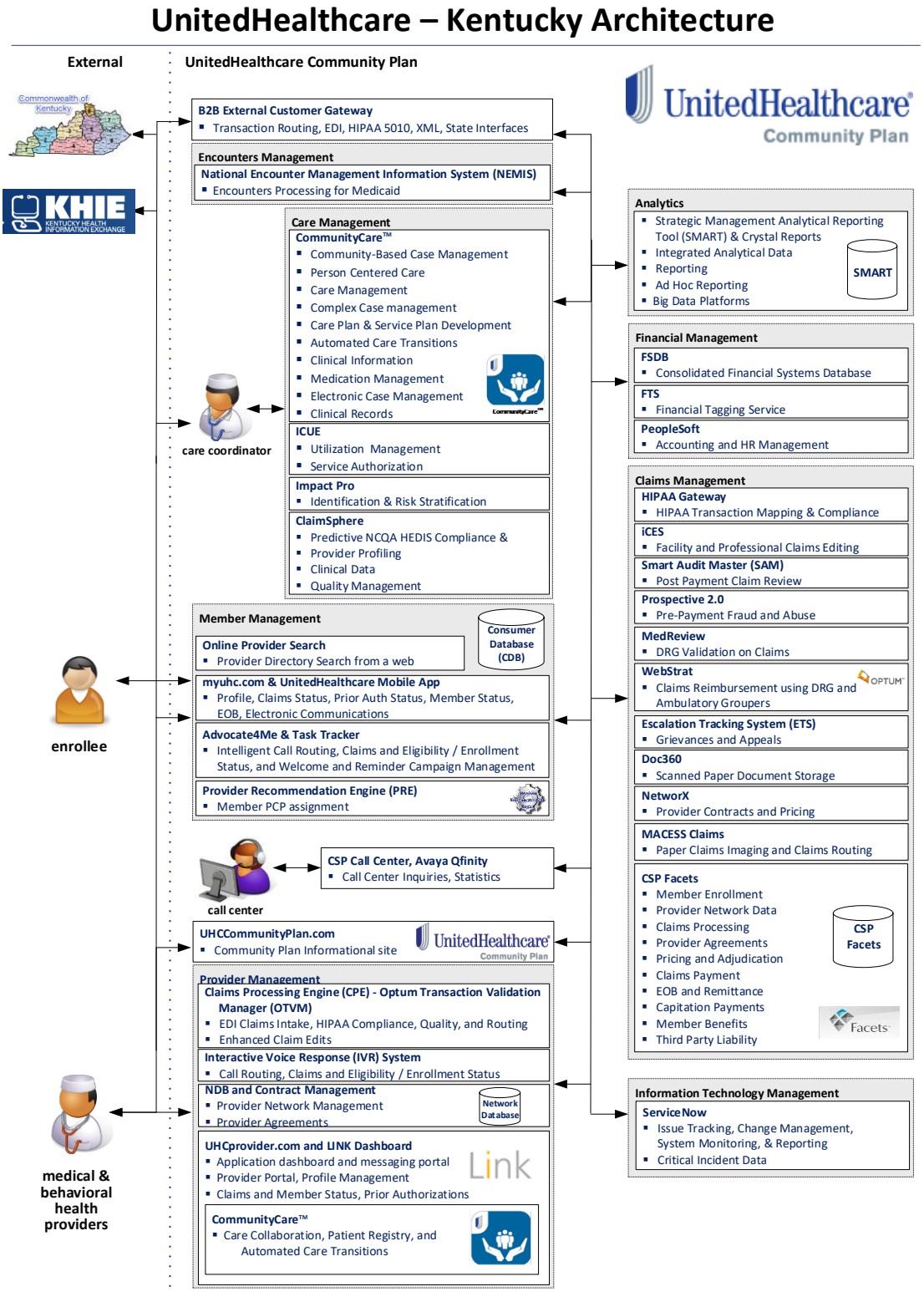
ATTACHMENT C.6.A UNITEDHEALTHCARE MANAGEMENT INFORMATION SYSTEM

A detailed description of the UnitedHealthcare Management Information System (MIS), including diagrams and flowcharts, is provided herein. The diagram on the next page provides an overview of the major capabilities and systems planned to support the Commonwealth. Following this overview diagram, we provide flowcharts or diagrams corresponding to RFP Section C.6.a.i-viii along with summary tables containing descriptions of how the subsystems are used in managing a particular operational area, dataset and transactional function.

Our Reporting subsystems are presented and described herein in subsection C.6.a.ix. Our Testing subsystems are described in subsection C.6.a.x. Descriptions of our Information Systems Management subsystems are provided in subsection C.6.a.xi. These subsystems enable user-friendly means for enrollees to access services, get information, and to be empowered to improve their health and well-being.

FIGURE 1: C.6.A MANAGEMENT INFORMATION SYSTEM OVERVIEW



Ver.1.1 - Updated 01/25/20

C.6.a.i Enrollee Subsystems

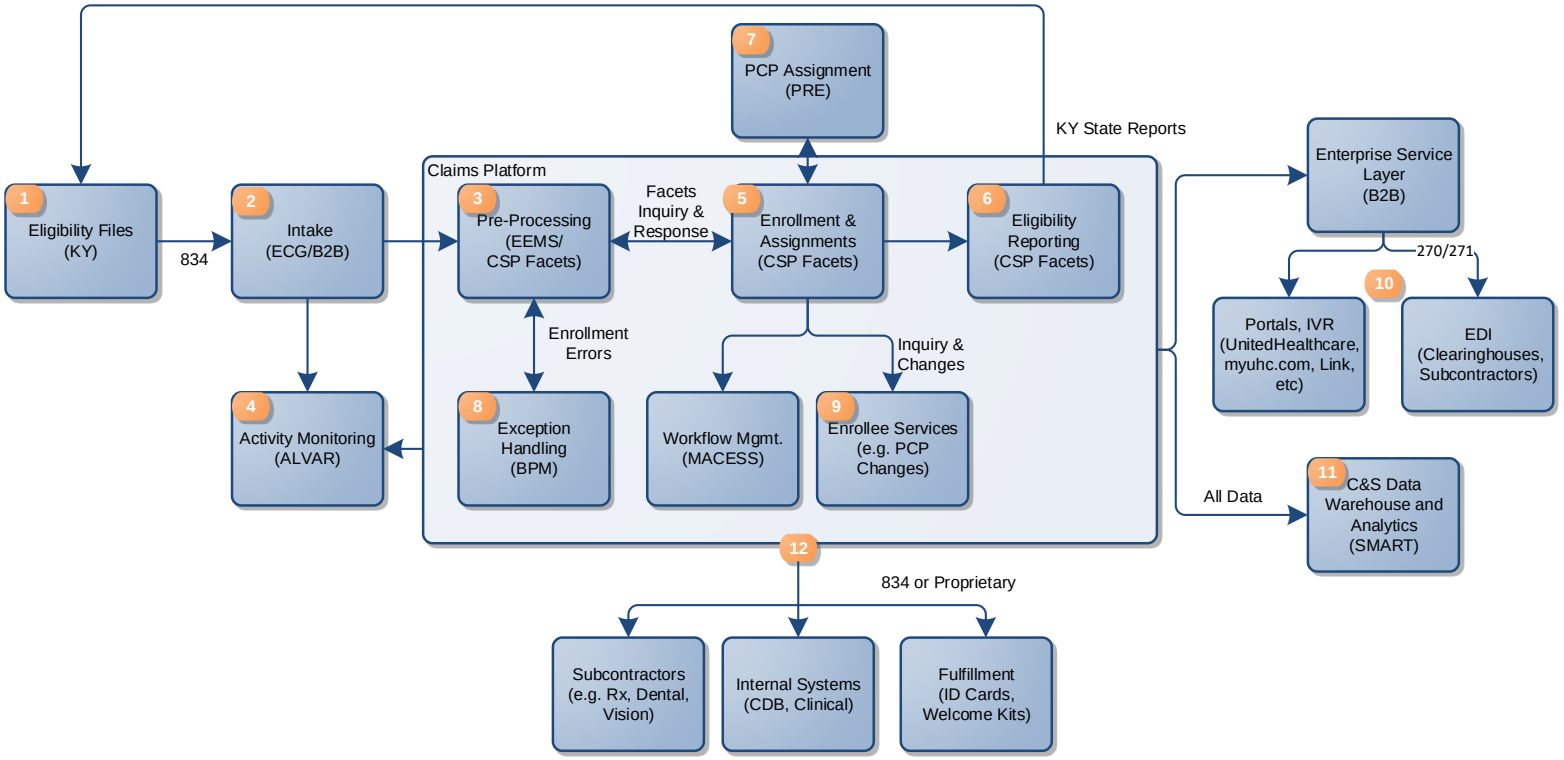
The flowchart following the table depicts how our enrollee systems supporting eligibility and enrollment receive eligibility files, then route the data contained from the files to various operational areas for day-to-day enrollment and eligibility activities such as care coordination, PCP assignment, eligibility verification, claims and related services. The summary table below provides the name of the subsystem and a description of the system's support functionality.

Table C.6.a.i Enrollee Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Enrollee	
Alvar	Monitors and tracks important business operations, transactions and processes to provide dashboards across end-to-end process flows.
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties.
Business Process Management System (BPM)	Manages the enrollment error queues including corrections and resubmission of records to CSP Facets.
Consumer Database (CDB)	Consolidated database of all UnitedHealthcare Enrollees that serves as a "master index" of Enrollees across all UnitedHealthcare systems.
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes
Eligibility Enrollment Management System (EEMS)	Enhanced enrollment module for CSP Facets that increases efficiency and accuracy of the enrollment process, improved speed to market for format changes, reduced maintenance costs and improved end-to-end cycle time for loading eligibility.
Interactive Voice Response (IVR) System and Avaya Dialer	Handles basic Enrollee inquiries and directs incoming calls to the most appropriate Enrollee services center professional.

