wasting in the era of modern antiretroviral therapy. *J Manag Care Spec Pharm*. 2022 Oct;28(10):1180–1189. doi: 10.18553/jmcp.2022.22097. Epub 2022 Aug 8. PMID: 35939048.

- 113: Durgapal S, Hanson K, Kurosky SK, Kautz S, Sison S, Cool C. Work productivity among patients with metastatic breast cancer in the United States. *Expert Rev Pharmacoecon Outcomes Res.* 2022 Oct;22(7):1137-1145. doi: 10.1080/14737167.2022.2108409. Epub 2022 Aug 4. PMID: 35906806.
- 114: Desai R, Park H, Brown JD, Mohandas R, Pepine CJ, Smith SM. Comparative Safety and Effectiveness of Aldosterone Antagonists Versus Beta-Blockers as Fourth Agents in Patients With Apparent Resistant Hypertension. *Hypertension.* 2022 Oct;79(10):2305-2315. doi: 10.1161/HYPERTENSIONAHA.122.19280. Epub 2022 Jul 26. PMID: 35880517.
- 115: Watkins S, Toliver JC, Kim N, Whitmire S, Garvey WT. Economic outcomes of antiobesity medication use among adults in the United States: A retrospective cohort study. *J Manag Care Spec Pharm.* 2022 Oct;28(10):1066-1079. doi: 10.18553/jmcp.2022.22116. Epub 2022 Jul 20. PMID: 35856489.
- 116: Patel CG, Williams SP, Tao G. Access to Healthcare and the Utilization of Sexually Transmitted Infections Among Homeless Medicaid Patients 15 to 44 Years of Age. *J Community Health.* 2022 Oct;47(5):853-861. doi: 10.1007/s10900-022-01119-y. Epub 2022 Jul 10. PMID: 35819549.
- 117: Rodrigues AJ, Varshneya K, Schonfeld E, Malhotra S, Stienen MN, Veeravagu A. Chronic Opioid Use Prior to ACDF Surgery Is Associated with Inferior Postoperative Outcomes: A Propensity-Matched Study of 17,443 Chronic Opioid Users. *World Neurosurg.* 2022 Oct;166:e294-e305. doi: 10.1016/j.wneu.2022.07.002. Epub 2022 Jul 7. PMID: 35809840.
- 118: Bakri SJ, Karcher H, Andersen S, Souied EH. Anti-Vascular Endothelial Growth Factor Treatment Discontinuation and Interval in Neovascular Age-Related Macular Degeneration in the United States. *Am J Ophthalmol.* 2022 Oct;242:189-196. doi: 10.1016/j.ajo.2022.06.005. Epub 2022 Jun 21. PMID: 35738393.
- 119: Chang JC, Costenbader KH. Hydroxychloroquine and immunosuppressant adherence patterns and their association with subsequent hospitalization rates among children with systemic lupus erythematosus. *Semin Arthritis Rheum.* 2022 Oct;56:152042. doi: 10.1016/j.semarthrit.2022.152042. Epub 2022 Jun 8. PMID: 35738041.
- 120: Hebert KJ, Matta R, Horns JJ, Paudel N, Das R, Kohler TS, Pastuszak AW, McCormick BJ, Hotaling JM, Myers JB. Risk of Postoperative Thromboembolism in Men Undergoing Urological Prosthetic Surgery: An Assessment of 21,413 Men. *J Urol.* 2022 Oct;208(4):878-885. doi: 10.1097/JU.0000000000002801. Epub 2022 Jun 10. PMID: 35686836.
- 121: Khosrow-Khavar F, Desai RJ, Lee H, Lee SB, Kim SC. Tofacitinib and Risk of Malignancy: Results From the Safety of Tofacitinib in Routine Care Patients With Rheumatoid Arthritis (STAR-RA) Study.

- Arthritis Rheumatol. 2022 Oct;74(10):1648-1659. doi: 10.1002/art.42250. Epub 2022 Sep 1. PMID: 35643956; PMCID: PMC9529806.
- 122: Nin DZ, Chen YW, Talmo CT, Hollenbeck BL, Mattingly DA, Niu R, Chang DC, Smith EL. Drivers of Unequal Healthcare Costs in the Nonoperative Treatment of Late-Stage Knee Osteoarthritis Prior to Primary Total Knee Arthroplasty. *J Arthroplasty*. 2022 Oct;37(10):1967-1972.e1. doi: 10.1016/j.arth.2022.04.040. Epub 2022 May 4. PMID: 35525419.
- 123: Antonio-Aguirre B, Swenor B, Canner JK, Singh MS. Risk of Cystoid Macular Edema after Cataract Surgery in Retinitis Pigmentosa: An Analysis of United States Claims from 2010 to 2018. *Ophthalmol Retina*. 2022 Oct;6(10):906-913. doi: 10.1016/j.oret.2022.04.018. Epub 2022 May 2. PMID: 35513237.
- 124: Diaz SE, Lee YF, Bastawrous AL, Shih IF, Lee SH, Li Y, Cleary RK. Comparison of health-care utilization and expenditures for minimally invasive vs. open colectomy for benign disease. *Surg Endosc*. 2022 Oct;36(10):7250-7258. doi: 10.1007/s00464-022-09097-x. Epub 2022 Feb 22. PMID: 35194661; PMCID: PMC9485164.
- 125: Sen AP, Singh Y, Anderson GF. Site-based payment differentials for ambulatory services among individuals with commercial insurance. *Health Serv Res*. 2022 Oct;57(5):1165-1174. doi: 10.1111/1475-6773.13935. Epub 2022 Feb 15. PMID: 35041209; PMCID: PMC9441285.
- 126: Warren DK, Peacock KM, Nickel KB, Fraser VJ, Olsen MA; CDC Prevention Epicenter Program. Postdischarge prophylactic antibiotics following mastectomy with and without breast reconstruction. *Infect Control Hosp Epidemiol*. 2022 Oct;43(10):1382-1388. doi: 10.1017/ice.2021.400. Epub 2021 Sep 27. PMID: 34569458; PMCID: PMC8957624.
- 127: Schieve LA, Simmons GM, Payne AB, Abe K, Hsu LL, Hulihan M, Pope S, Rhie S, Dupervil B, Hooper WC. Vital Signs: Use of Recommended Health Care Measures to Prevent Selected Complications of Sickle Cell Anemia in Children and Adolescents - Selected U.S. States, 2019. *MMWR Morb Mortal Wkly Rep*. 2022 Sep 30;71(39):1241-1246. doi: 10.15585/mmwr.mm7139e1. PMID: 36173745; PMCID: PMC9533731.
- 128: Miller AC, Harris LM, Cavanaugh JE, Abou Alaiwa M, Stoltz DA, Hornick DB, Polgreen PM. The Rapid Reduction of Infection-Related Visits and Antibiotic Use Among People With Cystic Fibrosis After Starting Elexacaftor-Tezacaftor- Ivacaftor. *Clin Infect Dis*. 2022 Sep 30;75(7):1115-1122. doi: 10.1093/cid/ciac117. PMID: 35142340; PMCID: PMC9525072.
- 129: Gagnon-Sanschagrin P, Schein J, Urganus A, Serra E, Liang Y, Musingarimi P, Cloutier M, Guérin A, Davis LL. Identifying individuals with undiagnosed post-traumatic stress disorder in a large United States civilian population - a machine

- learning approach. *BMC Psychiatry*. 2022 Sep 29;22(1):630. doi: 10.1186/s12888-022-04267-6. PMID: 36171558; PMCID: PMC9519190.
- 130: Abrahami D, Tesfaye H, Yin H, Vine S, Hicks B, Yu OHY, Campeau L, Platt RW, Schneeweiss S, Patorno E, Azoulay L. Sodium-Glucose Cotransporter 2 Inhibitors and the Short-term Risk of Bladder Cancer: An International Multisite Cohort Study. *Diabetes Care*. 2022 Sep 28:dc221174. doi: 10.2337/dc22-1174. Epub ahead of print. PMID: 36170656.
- 131: Kuo EJ, Chen L, Wright JD, McManus CM, Lee JA, Kuo JH. Phenoxybenzamine is no longer the standard agent used for alpha blockade before adrenalectomy for pheochromocytoma: A national study of 552 patients. *Surgery*. 2022 Sep 24:S0039-6060(22)00621-3. doi: 10.1016/j.surg.2022.05.039. Epub ahead of print. PMID: 36167697.
- 132: Wu Y, Ren K, Wan Y, Lin HM. Economic burden in patients with anaplastic lymphoma kinase (*ALK*)-positive non-small cell lung cancer (NSCLC), with or without brain metastases, receiving first-line ALK inhibitors. *J Oncol Pharm Pract*. 2022 Sep 21:10781552221126174. doi: 10.1177/10781552221126174. Epub ahead of print. PMID: 36131505.
- 133: Miller AC, Arakkal AT, Koeneman SH, Cavanaugh JE, Polgreen PM. A clinically-guided unsupervised clustering approach to recommend symptoms of disease associated with diagnostic opportunities. *Diagnosis (Berl)*. 2022 Sep 21. doi: 10.1515/dx-2022-0044. Epub ahead of print. PMID: 36127310.
- 134: Lee YW, Morgan JR, Fiascone S, Perkins RB. Underscreenng, overscreening, and guideline-adherent cervical cancer screening in a national cohort. *Gynecol Oncol*. 2022 Sep 20:S0090-8258(22)01826-1. doi: 10.1016/j.ygyno.2022.09.012. Epub ahead of print. PMID: 36150914.
- 135: Cogan JC, Raghunathan RR, Beauchemin MP, Accordino MK, Huang Y, Elkin EB, Melamed A, Wright JD, Hershman DL. New and Persistent Sedative-Hypnotic Use after Adjuvant Chemotherapy for Breast Cancer. *J Natl Cancer Inst*. 2022 Sep 20:djac170. doi: 10.1093/jnci/djac170. Epub ahead of print. PMID: 36130058.
- 136: Dunbar PJ, Sobotka SA, Rodean J, Pulcini CD, Macy ML, Thomson J, Harris D, Coller RJ, Desmarais A, Hall M, Berry JG. Prevalence of and Spending on Ear, Nose, Throat, and Respiratory Infections Among Children With Chronic Complex Conditions. *Acad Pediatr*. 2022 Sep 16:S1876-2859(22)00350-3. doi: 10.1016/j.acap.2022.07.004. Epub ahead of print. PMID: 36122827.
- 137: He JJ, Horns JJ, Kraiss LW, Smith BK, Griffin CL, DeMartino RR, Sarfati MR, Brooke BS. High-intensity statin therapy reduces risk of amputation and reintervention among patients undergoing lower extremity bypass for chronic limb-

- threatening ischemia. *J Vasc Surg*. 2022 Sep 15:S0741-5214(22)02245-5. doi: 10.1016/j.jvs.2022.09.007. Epub ahead of print. PMID: 36115522.
- 138: Yu B, Zhang CA, Li S, Chen T, Mulloy E, Shaw GM, Eisenberg ML. Preconception paternal comorbidities and offspring birth defects: Analysis of a large national data set. *Birth Defects Res*. 2022 Sep 15. doi: 10.1002/bdr2.2082. Epub ahead of print. PMID: 36106720.
- 139: Rizzo KR, Eckhoff MD, Gonzalez GA, Diamond S, Nesti L, Dunn JC. Predictors of Success following Microvascular Replantation Surgery of the Upper Extremity in Adult Patients. *Plast Reconstr Surg Glob Open*. 2022 Sep 14;10(9):e4501. doi: 10.1097/GOX.0000000000004501. PMID: 36119384; PMCID: PMC9473795.
- 140: Smyth EN, Beyrer J, Saverno KR, Hadden E, Abedtash H, DeLuca A, Lawrence GW, Rybowski S. Real-World Patient Characteristics, Utilization Patterns, and Outcomes of US Patients with HR+, HER2- Metastatic Breast Cancer Treated with Abemaciclib. *Drugs Real World Outcomes*. 2022 Sep 12. doi: 10.1007/s40801-022-00327-1. Epub ahead of print. PMID: 36097254.
- 141: Ruzieh M, Ahmad TA, Liu G, Foy AJ. Association between statin exposure and diabetes incidence among privately-insured patients before and after applying a novel technique to control for selection bias. *Am J Med Sci*. 2022 Sep 10:S0002-9629(22)00375-5. doi: 10.1016/j.amjms.2022.08.018. Epub ahead of print. PMID: 36096188.
- 142: Olsen MA, Stwalley D, Tipping AD, Keller MR, Yu H, Dubberke ER. Trends in the incidence of *Clostridioides difficile* infection in adults and the elderly insured by Medicaid compared to commercial insurance or Medicare only. *Infect Control Hosp Epidemiol*. 2022 Sep 9:1-9. doi: 10.1017/ice.2022.208. Epub ahead of print. PMID: 36082779.
- 143: Hu T, Song Y, Done N, Liu Q, Sarpong EM, Lemus-Wirtz E, Signorovitch J, Mohanty S, Weiss T. Incidence of invasive pneumococcal disease in children with commercial insurance or Medicaid coverage in the United States before and after the introduction of 7- and 13-valent pneumococcal conjugate vaccines during 1998-2018. *BMC Public Health*. 2022 Sep 5;22(1):1677. doi: 10.1186/s12889-022-14051-6. PMID: 36064378; PMCID: PMC9442936.
- 144: Tranby EP, Heaton LJ, Tomar SL, Kelly AL, Fager GL, Backley M, Frantsve- Hawley J. Oral Cancer Prevalence, Mortality, and Costs in Medicaid and Commercial Insurance Claims Data. *Cancer Epidemiol Biomarkers Prev*. 2022 Sep 2;31(9):1849-1857. doi: 10.1158/1055-9965.EPI-22-0114. PMID: 35732291.
- 145: Encinosa W, Lane K, Cornelio N. How state surprise billing protections increased ED visits, 2007-2018: potential implications for the No Surprises Act. *Am J Manag Care*. 2022 Sep 1;28(9):e333-e338. doi:

