

Healthcare Informatics and Technology

Adverse Event Reporting System – Concept: A digital platform for collecting and analyzing patient safety incidents. **Related terms:** pharmacovigilance, incident reporting – **Explanation:** Enables healthcare providers to submit details of medication-related harms, facilitating trend analysis and regulatory response. **Example:** A nurse logs a drug reaction in an electronic system, triggering a safety alert. **Challenge:** Ensuring timely entry and accurate coding of events while avoiding duplicate reports.

Algorithm – Concept: A step-by-step computational procedure for solving a problem. **Related terms:** logic flow, decision tree – **Explanation:** In case management, algorithms guide triage, risk stratification, and discharge planning. **Example:** An algorithm determines eligibility for home health services based on clinical criteria. **Challenge:** Maintaining algorithm relevance as clinical guidelines evolve.

Analytics – Concept: Systematic analysis of data to inform decisions. **Related terms:** business intelligence, predictive modeling – **Explanation:** Analytics transform raw health records into actionable insights, such as readmission risk scores. **Example:** A dashboard shows the top reasons for prolonged hospital stays. **Challenge:** Balancing data granularity with privacy protections.

Application Programming Interface (API) – Concept: A set of rules that allows software applications to communicate. **Related terms:** interoperability, web services – **Explanation:** APIs enable EHRs to exchange patient data with external platforms like pharmacy systems. **Example:** An API pulls medication lists into a case manager's workflow tool. **Challenge:** Managing version control and secure authentication across systems.

Artificial Intelligence (AI) – Concept: Technology that simulates human intelligence to perform tasks. **Related terms:** machine learning, natural language processing – **Explanation:** AI can predict discharge delays, suggest care pathways, or automate documentation. **Example:** An AI model flags patients at high risk for falls. **Challenge:** Mitigating bias in training data and ensuring explainability for clinicians.

Archiving – Concept: Long-term storage of health information for future reference. **Related terms:** retention policy, data lifecycle – **Explanation:** Archived records support audits, research, and continuity of care. **Example:** A hospital archives completed case files after seven years. **Challenge:** Balancing accessibility with cost-effective storage solutions.

Assessment Tool – Concept: Instrument used to evaluate patient status or needs. **Related terms:** screening questionnaire, outcome measure – **Explanation:** Standardized tools assess functional ability, pain, or psychosocial factors. **Example:** The Barthel Index measures activities of daily living. **Challenge:** Selecting tools validated for specific populations and ensuring consistent administration.

Audit Trail – Concept: Chronological record of system activity. **Related terms:** log file, compliance monitoring – **Explanation:** Captures who accessed, created, or modified patient data, supporting accountability.

Example: An audit reveals that a case manager edited a care plan at 02:15 Am. Challenge: Managing large volumes of logs while preserving performance.

Automation – Concept: Use of technology to perform tasks without manual input. Related terms: workflow engine, robotic process automation – Explanation: Automates repetitive steps such as sending referral notifications. Example: An automated rule sends a discharge summary to the primary care physician. Challenge: Designing safeguards to prevent unintended actions.

Baseline Data – Concept: Initial set of information collected before an intervention. Related terms: pre-intervention metrics, control group – Explanation: Provides a reference point to measure outcomes like reduced readmission rates. Example: Baseline readmission rate is 15 % prior to a new case management protocol. Challenge: Ensuring data completeness and comparability over time.

Benefits Management – Concept: Process of overseeing employee health benefits information. Related terms: claims processing, eligibility verification – Explanation: Integrates insurance data with clinical records to determine coverage for services. Example: A system verifies that a patient's plan covers home health nursing. Challenge: Navigating varying payer rules and frequent updates.

Big Data – Concept: Extremely large datasets that require advanced tools for analysis. Related terms: data mining, distributed computing – Explanation: Enables population-level insights, such as identifying social determinants of health. Example: Analyzing millions of claims to detect patterns in chronic disease management. Challenge: Ensuring data quality and protecting patient confidentiality at scale.

Biometric Authentication – Concept: Security method using physical characteristics. Related terms: fingerprint scan, facial recognition – Explanation: Confirms user identity before granting access to sensitive health information. Example: A case manager logs in using a retinal scan. Challenge: Balancing convenience with false-reject rates and privacy concerns.