Management Information System	General Description/Functions Supported by System
MACESS	Workflow application that facilitates claim processing, including viewing of paper claims and supporting documentation in EDMS and Doc360, and routing of claims to our claim processors.
Provider Recommendation Engine (PRE)	Intelligent rules engine that systematically matches Enrollees with "preferred" PCPs who have the highest quality scores and best outcomes, costs and location.
Public Enrollee Portal (*uhccommunityplan.com*)	UnitedHealthcare public web presence used for posting general information, handbooks and bulletins — common entry point for Enrollees. Provides flexible search capability by type of provider, specialty, location and other criteria.
Strategic Management Analytic Reporting Tool (SMART)	Comprehensive, integrated analytical data warehouse, using the latest Oracle Exadata Database platform that holds all Medicaid relevant information — including claims data (e.g., medical, pharmacy, vision and lab), Enrollee data, provider data, authorizations, external subcontractor data and predictive modeling information. SMART: ▪ Supports quality management, performance management and compliance reporting, and ad hoc reporting as needed with turnaround times averaging less than five business days ▪ Stores service-specific data that includes behavioral health, LTSS, pharmacy, inpatient and outpatient services ▪ Includes consolidated patient census (common store of all patients receiving care) ▪ Consolidates data for Impact Pro health-risk modeling and stratification ▪ Consolidates relevant data for ClaimSphere EPSDT and HEDIS reporting and related analysis and monitoring
Secure Enrollee Mobile App (*UnitedHealthcare*)	The free Enrollee mobile app provides personalized care notifications, medication management capabilities, administrative transactions, and can connect users directly with a member service advocate (MSA).
Secure Enrollee Portal (*myuhc.com)*	Secure health and wellness information is available 24 hours a day, seven days a week through our Enrollee portal. Enrollees register for online access by setting up a secure HealthSafe ID™ and password. The personalized and easy-to-navigate digital experience allows Enrollees to search for covered benefits (medical, dental, vision, pharmacy and mental health), manage personal preferences, update contact information (including email addresses for facilitating contacts and information exchange), view/print and request we mail an ID card, change their PCP and locate providers through a searchable provider directory. The portal also offers personalized health and wellness content such as seasonal reminders (i.e., flu shots), personalized care recommendations, links to plan programs, and links to online resources and tools.

Enrollee Subsystems: Eligibility and Enrollment



1. The Commonwealth sends the enrollment / disenrollment files to UnitedHealthcare
2. Electronic Communication Gateway (ECG) receives the files over a secure connection
3. 834 is validated for HIPAA compliance and is run through business rules
4. ALVAR monitors the activity for the incoming and outgoing files
5. Facets service updates the Enrollee's demographics eligibility. Errors are captured and routed to Enrollee Services for review
6. Operations and state specific reports are generated and distributed using ECG
7. PCP assignment occurs based on business rules
8. Enrollee Services corrects errors and submits records for reprocessing
9. Enrollee Services reviews inquiries and updates CSP Facets.
10. Data is shared with downstream systems such as the 270/271 transaction, IVRs, portals, and mobile applications.
11. SMART loads data from claims systems and other sources for reporting and analytics use
12. Enrollment and Eligibility updates are shared with downstream applications and subcontractors using ECG

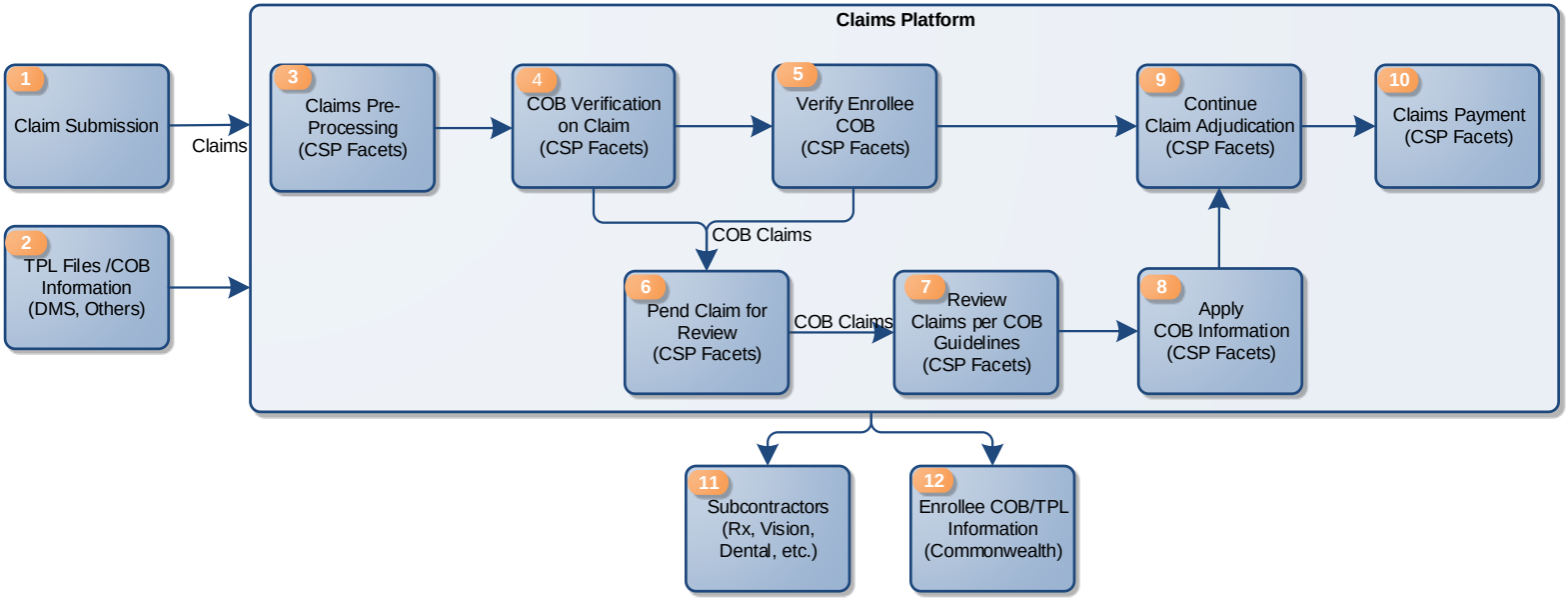
C.6.a. ii Third Party Liability (TPL) Subsystems

Our third party liability (TPL) subsystems work in conjunction with our claims and utilization review subsystems to continually mine for TPL and to apply coordination of benefits (COB) edits, making sure that Medicaid is the payer of last resort. The table below provides a summary of our TPL subsystems. The flowchart following the table depicts how claims flow through our claims platform, CSP, to be adjusted due to TPL, COB, subrogation and similar cost avoidance activities.

Table C.6.a.ii.: Third Party Liability Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Third Party Liability	
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes

Third Party Liability Subsystems



1	Provider submits claims via either clearinghouse or directly. Submitted are transmitted to CSP Facets	7	Review COB to validate the COB information on claim in CSP Facets
2	TPL and COB information from the Commonwealth and other entities are loaded into CSP Facets via ECG	8	Apply appropriate COB information to claim in CSP Facets
3	Claim is loaded into Facets pre-processer. Enrollee and Provider on the claim are identified	9	CSP Facets completes adjudication and readies claim for payment
4	Verify if COB information is submitted on claim	10	CSP Facets finalizes and pays claim
5	Verify if Enrollee has COB information loaded within CSP Facets and pend claim	11	TPL updates are shared with our subcontractors
6	CSP Facets pends the claims for COB review	12	We continually update COB information and share those updates with the Commonwealth via ECG

C.6.a.iii Provider Data Management Subsystems

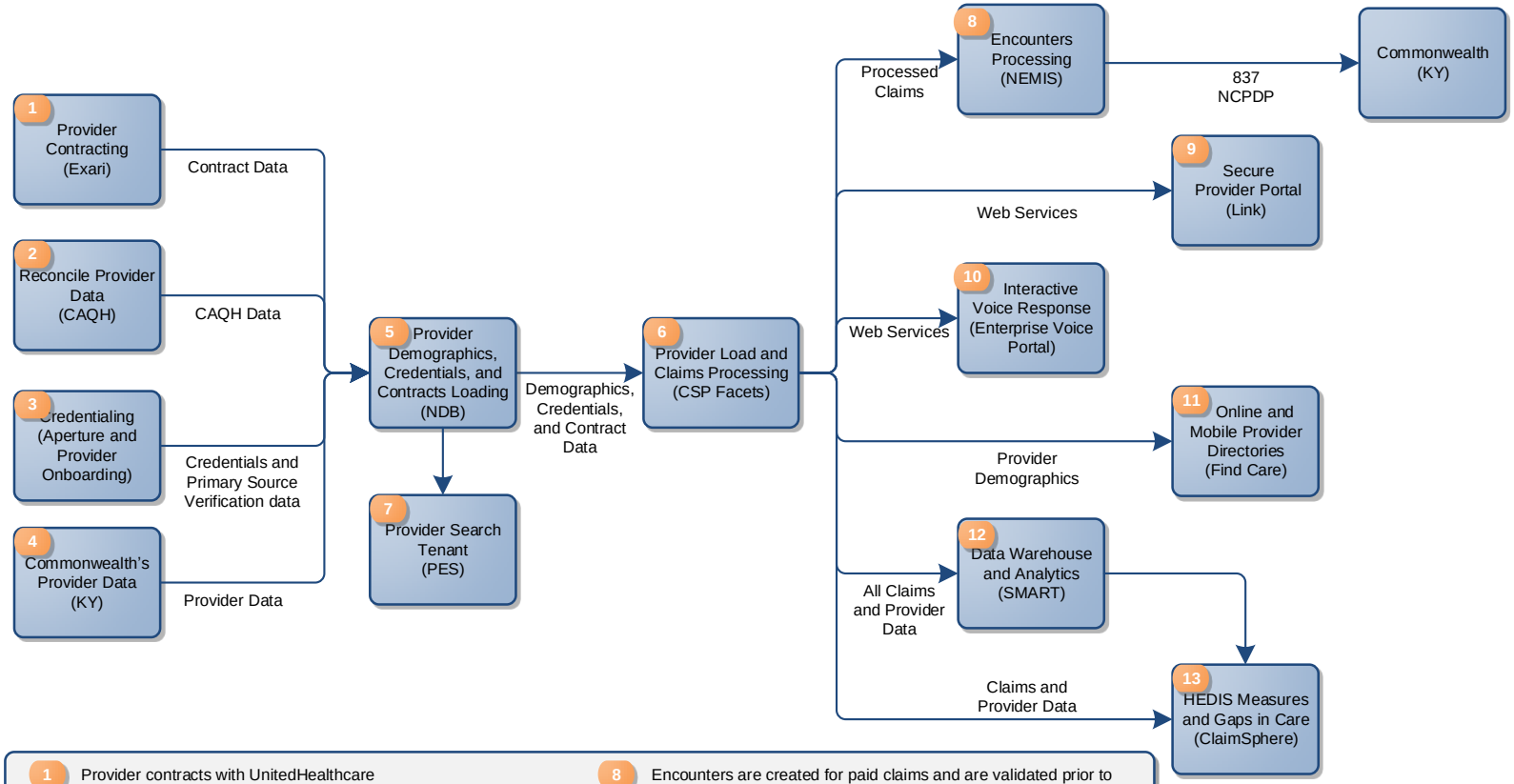
The flowchart following the table below illustrates how provider data is collected from internal and external sources, and then loaded into other subsystems for day-to-day business operations, such as provider directories, claims, contracting and our secure provider portal, *Link*. Our Provider Subsystem supports online inquiry screens and external interfaces with the Department and other governmental agencies to receive licensure information. The table below describes the systems supporting our provider data management system as a whole.