- 10.37765/ajmc.2022.89226. PMID: 36121365.
- 146: Kadakia A, Brady BL, Dembek C, Williams GR, Kent JM. Burden of EPS in commercial patients with schizophrenia initiating atypical antipsychotics. *Am J Manag Care*. 2022 Sep 1;28(9):e315-e324. doi: 10.37765/ajmc.2022.89163. PMID: 36121363.
- 147: Davis GE, Zeiger RS, Emmanuel B, Chung Y, Tran TN, Evans KA, Chen S, Katial R, Kreindler JL, Tkacz J. Systemic Corticosteroid-related Adverse Outcomes and Health Care Resource Utilization and Costs Among Patients with Chronic Rhinosinusitis with Nasal Polyposis. *Clin Ther*. 2022 Sep;44(9):1187-1202. doi: 10.1016/j.clinthera.2022.08.004. Epub 2022 Aug 31. PMID: 36057475.
- 148: Armstrong A, Xia Q, John AR, Patel V, Seigel L. Treatment Patterns for Targeted Therapies, Non-Targeted Therapies, and Drug Holidays in Patients with Psoriasis. *Dermatol Ther (Heidelb)*. 2022 Sep;12(9):2087-2103. doi: 10.1007/s13555-022-00775-1. Epub 2022 Aug 10. PMID: 35947341; PMCID: PMC9464286.
- 149: Galsky MD, Grewal S, Liu Y, Fuldeore R, Sesterhenn S, Chang N, Hepp Z. Treatment with opioids in patients with locally advanced or metastatic urothelial carcinoma and matched non-cancer controls. *Urol Oncol*. 2022 Sep;40(9):411.e9-411.e18. doi: 10.1016/j.urolonc.2022.06.013. Epub 2022 Aug 1. PMID: 35927156.
- 150: Cockrum RH, Soo J, Ham SA, Cohen KS, Snow SG. Association of Progestogens and Venous Thromboembolism Among Women of Reproductive Age. *Obstet Gynecol*. 2022 Sep 1;140(3):477-487. doi: 10.1097/AOG.0000000000004896. Epub 2022 Aug 3. PMID: 35926206; PMCID: PMC9669089.
- 151: Rogers KA, Lu X, Emond B, Côté-Sergent A, Kinkead F, Lafeuille MH, Lefebvre P, Huang Q. Clinical and economic burden of tumor lysis syndrome among patients with chronic lymphocytic leukemia/small lymphocytic lymphoma: A real-world US retrospective study. *J Manag Care Spec Pharm*. 2022 Sep;28(9):1033-1045. doi: 10.18553/jmcp.2022.22075. Epub 2022 Jul 11. PMID: 35816124.
- 152: Downing J, Holt SK, Cunetta M, Gore JL, Dy GW. Spending and Out-of-Pocket Costs for Genital Gender-Affirming Surgery in the US. *JAMA Surg*. 2022 Sep 1;157(9):799-806. doi: 10.1001/jamasurg.2022.2606. PMID: 35793109; PMCID: PMC9260638.
- 153: Wickwire EM, Amari DT, Juday TR, Frech FH, Gor D, Malhotra M. Cardiac events and economic burden among patients with hypertension and treated insomnia in the USA. *Future Cardiol*. 2022 Sep;18(9):731-741. doi: 10.2217/fca-2022-0009. Epub 2022 Jul 5. PMID: 35787013.
- 154: Jain R, Higa S, Keyloun K, Park J, Bonafede M, Tung A, Gillard P, Cutler AJ. Treatment Patterns During Major Depressive Episodes Among Patients with

- Major Depressive Disorder: A Retrospective Database Analysis. *Drugs Real World Outcomes*. 2022 Sep;9(3):477-486. doi: 10.1007/s40801-022-00316-4. Epub 2022 Jun 30. PMID: 35771409; PMCID: PMC9392824.
- 155: Patel DP, Horns JJ, Pastuszak AW, Hsieh TC, Yafi FA, Hotaling JM. Hypogonadism Associated With Higher Rate of Penile Prosthesis Infection: An Analysis of United States Claims Data. *Urology*. 2022 Sep;167:132-137. doi: 10.1016/j.urology.2022.06.010. Epub 2022 Jun 26. PMID: 35768026.
- 156: Marshall GS, Petigara T, Liu Z, Wolfson L, Johnson D, Goveia MG, Chen YT. Timing of Monovalent Vaccine Administration in Infants Receiving DTaP-based Combination Vaccines in the United States. *Pediatr Infect Dis J*. 2022 Sep 1;41(9):775-781. doi: 10.1097/INF.0000000000003609. Epub 2022 Jun 24. PMID: 35763699; PMCID: PMC9359762.
- 157: Ehrlich PF, Pulcini CD, De Souza HG, Hall M, Andrews A, Zima BT, Fein JA, Chaudhary S, Hoffmann JA, Fleegler EW, Jeffries KN, Goyal MK, Hargarten SW, Alpern ER. Mental Health Care Following Firearm and Motor Vehicle-related Injuries: Differences Impacting Our Treatment Strategies. *Ann Surg*. 2022 Sep 1;276(3):463-471. doi: 10.1097/SLA.0000000000005557. Epub 2022 Jun 28. PMID: 35762587; PMCID: PMC9388584.
- 158: Hussan H, Akinyeye S, Mihaylova M, McLaughlin E, Chiang C, Clinton SK, Lieberman D. Colorectal Cancer Risk Is Impacted by Sex and Type of Surgery After Bariatric Surgery. *Obes Surg*. 2022 Sep;32(9):2880-2890. doi: 10.1007/s11695-022-06155-0. Epub 2022 Jun 22. PMID: 35731459.
- 159: DeMartino JK, Swallow E, Goldschmidt D, Yang K, Viola M, Radtke T, Kirson N. Direct health care costs associated with COVID-19 in the United States. *J Manag Care Spec Pharm*. 2022 Sep;28(9):936-947. doi: 10.18553/jmcp.2022.22050. Epub 2022 Jun 18. PMID: 35722829.
- 160: Pimentel RC, Rahai N, Maccioni S, Khanna R. Differences in outcomes among patients with atrial fibrillation undergoing catheter ablation with versus without intracardiac echocardiography. *J Cardiovasc Electrophysiol*. 2022 Sep;33(9):2015-2047. doi: 10.1111/jce.15599. Epub 2022 Jul 23. PMID: 35711034; PMCID: PMC9544828.
- 161: Datar M, Pan LC, McKinney JL, Goss TF, Pulliam SJ. Healthcare resource use and cost burden of urinary incontinence to United States payers. *Neurourol Urodyn*. 2022 Sep;41(7):1553-1562. doi: 10.1002/nau.24989. Epub 2022 Jun 16. PMID: 35708134; PMCID: PMC9542745.
- 162: Tabatabaeepour N, Morgan JR, Jalali A, Kapadia SN, Meinhofer A. Impact of prenatal substance use policies on commercially insured pregnant females with opioid use disorder. *J Subst Abuse*

- Treat. 2022 Sep;140:108800. doi: 10.1016/j.jsat.2022.108800. Epub 2022 May 10. PMID: 35577664; PMCID: PMC9357143.
- 163: Paro A, Hyer JM, Shaikh CF, Pawlik TM. Financial Impact of Out-of-Pocket Costs Among Patients Undergoing Resection for Colorectal Carcinoma. *Ann Surg Oncol*. 2022 Sep;29(9):5387-5397. doi: 10.1245/s10434-022-11755-2. Epub 2022 Apr 16. PMID: 35430665; PMCID: PMC9013274.
- 164: Chao GF, Yang J, Peahl AF, Thumma JR, Dimick JB, Arterburn DE, Telem DA. Comparative effectiveness of sleeve gastrectomy vs Roux-en-Y gastric bypass in patients giving birth after bariatric surgery: reinterventions and obstetric outcomes. *Surg Endosc*. 2022 Sep;36(9):6954-6968. doi: 10.1007/s00464-022-09063-7. Epub 2022 Jan 31. PMID: 35099628.
- 165: Franks JA, Anderson JL, Bowman E, Li CY, Kennedy RE, Yun H. Inpatient Diagnosis of Delirium and Encephalopathy: Coding Trends in 2011-2018. *J Acad Consult Liaison Psychiatry*. 2022 Sep-Oct;63(5):413-422. doi: 10.1016/j.jaclp.2021.12.006. Epub 2022 Jan 10. PMID: 35017122.
- 166: Chen Z, Roy K, Khushalani JS, Puddy RW. Trend in rural-urban disparities in access to outpatient mental health services among US adults aged 18-64 with employer-sponsored insurance: 2005-2018. *J Rural Health*. 2022 Sep;38(4):788-794. doi: 10.1111/jrh.12644. Epub 2022 Jan 9. PMID: 35001435; PMCID: PMC9661493.
- 167: Lyu W, Wanchek T, Wehby GL. The effects of state facial surgery mandates on timeliness of primary cleft repair surgery in the United States. *Oral Dis*. 2022 Sep;28(6):1620-1627. doi: 10.1111/odi.13801. Epub 2021 Feb 26. PMID: 33586311.
- 168: Rochlin DH, Scheckter CC, Satteson ES, Swan CC, Fox PM, Curtin C. Separating Fact From Fiction: A Nationwide Longitudinal Examination of Complex Regional Pain Syndrome Following Treatment of Dupuytren Contracture. *Hand (N Y)*. 2022 Sep;17(5):825-832. doi: 10.1177/1558944720963915. Epub 2020 Oct 20. PMID: 33081519; PMCID: PMC9465785.
- 169: Turkoz I, Daskiran M, Starr HL, Najarian D, Lopena O, Obando C, Keenan A, Benson C, Gopal S. Comparing Relapse Rates in Real-World Patients with Schizophrenia Who Were Adequately versus Not Adequately Treated with Paliperidone Palmitate Once-Monthly Injections Before Transitioning to Once-Every-3-Months Injections. *Neuropsychiatr Dis Treat*. 2022 Aug 30;18:1927-1937. doi: 10.2147/NDT.S373725. PMID: 36065384; PMCID: PMC9440679.
- 170: Nicholls M, Niazi F, Nelson WW, Lau E, Kurtz SM, Ong KL. Association Between Bio-Fermentation Derived Hyaluronic Acid and Healthcare Costs Following Knee Arthroplasty. *Clinicoecon Outcomes Res*. 2022 Aug 30;14:575-585. doi:

- 10.2147/CEOR.S347512. PMID: 36065176; PMCID: PMC9440671.
- 171: Gonzalez GA, Corso K, Kr S, Porto G, Wainwright J, Franco D, Miao J, Hines K, O'Leary M, Mouchtouris N, Mahtabfar A, Neavling N, Montenegro TS, Thalheimer S, Sharan A, Jallo J, Harrop J. Incidence of Pseudarthrosis and Subsequent Surgery After Cervical Fusion Surgery: A Retrospective Review of a National Health Care Claims Database. *World Neurosurg.* 2022 Aug 28:S1878-8750(22)01203-7. doi: 10.1016/j.wneu.2022.08.094. Epub ahead of print. PMID: 36041719.
- 172: Collins JP, King LM, Collier SA, Person J, Gerdes ME, Crim SM, Bartoces M, Fleming-Dutra KE, Friedman CR, Francois Watkins LK. Antibiotic prescribing for acute gastroenteritis during ambulatory care visits—United States, 2006–2015. *Infect Control Hosp Epidemiol.* 2022 Aug 26:1-10. doi: 10.1017/ice.2021.522. Epub ahead of print. PMID: 36017721.
- 173: Salastekar N, Duszak R Jr, Santavicca S, Horný M, Balthazar P, Khaja A, Hughes DR, Hanna TN. Utilization of Chest and Abdominopelvic CT for Traumatic Injury From 2011 to 2018: Evaluation Using a National Commercial Database. *AJR Am J Roentgenol.* 2022 Aug 24. doi: 10.2214/AJR.22.27991. Epub ahead of print. PMID: 36000666.
- 174: Navarro-Millán I, Xie F, Crowson CS, Safford MM, Rajan M, Sattui SE, Curtis JR. Comparing cardiovascular risk of patients with rheumatoid arthritis within the Social Security Disability Insurance with those commercially insured. *Arthritis Res Ther.* 2022 Aug 22;24(1):202. doi: 10.1186/s13075-022-02847-1. PMID: 35996193; PMCID: PMC9396772.
- 175: Archambault C, Azad AD, Al-Moujahed A, Vail D, Wood E, Koo EB. Time to Treatment of Pediatric Retinal Detachments: A US Claims-based Analysis. *Ophthalmol Retina.* 2022 Aug 21:S2468-6530(22)00393-1. doi: 10.1016/j.oret.2022.08.017. Epub ahead of print. PMID: 36002094.
- 176: Zah V, Stanicic F, Ruby J, Vukicevic D, Hurley D. Real-world Medicare Healthcare Costs of Patients with Dupuytren's Contracture Treated with Collagenase or Fasciectomy. *Plast Reconstr Surg Glob Open.* 2022 Aug 18;10(8):e4480. doi: 10.1097/GOX.0000000000004480. PMID: 35999874; PMCID: PMC9390814.
- 177: Schein J, Childress A, Adams J, Gagnon-Sanschagrin P, Maitland J, Qu W, Cloutier M, Guérin A. Treatment patterns among children and adolescents with attention-deficit/hyperactivity disorder in the United States – a retrospective claims analysis. *BMC Psychiatry.* 2022 Aug 18;22(1):555. doi: 10.1186/s12888-022-04188-4. PMID: 35982469; PMCID: PMC9387015.
- 178: Moll K, Hobbi S, Zhou CK, Fingar K, Burrell T, Hernandez-Medina V, Obidi J, Alawar N, Anderson SA, Wong HL, Shoaibi A. Assessment of performance characteristics of COVID-19 ICD-10-CM

- diagnosis code U07.1 using SARS-CoV-2 nucleic acid amplification test results. *PLoS One.* 2022 Aug 18;17(8):e0273196. doi: 10.1371/journal.pone.0273196. PMID: 35980905; PMCID: PMC9387790.
- 179: Nash D, Katcoff H, Faerber J, Iyer VR, Shah MJ, O'Byrne ML, Janson C. Impact of Device Miniaturization on Insertable Cardiac Monitor Use in the Pediatric Population: An Analysis of the MarketScan Commercial and Medicaid Databases. *J Am Heart Assoc.* 2022 Aug 16;11(16):e024112. doi: 10.1161/JAHA.121.024112. Epub 2022 Aug 5. PMID: 35929446; PMCID: PMC9496290.
- 180: Gantengberg JR, van Aalst R, Zimmerman N, Limone B, Chaves SS, La Via WV, Nelson CB, Rizzo C, Savitz DA, Zullo AR. Medically Attended Illness due to Respiratory Syncytial Virus Infection Among Infants Born in the United States Between 2016 and 2020. *J Infect Dis.* 2022 Aug 15;226(Suppl 2):S164-S174. doi: 10.1093/infdis/jiac185. PMID: 35968869; PMCID: PMC9377038.
- 181: Zhdanova M, Voelker J, Pilon D, Joshi K, Morrison L, Sheehan JJ, Vermette- Laforme M, Lefebvre P, Citrome L. Excess healthcare resource utilization and healthcare costs among privately and publicly insured patients with major depressive disorder and acute suicidal ideation or behavior in the United States. *J Affect Disord.* 2022 Aug 15;311:303-310. doi: 10.1016/j.jad.2022.05.086. Epub 2022 May 18. PMID: 35597466.
- 182: Greenhawt M, Abrams EM, Chalil JM, Tran O, Green TD, Shaker MS. The Impact of Allergy Specialty Care on Health Care Utilization Among Peanut Allergy Children in the United States. *J Allergy Clin Immunol Pract.* 2022 Aug 13:S2213-2198(22)00815-7. doi: 10.1016/j.jaip.2022.08.011. Epub ahead of print. PMID: 35973525.
- 183: Zakutansky SK, McCaffery H, Viglianti EM, Carlton EF. Characteristics and Outcomes of Young Adult Patients with Severe Sepsis Admitted to Pediatric Intensive Care Units Versus Medical/Surgical Intensive Care Units. *J Intensive Care Med.* 2022 Aug 10:8850666221119685. doi: 10.1177/08850666221119685. Epub ahead of print. PMID: 35950262.
- 184: Bandara S, Bicket MC, McGinty EE. Trends in opioid and non-opioid treatment for chronic non-cancer pain and cancer pain among privately insured adults in the United States, 2012-2019. *PLoS One.* 2022 Aug 10;17(8):e0272142. doi: 10.1371/journal.pone.0272142. PMID: 35947577; PMCID: PMC9365134.
- 185: Speltz Paiz R, Kaizer A, Jain SV, Darrow DP, Shankar H, Goel V. Lead and Pulse Generator Migration After Spinal Cord Stimulation Implantation: Insights From an Analysis of 7322 Patients. *Neuromodulation.* 2022 Aug 8:S1094-7159(22)00729-2. doi: 10.1016/j.neurom.2022.06.001. Epub ahead of print. PMID: 35953425.