Clinical Decision Support (CDS) – Concept: Tools that provide clinicians with knowledge and patient-specific information. Related terms: alerts, order sets – Explanation: CDS can suggest appropriate interventions or warn of potential drug interactions. Example: A pop-up alerts a case manager when a prescribed medication conflicts with a known allergy. Challenge: Reducing alert fatigue while maintaining safety.

Clinical Documentation Improvement (CDI) – Concept: Initiatives aimed at enhancing the quality of health records. Related terms: coding accuracy, documentation standards – Explanation: Accurate documentation supports proper reimbursement and quality reporting. Example: A CDI specialist works with clinicians to clarify the severity of a condition. Challenge: Aligning documentation practices with evolving coding rules.

Clinical Pathway – Concept: Evidence-based sequence of clinical interventions for a specific condition. Related terms: care protocol, standard of care – Explanation: Guides case managers in coordinating multidisciplinary care. Example: A pathway for congestive heart failure outlines medication, education, and follow-up steps. Challenge: Customizing pathways to individual patient contexts without deviating from evidence.

Clinical Terminology – Concept: Standardized vocabularies for describing health concepts. Related terms:

SNOMED CT, ICD-10 – Explanation: Facilitates consistent data entry and interoperability across systems. Example: Using SNOMED code 44054006 for “Diabetes mellitus”. Challenge: Training staff to select correct terms amidst extensive code sets.

Claim Management System – Concept: Software that processes insurance claims from submission to payment. Related terms: adjudication, reimbursement cycle – Explanation: Automates verification of coverage, coding validation, and payment posting. Example: A claim for physical therapy is automatically approved after eligibility check. Challenge: Handling denials and appeals efficiently.

Cloud Computing – Concept: Delivery of computing services over the internet. Related terms: software as a service, infrastructure as a service – Explanation: Enables scalable storage and processing for case management platforms. Example: A cloud-based portal hosts patient care plans accessible from any device. Challenge: Ensuring data residency compliance and robust cybersecurity.

Code Set – Concept: Collection of standardized codes representing diagnoses, procedures, or services. Related terms: ICD, CPT – Explanation: Accurate coding impacts billing, reporting, and analytics. Example: Assigning CPT code 99213 for a standard office visit. Challenge: Keeping abreast of annual code updates and payer-specific modifiers.

Co-Design – Concept: Collaborative development of technology with end-users. Related terms: user-centered design, stakeholder engagement – Explanation: Involves case managers, patients, and IT staff to create intuitive tools. Example: A prototype case management dashboard is refined through clinician feedback sessions. Challenge: Balancing diverse perspectives while meeting project timelines.

Compliance – Concept: Adherence to legal, regulatory, and organizational standards. Related terms: HIPAA, GDPR – Explanation: Ensures that health information is handled securely and ethically. Example: Conducting regular privacy risk assessments to maintain compliance. Challenge: Interpreting overlapping regulations across jurisdictions.

Confidentiality – Concept: Obligation to protect patient information from unauthorized disclosure. Related terms: privacy, data security – Explanation: Enforced through access controls, encryption, and policies. Example: Only the assigned case manager can view a patient’s psychosocial assessment. Challenge: Managing insider threats and inadvertent data sharing.

Continuity of Care Document (CCD) – Concept: XML-based format for exchanging summary health information. Related terms: HL7, interoperability – Explanation: Transfers essential data such as medications, allergies, and care plans between providers. Example: A CCD is sent from the hospital to the community health agency after discharge. Challenge: Mapping local data fields to the standardized CCD structure.

Data Governance – Concept: Framework for managing data availability, usability, integrity, and security. Related terms: stewardship, data policy – Explanation: Establishes roles and responsibilities for data handling across the organization. Example: A data governance council approves a new data sharing agreement. Challenge: Aligning governance with rapid technology adoption.

Data Integration – Concept: Combining information from disparate sources into a unified view. Related

terms: ETL, data warehouse – Explanation: Allows case managers to see clinical, financial, and social data side by side. Example: Integrating lab results with social work notes in a care coordination portal. Challenge: Resolving mismatched identifiers and differing data formats.

Data Lake – Concept: Repository that stores raw, unprocessed data at scale. Related terms: big data, schema-on-read – Explanation: Supports flexible analytics without imposing strict data models initially. Example: A data lake holds streaming sensor data from wearable devices. Challenge: Preventing data swamps where information becomes unusable.