Table C.6.iii.: Provider Data Management Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Provider Data Management	
Aperture	Manages workflow and stores provider credentialing information for all UnitedHealthcare participating providers
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties
CSP Call Center	Supports Enrollee services center operations in assisting providers with common inquiries (e.g., verifying Enrollee eligibility and verifying claims status)
Exari	Manages provider contracting workflow and stores contract information for most UnitedHealthcare participating providers
Interactive Voice Response (IVR) System	Enterprise voice portal handles basic provider inquiries (e.g., Enrollee eligibility/enrollment status and claims status) and directs incoming calls to the most appropriate provider services center professional
Link	Secure provider portal providing a central access point where enrolled providers have access to eligibility and benefits, claims management, claims reconsiderations, enhanced online authorizations and gaps in care, and where they can update their practice profile. Additionally, providers can view and provide feedback on the initial health risk screening and care plans in CommunityCare.
Network Database (NDB)	Our single enterprise repository of all information related to provider network management
Provider Elastic Search Tenant (PES)	PES leverages the UnitedHealthcare Big Data Platform to return real-time, current provider data to client-facing applications.
uhccommunityplan.com	UnitedHealthcare public web presence used for posting general information, handbooks and bulletins and serves as a common entry point for providers

Management Information System	General Description/Functions Supported by System
UHCprovider.com	*UHCprovider.com* is UnitedHealthcare's home for provider information. With access to *Link's* self-service tools 24 hours a day, seven days a week, current medical policies and the latest news bulletins, this site also has a great library of resources to support administrative tasks including eligibility, claims and prior authorizations and notifications. *UHCprovider.com* includes a powerful internal search tool to help care providers locate the information they need quickly. The site also offers care providers the opportunity to submit feedback on their experience to help identify opportunities to improve or enhance how we work together.

Provider Subsystem



1. Provider contracts with UnitedHealthcare
2. Council for Affordable Quality Healthcare's (CAQH) data is received and reconciled with UnitedHealthcare's provider data in NDB
3. Provider credentials are verified and data is loaded in NDB
4. Provider data is received from the Commonwealth and loaded to NDB
5. Source of Truth for Provider Data
6. Provider data is loaded daily to the CSP Facets Claims Platform
7. Provider data is loaded daily to the search tenant for use by other systems
8. Encounters are created for paid claims and are validated prior to sending them to the Commonwealth
9. Providers can obtain claims status, claim payment information, member eligibility, data validation, reports, authorizations, and more on secure provider portals
10. Providers can obtain claims status, member eligibility, and more via the IVR system
11. Provider data is sent daily to our online provider directories
12. Provider and claims data is loaded into the Data Warehouse for analytics and reporting
13. Provider and claims data is sent to ClaimSphere to calculate HEDIS Measures

C.6.a.iv Reference Subsystems

Interwoven with each relevant operational need for data (e.g., claims, utilization, quality management) are contract-specific reference sources and the detailed information needed to manage and maintain up-to-date pricing files as well as procedure codes and diagnosis codes (i.e., reference data) specific to that contract. Also, our Reference Subsystems support online inquiry screens and interfaces with critical reference data from external sources, such as but not limited to ADA (dental) codes, CMS-HCPCS updates, CPT4, ICD-9, ICD-10, diagnosis surgery codes (e.g., DSM), and NDC codes.

Table C.6.iv.: Reference Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Reference Subsystems	
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes
NetworX	Supports rules-based provider contract configuration and claim pricing

C.6.a.v. Claims Processing Subsystem (including Encounter Data)

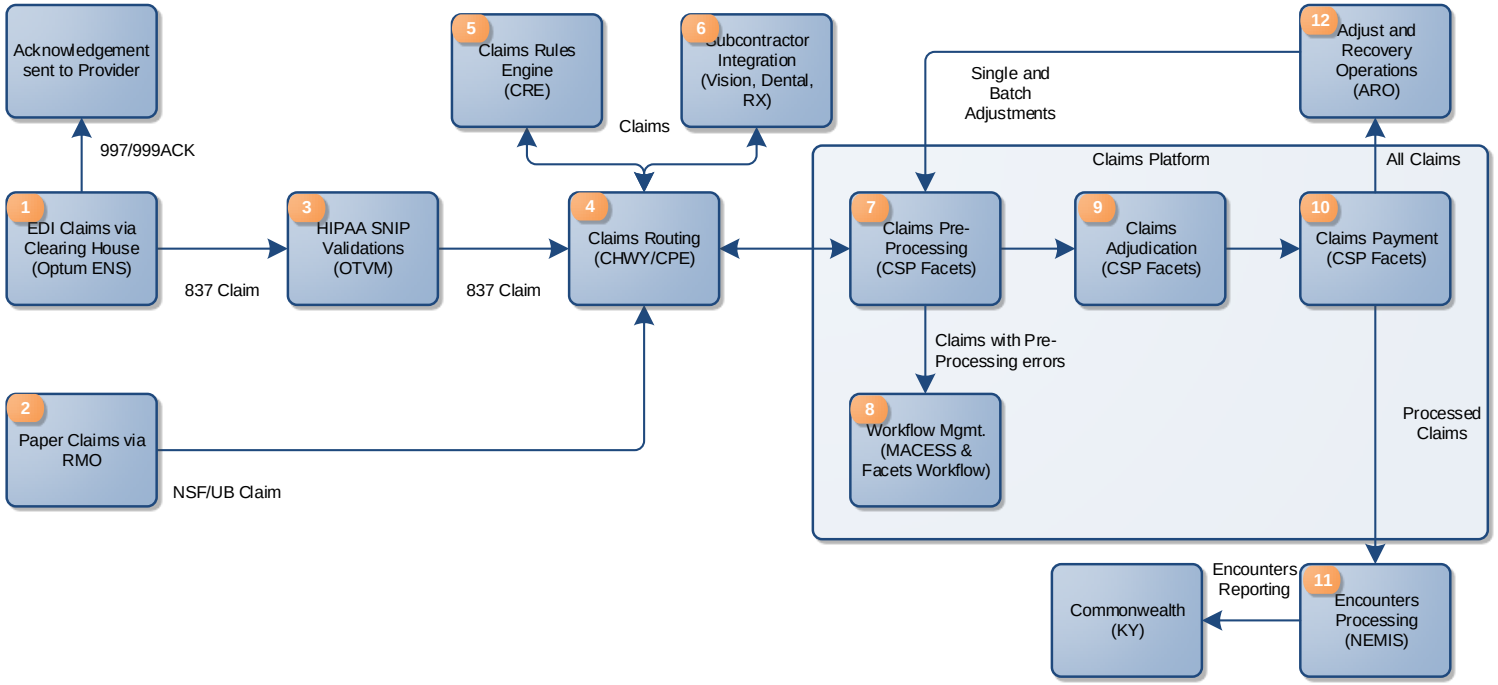
Working in conjunction with our TPL and SURS subsystems described and provided in this attachment, our claims processing and encounter data systems bring workstreams together to enable effective management of each process. Following the table below, we provide two flowcharts that depict how our encounter data processing and our claims processing systems interconnect.