- 186: Tran PT, Nduaguba SO, Diaby V, Choi Y, Winterstein AG. RSV testing practice and positivity by patient demographics in the United States: integrated analyses of MarketScan and NREVSS databases. *BMC Infect Dis.* 2022 Aug 8;22(1):681. doi: 10.1186/s12879-022-07659-x. PMID: 35941563; PMCID: PMC9360654.
- 187: Yang JY, Lund JL, Pate V, Kappelman MD. Utilization of Colonoscopy Following Treatment Initiation in U.S. Commercially Insured Patients With Inflammatory Bowel Disease, 2013-2019. *Inflamm Bowel Dis.* 2022 Aug 5:izac136. doi: 10.1093/ibd/izac136. Epub ahead of print. PMID: 35929644.
- 188: Ostropolets A, Shoener Dunham L, Johnson KD, Liu J. Pneumococcal vaccination coverage among adults newly diagnosed with underlying medical conditions and regional variation in the U.S. *Vaccine.* 2022 Aug 5;40(33):4856-4863. doi: 10.1016/j.vaccine.2022.06.068. Epub 2022 Jul 6. PMID: 35803847.
- 189: Ungaro RC, Griffith J, Garcia-Horton V, Wang A, Cross RK. Adalimumab Is Associated With Lower Healthcare Resource and Steroid Use Versus Vedolizumab in Biologic-Naive Crohn's Disease: A Retrospective Claims Database Analysis. *Crohns Colitis 360.* 2022 Aug 4;4(3):otac029. doi: 10.1093/crocol/otac029. PMID: 36061451; PMCID: PMC9434638.
- 190: Atallah EL, Maegawa R, Latremouille-Viau D, Rossi C, Guérin A, Wu EQ, Patwardhan P. Chronic Myeloid Leukemia: Part I-Real-World Treatment Patterns, Healthcare Resource Utilization, and Associated Costs in Later Lines of Therapy in the United States. *J Health Econ Outcomes Res.* 2022 Aug 4;9(2):19-29. doi: 10.36469/001c.36975. PMID: 35979528; PMCID: PMC9352872.
- 191: Gungabissoon U, Gibbons DC, Requena G, Ribeiro de Souza A, Smith H. Disease burden of primary biliary cholangitis and associated pruritus based on a cross- sectional US claims analysis. *BMJ Open Gastroenterol.* 2022 Aug;9(1):e000857. doi: 10.1136/bmjgast-2021-000857. PMID: 35973742; PMCID: PMC9386220.
- 192: Whitham HK, Gilliland AE, Collier SA, Scallan Walter E, Hoffmann S. Direct Outpatient Health Care Costs Among Commercially Insured Persons for Common Foodborne Pathogens and Acute Gastroenteritis, 2012-2015. *Foodborne Pathog Dis.* 2022 Aug;19(8):558-568. doi: 10.1089/fpd.2021.0108. PMID: 35960532.
- 193: Varnado OJ, Manjelievskaja J, Ye W, Perry A, Schuh K, Wenzel R. Health care resource utilization and costs associated with treatment among patients initiating calcitonin gene-related peptide inhibitors vs other preventive migraine treatments in the United States. *J Manag Care Spec Pharm.* 2022 Aug;28(8):818-829. doi: 10.18553/jmcp.2022.28.8.818. PMID: 35876297.

- 194: Vollmer BL, Solowey J, Chen X, Chang BP, Williams O, Kulick ER, Elkind MSV, Boehme AK. Individual and Joint Effects of Influenza-Like Illness and Vaccinations on Stroke in the Young: A Case-Control Study. *Stroke*. 2022 Aug;53(8):2585-2593. doi: 10.1161/STROKEAHA.121.038403. Epub 2022 Jul 11. PMID: 35861760; PMCID: PMC9329193.
- 195: Carbone AD, Wang K, Tiao J, Chu B, Poeran J, Colvin AC, Gladstone JN, Anthony SG. Trends in Health Care Expenditures and Patient Out-of-Pocket Expenses in Primary Anterior Cruciate Ligament Reconstruction. *Am J Sports Med*. 2022 Aug;50(10):2680-2687. doi: 10.1177/03635465221107082. Epub 2022 Jul 14. PMID: 35834951.
- 196: Li H, Mawanda F, Mitchell L, Zhang X, Goodloe R, Vincent M, Motsko S. Potential Channeling Bias in the Evaluation of Cardiovascular Risk: The Importance of Comparator Selection in Observational Research. *Pharmaceut Med*. 2022 Aug;36(4):247-259. doi: 10.1007/s40290-022-00433-z. Epub 2022 Jul 4. PMID: 35788962; PMCID: PMC9334378.
- 197: Bae JP, Kadziola ZA, Liu D, Chinhammit C, Boye KS, Mather KJ. An Early Assessment of the Real-World Treatment Patterns of Type 2 Diabetes: A Comparison to the 2018 ADA/EASD Consensus Report Recommendations. *Diabetes Ther*. 2022 Aug;13(8):1499-1510. doi: 10.1007/s13300-022-01289-x. Epub 2022 Jun 29. PMID: 35764911; PMCID: PMC9309104.
- 198: Varnado OJ, Hoyt M, Ye W, Nicholson R. Patient characteristics and treatment utilization among patients with migraine initiating self-injectable calcitonin gene-related peptide monoclonal antibody and novel acute medication. *Curr Med Res Opin*. 2022 Aug;38(8):1451-1457. doi: 10.1080/03007995.2022.2091333. Epub 2022 Jul 11. PMID: 35762152.
- 199: Pan LC, Datar M, McKinney JL, Keyser LE, Goss TF, Pulliam SJ. Adherence to professional society guidelines among women with stress or mixed urinary incontinence. *Neurourol Urodyn*. 2022 Aug;41(6):1489-1497. doi: 10.1002/nau.24986. Epub 2022 Jun 22. PMID: 35731185; PMCID: PMC9542296.
- 200: Sherman BW, Sils B, Kamin L, Westrich K. Specialty drug and health care utilization vary by wage level in employer-sponsored health plans. *J Manag Care Spec Pharm*. 2022 Aug;28(8):918-928. doi: 10.18553/jmcp.2022.22091. Epub 2022 Jun 18. PMID: 35722830.
- 201: Pollack M, Gandhi H, Tkacz J, Lanz M, Lugogo N, Gilbert I. The use of short-acting bronchodilators and cost burden of asthma across Global Initiative for Asthma-based severity levels: Insights from a large US commercial and managed Medicaid population. *J Manag Care Spec Pharm*. 2022 Aug;28(8):881-891. doi: 10.18553/jmcp.2022.21498. Epub 2022 Jun 16. PMID: 35708342.

- 202: Woolley M, Cook EE, Mu F, Betts KA, Billmyer E, Yim E, Chen J, Wu EQ. The Economic Burden of Eosinophilic Gastritis and Eosinophilic Enteritis in the United States. *Adv Ther.* 2022 Aug;39(8):3547-3559. doi: 10.1007/s12325-022-02202-5. Epub 2022 Jun 10. PMID: 35689161; PMCID: PMC9309124.
- 203: Lan G, Wu B, Sharma K, Gadhia K, Ashton V. Improved Prediction of Body Mass Index in Real-World Administrative Healthcare Claims Databases. *Adv Ther.* 2022 Aug;39(8):3835-3844. doi: 10.1007/s12325-022-02192-4. Epub 2022 Jun 10. PMID: 35680715.
- 204: Chang JC, Weiss PF, Xiao R, Atkinson MA, Wenderfer SE. Use of renin angiotensin aldosterone system inhibitors in children with lupus and time to glucocorticoid discontinuation. *Kidney Int.* 2022 Aug;102(2):395-404. doi: 10.1016/j.kint.2022.04.023. Epub 2022 May 23. PMID: 35618096; PMCID: PMC9329244.
- 205: Costales B, Vouri SM, Brown JD, Setlow B, Goodin AJ. Treatment initiation and utilization patterns of pharmacotherapies for early-onset idiopathic restless legs syndrome. *Sleep Med.* 2022 Aug;96:70-78. doi: 10.1016/j.sleep.2022.05.003. Epub 2022 May 13. PMID: 35605349; PMCID: PMC9385069.
- 206: Nalliah RP, Basu T, Chang CH. Association between periodontal care and hospitalization with acute myocardial infarction. *J Am Dent Assoc.* 2022 Aug;153(8):776-786.e2. doi: 10.1016/j.adaj.2022.02.003. Epub 2022 Apr 20. PMID: 35459524.
- 207: Rodrigues AJ, Jokhai R, Varshneya K, Stienen MN, Veeravagu A. Factors Which Predict Adverse Outcomes in Anterior Cervical Discectomy and Fusion Procedures in the Nonelderly Adult Population. *Clin Spine Surg.* 2022 Aug 1;35(7):E584-E589. doi: 10.1097/BSD.0000000000001326. Epub 2022 Apr 7. PMID: 35385403.
- 208: Adil SM, Charalambous LT, Rajkumar S, Seas A, Warman PI, Murphy KR, Rahimpour S, Parente B, Dharmapurikar R, Dunn TW, Lad SP. Machine Learning to Predict Successful Opioid Dose Reduction or Stabilization After Spinal Cord Stimulation. *Neurosurgery.* 2022 Aug 1;91(2):272-279. doi: 10.1227/neu.0000000000001969. Epub 2022 Apr 8. PMID: 35384918.
- 209: Samples H, Williams AR, Crystal S, Olfson M. Psychosocial and behavioral therapy in conjunction with medication for opioid use disorder: Patterns, predictors, and association with buprenorphine treatment outcomes. *J Subst Abuse Treat.* 2022 Aug;139:108774. doi: 10.1016/j.jsat.2022.108774. Epub 2022 Mar 18. PMID: 35337716; PMCID: PMC9187597.
- 210: Premkumar A, Anatone A, Illescas A, Memtsoudis S, Cross MB, Sculco PK, Gonzalez Della Valle A. Perioperative Use of Antifibrotic Medications Associated With

- Lower Rate of Manipulation After Primary TKA: An Analysis of 101,366 Patients. *J Arthroplasty*. 2022 Aug;37(8S):S1010-S1015.e1. doi: 10.1016/j.arth.2022.03.026. Epub 2022 Mar 11. PMID: 35283229.
- 211: Murugappan MN, Westberg SM, Contag S, Melnik TE, Kumar A, Rajpurohit A, Thorsness K, Farley JF. Maternal ADHD and Perinatal Prescription Stimulant Use. *J Atten Disord*. 2022 Aug;26(10):1347-1356. doi: 10.1177/10870547211073472. Epub 2022 Jan 20. PMID: 35048729.
- 212: Sarayani A, Albogami Y, Thai TN, Smolinski NE, Patel P, Wang Y, Nduaguba S, Rasmussen SA, Winterstein AG. Prenatal exposure to teratogenic medications in the era of Risk Evaluation and Mitigation Strategies. *Am J Obstet Gynecol*. 2022 Aug;227(2):263.e1-263.e38. doi: 10.1016/j.ajog.2022.01.004. Epub 2022 Jan 12. PMID: 35032444.
- 213: Johnston EE, Davis ES, Bhatia S, Kenzik K. Location of death and hospice use in children with cancer varies by type of health insurance. *Pediatr Blood Cancer*. 2022 Aug;69(8):e29521. doi: 10.1002/pbc.29521. Epub 2021 Dec 28. PMID: 34962704.
- 214: Greenfield PT, Spencer CC, Dawes A, Wagner ER, Gottschalk MB, Daly CA. The Preoperative Cost of Carpal Tunnel Syndrome. *J Hand Surg Am*. 2022 Aug;47(8):752-761.e1. doi: 10.1016/j.jhsa.2021.07.027. Epub 2021 Sep 8. PMID: 34509312.
- 215: Wood AR, Ham SA, Sengupta N, Micic D. Impact of Early Video Capsule Endoscopy on Hospitalization and Post-hospitalization Outcomes: A Propensity Score-Matching Analysis. *Dig Dis Sci*. 2022 Aug;67(8):3584-3591. doi: 10.1007/s10620-021-07239-0. Epub 2021 Sep 4. PMID: 34480709.
- 216: Ray M, Swallow E, Gandhi K, Carley C, Sikirica V, Wang T, Done N, Signorovitch J, Mostaghimi A. Healthcare Utilization and Costs Among US Adolescents With Alopecia Areata. *J Health Econ Outcomes Res*. 2022 Jul 29;9(2):11-18. doi: 10.36469/001c.36229. PMID: 35975139; PMCID: PMC9338344.
- 217: Robertson DM, Truong DT, Cox DA, Carmichael HL, Ou Z, Minich LL, Williams RV, Selamet Tierney ES. Pediatric Heart Network Trial of Losartan vs. Atenolol in Children and Young Adults with Marfan Syndrome: Impact on Prescription Practices. *Pediatr Cardiol*. 2022 Jul 28. doi: 10.1007/s00246-022-02976-z. Epub ahead of print. PMID: 35902413.
- 218: Zhao N, Al-Aly Z, Zheng B, van Donkelaar A, Martin RV, Pineau CA, Bernatsky S. Fine particulate matter components and interstitial lung disease in rheumatoid arthritis. *Eur Respir J*. 2022 Jul 28;60(1):2102149. doi: 10.1183/13993003.02149-2021. PMID: 34949700.
- 219: Hugunin J, Davis M, Larkin C, Baek J, Skehan B, Lapane KL. Healthcare use in commercially insured youth with mental