Data Mining – Concept: Extracting patterns from large datasets using statistical techniques. Related terms: machine learning, predictive analytics – Explanation: Identifies hidden relationships, such as predictors of readmission. Example: Mining claims data reveals that frequent emergency visits correlate with medication non-adherence. Challenge: Ensuring findings are clinically meaningful and not spurious.

Data Quality – Concept: Degree to which data accurately reflects the real-world phenomenon it represents. Related terms: data validation, integrity – Explanation: High-quality data underpins reliable case management decisions. Example: Validating that a patient's birthdate matches the demographic record. Challenge: Detecting and correcting errors across multiple source systems.

Data Security – Concept: Protective measures that safeguard data from unauthorized access or alteration. Related terms: encryption, firewalls – Explanation: Includes technical controls, policies, and training. Example: Encrypting case notes at rest and in transit. Challenge: Balancing security with usability for frontline staff.

Decision Support System (DSS) – Concept: Computer-based system that assists with complex decision-making. Related terms: clinical decision support, analytics engine – Explanation: Provides recommendations based on algorithms and data inputs. Example: A DSS suggests a home health referral when a patient's risk score exceeds a threshold. Challenge: Integrating seamlessly into existing workflows to avoid disruption.

Denial Management – Concept: Process of identifying, appealing, and preventing claim denials. Related terms: revenue cycle, payer contracts – Explanation: Reduces revenue loss and improves cash flow. Example: A case manager reviews a denied claim for missing diagnosis code and submits an appeal. Challenge: Keeping up with varying payer denial reasons and documentation requirements.

Digital Signature – Concept: Cryptographic method that verifies the authenticity of electronic documents. Related terms: electronic health record, non-repudiation – Explanation: Allows clinicians to sign care plans electronically with legal validity. Example: A case manager signs a discharge summary using a digital certificate. Challenge: Managing certificate expiration and ensuring cross-system recognition.

Discharge Planning – Concept: Coordinated process that prepares a patient for transition from acute care to the next level of care. Related terms: care coordination, post-acute services – Explanation: Involves assessing needs, arranging services, and educating patients. Example: A case manager schedules home health visits and provides medication reconciliation before discharge. Challenge: Aligning service availability with patient discharge dates.

Electronic Health Record (EHR) – Concept: Digital version of a patient’s comprehensive health information. Related terms: clinical documentation, interoperability – Explanation: Central repository for diagnoses, medications, labs, and care plans. Example: An EHR displays a patient’s allergy list to prevent adverse drug events. Challenge: Reducing documentation burden while maintaining data richness.

Electronic Medical Record (EMR) – Concept: Digital version of a clinician’s chart within a single practice. Related terms: EHR, health information system – Explanation: Focuses on clinical data generated by a specific provider. Example: A primary care EMR captures visit notes, vitals, and immunizations. Challenge: Integrating EMRs with broader health networks for continuity of care.

Enterprise Resource Planning (ERP) – Concept: Integrated suite of applications that manage core business processes. Related terms: financial management, supply chain – Explanation: In healthcare, ERP supports billing, inventory, and human resources alongside clinical systems. Example: An ERP module tracks medical device inventory across multiple facilities. Challenge: Aligning ERP workflows with clinical priorities without compromising patient care.

Enterprise Data Warehouse (EDW) – Concept: Centralized repository that aggregates data from multiple operational systems. Related terms: ETL, analytics – Explanation: Provides a single source of truth for reporting and decision-making. Example: An EDW consolidates admission, discharge, and financial data for performance dashboards. Challenge: Maintaining data freshness and handling schema changes.

Epic Systems – Concept: Widely used EHR vendor offering integrated clinical and administrative modules. Related terms: interoperability, health IT vendor – Explanation: Supports functionalities such as order entry, documentation, and patient portals. Example: A case manager uses Epic’s Care Coordination module to track referrals. Challenge: Customizing Epic to meet specific workflow needs while managing upgrade cycles.

FHIR (Fast Healthcare Interoperability Resources) – Concept: Modern standard for exchanging health information via APIs. Related terms: HL7, RESTful services – Explanation: Enables granular data exchange such as medication lists or appointment slots. Example: A mobile app retrieves a patient’s immunization record using a FHIR query. Challenge: Implementing security controls and handling version compatibility.