Table C.6.a.v.: Claims and Encounters Processing Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Encounter Data and Claims Processing	
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties
Claims Processing Engine (CPE)	Application that enables universal claim intake and routing into CSP Facets
Claims Rules Engine (CRE)	Application to support the business rules and validations used during claim adjudication.
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes
Escalation Tracking System (ETS)	Facilitates administration and escalation management and processing of claim disputes, grievances and appeals. ETS: ▪ Manages, provides status and tracks resolution on submitted grievances and appeals against policy-mandated time frames for Enrollee contact and appeal or grievance resolution ▪ Generates reports related to the outcomes of grievances, complaints and appeals ▪ Provides flexibility to easily customize data elements according to the Commonwealth's needs
MACESS	Workflow application that facilitates claim processing, including viewing of paper claims and supporting documentation in EDMS, and routing of claims to our claim processors

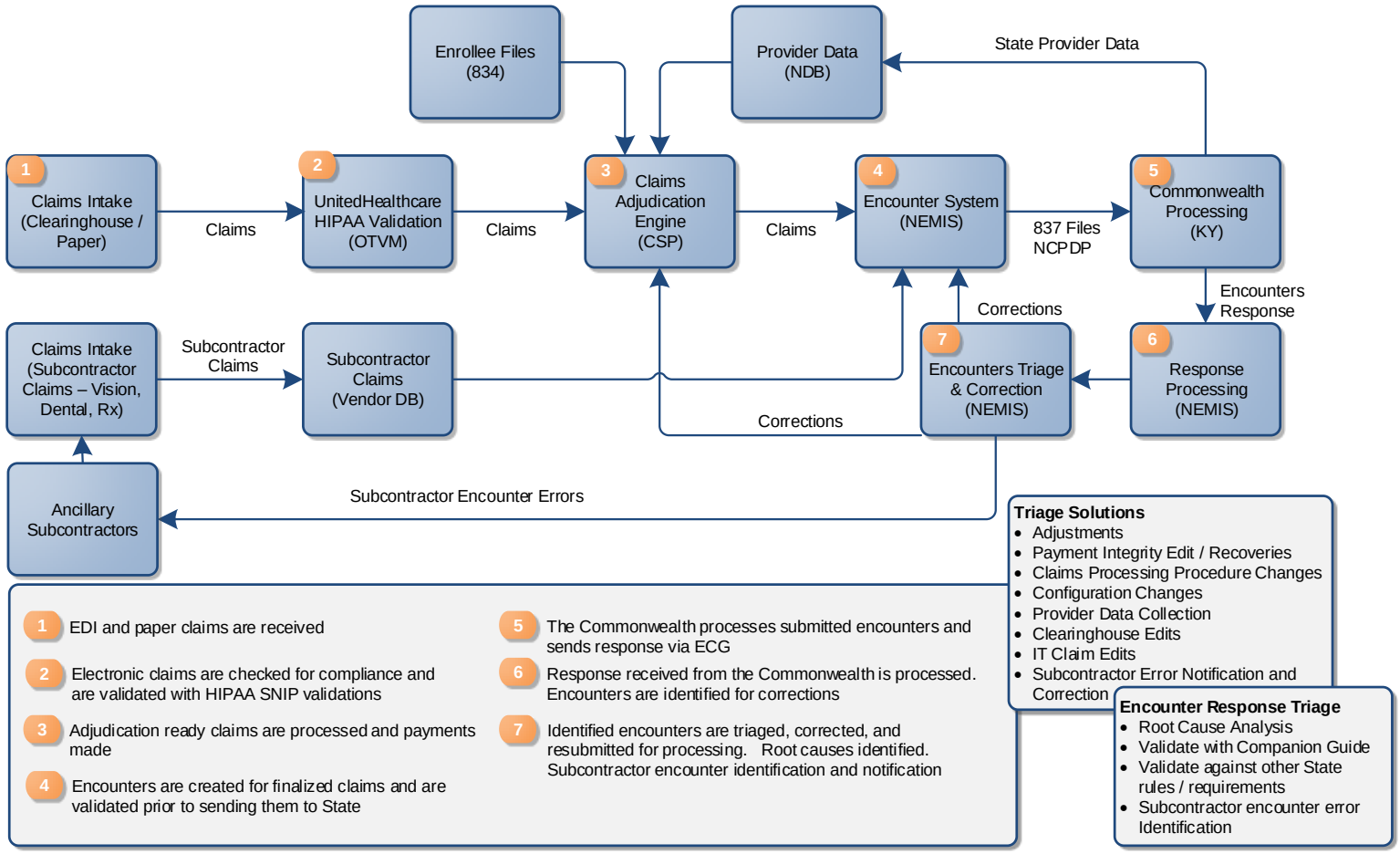
Management Information System	General Description/Functions Supported by System
National Encounter Management Information System (NEMIS)	Strategic, internally developed encounter data submission and reporting system that initiates submission of encounters, tracks responses, provides error correction and resubmission of Medicaid encounters to the Commonwealth in a format to be specified by the Commonwealth.
Network Database (NDB)	Our single enterprise repository of all information related to provider network management
NetworX	Supports rules-based provider contract configuration and claim pricing
Optum Transaction Validation Manager (OTVM)	Electronic data interchange (EDI) validation that enables us to test and certify HIPAA transaction sets and verify compliance with standards and regulations on inbound claims.

Claims Subsystem



1. HIPAA Compliant EDI claims are received at clearinghouse.
2. Paper claims are scanned and converted to electronic form. Basic validations are applied
3. Electronic claims are checked for compliance and are validated with HIPAA SNIP validations
4. Claims are routed to appropriate claims system based on the Enrollee identifiers
5. Claim is checked against various claim edits, validations, and rules.
6. Applicable claims amounts are applied to an enrollee's deductible and copayment account details are applied for subcontractor claims
7. Claim is loaded into Facets pre-processer. Enrollee and Provider on the claim are identified
8. Claims with pre-processing errors are routed to MACESS or Facets Workflow for manual review and updates. Updated claims are processed in the next cycle
9. Adjudication ready claims are picked up and processed. Claim editing rules are applied. Authorization is verified. Provider contract and pricing is determined. Enrollee benefits, co-pays, deductible, and max out of pocket are verified and applied
10. Check creation / EFT generation
11. Encounters are created for finalized claims and are validated prior to sending to the Commonwealth
12. Adjustments are categorized into single and batch. Single adjustments are done directly via Facets online application. Batch adjustments are done via bulk adjustment tool

Encounters Subsystems



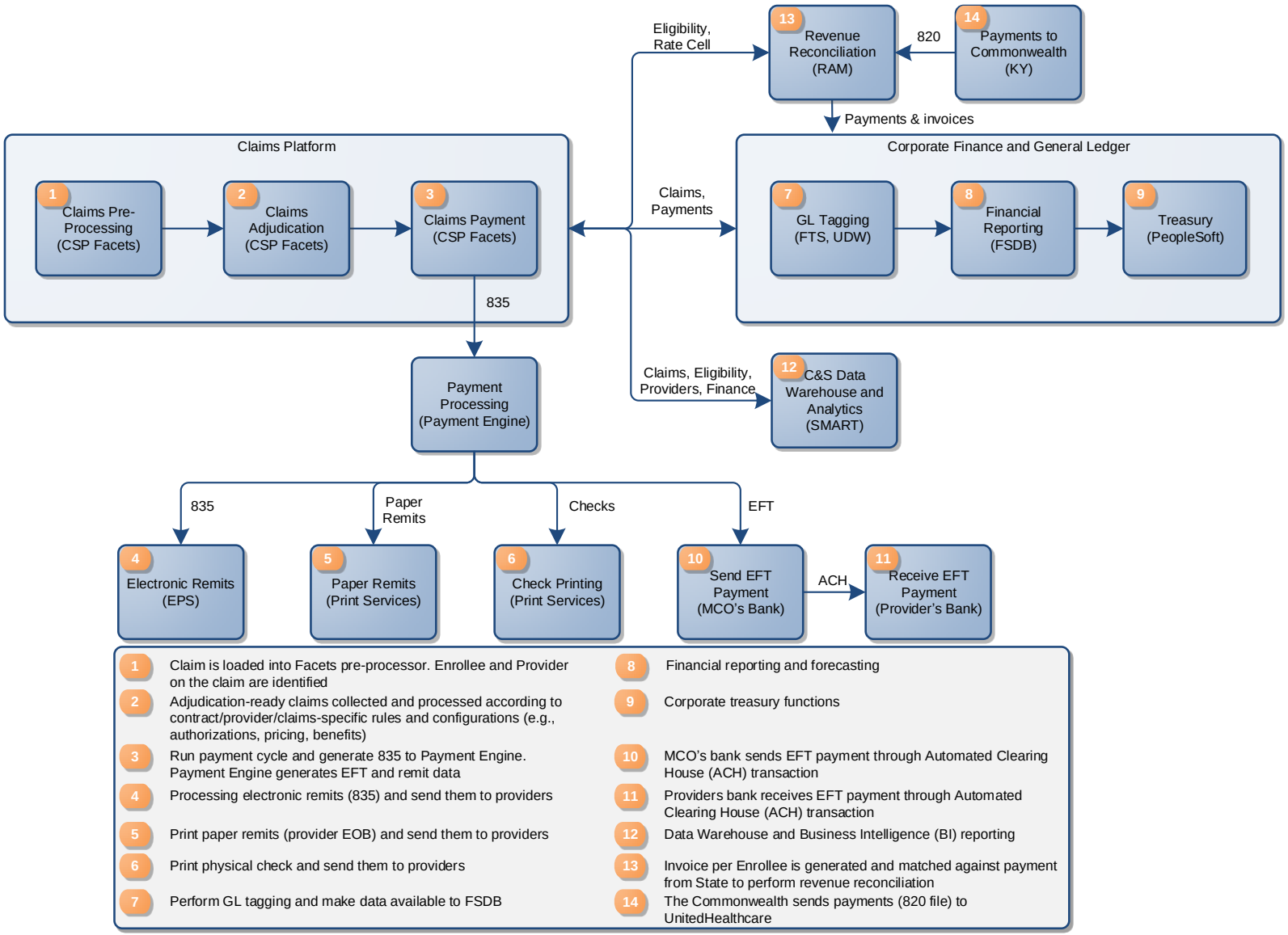
C.6.a.vi. Financial Subsystem

The flowchart below depicts how our financial subsystems interconnect with our claims platform, payment and invoicing, pricing, reporting and other systems related to finance management and business accounting practices. Following the summary table below, we provide a flowchart that illustrates the subsystems that interconnect with subsystems for operational support regarding finance, accounting, pricing and similar financial management practices and activities.