- health disorders. *BMC Health Serv Res.* 2022 Jul 26;22(1):952. doi: 10.1186/s12913-022-08353-z. PMID: 35883138; PMCID: PMC9323879.
- 220: Charalambous LT, Adil SM, Rajkumar S, Gramer R, Kirsch E, Liu B, Zomorodi A, McClellan M, Lad SP. A Nationwide Analysis of Aneurysmal Subarachnoid Hemorrhage Mortality, Complications, and Health Economics in the USA. *Transl Stroke Res.* 2022 Jul 26. doi: 10.1007/s12975-022-01065-w. Epub ahead of print. PMID: 35881231.
- 221: Suarez EA, Nguyen M, Zhang D, Zhao Y, Stojanovic D, Munoz M, Liedtka J, Anderson A, Liu W, Dashevsky I, Cole D, DeLuccia S, Menzin T, Noble J, Maro JC. Novel Methods for Pregnancy Drug Safety Surveillance in the FDA Sentinel System. *Pharmacoepidemiol Drug Saf.* 2022 Jul 24. doi: 10.1002/pds.5512. Epub ahead of print. PMID: 35871766.
- 222: Pradhan R, Patorno E, Tesfaye H, Schneeweiss S, Yin H, Franklin J, Pawar A, Santella C, Yu OHY, Renoux C, Azoulay L. Glucagon-Like Peptide 1 Receptor Agonists and Risk of Anaphylactic Reaction Among Patients With Type 2 Diabetes: A Multisite Population-Based Cohort Study. *Am J Epidemiol.* 2022 Jul 23;191(8):1352-1367. doi: 10.1093/aje/kwac021. PMID: 35136902.
- 223: Antoon JW, Hall M, Feinstein JA, Kyler KE, Shah SS, Girdwood ST, Goldman JL, Grijalva CG, Williams DJ. Guideline Concordant Antiviral Treatment in Children at High-risk for Influenza Complications. *Clin Infect Dis.* 2022 Jul 22:ciac606. doi: 10.1093/cid/ciac606. Epub ahead of print. PMID: 35867691.
- 224: Shankar DS, Kim J, Bienstock DM, Gao M, Lee Y, Zubizarreta NJ, Poeran J, Lin JD, Chaudhary SB, Hecht AC. Postoperative Opioid Use and Prescribing Patterns among Patients Undergoing Cervical Laminectomy with Instrumented Fusion versus Cervical Laminoplasty with Reconstruction. *Global Spine J.* 2022 Jul 21:2192568222116825. doi: 10.1177/2192568222116825. Epub ahead of print. PMID: 35861211.
- 225: Rajkumar S, Yang LZ, Venkatraman V, Charalambous L, Parente B, Lee HJ, Lad SP. Health Care Resource Utilization of High-Frequency Spinal Cord Stimulation for Treatment of Chronic Refractory Low Back Pain. *Neuromodulation.* 2022 Jul 20:S1094-7159(22)00720-6. doi: 10.1016/j.neurom.2022.03.013. Epub ahead of print. PMID: 35871122.
- 226: Lutsey PL, Evensen LH, Thenappan T, Prins KW, Walker RF, Farley JF, MacLehose RF, Alonso A, Zakai NA. Incidence and Risk Factors of Pulmonary Hypertension After Venous Thromboembolism: An Analysis of a Large Health Care Database. *J Am Heart Assoc.* 2022 Jul 19;11(14):e024358. doi: 10.1161/JAHA.121.024358. Epub 2022 Jul 15. PMID: 35861839.
- 227: Lugogo NL, Bogart M, Corbridge T, Packnett ER, Wu J, Hahn B. Impact of mepolizumab in patients with high-burden

- severe asthma within a managed care population. *J Asthma*. 2022 Jul 19:1-16. doi: 10.1080/02770903.2022.2102036. Epub ahead of print. PMID: 35853158.
- 228: Garrity BM, Perrin JM, Rodean J, Houtrow AJ, Shelton C, Stille C, McLellan S, Coleman C, Mann M, Kuhlthau K, Desmarais A, Berry JG. Annual Days With a Health Care Encounter for Children and Youth Enrolled in Medicaid: A Multistate Analysis. *Acad Pediatr*. 2022 Jul 18:S1876-2859(22)00353-9. doi: 10.1016/j.acap.2022.07.008. Epub ahead of print. PMID: 35863733.
- 229: Cranmer LD, Hess LM, Sugihara T, Muntz HG. Cardiac events among patients with sarcoma treated with doxorubicin by method of infusion: A real-world database study. *Cancer Rep (Hoboken)*. 2022 Jul 18:e1681. doi: 10.1002/cnr2.1681. Epub ahead of print. PMID: 35852051.
- 230: Beauchemin MP, Raghunathan RR, Accordino MK, Cogan JC, Kahn JM, Wright JD, Hershman DL. New persistent opioid use among adolescents and young adults with sarcoma. *Cancer*. 2022 Jul 15;128(14):2777-2785. doi: 10.1002/cncr.34238. Epub 2022 May 23. PMID: 35599575.
- 231: Ettleson MD, Bianco AC, Wan W, Laiteerapong N. Suboptimal Thyroid Hormone Replacement Is Associated With Worse Hospital Outcomes. *J Clin Endocrinol Metab*. 2022 Jul 14;107(8):e3411-e3419. doi: 10.1210/clinem/dgac215. PMID: 35472082; PMCID: PMC9282363.
- 232: Trujillo AJ, Gutierrez JC, Garcia Morales EE, Socal M, Ballreich J, Anderson G. Trajectories of prices in generic drug markets: what can we infer from looking at trajectories rather than average prices? *Health Econ Rev*. 2022 Jul 11;12(1):37. doi: 10.1186/s13561-022-00384-w. PMID: 35819735; PMCID: PMC9278003.
- 233: Glover S, Borrego ME, Ray GM, Roberts MH. Sodium-Glucose Cotransporter 2 Inhibitor Use Among Individuals Age <65 with Type 2 Diabetes and Heart Failure with Reduced Ejection Fraction: A Cost-Benefit Analysis. *Clinicoecon Outcomes Res*. 2022 Jul 9;14:465-477. doi: 10.2147/CEOR.S361886. PMID: 35845354; PMCID: PMC9278724.
- 234: Marrache M, Prasad N, Margalit A, Nayar SK, Best MJ, Fritz JM, Skolasky RL. Initial presentation for acute low back pain: is early physical therapy associated with healthcare utilization and spending? A retrospective review of a National Database. *BMC Health Serv Res*. 2022 Jul 2;22(1):851. doi: 10.1186/s12913-022-08255-0. PMID: 35778738; PMCID: PMC9250203.
- 235: Wadhwa H, Zhuang T, Shapiro LM, Welch JM, Richard MJ, Kamal RN. Site of service of irrigation and debridement of open finger and hand fractures: a retrospective review of trends and outcomes. *Curr Orthop Pract*. 2022 Jul-Aug;33(4):358-362. doi: 10.1097/bco.0000000000001123. Epub 2022 May 11. PMID: 36188628; PMCID: PMC9524536.

- 236: Mahipal V, Alam MAU. Estimating Heterogeneous Causal Effect of Polysubstance Usage on Drug Overdose from Large-Scale Electronic Health Record. *Annu Int Conf IEEE Eng Med Biol Soc.* 2022 Jul;2022:1028-1031. doi: 10.1109/EMBC48229.2022.9872018. PMID: 36086313.
- 237: Hughes A, Khan T, Kirley K, Moin T, Mainous A, Sachdev N, Williams J, Wozniak G. Metformin Prescription Rates for Patients with Prediabetes. *J Am Board Fam Med.* 2022 Jul-Aug;35(4):821-826. doi: 10.3122/jabfm.2022.04.210485. PMID: 35896449.
- 238: Lodise TP, Manjelievskaja J, Marchlewicz EH, Rodriguez M. Retrospective Cohort Study of the 12-Month Epidemiology, Treatment Patterns, Outcomes, and Health Care Costs Among Adult Patients With Complicated Urinary Tract Infections. *Open Forum Infect Dis.* 2022 Jun 20;9(7):ofac307. doi: 10.1093/ofid/ofac307. PMID: 35891695; PMCID: PMC9308450.
- 239: Hall EW, Tippett A, Fridkin S, Anderson EJ, Lopman B, Benkeser D, Baker JM. Association Between Rotavirus Vaccination and Antibiotic Prescribing Among Commercially Insured US Children, 2007-2018. *Open Forum Infect Dis.* 2022 Jun 9;9(7):ofac276. doi: 10.1093/ofid/ofac276. PMID: 35855006; PMCID: PMC9291383.
- 240: Liao L, Chen L, Gockley A, Melamed A, St Clair CM, Hou JY, Khoury-Collado F, Accordino M, Hershman DL, Wright JD. Temporal Trends in Cervical Cancer Screening Practices and Associated Downstream Abnormalities and Procedures Among Women With Insurance in the United States. *Obstet Gynecol.* 2022 Jul 1;140(1):55-64. doi: 10.1097/AOG.0000000000004838. Epub 2022 Jun 7. PMID: 35849456.
- 241: Sharifi M, Goodman AB, Chua KP. Assessment of Underuse and Overuse of Screening Tests for Co-occurring Conditions Among Children With Obesity. *JAMA Netw Open.* 2022 Jul 1;5(7):e2222101. doi: 10.1001/jamanetworkopen.2022.22101. Erratum in: *JAMA Netw Open.* 2022 Aug 1;5(8):e2228489. PMID: 35834247; PMCID: PMC9284328.
- 242: Streed CG Jr, Morgan JR, Gai MJ, Larochelle MR, Paasche-Orlow MK, Taylor JL. Prevalence of HIV Preexposure Prophylaxis Prescribing Among Persons With Commercial Insurance and Likely Injection Drug Use. *JAMA Netw Open.* 2022 Jul 1;5(7):e2221346. doi: 10.1001/jamanetworkopen.2022.21346. PMID: 35819784; PMCID: PMC9277489.
- 243: Jin MC, Jensen M, Zhou Z, Rodrigues A, Ren A, Barros Guinle MI, Veeravagu A, Zygourakis CC, Desai AM, Ratliff JK. Health Care Resource Utilization in Management of Opioid-Naive Patients With Newly Diagnosed Neck Pain. *JAMA Netw Open.* 2022 Jul 1;5(7):e2222062. doi: 10.1001/jamanetworkopen.2022.22062. PMID: 35816312; PMCID: PMC9280399.

- 244: Grada A, Perche P, Feldman S. Adherence and Persistence to Acne Medications: A Population-Based Claims Database Analysis. *J Drugs Dermatol.* 2022 Jul 1;21(7):758-764. doi: 10.36849/JDD.6832. PMID: 35816068.
- 245: Beau-Lejdstrom R, Hong LS, Garcia de Albeniz X, Floricel F, Lorenzen J, Bonfitto F, Kalilani L, Loesch C, Luscombe G, Perez-Gutthann S, Mottet I, Foskett N. Incidence of Acute Renal Failure in Patients Using Levetiracetam Versus Other Antiseizure Medications: A Voluntary Post-Authorization Safety Study. *Drug Saf.* 2022 Jul;45(7):781-790. doi: 10.1007/s40264-022-01193-0. Epub 2022 Jun 28. PMID: 35761158.
- 246: Wang CY, Park H, Heldermon CD, Vouri SM, Brown JD. Patient out-of-pocket and payer costs for pegfilgrastim originator vs biosimilars as primary prophylaxis of febrile neutropenia in the first cycle among a commercially insured population. *J Manag Care Spec Pharm.* 2022 Jul;28(7):795-802. doi: 10.18553/jmcp.2022.28.7.795. PMID: 35737859.
- 247: Ge W, Chen CI, Wu N, Fury MG, Ruiz E, Jalbert JJ. Hedgehog pathway inhibitor real-world treatment patterns in patients with basal cell carcinoma: a claims-based analysis. *Future Oncol.* 2022 Jul;18(23):2561-2572. doi: 10.2217/fon-2022-0373. Epub 2022 Jun 23. PMID: 35735026.
- 248: Smolinski NE, Antonelli PJ, Winterstein AG. Watchful Waiting for Acute Otitis Media. *Pediatrics.* 2022 Jul 1;150(1):e2021055613. doi: 10.1542/peds.2021-055613. PMID: 35726560.
- 249: Pero A, Pace A, Dhamoon MS. Triptan medication use among patients with migraine with contraindications in the US. *Headache.* 2022 Jul;62(7):883-889. doi: 10.1111/head.14327. Epub 2022 Jun 7. PMID: 35670141.
- 250: Cohen SB, Haraoui B, Curtis JR, Smith TW, Woolcott J, Gruben D, Murray CW. Impact of Methotrexate Discontinuation, Interruption, or Persistence in US Patients with Rheumatoid Arthritis Initiating Tofacitinib + Oral Methotrexate Combination. *Clin Ther.* 2022 Jul;44(7):982-997.e2. doi: 10.1016/j.clinthera.2022.05.002. Epub 2022 Jun 4. PMID: 35667900.
- 251: Block AM, Eisenberg MT, Inclan PM, Nepple JJ. Treatment Trends in Meniscal Pathology in the Setting of Concomitant ACL Injuries in Pediatric and Young Adult Patients: An Insurance Database Study. *Am J Sports Med.* 2022 Jul;50(9):2367-2373. doi: 10.1177/03635465221098141. Epub 2022 Jun 1. PMID: 35647786.
- 252: Doherty MT, Aris E, Servotte N, Beck E. Capturing the value of vaccination: impact of vaccine-preventable disease on hospitalization. *Aging Clin Exp Res.* 2022 Jul;34(7):1551-1561. doi: 10.1007/s40520-022-02110-2. Epub 2022 May 28. PMID: 35633477; PMCID: PMC9142834.