Health Information Exchange (HIE) – Concept: Network that facilitates the sharing of health data across organizations. Related terms: interoperability, regional exchange – Explanation: Improves continuity of care by providing clinicians access to external records. Example: A community health provider retrieves hospital discharge summaries via an HIE. Challenge: Aligning data standards and addressing consent management.

Health Level Seven (HL7) – Concept: Set of international standards for the exchange, integration, sharing, and retrieval of electronic health information. Related terms: V2, CDA, FHIR – Explanation: Provides messaging formats for lab results, admissions, and clinical documents. Example: An HL7 V2 message transmits a lab result from the laboratory system to the EHR. Challenge: Mapping legacy HL7 messages to newer standards without data loss.

Health Literacy – Concept: The degree to which individuals can obtain, process, and understand health information. Related terms: patient education, communication – Explanation: Influences patient

engagement and adherence to care plans. Example: Simplifying medication instructions for a patient with limited health literacy. Challenge: Designing digital tools that accommodate varying literacy levels.

Health Outcome Measures – Concept: Metrics that assess the results of health care services. Related terms: quality indicators, performance metrics – Explanation: Include readmission rates, patient satisfaction, and functional improvement. Example: Tracking the reduction in 30-day readmissions after implementing a case management program. Challenge: Selecting measures that are meaningful, reliable, and risk-adjusted.

Health Information Management (HIM) – Concept: Discipline that oversees the acquisition, analysis, and protection of health information. Related terms: coding, privacy – Explanation: HIM professionals ensure data accuracy, compliance, and accessibility. Example: A HIM specialist validates diagnosis codes for billing accuracy. Challenge: Adapting HIM practices to emerging technologies like AI-driven coding.

Health Insurance Portability and Accountability Act (HIPAA) – Concept: U.S. Law that establishes standards for protecting health information. Related terms: privacy rule, security rule – Explanation: Requires safeguards for electronic protected health information (ePHI). Example: Implementing role-based access controls to comply with HIPAA. Challenge: Interpreting the rule in the context of cloud-based services.

Health Information Technology (HIT) – Concept: Broad category encompassing electronic systems used to store, share, and analyze health data. Related terms: EHR, telehealth – Explanation: Supports clinical, administrative, and public health functions. Example: A HIT platform integrates patient portals, scheduling, and billing. Challenge: Ensuring interoperability among heterogeneous HIT components.

Health Level Seven Version 2 (HL7 V2) – Concept: Early messaging standard for exchanging clinical data between systems. Related terms: HL7, interface engine – Explanation: Uses delimited text messages for events like admissions, discharges, and lab results. Example: An ADT (Admission, Discharge, Transfer) message updates patient demographics in the EHR. Challenge: Managing custom segments and variations across vendor implementations.

Health Level Seven Clinical Document Architecture (CDA) – Concept: XML-based standard for structuring clinical documents. Related terms: HL7, interoperability – Explanation: Enables exchange of documents such as discharge summaries and progress notes. Example: A CDA document carries a patient's medication list to an external provider. Challenge: Ensuring consistent content models and handling large document sizes.

Health Services Research – Concept: Field that examines how people access health care, health outcomes, and costs. Related terms: epidemiology, health economics – Explanation: Provides evidence to inform case management policies and resource allocation. Example: A study evaluates the impact of case management on chronic disease costs. Challenge: Controlling for confounding variables and data heterogeneity.

Health Technology Assessment (HTA) – Concept: Systematic evaluation of the properties, effects, and impacts of health technologies. Related terms: cost-effectiveness analysis, evidence-based practice – Explanation: Guides decisions about adoption of new tools such as remote monitoring devices. Example: An HTA report recommends a telehealth platform for managing diabetes. Challenge: Balancing rapid innovation with rigorous assessment timelines.

Health-IT Vendor Management – Concept: Process of overseeing relationships with technology suppliers. Related terms: contract negotiation, service level agreement – Explanation: Ensures that vendor performance aligns with organizational goals and compliance requirements. Example: Monitoring a vendor's response time for critical system outages. Challenge: Managing multiple contracts while maintaining consistent data standards.

Hybrid Cloud – Concept: Computing environment that combines private and public cloud services. Related terms: cloud computing, data residency – Explanation: Allows sensitive patient data to reside on a private cloud while leveraging public resources for scalability. Example: Storing PHI on a private cloud and using public cloud for analytics workloads. Challenge: Coordinating security policies across heterogeneous environments.