Table C.6.a.vi.: Financial Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystems: Financial	
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes
Financial Summary Database (FSDB)	Manages financial transactions to our general ledger and reserving process
Financial Tagging Service (FTS)	The FTS increases the consistency and quality of financial tags in analytic data warehouses and financial tools
National Encounter Management Information System (NEMIS)	Strategic, internally developed encounter data submission and reporting system that initiates submission of encounters, tracks responses, provides error correction and resubmission of Medicaid encounters to the Commonwealth in a format to be specified by the Commonwealth.
Payment Engine	Processes and generates consolidated check and electronic payments (EFT) to providers along with provider remittance advices (PRA) and electronic remittance advices (ERA) per provider preference.
PeopleSoft	Enterprise financial management solution containing modules, such as general ledger, asset management, purchasing, accounts payable and accounts receivables, to provide a consolidated view of financial data
Revenue Accuracy Manager (RAM)	RAM reconciles Enrollee records to capitation payments and documents receipt and distribution of capitation payments

Financial Subsystems



C.6.a.vii. Utilization/Quality Improvement Subsystem

Following the table below, we provide flowcharts that depict how our utilization data and quality improvement subsystems are interconnected, enabling our population health management teams to have access to historic, current and trending utilization and outcomes data to guide their approach to implementing or adjusting utilization management and quality improvement initiatives at a population-specific level.

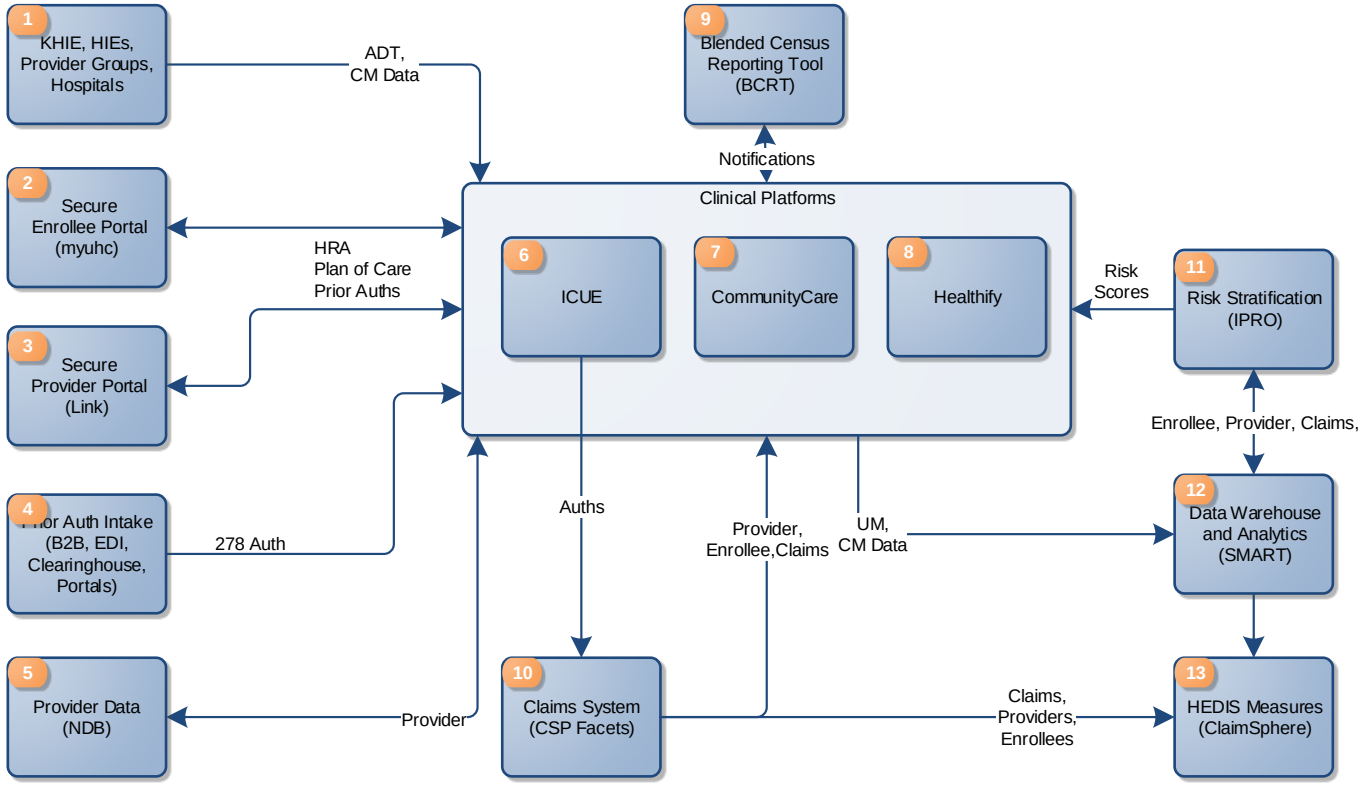
Table C.6.a.vii.: Utilization Data and Quality Improvement Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Utilization Data and Quality Improvement	
Blended Census Reporting Tool (BCRT)	The Blended Census Reporting Tool (BCRT) is a census report tool that tracks open cases and discharges daily by minor market and region. It serves as an operational and analytical tool to support bed day management initiatives.
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties
ClaimSphere HEDIS	ClaimSphere™ HEDIS is Cognizant's NCQA-certified HEDIS solution. ClaimSphere: ▪ Provides the foundation for medical quality management and improvement programs like provider profiling and gaps-in-care analysis ▪ Performs detailed measure analysis with access to Enrollee detail and information on specific Enrollees qualified for each measure Standard system views provide us with insight through line of business analysis, gaps-in-care reporting, provider scorecards and drill down capabilities. With this information transparency insight, we can analyze poorly performing measures to take appropriate action. We broadcast gaps in care via our secure provider and Enrollee portals, mobile app, EDI eligibility transactions and CommunityCare.

Management Information System	General Description/Functions Supported by System
CommunityCare	This tool enables care coordination, medication management and quality management by giving providers updated and shared access to Enrollee's (i.e., their patient's) care plan and supports alignment of clinical problems, goals and interventions. It provides electronic access for the care team, primary care coordinators, providers, specialists, Enrollees, caregivers and others, as permitted by the Enrollee. Containing claims information from CSP and authorization data from ICUE, CommunityCare includes our Population Registry and gives providers and care communities a comprehensive view of the services used by any given care population. Using the *Enrollee view* within the Population Registry, providers have the clinical history of the whole person. CommunityCare: ▪ Provides automated notifications of care transitions ▪ Receives authorizations from ICUE for reference by the care team ▪ Supports Direct for secure clinical data exchange with providers and HIEs ▪ Supports import, parsing and attachment of C-CDA, ADT, LOINC and other standard formats
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes
eVisor/Impact Pro™ (IPRO)	eVisor synchronizes claims data with evidence-based medicine guidelines to identify engagement opportunities. Impact Pro is a key analytical engine within the eVisor analytics platform. Impact Pro is a multidimensional, episode-based predictive modeling and care management analytics solution that enables our nurse care managers to use clinical, risk and administrative profile information to provide targeted health care service to Enrollees. Impact Pro: ▪ Identifies individuals who have not obtained appropriate preventive care and screening and who are at risk for developing costly and debilitating health conditions ▪ Provides Enrollee risk stratification and scoring to target specific populations/individuals for different levels of care management intensity managed through CommunityCare and ICUE ▪ Provides results through CommunityCare

Management Information System	General Description/Functions Supported by System
Healthify	Web-based tool that helps us connect enrollees to relevant and available social resources that deliver services (e.g., food, housing, legal resources, employment assistance, energy, support groups, child care and clothing) to individuals at risk for poor health outcomes or inappropriate use of health care services.
ICUE	ICUE (Integrated Clinical User Experience) is our clinician-facing web-based clinical platform that enables and delivers a coordinated, integrated experience to our Enrollees and the health care communities that support them. ICUE features consolidated data, functions and user experience and serves as a single source of truth for clinical operations transactional data. System users have access to all of the categories of data they need, such as Enrollee eligibility, benefits, provider information, claims data and clinical resources.
Link	Secure provider portal providing a central access point where enrolled providers have access to eligibility and benefits, claims management, claims reconsiderations, enhanced online authorizations and gaps in care, and where they can update their practice profile. Also, providers can view and provide feedback on the initial health risk screening and care plans in CommunityCare.
Network Database (NDB)	Our single enterprise repository of all information related to provider network management
Secure Enrollee Portal (*myuhc.com)*	Secure health and wellness information is available 24 hours a day, seven days a week through our Enrollee portal. Enrollees register for online access by setting up a secure HealthSafe ID™ and password. The personalized and easy-to-navigate digital experience allows Enrollees to search for covered benefits (medical, dental, vision, pharmacy and mental health), manage personal preferences, update contact information (including email addresses for facilitating contacts and information exchange), view/print and request we mail an ID card, change their PCP and locate providers through a searchable provider directory. Also, the portal offers personalized health and wellness content such as seasonal reminders (i.e., flu shots), personalized care recommendations, links to plan programs, and links to online resources and tools.
Strategic Management Analytic Reporting Tool (SMART)	Comprehensive, integrated analytical data warehouse, using the latest Oracle Exadata Database platform that holds all Medicaid relevant information — including claims data (e.g., medical, pharmacy, vision and lab), Enrollee data, provider data, authorizations, external subcontractor data and predictive modeling information. SMART: ▪ Supports quality management, performance management and compliance reporting, and ad hoc reporting as needed with turnaround times averaging less than five business days ▪ Stores service-specific data that includes behavioral health, LTSS, pharmacy, inpatient and outpatient services ▪ Includes consolidated patient census (common store of all patients receiving care) ▪ Consolidates data for Impact Pro health-risk modeling and stratification ▪ Consolidates relevant data for ClaimSphere EPSDT and HEDIS reporting and related analysis and monitoring