- 253: Leonardi C, Zhu B, Malatestinic WN, Eastman WJ, Guo J, Murage MJ, Choong CK, Burge R, Blauvelt A. Real-World Biologic Adherence, Persistence, and Monotherapy Comparisons in US Patients with Psoriasis: Results from IBM MarketScan[®] Databases. *Adv Ther.* 2022 Jul;39(7):3214-3224. doi: 10.1007/s12325-022-02155-9. Epub 2022 May 16. PMID: 35570242; PMCID: PMC9239953.
- 254: Moningi S, Lei X, Fang P, Taniguchi CM, Holliday EB, Koay EJ, Koong AC, Ludmir EB, Minsky BD, Das P, Giordano SH, Smith GL. Contemporary use and outcomes of radiation and chemotherapy for unresectable pancreatic cancer. *Clin Transl Radiat Oncol.* 2022 Apr 19;35:9-16. doi: 10.1016/j.ctro.2022.04.007. PMID: 35510142; PMCID: PMC9058953.
- 255: Evans M, Chandramouli AS, Faurby M, Matthiessen KS, Mogensen PB, Verma S. Healthcare costs and hospitalizations in US patients with type 2 diabetes and cardiovascular disease: A retrospective database study (OFFSET). *Diabetes Obes Metab.* 2022 Jul;24(7):1300-1309. doi: 10.1111/dom.14703. Epub 2022 May 3. PMID: 35504854; PMCID: PMC9324926.
- 256: Mesa-Frias M, Rossi C, Emond B, Bookhart B, Anderson D, Drummond S, Wang J, Lefebvre P, Lamerato LE, Lafeuille MH. Incidence and economic burden of respiratory syncytial virus among adults in the United States: A retrospective analysis using 2 insurance claims databases. *J Manag Care Spec Pharm.* 2022 Jul;28(7):753-765. doi: 10.18553/jmcp.2022.21459. Epub 2022 May 3. PMID: 35503888.
- 257: Hakam N, Lui J, Shaw NM, Nabavizadeh B, Smith JF, Eisenberg ML, Breyer BN. Hematospermia is rarely associated with urologic malignancy: Analysis of United States claims data. *Andrology.* 2022 Jul;10(5):919-925. doi: 10.1111/andr.13189. Epub 2022 May 5. PMID: 35483126.
- 258: Sah J, Teeple A, Muser E, Gutierrez C, Dassopoulos T. Treatment persistence and maintenance dose titration among ulcerative colitis patients on biologics: a pooled study of three United States claim databases. *Curr Med Res Opin.* 2022 Jul;38(7):1093-1101. doi: 10.1080/03007995.2022.2071041. Epub 2022 May 23. PMID: 35475385.
- 259: Alam AB, Lutsey PL, Chen LY, MacLehose RF, Shao IY, Alonso A. Risk Factors for Dementia in Patients With Atrial Fibrillation. *Am J Cardiol.* 2022 Jul 1;174:48-52. doi: 10.1016/j.amjcard.2022.03.029. Epub 2022 Apr 23. PMID: 35473779; PMCID: PMC9181692.
- 260: Patel D, Liu G, Roberts SCM, Leslie DL, Weisman CS, Horvath S, Chuang CH. Association of Provider Specialty With Abortion-Related Morbidity and Adverse Events Among Patients Having Procedural and Medication Abortions. *Womens Health Issues.* 2022 Jul-Aug;32(4):327-333. doi:

- 10.1016/j.whi.2022.03.001. Epub 2022 Apr 15. PMID: 35437157.
- 261: Kang HR, Lo-Ciganic WH, DeRemer CE, Dietrich EA, Huang PL, Park H. Effectiveness and Safety of Extended Oral Anticoagulant Therapy in Patients with Venous Thromboembolism: A Retrospective Cohort Study. *Clin Pharmacol Ther.* 2022 Jul;112(1):133-145. doi: 10.1002/cpt.2611. Epub 2022 May 2. PMID: 35420702.
- 262: Abdelwahab M, Marques S, Howard J, Huang A, Lechner M, Olds C, Capasso R. Incidence and risk factors of chronic opioid use after sleep apnea surgery. *J Clin Sleep Med.* 2022 Jul 1;18(7):1805-1813. doi: 10.5664/jcsm.9978. PMID: 35393936; PMCID: PMC9243273.
- 263: Al-Bahou J, Bhagwandass H, Valdes IL, Friedman J, Vouri SM. Changes in overactive bladder medication following bariatric surgery: segmented regression analysis. *World J Urol.* 2022 Jul;40(7):1777-1783. doi: 10.1007/s00345-022-04001-7. Epub 2022 Apr 6. PMID: 35384485.
- 264: Jain N, Sharma M, Wang D, Ugiliweneza B, Drazin D, Boakye M. The Phenotypes of Anxiety and Depression: Analysis of Combined Comorbidity and Treatment in Patients Undergoing Spinal Fusion. *Neurosurgery.* 2022 Jul 1;91(1):103-114. doi: 10.1227/neu.0000000000001935. Epub 2022 Apr 6. PMID: 35377352.
- 265: Keating SJ, Gu T, Jun MP, McBride A. Health Care Resource Utilization and Total Costs of Care Among Patients with Diffuse Large B Cell Lymphoma Treated with Chimeric Antigen Receptor T Cell Therapy in the United States. *Transplant Cell Ther.* 2022 Jul;28(7):404.e1-404.e6. doi: 10.1016/j.jtct.2022.03.021. Epub 2022 Mar 27. PMID: 35354101.
- 266: Thomas AS, Huang Y, Kwon W, Schrophe BA, Sugahara K, Chabot JA, Wright JD, Kluger MD. Prevalence and Risk Factors for Pancreatic Insufficiency After Partial Pancreatectomy. *J Gastrointest Surg.* 2022 Jul;26(7):1425-1435. doi: 10.1007/s11605-022-05302-3. Epub 2022 Mar 22. PMID: 35318597.
- 267: Hong K, Hill HA, Tsai Y, Lindley MC, Zhou F. Vaccination Coverage of Privately Insured Children: Comparing U.S. Survey and Administrative Data. *Am J Prev Med.* 2022 Jul;63(1):107-110. doi: 10.1016/j.amepre.2022.01.020. Epub 2022 Mar 19. PMID: 35317958.
- 268: AlAshqar A, Ishiwata R, Moss C, Andersen KM, Yanek L, Bicket MC, Alexander GC, Borahay MA. Predictors of new persistent opioid use after benign hysterectomy in the United States. *Am J Obstet Gynecol.* 2022 Jul;227(1):68.e1-68.e24. doi: 10.1016/j.ajog.2022.02.030. Epub 2022 Mar 3. PMID: 35248573; PMCID: PMC9253094.
- 269: Zeitler EP, Ronk CJ, Cockerham A, Huse S, McKindley DS, Kim MH. Healthcare resource utilization in patients with newly diagnosed atrial fibrillation in the United States. *Expert Rev Pharmacoecon Outcomes Res.* 2022 Jul;22(5):763-771. doi:

- 10.1080/14737167.2022.2045955. Epub 2022 Mar 10. PMID: 35209794.
- 270: Goel V, Kaizer A, Patwardhan AM, Ibrahim M, DeSimone DC, Sivanesan E, Shankar H. Postoperative Oral Antibiotic Use and Infection-Related Complications After Spinal Cord Stimulator Surgery. *Neuromodulation*. 2022 Jul;25(5):738-744. doi: 10.1016/j.neurom.2021.10.012. Epub 2021 Dec 18. PMID: 35088754.
- 271: Gaber CE, Cotton CC, Eluri S, Lund JL, Farrell TM, Dallon ES. Autoimmune and viral risk factors are associated with achalasia: A case-control study. *Neurogastroenterol Motil*. 2022 Jul;34(7):e14312. doi: 10.1111/nmo.14312. Epub 2021 Dec 26. PMID: 34957646; PMCID: PMC9232907.
- 272: Weaver J, Chakladar S, Mirchandani K, Liu Z. Surgical and Pharmacological Treatment Patterns in Women with Endometriosis: A Descriptive Analysis of Insurance Claims. *J Womens Health (Larchmt)*. 2022 Jul;31(7):1003-1011. doi: 10.1089/jwh.2021.0060. Epub 2021 Nov 26. PMID: 34846930.
- 273: Zheng B, Soares de Moura C, Machado M, Pineau CA, Curtis JR, Vinet E, Bernatsky S. Association between chronic obstructive pulmonary disease, smoking, and interstitial lung disease onset in rheumatoid arthritis. *Clin Exp Rheumatol*. 2022 Jul;40(7):1280-1284. doi: 10.55563/clinexprheumatol/i9au1r. Epub 2021 Sep 7. PMID: 34494959.
- 274: Tiwari T, Tranby E, Thakkar-Samtani M, Frantsve-Hawley J. Determinants of Tooth Loss in a Medicaid Adult Population. *JDR Clin Trans Res*. 2022 Jul;7(3):289-297. doi: 10.1177/23800844211022277. Epub 2021 Jul 16. PMID: 34269110.
- 275: Hong K, Lindley MC, Zhou F. Coverage and Timing of Influenza Vaccination Among Privately Insured Pregnant Women in the United States, 2010-2018. *Public Health Rep*. 2022 Jul-Aug;137(4):739-748. doi: 10.1177/00333549211026779. Epub 2021 Jun 23. PMID: 34161183; PMCID: PMC9257513.
- 276: Tanner MR, Bush T, Nesheim SR, Weidle PJ, Byrd KK. Retention in Medical Care Among Insured Adolescents and Young Adults With Diagnosed HIV Infection, United States, 2010-2014. *Public Health Rep*. 2022 Jul-Aug;137(4):721-729. doi: 10.1177/00333549211023266. Epub 2021 Jun 16. PMID: 34133247; PMCID: PMC9257494.
- 277: Padovano WM, Dengler J, Patterson MM, Yee A, Snyder-Warwick AK, Wood MD, Moore AM, Mackinnon SE. Incidence of Nerve Injury After Extremity Trauma in the United States. *Hand (N Y)*. 2022 Jul;17(4):615-623. doi: 10.1177/1558944720963895. Epub 2020 Oct 21. PMID: 33084377; PMCID: PMC9274890.
- 278: Huo X, Finkelstein J. Effect of Hydroxychloroquine on Influenza Prevention. *Stud Health Technol Inform*.

- 2022 Jun 29;295:343-344. doi: 10.3233/SHTI220733. PMID: 35773879.
- 279: Chao GF, Yang J, Peahl A, Thumma JR, Dimick JB, Arterburn DE, Telem DA. Births After Bariatric Surgery in the United States: Incidence, Obstetric Outcomes, and Reinterventions. *Ann Surg*. 2022 Jun 28. doi: 10.1097/SLA.0000000000005438. Epub ahead of print. PMID: 35762610.
- 280: Kiani S, Poeran J, Zhong H, Wilson LA, Poulsides L, Liu J, Memtsoudis SG. Tramadol prescribed at discharge is associated with lower odds of chronic opioid use after elective total joint arthroplasty. *Reg Anesth Pain Med*. 2022 Jun 27:rapm-2022-103486. doi: 10.1136/rapm-2022-103486. Epub ahead of print. PMID: 35760515.
- 281: Park JY, Veenstra DL, Wallick CJ, Marcum ZA. Prescribing Alzheimer's Disease treatments by provider type and geographic region: a comparison among physicians, nurse practitioners, and physician assistants. *BMC Geriatr*. 2022 Jun 25;22(1):522. doi: 10.1186/s12877-022-03176-3. PMID: 35752783; PMCID: PMC9233396.
- 282: Xu KY, Mintz CM, Presnall N, Bierut LJ, Grucza RA. Association of Bupropion, Naltrexone, and Opioid Agonist Treatment With Stimulant-Related Admissions Among People With Opioid Use Disorder: A Case-Crossover Analysis. *J Clin Psychiatry*. 2022 Jun 20;83(4):21m14112. doi: 10.4088/JCP.21m14112. PMID: 35759785.
- 283: Yuen KCJ, Birkegard AC, Blevins LS, Clemons DR, Hoffman AR, Kelepouris N, Kerr JM, Tarp JM, Fleseriu M. Development of a Novel Algorithm to Identify People with High Likelihood of Adult Growth Hormone Deficiency in a US Healthcare Claims Database. *Int J Endocrinol*. 2022 Jun 18;2022:7853786. doi: 10.1155/2022/7853786. PMID: 35761982; PMCID: PMC9233577.
- 284: Akter T, Annamalai B, Obert E, Simpson KN, Rohrer B. Dabigatran and Wet AMD, Results From Retinal Pigment Epithelial Cell Monolayers, the Mouse Model of Choroidal Neovascularization, and Patients From the Medicare Data Base. *Front Immunol*. 2022 Jun 17;13:896274. doi: 10.3389/fimmu.2022.896274. PMID: 35784301; PMCID: PMC9248746.
- 285: Husni ME, Chang E, Broder MS, Paydar C, Bognar K, Desai P, Klyachkin Y, Khilfeh I. Biologic Initiation Rate in Systemic-Naïve Psoriatic Arthritis Patients Starting Treatment with Apremilast vs Methotrexate: 1-Year Retrospective Analysis of a US Claims Database. *Open Access Rheumatol*. 2022 Jun 15;14:123-132. doi: 10.2147/OARRR.S342123. PMID: 35734243; PMCID: PMC9207121.
- 286: Varady NH, Abraham PF, Kucharik MP, Freccero DM, Smith EL, Martin SD. Comparing the Risk of Osteonecrosis of the Femoral Head Following Intra-Articular Corticosteroid and Hyaluronic Acid Injections. *J Bone Joint Surg Am*. 2022 Jun