Identity Management – Concept: Framework for ensuring that users are correctly identified and granted appropriate access. Related terms: single sign-on, role-based access – Explanation: Controls who can view or edit patient records. Example: A case manager's credentials are linked to their department role. Challenge: Managing lifecycle events such as onboarding and off-boarding efficiently.

Immunization Registry – Concept: Centralized database that tracks vaccination histories. Related terms: public health, vaccine coverage – Explanation: Supports case managers in identifying gaps and coordinating immunizations. Example: Querying the registry to confirm a child's measles vaccine status before school enrollment. Challenge: Ensuring data timeliness and reconciling duplicate entries.

Information Architecture – Concept: Structural design of information environments to support findability and usability. Related terms: metadata, navigation – Explanation: Organizes health data hierarchically for efficient retrieval. Example: Designing a taxonomy that groups chronic disease data under "Cardiovascular" and "Respiratory". Challenge: Balancing depth of hierarchy with user simplicity.

Information Governance – Concept: Policies and procedures that ensure information is managed responsibly. Related terms: data governance, compliance – Explanation: Addresses data stewardship, retention, and risk management. Example: A policy mandates that all case notes be retained for ten years. Challenge: Aligning governance with evolving regulatory landscapes.

Information Technology (IT) Service Management (ITSM) – Concept: Set of practices for delivering IT services aligned with business needs. Related terms: ITIL, service desk – Explanation: Includes incident management, change control, and problem resolution. Example: An ITSM ticket tracks a system outage affecting case management workflows. Challenge: Integrating ITSM processes with clinical urgency without causing delays.

Informatics – Concept: Interdisciplinary field that studies the creation, storage, and use of information in health care. Related terms: clinical informatics, bioinformatics – Explanation: Bridges technology, data science, and clinical practice. Example: An informatics specialist designs a data model for tracking social determinants. Challenge: Translating complex technical concepts into actionable clinical insights.

Interoperability – Concept: Ability of disparate systems to exchange, interpret, and use data cohesively. Related terms: FHIR, HL7, HIE – Explanation: Enables seamless flow of patient information across care

settings. Example: A case manager accesses lab results from an external laboratory via an interoperable interface. Challenge: Reconciling differing data standards and maintaining data fidelity.

Internet of Things (IoT) – Concept: Network of physical devices embedded with sensors and connectivity. Related terms: wearables, remote monitoring – Explanation: Collects real-time health data such as heart rate or glucose levels. Example: A smartwatch transmits daily step counts to a case manager’s dashboard. Challenge: Ensuring data security and managing device heterogeneity.

Iterative Development – Concept: Incremental approach to building software, incorporating feedback at each cycle. Related terms: agile, sprint – Explanation: Allows continuous improvement of case management tools based on user experience. Example: A new feature for care plan templates is released after two development sprints. Challenge: Keeping scope controlled while incorporating diverse stakeholder input.

Knowledge Base – Concept: Centralized repository of structured information, guidelines, and best practices. Related terms: clinical decision support, reference library – Explanation: Supports case managers with evidence-based protocols at the point of care. Example: Accessing a guideline on fall prevention within the EHR. Challenge: Keeping content up-to-date and ensuring relevance to local practice.

Learning Health System – Concept: System that continuously captures data, generates evidence, and applies insights to improve care. Related terms: real-world evidence, feedback loop – Explanation: Case managers contribute data that inform iterative care improvements. Example: Analyzing readmission data to refine discharge planning processes. Challenge: Integrating data collection seamlessly without burdening clinicians.

Lean Methodology – Concept: Systematic approach to eliminate waste and improve efficiency. Related terms: process improvement, Kaizen – Explanation: Applied to case management to streamline workflows and reduce delays. Example: Mapping the referral process to identify redundant steps. Challenge: Sustaining gains amid changing clinical demands.

License Management – Concept: Tracking and compliance of software usage rights. Related terms: software asset management, audit – Explanation: Ensures that all health IT tools are properly licensed and renewed. Example: Monitoring expiration dates of analytics platform licenses. Challenge: Coordinating renewals across multiple departments and avoiding license overuse.

Longitudinal Data – Concept: Information collected about a patient over an extended period. Related terms: cohort study, time series – Explanation: Enables tracking of disease progression and outcomes. Example: Charting a patient’s blood pressure readings across three years. Challenge: Maintaining consistent data capture methods and handling missing intervals.