Utilization Data and Quality Improvement Subsystems



1. HIE, EMR connections, and other systems deliver ADT and CM data via ECG
2. Enrollees can view or update HRA, Plan of Care, IHR, and more on myuhc.com
3. Providers can submit authorization requests, view status and more on various Link applications
4. Providers can submit 278 EDI authorization. Acknowledgements are sent from B2B
5. Provider data is made available to clinical systems
6. Utilization Management, assessments and reviews
7. CommunityCare tool supports care coordination
8. Healthify tool supports social determinates of health
9. Notifications sent from BCRT tool to Clinical Platform
10. Authorizations fed to claims system to support adjudication. Enrollee and network data fed to clinical systems
11. Risk stratification of Enrollees. Risks shared with CommunityCare for high risk Enrollees
12. Clinical Reporting and Analytics
13. Claim, Enrollee, Provider, RX, Labs, and supplemental data loaded for HEDIS in ClaimSphere

C.6.a.viii. Surveillance Utilization Review Subsystem

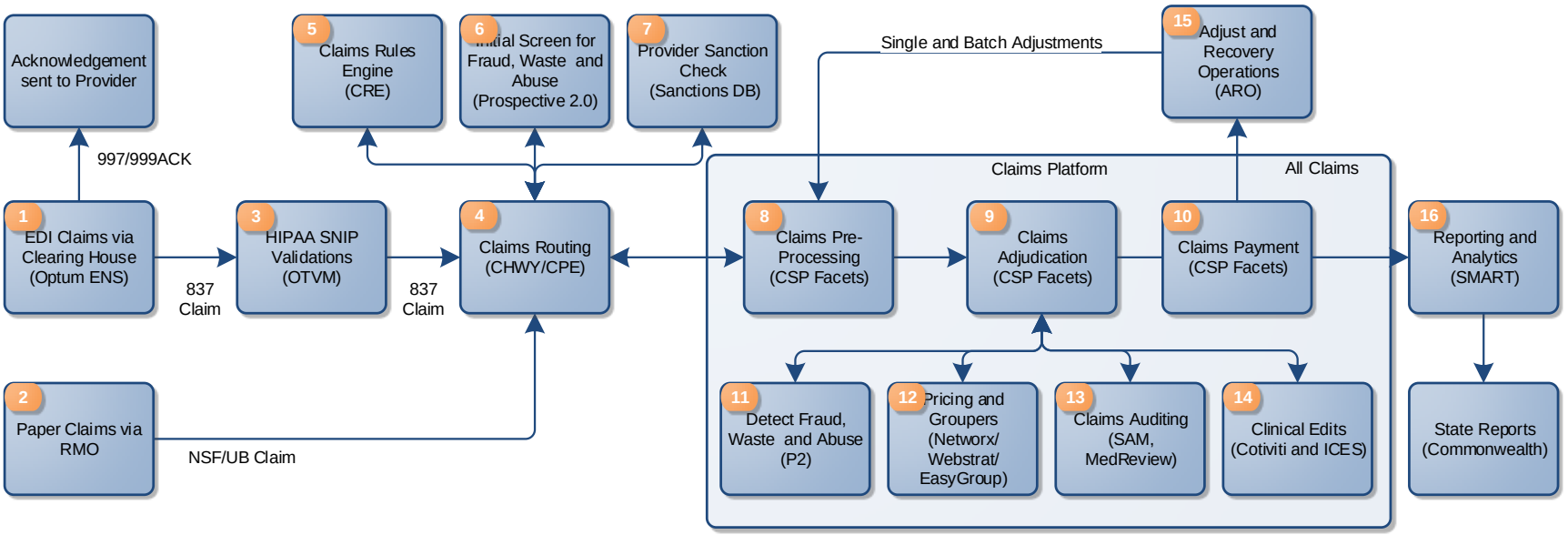
Our comprehensive Surveillance Utilization Review Subsystem (SURS) captures enrollee-specific and provider specific information (including subcontractor information) and complies with the requirements of 42 CFR 455. The diagram following the table below shows how our SURS supports a multitude of quality improvement, utilization management, profiling, reporting, investigating, and monitoring activities aimed at reducing fraud, waste and abuse and continuous quality improvement.

Table C.6.a.viii.: Surveillance Utilization Review Subsystem Descriptions

Management Information System	General Description/Functions Supported by System
Subsystem: Surveillance Utilization Review	
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties
Claims Processing Engine (CPE)	Application that enables universal claim intake and routing into CSP
Cotiviti	Clinical edit system which analyzes provider health care claims based upon business rules and edits.
CSP Facets	Integrated managed care information system built on the TriZetto Facets platform, which meets all applicable state and federal laws and privacy regulations including, but not limited to, HIPAA. Functions include: ▪ Core health plan administration system's primary functions: benefits, enrollment and disenrollment management, claims pricing, adjudication and payment ▪ Comprehensive Enrollee database, using Medicaid state ID numbers; eligibility begin and end dates; age-specific information; enrollment history; Enrollee TPL coverage and utilization and expenditure information ▪ Integrated claim processing suite including claim edits, adjudication, COB processing, rules-based correction/adjustment, voiding and resubmission ▪ Claim status data including incurred claims, processing status and payment timeliness data ▪ Documents distribution of capitation payments ▪ Generates explanation of benefits, remittance advice, and statements ▪ Data for provider payment issuance purposes
Escalation Tracking System (ETS)	Facilitates administration and escalation management and processing of claim disputes, grievances and appeals. ETS: ▪ Manages, provides status and tracks resolution on submitted grievances and appeals against policy-mandated time frames for Enrollee contact and appeal or grievance resolution ▪ Generates reports related to the outcomes of grievances, complaints and appeals ▪ Provides flexibility to easily customize data elements according to the Commonwealth's needs
MACESS	Workflow application that facilitates claim processing, including viewing of paper claims and supporting documentation in EDMS, and routing of claims to our claim processors
MedReview	Reviews the validity and appropriateness of high-dollar claims

Management Information System	General Description/Functions Supported by System
NetworX	Supports rules-based provider contract configuration and claim pricing
OptumInsight Claim Edit System (iCES)	Clinical edit system that analyzes provider health care claims based upon business rules that automate reimbursement policy and industry standard coding practices
Optum Transaction Validation Manager (OTVM)	Electronic data interchange (EDI) validation that enables us to test and certify HIPAA transaction sets and verify compliance with standards and regulations on inbound claims.
Prospective 2.0	Identifies fraud and abuse prior to claims payment allowing a greater recovery than post-payment
Sanctions DB	Monitors provider sanctions and disciplinary actions.
Smart Audit Master (SAM)	Claims payment validation tool that screens for the most common errors
Strategic Management Analytic Reporting Tool (SMART)	Comprehensive, integrated analytical data warehouse, using the latest Oracle Exadata Database platform that holds all Medicaid relevant information — including claims data (e.g., medical, pharmacy, vision and lab), Enrollee data, provider data, authorizations, external subcontractor data and predictive modeling information. SMART: ▪ Supports quality management, performance management and compliance reporting, and ad hoc reporting as needed with turnaround times averaging less than five business days ▪ Stores service-specific data that includes behavioral health, LTSS, pharmacy, inpatient and outpatient services ▪ Includes consolidated patient census (common store of enrollees receiving care) ▪ Consolidates data for Impact Pro health-risk modeling and stratification ▪ Consolidates relevant data for ClaimSphere EPSDT and HEDIS reporting and related analysis and monitoring

Surveillance Utilization Review Subsystem (SURS) Subsystem



1. HIPAA Compliant EDI claims are received at clearinghouse.
2. Paper claims are scanned and converted to electronic form. Basic validations are applied
3. Electronic claims are checked for compliance and are validated with HIPAA SNIP validations
4. Claims are routed to appropriate claims system based on the Enrollee identifiers
5. Claim is checked against various claim edits, validations, and rules.
6. Claim is flagged if fraud, waste, or abuse is detected
7. Claim is flagged if provider has been sanctioned
8. Claim is loaded into Facets pre-processer. Enrollee and Provider on the claim are identified
9. Claims are picked up and processed. Claim editing rules are applied. Authorization is verified. Sanctioned providers claims are denied. Provider contract and pricing is determined. Enrollee benefits, co-pays, deductible, and max out of pocket are verified and applied.
10. Check creation / EFT generation
11. Flagged claims are processed/denied due to fraudulent or abusive activity
12. Claims are priced and classified
13. Randomly sampled claims routed to auditors, transaction operations and quality which opens claims, review errors and determine a claim's accuracy assessment. DRG Payment Accuracy is assessed
14. Clinical editing and reimbursement policies are applied to claims.
15. Single adjustments are done directly via Facets online application. Batch adjustments are done via bulk adjustment tool
16. Claims information is copied into Data Warehouse and to adjustment recovery operations for analytics and reporting