- 15;104(12):1055-1060. doi: 10.2106/JBJS.21.01043. Epub 2022 Mar 11. PMID: 35275891.
- 287: Heo H, Lambert SR. Ocular Motor Nerve Palsy After Traumatic Brain Injury: A Claims Database Study. *J Neuroophthalmol*. 2022 Jun 14. doi: 10.1097/WNO.0000000000001635. Epub ahead of print. PMID: 36166785.
- 288: Ji X, Hu X, Brock KE, Mertens AC, Cummings JR, Effinger KE. Early Posttherapy Opioid Prescription, Potential Misuse, and Substance Use Disorder Among Pediatric Cancer Survivors. *J Natl Cancer Inst*. 2022 Jun 13;114(6):895-906. doi: 10.1093/jnci/djac049. PMID: 35262708; PMCID: PMC9194632.
- 289: Kikuchi JY, Yanek LR, Handa VL, Chen CCG, Jacobs S, Blomquist J, Patterson D. Prolapse and mesh reoperations following sacrocolpopexy: comparing supracervical hysterectomy, total hysterectomy, and no hysterectomy. *Int Urogynecol J*. 2022 Jun 11. doi: 10.1007/s00192-022-05263-w. Epub ahead of print. PMID: 35689689.
- 290: Song C, Kunovszki P, Beaudet A. Comparison of Healthcare Encounters and Drug Persistence in Patients With Pulmonary Arterial Hypertension Receiving Oral Selexipag, Inhaled Iloprost, or Parenteral Treprostinil: A Retrospective Database Analysis. *J Health Econ Outcomes Res*. 2022 Jun 8;9(1):151-160. doi: 10.36469/001c.35246. PMID: 35800882; PMCID: PMC9178228.
- 291: Fox RJ, Mehta R, Pham T, Park J, Wilson K, Bonafede M. Real-world disease-modifying therapy pathways from administrative claims data in patients with multiple sclerosis. *BMC Neurol*. 2022 Jun 7;22(1):211. doi: 10.1186/s12883-022-02738-7. PMID: 35672686; PMCID: PMC9172015.
- 292: Kyler KE, Hall M, Bettenhausen JL, Clark NA, Hampl S, Davis AM. Medicaid Expenditures among Children with Documented Obesity. *Child Obes*. 2022 Jun 6. doi: 10.1089/chi.2021.0249. Epub ahead of print. PMID: 35666560.
- 293: Chen G, Pedarla V, Null KD, Cazzetta SE, Khan QR, Schwartz DA. Health Care Costs and Resource Utilization Among Patients With Crohn's Disease With and Without Perianal Fistula. *Inflamm Bowel Dis*. 2022 Jun 3;28(6):870-877. doi: 10.1093/ibd/izab198. PMID: 34525184; PMCID: PMC9165558.
- 294: Coates MD, Ba DM, Liu G, Dalessio S, Leslie DL, Huang X. Revisiting the Association Between Inflammatory Bowel Disease and Parkinson's Disease. *Inflamm Bowel Dis*. 2022 Jun 3;28(6):850-854. doi: 10.1093/ibd/izab175. PMID: 34259840.
- 295: Tan L, Reibman J, Ambrose C, Chung Y, Desai P, Llanos JP, Moynihan M, Tkacz J. Clinical and economic burden of uncontrolled severe noneosinophilic asthma. *Am J Manag Care*. 2022 Jun 1;28(6):e212-e220. doi: 10.37765/ajmc.2022.89159. PMID: 35738228.

- 296: Jazowski SA, Wilson L, Dusetzina SB, Zafar SY, Zullig LL. Association of High-Deductible Health Plan Enrollment With Spending on and Use of Lenalidomide Therapy Among Commercially Insured Patients With Multiple Myeloma. *JAMA Netw Open*. 2022 Jun 1;5(6):e2215720. doi: 10.1001/jamanetworkopen.2022.15720. PMID: 35671056; PMCID: PMC9175078.
- 297: Spencer C, Runge W, Hurt J, Dawes A, Toston R, Wagner ER, Gottschalk MB. Predictive Factors Associated with the Need for Simultaneous Carpal Tunnel and Ulnar Nerve at the Elbow Releases. *Bull Hosp Jt Dis* (2013). 2022 Jun;80(2):200-208. PMID: 35643485.
- 298: Ogbomo A, Tsang Y, Mallampati R, Panjabi S. The direct and indirect health care costs associated with pulmonary arterial hypertension among commercially insured patients in the United States. *J Manag Care Spec Pharm*. 2022 Jun;28(6):608-616. doi: 10.18553/jmcp.2022.28.6.608. PMID: 35621726.
- 299: Knisely A, Huang Y, Li Y, Prabhu VS, Wright JD. Adjuvant and first line chemotherapy use for endometrial cancer. *Gynecol Oncol Rep*. 2022 May 14;41:101002. doi: 10.1016/j.gore.2022.101002. PMID: 35620299; PMCID: PMC9126968.
- 300: Ferrucci KA, Lapane KL, Jesdale BM. Prevalence of diagnosed eating disorders in US transgender adults and youth in insurance claims. *Int J Eat Disord*. 2022 Jun;55(6):801-809. doi: 10.1002/eat.23729.
- Epub 2022 May 7. PMID: 35524487; PMCID: PMC9167760.
- 301: Mease PJ, Young P, Gruben D, Fallon L, Germino R, Kavanaugh A. Early Real-World Experience of Tofacitinib for Psoriatic Arthritis: Data from a United States Healthcare Claims Database. *Adv Ther*. 2022 Jun;39(6):2932-2945. doi: 10.1007/s12325-022-02084-7. Epub 2022 Apr 28. PMID: 35482248; PMCID: PMC9123050.
- 302: Desai R, Park H, Brown JD, Mohandas R, Smith SM. Norepinephrine reuptake inhibitors and risk of antihypertensive treatment intensification and major adverse cardiovascular events in patients with stable hypertension and depression. *Pharmacotherapy*. 2022 Jun;42(6):472-482. doi: 10.1002/phar.2686. Epub 2022 May 9. PMID: 35478186.
- 303: Walton EL, Quinn TP, Mulloy E, Patil D, Mehta A. Cost of Intralesional Collagenase Clostridium Histiolyticum Therapy Versus Surgery for the Management of Peyronie's Disease: A Claims-Based Analysis (2009-2019). *Sex Med*. 2022 Jun;10(3):100517. doi: 10.1016/j.esxm.2022.100517. Epub 2022 Apr 21. Erratum in: *Sex Med*. 2022 Oct;10(5):100551. PMID: 35461065; PMCID: PMC9177867.
- 304: Soileau MJ, Pagan F, Fasano A, Rodriguez-Cruz R, Wang L, Kandukuri PL, Yan CH, Alobaidi A, Bao Y, Kukreja P, Oh M, Siddiqui MS. Comparative Effectiveness of Carbidopa-Levodopa Enteral Suspension and Deep Brain Stimulation on Parkinson's

- Disease-Related Pill Burden Reduction in Advanced Parkinson's Disease: A Retrospective Real-World Cohort Study. *Neurol Ther.* 2022 Jun;11(2):851-861. doi: 10.1007/s40120-022-00351-x. Epub 2022 Apr 20. PMID: 35441973; PMCID: PMC9095798.
- 305: Zhao D, Nunes AP, Baek J, Lapane KL. An algorithm to identify gabapentin misuse and/or abuse in administrative claims data. *Drug Alcohol Depend.* 2022 Jun 1;235:109429. doi: 10.1016/j.drugalcdep.2022.109429. Epub 2022 Mar 26. PMID: 35427982.
- 306: Tejwani R, Lee HJ, Hughes TL, Hobbs KT, Aksenov LI, Scales CD, Routh JC. Predicting postoperative complications in pediatric surgery: A novel pediatric comorbidity index. *J Pediatr Urol.* 2022 Jun;18(3):291-301. doi: 10.1016/j.jpurol.2022.03.007. Epub 2022 Mar 12. PMID: 35410802; PMCID: PMC9233007.
- 307: Jalbert JJ, Wu N, Chen CI, Ambati S, Ge W, Arnason JE. Real-World Treatment Patterns After CD19-Directed CAR T Cell Therapy Among Patients with Diffuse Large B Cell Lymphoma. *Adv Ther.* 2022 Jun;39(6):2630-2640. doi: 10.1007/s12325-022-02087-4. Epub 2022 Apr 9. PMID: 35397110; PMCID: PMC9123047.
- 308: Vaitsiakhovich T, Coleman CI, Kleinjung F, Vardar B, Schaefer B. Worsening of kidney function in patients with atrial fibrillation and chronic kidney disease: evidence from the real-world CALLIPER study. *Curr Med Res Opin.* 2022 Jun;38(6):937-945. doi: 10.1080/03007995.2022.2061705. Epub 2022 Apr 22. PMID: 35392744.
- 309: Jain R, Kong AM, Gillard P, Harrington A. Treatment Patterns Among Patients with Bipolar Disorder in the United States: A Retrospective Claims Database Analysis. *Adv Ther.* 2022 Jun;39(6):2578-2595. doi: 10.1007/s12325-022-02112-6. Epub 2022 Apr 6. PMID: 35381965; PMCID: PMC9123057.
- 310: Song Z, Zubizarreta JR, Giuriato M, Paulos E, Koh KA. Changes in Health Care Spending, Use, and Clinical Outcomes After Nonfatal Firearm Injuries Among Survivors and Family Members : A Cohort Study. *Ann Intern Med.* 2022 Jun;175(6):795-803. doi: 10.7326/M21-2812. Epub 2022 Apr 5. PMID: 35377713.
- 311: Gu J, Sanchez R, Chauhan A, Fazio S, Wong N. Lipid treatment status and goal attainment among patients with atherosclerotic cardiovascular disease in the United States: A 2019 update. *Am J Prev Cardiol.* 2022 Mar 20;10:100336. doi: 10.1016/j.ajpc.2022.100336. PMID: 35368909; PMCID: PMC8968014.
- 312: Beachler DC, Hall K, Garg R, Banerjee G, Li L, Boulanger L, Yuce H, Walker AM. An Evaluation of the Effect of the OxyContin Reformulation on Unintentional Fatal and Nonfatal Overdose. *Clin J Pain.* 2022 Jun 1;38(6):396-404. doi: 10.1097/AJP.0000000000001034. PMID: 35356897; PMCID: PMC9076252.

- 313: Hwang MC, Rozycki M, Kauffman D, Arndt T, Yi E, Weisman MH. Does Gender Impact a Diagnosis of Ankylosing Spondylitis? *ACR Open Rheumatol*. 2022 Jun;4(6):540-546. doi: 10.1002/acr2.11428. Epub 2022 Mar 29. PMID: 35352497; PMCID: PMC9190217.
- 314: Varshneya K, Hong CS, Tyagi V, Ruberte Thiele RA, Huddleston JI 3rd. Imageless Computer Navigation Reduces 5-Year All-Cause Revision Rates After Primary Total Knee Arthroplasty. *J Arthroplasty*. 2022 Jun;37(6S):S211-S215. doi: 10.1016/j.arth.2022.02.004. Epub 2022 Feb 18. PMID: 35256233.
- 315: Bae J, Liu D, Chinthammit C, Kadziola Z, Boye K, Mather K. Type 2 diabetes pharmacotherapy trends in high-risk subgroups. *Diabetes Obes Metab*. 2022 Jun;24(6):1166-1171. doi: 10.1111/dom.14678. Epub 2022 Mar 22. PMID: 35243741; PMCID: PMC9314938.
- 316: Owens AT, Sutton MB, Gao W, Fine JT, Xie J, Naidu SS, Desai NR. Treatment Changes, Healthcare Resource Utilization, and Costs Among Patients with Symptomatic Obstructive Hypertrophic Cardiomyopathy: A Claims Database Study. *Cardiol Ther*. 2022 Jun;11(2):249-267. doi: 10.1007/s40119-022-00257-7. Epub 2022 Mar 1. PMID: 35230625; PMCID: PMC9135924.
- 317: Pollack LM, Chen J, Cox S, Luo F, Robbins CL, Tevendale HD, Li R, Ko JY. Healthcare Utilization and Costs Associated With Perinatal Depression Among Medicaid Enrollees. *Am J Prev Med*. 2022 Jun;62(6):e333-e341. doi: 10.1016/j.amepre.2021.12.008. Epub 2022 Feb 25. PMID: 35227542; PMCID: PMC9247863.
- 318: Rashid Kazi R, Jung M, Kelly T, Xiong Y, Harris A. Frequency and timing of emergency department visits and hospital admissions in stented patients following common stone procedures. *Urolithiasis*. 2022 Jun;50(3):381-387. doi: 10.1007/s00240-022-01313-6. Epub 2022 Feb 8. PMID: 35133494.
- 319: Koltsov JCB, Sambare TD, Alamin TF, Wood KB, Cheng I, Hu SS. Healthcare resource utilization and costs 2 years pre- and post-lumbar spine surgery for stenosis: a national claims cohort study of 22,182 cases. *Spine J*. 2022 Jun;22(6):965-974. doi: 10.1016/j.spinee.2022.01.020. Epub 2022 Feb 3. PMID: 35123048.
- 320: Khosrow-Khavar F, Kim SC, Lee H, Lee SB, Desai RJ. Tofacitinib and risk of cardiovascular outcomes: results from the Safety of TofAcitinib in Routine care patients with Rheumatoid Arthritis (STAR-RA) study. *Ann Rheum Dis*. 2022 Jun;81(6):798-804. doi: 10.1136/annrheumdis-2021-221915. Epub 2022 Jan 13. PMID: 35027405; PMCID: PMC9117457.
- 321: Dillon J, Chen L, Melamed A, St Clair CM, Hou JY, Khouri-Collado F, Gockley A, Accordino M, Herszman DL, Wright JD. Patterns of cervical cancer screening among Medicaid beneficiaries. *BJOG*. 2022

- Jun;129(7):1104-1111. doi: 10.1111/1471-0528.17050. Epub 2021 Dec 29. PMID: 34882962.
- 322: Kluger MD, Huang YY, Kuo JH, Kwon W, Thomas AS, Hershman DL, Schrope BA, Sugahara KN, Chabot JA, Wright JD. Perioperative and persistent opioid utilization following pancreatectomy in the United States. *HPB (Oxford)*. 2022 Jun;24(6):912-924. doi: 10.1016/j.hpb.2021.10.021. Epub 2021 Nov 10. PMID: 34815188.
- 323: Wang A, Wang S, Owens CD, Vora JB, Diamond MP. Health Care Costs and Treatment Patterns Associated with Uterine Fibroids and Heavy Menstrual Bleeding: A Claims Analysis. *J Womens Health (Larchmt)*. 2022 Jun;31(6):856-863. doi: 10.1089/jwh.2020.8983. Epub 2021 Sep 30. PMID: 34591695; PMCID: PMC9245789.
- 324: Xu C, Teeple A, Wu B, Fitzgerald T, Feldman SR. Treatment adherence and persistence of seven commonly prescribed biologics for moderate to severe psoriasis and psoriatic arthritis in a U.S. commercially insured population. *J Dermatolog Treat*. 2022 Jun;33(4):2270-2277. doi: 10.1080/09546634.2021.1950600. Epub 2022 Jan 20. PMID: 34264149.
- 325: Simon TG, Patorno E, Schneeweiss S. Glucagon-Like Peptide-1 Receptor Agonists and Hepatic Decompensation Events in Patients With Cirrhosis and Diabetes. *Clin Gastroenterol Hepatol*. 2022 Jun;20(6):1382-1393.e19. doi: 10.1016/j.cgh.2021.07.010. Epub 2021 Jul 10. PMID: 34256144; PMCID: PMC8743301.
- 326: Spain CV, Dayal P, Ding Y, Iribarren C, Omachi TA, Chen H. Usage of long- acting muscarinic antagonists and biologics as add-on therapy for patients in the United States with moderate-to-severe asthma. *J Asthma*. 2022 Jun;59(6):1237-1247. doi: 10.1080/02770903.2021.1922915. Epub 2021 May 22. PMID: 33970741.
- 327: Muntner P, Orroth KK, Mues KE, Exter J, Shannon ED, Zaha R, Rosenson RS, Jackson EA. Evaluating a Simple Approach to Identify Adults Meeting the 2018 AHA/ACC Cholesterol Guideline Definition of Very High Risk for Atherosclerotic Cardiovascular Disease. *Cardiovasc Drugs Ther*. 2022 Jun;36(3):475-481. doi: 10.1007/s10557-021-07167-1. Epub 2021 Mar 4. PMID: 33661432; PMCID: PMC8720507.
- 328: Butler O, Ju S, Hoernig S, Vogtländer K, Bansilal S, Heresi GA. Assessment for residual disease after pulmonary endarterectomy in patients with chronic thromboembolic pulmonary hypertension. *ERJ Open Res*. 2022 May 30;8(2):00572-2021. doi: 10.1183/23120541.00572-2021. PMID: 35651369; PMCID: PMC9149390.
- 329: Cerullo M, Lee HJ, Kelsey C, Farrow NE, Scales CD, Tong BC. Surgical Evaluation in Patients Undergoing Radiation Therapy for Early-Stage Lung Cancer. *Ann Thorac Surg*. 2022 May 21:S0003-4975(22)00720-2. doi:

- 10.1016/j.jthoracsur.2022.04.055. Epub ahead of print. PMID: 35609647.
- 330: England BR, Yang Y, Roul P, Haas C, Najjar L, Sayles H, Yu F, Sauer BC, Baker JF, Xie F, Michaud K, Curtis JR, Mikuls TR. Identification of Multimorbidity Patterns in Rheumatoid Arthritis Through Machine Learning. *Arthritis Care Res (Hoboken)*. 2022 May 19. doi: 10.1002/acr.24956. Epub ahead of print. PMID: 35588095.
- 331: Lekoubou A, Ba DM, Nguyen C, Liu G, Leslie DL, Bonilha L, Vernon CM. Poststroke Seizures and the Risk of Dementia Among Young Stroke Survivors. *Neurology*. 2022 May 18;99(4):e385–92. doi: 10.1212/WNL.0000000000200736. Epub ahead of print. PMID: 35584925; PMCID: PMC9421769.
- 332: Johnson KM, Jiao B, Ramsey SD, Bender MA, Devine B, Basu A. Lifetime medical costs attributable to sickle cell disease among nonelderly individuals with commercial insurance. *Blood Adv*. 2022 May 16:bloodadvances.2021006281. doi: 10.1182/bloodadvances.2021006281. Epub ahead of print. PMID: 35575558.
- 333: O'Halloran JA, Sahrmann J, Parra-Rodriguez L, Vo DT, Butler AM, Olsen MA, Powderly WG. Integrase Strand Transfer Inhibitors are Associated with Incident Diabetes Mellitus in People with HIV. *Clin Infect Dis*. 2022 May 6:ciac355. doi: 10.1093/cid/ciac355. Epub ahead of print. PMID: 35521785.
- 334: Smith KM, Hotaling JM, Presson AP, Zhang C, Horns JJ, Cannon-Albright LA, Teerlink CC, Tashjian RZ, Chalmers PN. The Effect of Sex Hormone Deficiency on the Incidence of Rotator Cuff Repair: Analysis of a Large Insurance Database. *J Bone Joint Surg Am*. 2022 May 4;104(9):774–779. doi: 10.2106/JBJS.21.00103. Epub 2022 Apr 12. PMID: 35506951.
- 335: Butler AM, Brown DS, Durkin MJ, Sahrmann JM, Nickel KB, O'Neil CA, Olsen MA, Hyun DY, Zetts RM, Newland JG. Association of Inappropriate Outpatient Pediatric Antibiotic Prescriptions With Adverse Drug Events and Health Care Expenditures. *JAMA Netw Open*. 2022 May 2;5(5):e2214153. doi: 10.1001/jamanetworkopen.2022.14153. Erratum in: *JAMA Netw Open*. 2022 Jun 1;5(6):e2221479. PMID: 35616940; PMCID: PMC9136626.
- 336: Mintz CM, Xu KY, Presnall NJ, Hartz SM, Levin FR, Scherrer JF, Bierut LJ, Grucza RA. Analysis of Stimulant Prescriptions and Drug-Related Poisoning Risk Among Persons Receiving Buprenorphine Treatment for Opioid Use Disorder. *JAMA Netw Open*. 2022 May 2;5(5):e2211634. doi: 10.1001/jamanetworkopen.2022.11634. PMID: 35544135; PMCID: PMC9096599.
- 337: Xu KY, Mintz CM, Presnall N, Bierut LJ, Grucza RA. Comparative Effectiveness Associated With Buprenorphine and Naltrexone in Opioid Use Disorder and Cooccurring Polysubstance Use. *JAMA Netw Open*. 2022 May 2;5(5):e2211363. doi:

- 10.1001/jamanetworkopen.2022.11363. PMID: 35536575; PMCID: PMC9092203.
- 338: Donneyong MM, Zhu Y, Zhang P, Li Y, Hunold KM, Chiang C, Unroe K, Caterino JM, Li L. A comprehensive assessment of statin discontinuation among patients who concurrently initiate statins and CYP3A4-inhibitor drugs; a multistate transition model. *Br J Clin Pharmacol*. 2022 May 2. doi: 10.1111/bcp.15373. Epub ahead of print. PMID: 35502121.
- 339: Firkins SA, Hart PA, Porter K, Chiang C, Cloyd JM, Dillhoff M, Lara LF, Manilchuk A, Papachristou GI, Pawlik TM, Tsung A, Conwell DL, Krishna SG. Incidence and Risk Factors for New-Onset Diabetes Mellitus After Surgical Resection of Pancreatic Cystic Lesions: A MarketScan Study. *Pancreas*. 2022 May 1;51(5):427-434. doi: 10.1097/MPA.0000000000002054. Epub 2022 Jul 19. PMID: 35858183; PMCID: PMC9388590.
- 340: Allaw AB, Mittal S, Merchant FM, Besser SA, Beaser AD, Aziz Z, Ozcan C, Nayak HM, Tung R, Upadhyay GA. Population-Level Impact of the Guidelines Update on Patient Selection and Outcomes After Cardiac Resynchronization Therapy. *JACC Clin Electrophysiol*. 2022 May;8(5):651-661. doi: 10.1016/j.jacep.2022.01.026. Epub 2022 Mar 30. PMID: 35589178.
- 341: Suzuki Y, Huang Y, Melamed A, Clair CMS, Hou JY, Khoury-Collado F, Gockley A, Accordino M, Hershman DL, Wright JD. Use of Estrogen Therapy After Surgical Menopause in Women Who Are Premenopausal. *Obstet Gynecol*. 2022 May 1;139(5):756-763. doi: 10.1097/AOG.0000000000004762. Epub 2022 Apr 5. PMID: 35576334.
- 342: Suh K, Shankaran V, Bansal A. Assessing surveillance utilization and value in commercially insured patients with colorectal cancer. *Am J Manag Care*. 2022 May 1;28(5):e163-e169. doi: 10.37765/ajmc.2022.89147. PMID: 35546589; PMCID: PMC9316744.
- 343: Kim E, Marcum ZA, Raimundo K, Veenstra DL. Health care utilization and expenditures of parents of children with and without hemophilia A. *J Manag Care Spec Pharm*. 2022 May;28(5):529-537. doi: 10.18553/jmcp.2022.28.5.529. PMID: 35471073.
- 344: Trinh QD, Chaves LP, Feng Q, Zhu J, Sandin R, Abbott T. The cost impact of disease progression to metastatic castration-sensitive prostate cancer. *J Manag Care Spec Pharm*. 2022 May;28(5):544-554. doi: 10.18553/jmcp.2022.28.5.544. PMID: 35471070.
- 345: Bhavsar A, Lonnet G, Wang C, Chatzikonstantinidou K, Parikh R, Brabant Y, Servotte N, Shi M, Widenmaier R, Aris E. Increased Risk of Herpes Zoster in Adults ≥ 50 Years Old Diagnosed With COVID-19 in the United States. *Open Forum Infect Dis*. 2022 Mar 9;9(5):ofac118. doi: 10.1093/ofid/ofac118. PMID: 35392454; PMCID: PMC8982770.

- 346: Straub L, Hernández-Díaz S, Bateman BT, Wisner KL, Gray KJ, Pennell PB, Lester B, McDougle CJ, Suarez EA, Zhu Y, Zakoul H, Mogun H, Huybrechts KF. Association of Antipsychotic Drug Exposure in Pregnancy With Risk of Neurodevelopmental Disorders: A National Birth Cohort Study. *JAMA Intern Med.* 2022 May 1;182(5):522-533. doi: 10.1001/jamainternmed.2022.0375. PMID: 35343998; PMCID: PMC8961398.
- 347: Hong K, Lindley MC, Tsai Y, Zhou F. School Mandate and Influenza Vaccine Uptake Among Prekindergartners in New York City, 2012–2019. *Am J Public Health.* 2022 May;112(5):719-723. doi: 10.2105/AJPH.2022.306765. Epub 2022 Mar 24. PMID: 35324263; PMCID: PMC9010927.
- 348: Wickwire EM, Amari DT, Juday TR, Frech F, Gor D, Malhotra M. Incremental health care resource use and costs among adult patients with depression and treated for insomnia with zolpidem, trazodone, or benzodiazepines. *Curr Med Res Opin.* 2022 May;38(5):711-720. doi: 10.1080/03007995.2022.2047537. Epub 2022 Mar 15. PMID: 35262444.
- 349: Fisher DA, Princic N, Miller-Wilson LA, Wilson K, Limburg P. Costs of colorectal cancer screening with colonoscopy, including post-endoscopy events, among adults with Medicaid insurance. *Curr Med Res Opin.* 2022 May;38(5):793-801. doi: 10.1080/03007995.2022.2049163. Epub 2022 Mar 15. PMID: 35243953.
- 350: Rockefeller NF, Petersen TR, Jeppson PC, Dunivan G, Ninivaggio C, Meriwether K, Gallegos MA, Komesu YM. Midurethral Sling Removal or Revision in Women with Chronic Pain. *Female Pelvic Med Reconstr Surg.* 2022 May 1;28(5):e149-e153. doi: 10.1097/SPV.0000000000001126. Epub 2022 Jan 13. PMID: 35030137.
- 351: Edmiston CE Jr, Bond-Smith G, Spencer M, Chitnis AS, Holy CE, Po-Han Chen B, Leaper DJ. Assessment of risk and economic burden of surgical site infection (SSI) posthysterectomy using a U.S. longitudinal database. *Surgery.* 2022 May;171(5):1320-1330. doi: 10.1016/j.surg.2021.11.034. Epub 2021 Dec 29. PMID: 34973811.
- 352: Tedeschi SK, Jin Y, Vine S, Lee H, Pethoe-Schramm A, Yau V, Kim SC. Giant cell arteritis treatment patterns and rates of serious infections. *Clin Exp Rheumatol.* 2022 May;40(4):826-833. doi: 10.55563/clinexprheumatol/uonz1p. Epub 2021 Dec 13. PMID: 34905480.
- 353: Foster SA, Hoyt M, Ye W, Mason O, Ford JH. Direct cost and healthcare resource utilization of patients with migraine before treatment initiation with calcitonin gene-related peptide monoclonal antibodies by the number of prior preventive migraine medication classes. *Curr Med Res Opin.* 2022 May;38(5):653-660. doi: 10.1080/03007995.2021.2003127. Epub 2021 Dec 2. PMID: 34761723.

- 354: Abdelwahab M, Marques S, Previdelli I, Capasso R. Perioperative Antibiotic Use in Sleep Surgery: Clinical Relevance. *Otolaryngol Head Neck Surg.* 2022 May;166(5):993-1002. doi: 10.1177/01945998211048745. Epub 2021 Sep 28. PMID: 34582286.
- 355: Prater LC, O'Rourke B, Schnell P, Xu W, Li Y, Gustin J, Lockwood B, Lustberg M, White S, Happ MB, Retchin SM, Wickizer TM, Bose-Brill S. Examining the Association of Billed Advance Care Planning With End-of-Life Hospital Admissions Among Advanced Cancer Patients in Hospice. *Am J Hosp Palliat Care.* 2022 May;39(5):504-510. doi: 10.1177/10499091211039449. Epub 2021 Aug 24. PMID: 34427154.
- 356: Lois A, Fennern E, Cook S, Flum D, Davidson G. Patterns of care after cholecystostomy tube placement. *Surg Endosc.* 2022 May;36(5):2778-2785. doi: 10.1007/s00464-021-08562-3. Epub 2021 Jun 2. PMID: 34076767; PMCID: PMC8636522.
- 357: Rochlin DH, Perrault D, Sheckter CC, Fox P, Yao J. Prevalence of Ganglion Cyst Formation After Wrist Arthroscopy: A Retrospective Longitudinal Analysis of 2420 Patients. *Hand (N Y).* 2022 May;17(3):477-482. doi: 10.1177/1558944720939203. Epub 2020 Sep 16. PMID: 32935572; PMCID: PMC9112726.
- 358: Wilson JM, Farley KX, Erens GA, Bradbury TL, Guild GN 3rd. Preoperative opioid use is a risk factor for complication following revision total hip arthroplasty. *Hip Int.* 2022 May;32(3):363-370. doi: 10.1177/1120700020947400. Epub 2020 Aug 6. PMID: 32762258.
- 359: Cho HE, Hu HM, Gunaseelan V, Chen JS, Englesbe MJ, Chung KC, Waljee JF. Does Surgical Intensity Correlate With Opioid Prescribing?: Classifying Common Surgical Procedures. *Ann Surg.* 2022 May 1;275(5):897-903. doi: 10.1097/SLA.0000000000004299. Epub 2020 Jul 24. PMID: 32740234.
- 360: Benedict K, Lyman M, Jackson BR. Possible misdiagnosis, inappropriate empiric treatment, and opportunities for increased diagnostic testing for patients with vulvovaginal candidiasis—United States, 2018. *PLoS One.* 2022 Apr 28;17(4):e0267866. doi: 10.1371/journal.pone.0267866. PMID: 35482794; PMCID: PMC9049332.
- 361: Butler AM, Durkin MJ, Keller MR, Ma Y, Powderly WG, Olsen MA. Association of Adverse Events With Antibiotic Treatment for Urinary Tract Infection. *Clin Infect Dis.* 2022 Apr 28;74(8):1408-1418. doi: 10.1093/cid/ciab637. PMID: 34279560; PMCID: PMC9049277.
- 362: Pardo G, Pineda ED, Ng CD, Sheinson D, Bonine NG. The Association Between Persistence and Adherence to Disease-Modifying Therapies and Healthcare Resource Utilization and Costs in Patients With Multiple Sclerosis. *J Health Econ Outcomes Res.* 2022 Apr 26;9(1):111-116.