Machine Learning (ML) – Concept: Subset of AI that enables systems to learn patterns from data without explicit programming. Related terms: supervised learning, unsupervised learning – Explanation: Predicts risk scores, recommends interventions, and automates coding. Example: An ML model predicts which patients will benefit most from intensive case management. Challenge: Ensuring model transparency and preventing algorithmic bias.

Medical Coding – Concept: Translation of clinical documentation into standardized codes for billing and analytics. Related terms: ICD-10, CPT, SNOMED – Explanation: Accurate coding impacts reimbursement and quality reporting. Example: Assigning ICD-10 code E11.9 For type 2 diabetes without complications. Challenge: Keeping pace with frequent code updates and payer-specific modifiers.

Metadata – Concept: Data that describes other data, providing context and facilitating discovery. Related terms: data dictionary, tagging – Explanation: Metadata includes elements like source, date, and data owner. Example: Tagging a dataset with “social determinants” to aid retrieval. Challenge: Ensuring consistent metadata standards across departments.

Minimum Viable Product (MVP) – Concept: Early version of a product with just enough features to satisfy early users. Related terms: prototype, agile – Explanation: Allows rapid testing of case management tools before full rollout. Example: Launching an MVP that includes only referral tracking and basic reporting. Challenge: Defining the minimal feature set that still delivers value.

Mobile Health (mHealth) – Concept: Delivery of health services and information via mobile devices. Related terms: apps, SMS reminders – Explanation: Supports patient engagement, medication adherence, and remote monitoring. Example: Sending automated text reminders for follow-up appointments. Challenge: Addressing device compatibility and data security on personal phones.

Natural Language Processing (NLP) – Concept: Technology that enables computers to understand and interpret human language. Related terms: text mining, speech recognition – Explanation: Extracts clinical concepts from unstructured notes to enrich case data. Example: NLP parses a progress note to identify “non-adherence to insulin regimen”. Challenge: Handling ambiguous language and varied documentation styles.

Network Security – Concept: Measures to protect data as it travels across computer networks. Related terms: firewalls, intrusion detection – Explanation: Prevents unauthorized access, eavesdropping, and data breaches. Example: Deploying a firewall to restrict external access to the case management server. Challenge: Balancing strict controls with legitimate remote access needs.

Non-Functional Requirements – Concept: System attributes such as performance, reliability, and usability. Related terms: quality attributes, system constraints – Explanation: Define how a case management application should behave under various conditions. Example: The system must load a patient’s care plan within two seconds. Challenge: Prioritizing non-functional needs alongside functional features.

Normalization – Concept: Process of organizing data to reduce redundancy and improve integrity. Related terms: database design, relational model – Explanation: Involves splitting data into related tables linked by keys. Example: Separating patient demographics from encounter records to avoid duplicate entries. Challenge: Ensuring that normalization does not impede query performance.

Open Standards – Concept: Publicly available specifications that enable interoperability. Related terms: FHIR, HL7, DICOM – Explanation: Encourage vendor-neutral data exchange and reduce lock-in. Example: Using the FHIR “Patient” resource to share demographic data across systems. Challenge: Maintaining compliance with evolving standard versions.

Operational Data Store (ODS) – Concept: Database that integrates current transactional data for reporting. Related terms: EDW, real-time analytics – Explanation: Provides up-to-date information for case managers to monitor daily operations. Example: An ODS feeds a dashboard showing current bed occupancy and discharge dates. Challenge: Keeping the ODS synchronized with source systems without performance degradation.

Outcome Measurement – Concept: Systematic assessment of the results of health care interventions. Related terms: clinical metrics, quality indicators – Explanation: Guides improvement initiatives and demonstrates value. Example: Measuring the reduction in emergency department visits after implementing a chronic disease program. Challenge: Selecting metrics that are sensitive, specific, and aligned with organizational goals.

Patient Engagement – Concept: Active involvement of patients in their own health care decisions and actions. Related terms: shared decision-making, health portal – Explanation: Enhances adherence, satisfaction, and outcomes. Example: A patient uses a portal to view care plans and message the case manager. Challenge: Overcoming digital literacy gaps and ensuring equitable access.

Patient-Generated Health Data (PGHD) – Concept: Health information created, recorded, or gathered by patients outside of clinical settings. Related terms: wearables, home monitoring – Explanation: Provides insights into daily habits and symptom trends. Example: A patient logs daily blood glucose readings that are reviewed by the case manager. Challenge: Validating data accuracy and integrating it into the EHR workflow.