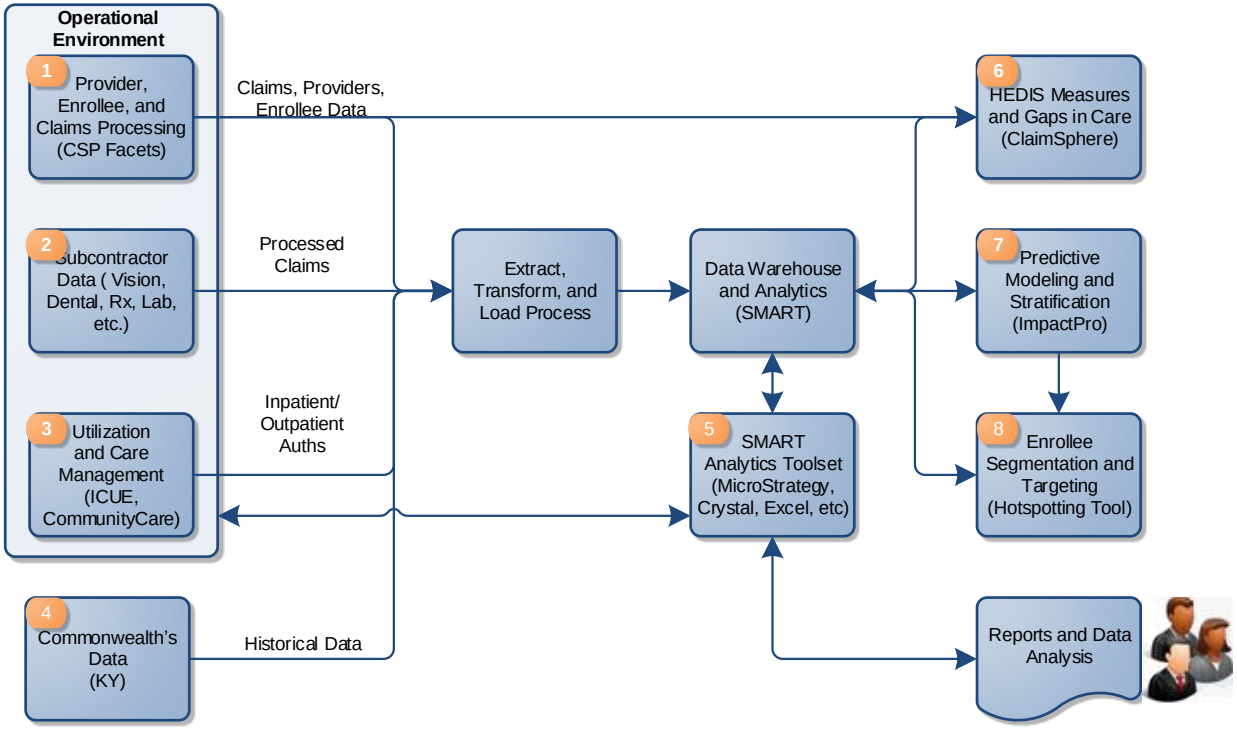
C.6.a.ix. Reporting Subsystems

The flowcharts following the table below depict current and next generation systems for how enrollee, provider, internal and external (i.e., state data intake, subcontractor) data from our eligibility, enrollment, claims, and utilization management subsystems is extracted, transformed and loaded into our SMART data warehouse. Our business intelligence team and end-users access SMART and use its data analytics toolset to analyze data and to produce reports that are shared internally and externally. The table below provides a summary of SMART and our electronic communication gateway (ECG) that supports reporting and secure data transactions with external parties.

Table C.6.a.ix.: Reporting Subsystem Descriptions

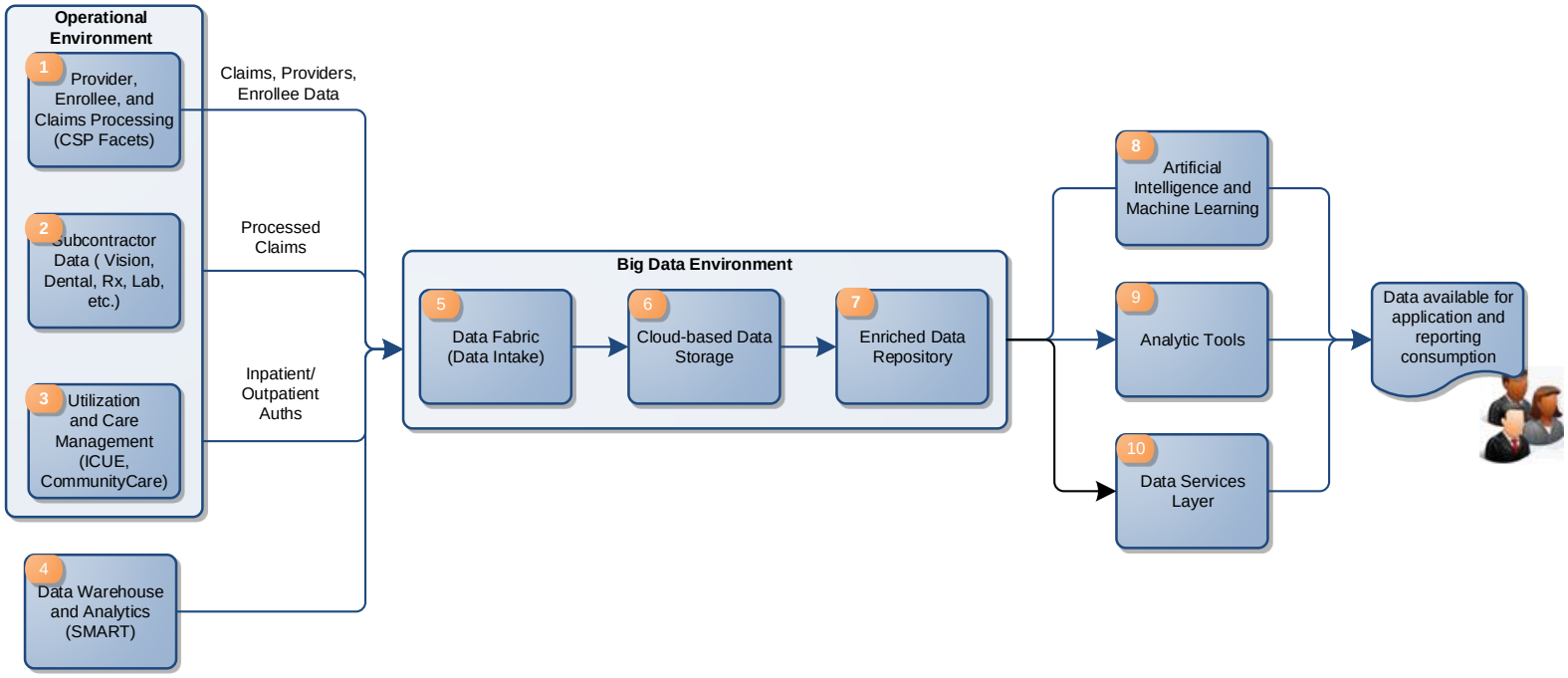
Management Information System	General Description/Functions Supported by System
Subsystem: Reporting	
Artificial Intelligence and Machine Learning	Information is extracted from data automatically through computational and statistical methods for use in Natural Language Processing, ChatBots, Robotic Process Automation, Expert Systems and Recommendation Engines
B2B/Electronic Communication Gateway (ECG)	Suite of tools supporting secure EDI transactions and file transfers between UnitedHealthcare and external parties
Data Fabric	A standardized technological approach to transport, transform, integrate and enrich source data on the way to being stored
Data Services Layer	The Data Services Layer provides access to our processed information through the use of application programming interfaces (APIs), for use by internal applications and other tools
Hotspotting Tool	Analytical tool used to identify enrollees to target for specific interventions.
Strategic Management Analytic Reporting Tool (SMART)	Comprehensive, integrated analytical data warehouse, using the latest Oracle Exadata Database platform that holds all Medicaid relevant information — including claims data (e.g., medical, pharmacy, vision and lab), Enrollee data, provider data, authorizations, external subcontractor data and predictive modeling information. SMART: ▪ Supports quality management, performance management and compliance reporting, and ad hoc reporting as needed with turnaround times averaging less than five business days ▪ Stores service-specific data that includes behavioral health, LTSS, pharmacy, inpatient and outpatient services ▪ Includes consolidated patient census (common store of all patients receiving care) ▪ Consolidates data for Impact Pro health-risk modeling and stratification ▪ Consolidates relevant data for ClaimSphere EPSDT and HEDIS reporting and related analysis and monitoring

Reporting Subsystem



1. Medical claims, behavioral claims, Enrollee demographics, provider demographics are sent to SMART
2. Subcontractor Claims (pharmacy, vision, dental, lab, etc.) are sent to SMART
3. Utilization and Care Management are sent to SMART
4. Historical Commonwealth data can be loaded into SMART for analytical purposes
5. The Business Intelligence team and end-users will access SMART and Operational systems using the Analytic Toolsets
6. Data is extracted and loaded into ClaimSphere for calculations of our HEDIS scores and Gaps in Care
7. Data is extracted and loaded into ImpactPro used in predictive modeling and stratification
8. Data is loaded to our Hotspotting tool which identifies and targets enrollees for specific intervention

Reporting Subsystem: Next Generation



1. Medical claims, behavioral claims, Enrollee demographics, provider demographics are sent to Big Data storage
2. Subcontractor Claims (pharmacy, vision, dental, lab, etc.) are sent to Big Data storage
3. Utilization and Care Management are sent to Big Data storage
4. Existing data in SMART system is made available to the Big Data platform
5. A standardized technological approach to transport, transform, integrate and enrich source data on the way to being stored
6. Data loaded into virtually unlimited UnitedHealthcare's Cloud-based storage
7. Data is enhanced, refined, and improved creating a valuable asset for use in analytics and reporting
8. Information is extracted from data automatically through computational and statistical methods for use in Natural Language Processing, ChatBots, Robotic Process Automation, Expert Systems and Recommendation Engines
9. Many tools are available for the review and analysis including Splunk, Talend, MapR, MarkLogic, Tableau
10. Provides access to our processed information through the use of application programming interfaces (APIs), for use by internal applications and other tools.