- doi: 10.36469/jheor.2022.33288. PMID: 35586512; PMCID: PMC9043544.
- 363: Barocas JA, Gai MJ, Nurani A, Bagley SM, Hadland SE. Initiation of HIV pre-exposure prophylaxis among youth in the United States, 2015-2018. *AIDS Care*. 2022 Apr 25;1-6. doi: 10.1080/09540121.2022.2067318. Epub ahead of print. PMID: 35468009; PMCID: PMC9592681.
- 364: Miller AC, Arakkal AT, Koeneman SH, Cavanaugh JE, Thompson GR, Baddley JW, Polgreen PM. Frequency and Duration of, and Risk Factors for, Diagnostic Delays Associated with Histoplasmosis. *J Fungi (Basel)*. 2022 Apr 23;8(5):438. doi: 10.3390/jof8050438. PMID: 35628693; PMCID: PMC9143509.
- 365: Jones CA, Broggi MS, Holmes JS, Gerlach EB, Goedderz CJ, Ibnamasud SH, Hernandez-Irizarry R, Schenker ML. High Altitude as a Risk Factor for Venous Thromboembolism in Tibial Plateau Fractures. *Cureus*. 2022 Apr 22;14(4):e24388. doi: 10.7759/cureus.24388. PMID: 35637832; PMCID: PMC9132220.
- 366: Mejia EJ, Lin KY, Okunowo O, Iacobellis KA, Matesanz SE, Brandsema JF, Wittlieb-Weber CA, Katcoff H, Griffis H, Edelson JB. Health Care Use of Cardiac Specialty Care in Children With Muscular Dystrophy in the United States. *J Am Heart Assoc*. 2022 Apr 19;11(8):e024722. doi: 10.1161/JAHA.121.024722. Epub 2022 Apr 12. PMID: 35411787; PMCID: PMC9238456.
- 367: Chirikov VV, Corman S, Qiao Y, Huang X. Clinical and Economic Burden of Out-of-Hospital Cardiac Arrest in US Commercial Insurance Population (2014 to 2019). *Am J Cardiol*. 2022 Apr 15;169:42-50. doi: 10.1016/j.amjcard.2021.12.038. Epub 2022 Jan 19. PMID: 35063266.
- 368: Fu AZ, Pesa JA, Lakey S, Benson C. Healthcare resource utilization and costs before and after long-acting injectable antipsychotic initiation in commercially insured young adults with schizophrenia. *BMC Psychiatry*. 2022 Apr 9;22(1):250. doi: 10.1186/s12888-022-03895-2. PMID: 35395757; PMCID: PMC8994268.
- 369: Youn GM, Shah JP, Wei EX, Kandathil C, Most SP. Revision Rates of Septoplasty in the United States. *Facial Plast Surg Aesthet Med*. 2022 Apr 7. doi: 10.1089/fpsam.2022.0009. Epub ahead of print. PMID: 35394347.
- 370: Dhaliwal DK, Chirikov V, Schmier J, Rege S, Newton S. Cost Burden of Endothelial Keratoplasty in Fuchs Endothelial Dystrophy: Real-World Analysis of a Commercially Insured US Population (2014-2019). *Clin Ophthalmol*. 2022 Apr 6;16:1055-1067. doi: 10.2147/OPTH.S358847. PMID: 35418743; PMCID: PMC8995174.
- 371: Berger JH, Faerber JA, Chen F, Lin KY, Brothers JA, O'Byrne ML. Adherence With Lipid Screening Guidelines in Children With Acquired and Congenital Heart Disease: An Observational Study Using Data From The MarketScan Commercial

- and Medicaid Databases. *J Am Heart Assoc.* 2022 Apr 5;11(7):e024197. doi: 10.1161/JAHA.121.024197. Epub 2022 Mar 18. PMID: 35301862; PMCID: PMC9075474.
- 372: Kenzik KM, Williams GR, Hollis R, Bhatia S. Healthcare utilization trajectory among survivors of colorectal cancer. *J Cancer Surviv.* 2022 Apr 2. doi: 10.1007/s11764-022-01206-y. Epub ahead of print. PMID: 35366740.
- 373: Varshneya K, Abrams GD, Sherman SL, Safran MR. Patient-Specific Risk Factors Exist for Hip Fractures After Arthroscopic Femoroacetabular Impingement Surgery, But Not for Dislocation—An Analysis of More Than 25,000 Hip Arthroscopies. *Arthrosc Sports Med Rehabil.* 2021 Dec 26;4(2):e519–e525. doi: 10.1016/j.asmr.2021.11.011. PMID: 35494300; PMCID: PMC9042775.
- 374: Ganguli I, Keating NL, Thakore N, Lii J, Raza S, Pace LE. Downstream Mammary and Extramammary Cascade Services and Spending Following Screening Breast Magnetic Resonance Imaging vs Mammography Among Commercially Insured Women. *JAMA Netw Open.* 2022 Apr 1;5(4):e227234. doi: 10.1001/jamanetworkopen.2022.7234. PMID: 35416989; PMCID: PMC9008498.
- 375: Blauvelt A, Shi N, Murage M, Ridenour T, Lew C, Somani N, Zhu B, Zimmerman N, Kern S, Burge R. Long-Term Treatment Patterns Among Patients With Psoriasis Treated With Ixekizumab or Adalimumab: A Real-World Study. *J Drugs Dermatol.* 2022 Apr 1;21(4):399–407. doi: 10.36849/JDD.6336. PMID: 35389589.
- 376: Sun JW, Young JG, Sarvet AL, Bailey LC, Heerman WJ, Janicke DM, Lin PD, Toh S, Block JP. Comparison of Rates of Type 2 Diabetes in Adults and Children Treated With Anticonvulsant Mood Stabilizers. *JAMA Netw Open.* 2022 Apr 1;5(4):e226484. doi: 10.1001/jamanetworkopen.2022.6484. PMID: 35385086; PMCID: PMC8987905.
- 377: Jin MC, Parker JJ, Prolo LM, Wu A, Halpern CH, Li G, Ratliff JK, Han SS, Skirboll SL, Grant GA. An integrated risk model stratifying seizure risk following brain tumor resection among seizure-naïve patients without antiepileptic prophylaxis. *Neurosurg Focus.* 2022 Apr;52(4):E3. doi: 10.3171/2022.1.FOCUS21751. PMID: 35364580.
- 378: McKinney JL, Datar M, Pan LC, Goss T, Keyser LE, Pulliam SJ. Retrospective claims analysis of physical therapy utilization among women with stress or mixed urinary incontinence. *Neurourol Urodyn.* 2022 Apr;41(4):918–925. doi: 10.1002/nau.24913. Epub 2022 Mar 30. PMID: 35353916; PMCID: PMC9311701.
- 379: Wilson JM, Jones CA, Holmes JS, Farley KX, Hernandez-Irizarry RC, Moore TJ Jr, Bradbury TL, Guild GN. Fixation vs Arthroplasty for Femoral Neck Fracture in Patients Aged 40–59 Years: A Propensity-Score-Matched Analysis. *Arthroplast Today.* 2022 Mar 20;14:175–182. doi: 10.1016/j.artd.2021.10.019. PMID: 35342781; PMCID: PMC8943217.

- 380: Mostaghimi A, Gandhi K, Done N, Ray M, Gao W, Carley C, Wang T, Swallow E, Sikirica V. All-cause health care resource utilization and costs among adults with alopecia areata: A retrospective claims database study in the United States. *J Manag Care Spec Pharm.* 2022 Apr;28(4):426–434. doi: 10.18553/jmcp.2022.28.4.426. PMID: 35332790.
- 381: Welk B, Lenherr S, Santiago-Lastra Y, Norman HS, Keiser MG, Elliott CS. Differences in the incidence of urinary tract infections between neurogenic and non-neurogenic bladder dysfunction individuals performing intermittent catheterization. *Neurourol Urodyn.* 2022 Apr;41(4):1002–1011. doi: 10.1002/nau.24914. Epub 2022 Mar 25. PMID: 35332597.
- 382: Crissman HP, Haley C, Stroumsa D, Tilea A, Moravek MB, Harris LH, Dalton VK. Leveraging Administrative Claims to Understand Disparities in Gender Minority Health: Contraceptive Use Patterns Among Transgender and Nonbinary People. *LGBT Health.* 2022 Apr;9(3):186–193. doi: 10.1089/lgbt.2021.0303. Epub 2022 Mar 17. PMID: 35297673.
- 383: Morga A, Kimura T, Feng Q, Rozario N, Schwartz J. Compliance to Advisory Committee on Immunization Practices recommendations for pneumococcal vaccination. *Vaccine.* 2022 Apr 1;40(15):2274–2281. doi: 10.1016/j.vaccine.2022.03.005. Epub 2022 Mar 12. PMID: 35292161.
- 384: Lo BD, Zhang GQ, Canner JK, Stem M, Taylor JP, Atallah C, Efron JE, Safar B. Preoperative Opioid Dose and Surgical Outcomes in Colorectal Surgery. *J Am Coll Surg.* 2022 Apr 1;234(4):428–435. doi: 10.1097/XCS.0000000000000109. PMID: 35290261.
- 385: Mody R, Manjelievskaia J, Marchlewicz EH, Malik RE, Zimmerman NM, Irwin DE, Yu M. Greater Adherence and Persistence with Injectable Dulaglutide Compared with Injectable Semaglutide at 1-Year Follow-up: Data from US Clinical Practice. *Clin Ther.* 2022 Apr;44(4):537–554. doi: 10.1016/j.clinthera.2022.01.017. Epub 2022 Mar 6. PMID: 35264311.
- 386: Snider JT, McMorrow D, Song X, Diakun D, Wade SW, Cheng P. Burden of Illness and Treatment Patterns in Second-line Large B-cell Lymphoma. *Clin Ther.* 2022 Apr;44(4):521–538. doi: 10.1016/j.clinthera.2022.02.004. Epub 2022 Feb 28. PMID: 35241295.
- 387: Parker JJ, Zhang Y, Fatemi P, Halpern CH, Porter BE, Grant GA. Antiseizure medication use and medical resource utilization after resective epilepsy surgery in children in the United States: A contemporary nationwide cross-sectional cohort analysis. *Epilepsia.* 2022 Apr;63(4):824–835. doi: 10.1111/epi.17180. Epub 2022 Feb 25. PMID: 35213744.
- 388: Olson AL, Hartmann N, Patnaik P, Garry EM, Bohn RL, Singer D, Baldwin M, Wallace L. Healthcare Resource Utilization and Related Costs in Chronic Fibrosing

- Interstitial Lung Diseases with a Progressive Phenotype: A US Claims Database Analysis. *Adv Ther.* 2022 Apr;39(4):1794-1809. doi: 10.1007/s12325-022-02066-9. Epub 2022 Feb 23. PMID: 35199282; PMCID: PMC8990938.
- 389: Eisenberg MT, Block AM, Vopat ML, Olsen MA, Nepple JJ. Rates of Infection After ACL Reconstruction in Pediatric and Adolescent Patients: A MarketScan Database Study of 44,501 Patients. *J Pediatr Orthop.* 2022 Apr 1;42(4):e362-e366. doi: 10.1097/BPO.0000000000002080. PMID: 35132010; PMCID: PMC8901548.
- 390: Rochlin DH, Scheckter CC, Momeni A. Failed Breast Conservation Therapy Predicts Higher Frequency of Revision Surgery following Mastectomy with Reconstruction. *Plast Reconstr Surg.* 2022 Apr 1;149(4):811-818. doi: 10.1097/PRS.0000000000008896. PMID: 35103635; PMCID: PMC8967810.
- 391: Packnett ER, Zimmerman NM, Kim G, Novy P, Morgan LC, Chime N, Ghaswalla P. A Real-world Claims Data Analysis of Meningococcal Serogroup B Vaccine Series Completion and Potential Missed Opportunities in the United States. *Pediatr Infect Dis J.* 2022 Apr 1;41(4):e158-e165. doi: 10.1097/INF.0000000000003455. PMID: 35086118; PMCID: PMC8920016.
- 392: Fleseriu M, Barkan A, Del Pilar Schneider M, Darhi Y, de Pierrefeu A, Ribeiro-Oliveira A Jr, Petersenn S, Neggers S, Melmed S. Prevalence of comorbidities and concomitant medication use in acromegaly: analysis of real-world data from the United States. *Pituitary.* 2022 Apr;25(2):296-307. doi: 10.1007/s11102-021-0198-5. Epub 2022 Jan 1. PMID: 34973139; PMCID: PMC8894179.



© Copyright Merative US L.P. 2022

Merative
100 Phoenix Drive
Ann Arbor, Michigan 48108

Produced in the United States of America
December 2022

Merative, the Merative logo and MarketScan are trademarks of Merative in the United States, other countries or both. All other company or product names are registered trademarks or trademarks of their respective companies.

This document is current as of the initial date of publication and may be changed by Merative at any time. Not all offerings are available in every country in which Merative operates.

The information in this document is provided "as is" without any warranty, express or implied, including without any warranties of merchantability, fitness for a particular purpose and any warranty or condition of non-infringement. Merative products are warranted according to the terms and conditions of the agreements under which they are provided.

The client is responsible for ensuring compliance with all applicable laws and regulations applicable to it. Merative does not provide legal advice or represent or warrant that its services or products will ensure that the client is in compliance with any law or regulation. The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on the specific configurations and operating conditions. It is the user's responsibility to evaluate and verify the operation of any other products or programs with Merative product and programs.

Statement of Good Security Practices: IT system security involves protecting systems and information through prevention, detection and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, misappropriated or misused or can result in damage to or misuse of your systems, including for use in attacks on others. No IT system or product should be considered completely secure and no single product, service or security measure can be completely effective in preventing improper use or access. Merative systems, products and services are designed to be part of a lawful, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products or services to be most effective. Merative does not warrant that any systems, product or services are immune from, or will make your enterprise immune from, the malicious or illegal conduct of any party.