Patient Portal – Concept: Secure online website that gives patients access to personal health information. Related terms: patient engagement, EHR – Explanation: Allows viewing lab results, scheduling appointments, and messaging providers. Example: A case manager sends a discharge summary through the portal for patient review. Challenge: Ensuring portal usability and protecting against phishing attacks.

Personal Health Record (PHR) – Concept: Health information maintained by the individual, often stored in a digital format. Related terms: patient portal, health app – Explanation: Empowers patients to manage and share their own health data. Example: A patient uploads vaccination records to their PHR for travel documentation. Challenge: Aligning PHR data with clinical records and addressing data quality concerns.

Pharmacy Management System – Concept: Software that supports medication ordering, dispensing, and inventory control. Related terms: eMAR, medication reconciliation – Explanation: Interfaces with case management to ensure accurate medication information. Example: An eMAR alerts a case manager when a prescribed drug is out of stock. Challenge: Synchronizing medication data across multiple pharmacy sites.

Population Health Management – Concept: Strategic approach to improving health outcomes of a defined group. Related terms: risk stratification, care coordination – Explanation: Uses analytics to identify high-risk patients and allocate resources. Example: Deploying care teams to manage patients with uncontrolled hypertension. Challenge: Integrating social determinants data and measuring long-term impact.

Predictive Analytics – Concept: Statistical techniques that forecast future events based on historical data. Related terms: machine learning, risk scoring – Explanation: Anticipates readmissions, disease exacerbations, or resource needs. Example: A model predicts a 30 % chance of readmission for a patient with multiple

comorbidities. Challenge: Validating predictions in diverse clinical settings and updating models with new data.

Privacy Impact Assessment (PIA) – Concept: Systematic evaluation of privacy risks associated with a project or system. Related terms: risk assessment, compliance – Explanation: Identifies potential breaches and proposes mitigation strategies. Example: Conducting a PIA before launching a new patient portal feature. Challenge: Balancing thoroughness with project timelines.

Process Mapping – Concept: Visual representation of workflow steps and decision points. Related terms: value stream mapping, flowchart – Explanation: Helps identify bottlenecks and opportunities for improvement. Example: Mapping the referral process reveals duplicate data entry points. Challenge: Keeping maps current as processes evolve.

Programmatic Interface – Concept: Set of functions that allow software components to interact programmatically. Related terms: API, SDK – Explanation: Enables developers to embed case management functionalities into other applications. Example: Using a programmatic interface to pull patient demographics into a reporting tool. Challenge: Maintaining compatibility across software versions.

Project Management Office (PMO) – Concept: Organizational unit that defines and maintains standards for project execution. Related terms: governance, portfolio management – Explanation: Oversees health IT initiatives, ensuring alignment with strategic goals. Example: The PMO tracks milestones for a new case management platform rollout. Challenge: Coordinating cross-functional teams while adhering to regulatory timelines.

Public Health Surveillance – Concept: Systematic collection, analysis, and dissemination of health data for disease monitoring. Related terms: Epidemiology, outbreak detection – Explanation: Provides data that can inform case management priorities. Example: Surveillance data shows a rise in flu cases, prompting increased vaccine outreach. Challenge: Integrating real-time clinical data while respecting privacy constraints.

Quality Assurance (QA) – Concept: Systematic activities to ensure that products or services meet defined standards. Related terms: quality control, continuous improvement – Explanation: In health IT, QA validates system functionality and data accuracy. Example: Performing regression testing after a software update to confirm case management features remain operational. Challenge: Balancing thorough testing with rapid release cycles.

Quality Improvement (QI) – Concept: Ongoing effort to enhance health care services and outcomes. Related terms: PDSA cycle, performance metrics – Explanation: Uses data to identify gaps and implement changes. Example: A QI project reduces average discharge planning time from 48 to 24 hours. Challenge: Sustaining improvements beyond initial project phases.

Query Language – Concept: Syntax used to retrieve and manipulate data from databases. Related terms: SQL, NoSQL – Explanation: Enables case managers to generate custom reports. Example: An SQL query extracts all patients with a readmission within 30 days. Challenge: Ensuring query performance and preventing inadvertent data exposure.

Real-World Evidence (RWE) – Concept: Clinical evidence derived from data collected outside of randomized trials.