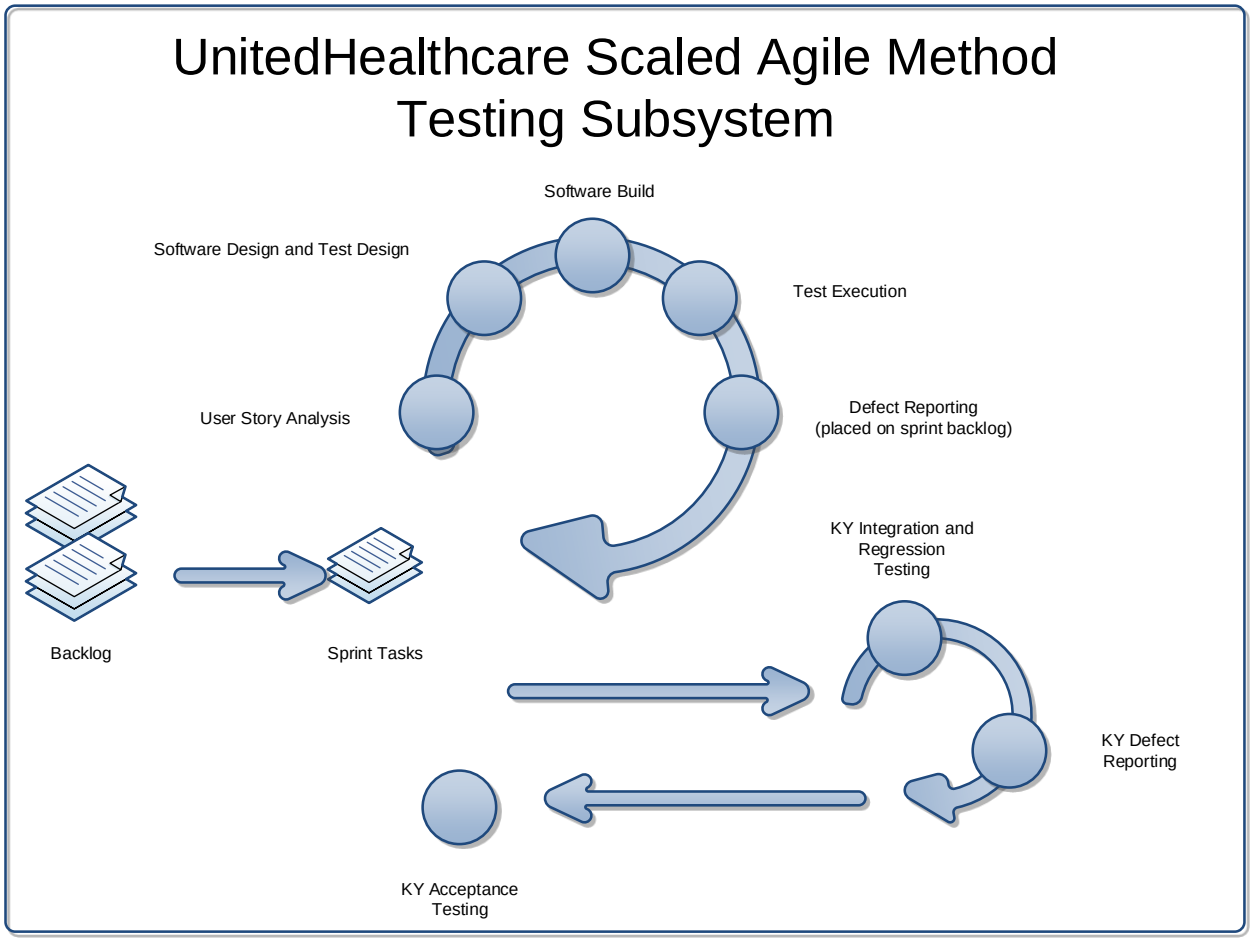
C.6.a.x. Testing Subsystems

The diagram following the table below depicts our systems testing methodology. Following the diagram, we provide a flowchart of our encounter data testing processes. The summary table below provides descriptions of our subsystem testing methodologies, including those for ensuring encounter data is complete, accurate, and delivered on time.

Table C.6.a.x.: Testing Subsystem Descriptions

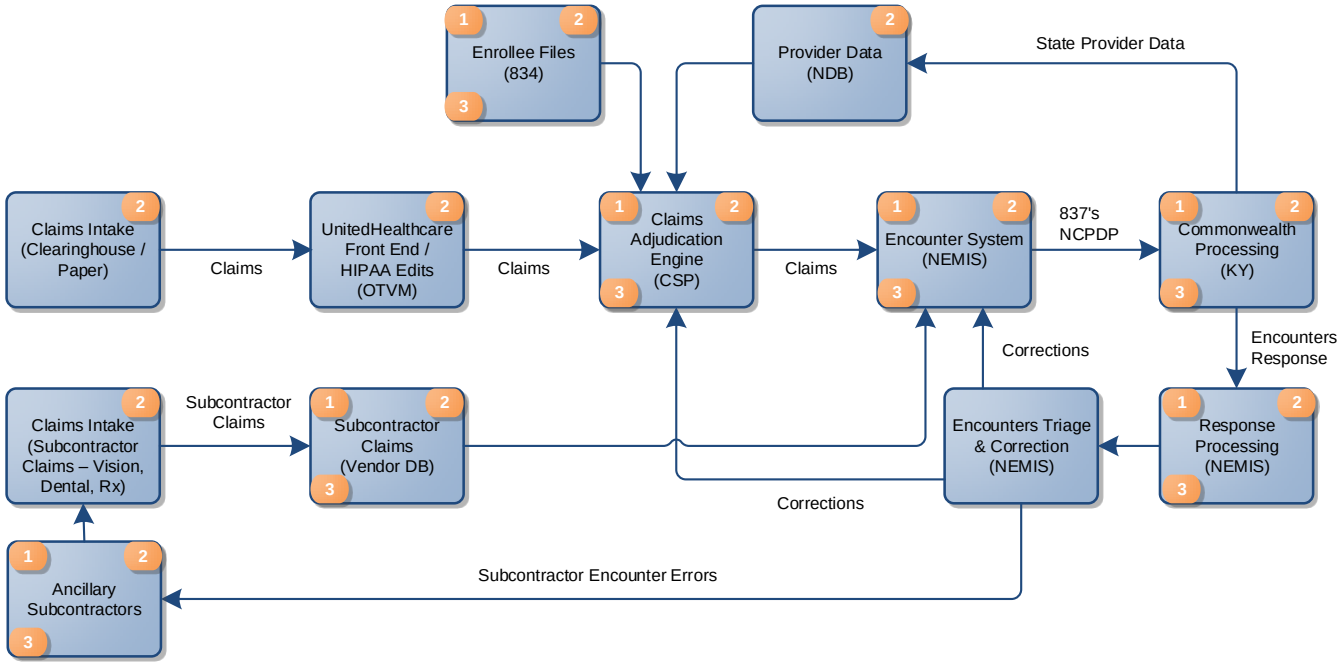
Management Information System	General Description/Functions Supported by System
Subsystem: Testing Methodology	
Automated Testing	To help improve quality while reducing cost, this effort advocates the expansion of automated testing within UnitedHealth Group information technology leveraging consistent, advanced frameworks.
Client Acceptance Testing	Client acceptance testing occurs after all the validation of any new capabilities is complete. This ends the cycle and provides consent to promote the software for production use.
Client Integration and Regression Testing	Once internal testing of the changes is complete, client integration (for new items) and client regression testing is executed. Any issues uncovered are reported and, in needed, added to the sprint backlog to be addressed.
Software Development Life Cycle (SDLC)	Our SDLC approach affords a smooth and timely implementation of new health plan programs or system modifications. We use an Agile software development framework (Scalable Agile Method) comprising intellectual capital and assets for processes, tools, metrics and training for reliable changes with minimum time to deployment.
Sprint	Throughout the sprinting phase, the development team completes a series of short sprints to create and release working software according to backlog specifications and the program increment milestones. This includes analysis, design, coding and testing of the item from the sprint backlog. Issues uncovered during the testing are placed on the sprint backlog to be addressed.
Encounters System Test Example	This is an example of testing points using the Encounters subsystem. Refer to C.6.a.iii for Encounter Subsystem definitions.
Testing Standards/Best Practices	We define the optimum methodologies and approaches for quality assurance in a manner that can adapt to multiple technologies and implementation approaches. We also capture and communicate successful approaches, or best practices that we can better leverage throughout the organization.

Testing Subsystem



UnitedHealthcare uses an Agile approach to developing software leveraging Acceptance Test Driven Development (ATDD). In applying ATDD, teams build testing into the software delivery lifecycle. User stories provide the backdrop for the testing scenarios needed to validate the desired functionality. Coding changes are validated through a combination of manual and automated testing as defined in the user stories, after each software build. Defects found are placed back on the sprint backlog to be remediated. Once unit and functional testing is complete, client integration testing can begin. Security, performance and scalability are validated throughout the testing lifecycle to ensure the highest quality deliverables.

Testing Points within the Encounters Subsystem



1. Contains functional tests for stories, features, and capabilities, to validate that they work the way the Product Owner (or Customer/user) intended. Feature-level and capability-level acceptance tests confirm the aggregate behavior of many user stories. This is testing for new functionality or connectivity. This includes unit, component and connectivity testing

2. Contains system-level acceptance tests to validate that the behavior of the whole system meets usability and functionality requirements, including scenarios that are often encountered during system use. This is testing of systems that have no change or only configuration-based changes. This includes business oriented system integration, usability and user acceptance testing

3. Contains system qualities testing to verify the system meets its Nonfunctional Requirements (NFRs), such as load and performance. This is testing that is used to ensure that connectivity to external entities is secure and performant. This includes performance load and security testing

C.6.a.xi. Information Systems Management

ServiceNow is our IT service management platform for our IT Support/Request Center and IT service management processes, including system monitoring and reporting of critical incidents. It supports all UnitedHealth Group employees, providers, subcontractors and the Department's representatives by providing web-enabled forms for submitting business requests and incidents to the technology team. The Request Center is a module within our ServiceNow ITSM tool. A Request Item (RITM) and Request Task(s) (SCTASK) are created based upon the request made via the corresponding Request Center request item. All requests are properly logged, triaged, prioritized, assigned and managed to resolution using our other ITSM processes, such as incident and problem management.