

Importance of Informatics Skills for Nurses to Support Communication

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Informatics competence is now part of ordinary nursing practice rather than a specialty skill used only by informatics nurses. Nurses document assessments, administer medications, review laboratory results, communicate across shifts, educate patients, participate in quality improvement, and increasingly work with predictive tools and artificial intelligence. Each of these activities depends on the quality of data and the way information moves through clinical systems. The American Association of Colleges of Nursing places informatics and healthcare technologies in Domain 8 of the Essentials and expects nurses to use digital tools to provide care, support communication, generate knowledge, and protect patients from technology-related harm (American Association of Colleges of Nursing [AACN], 2021/2026, 2026).

This perspective changes how I interpret my own informatics skills. Being comfortable with computers does not automatically mean I am competent in clinical informatics. A nurse can navigate an electronic health record quickly and still copy incorrect information, overlook an alert, expose protected data, or fail to recognize that a decision-support recommendation conflicts with the patient's condition. The most important informatics skills therefore combine technical ability with clinical judgment, communication, privacy, information literacy, and an understanding of how technology shapes workflow (McGonigle & Mastrian, 2022).

Clinical Communication

Communication is one of the clearest reasons nursing informatics matters. Nurses work between patients, families, physicians, pharmacists, laboratories, therapists, case managers, and other nurses. Information must remain accurate as care moves across shifts and settings. Electronic health records, secure messaging, medication systems, patient portals, health information exchange, and telehealth can support this process when they place the right information in front of the right authorized person at the right time.

Electronic documentation is particularly important because one note can influence many later decisions. A copied allergy, outdated medication list, inaccurate fall-risk assessment, or vague statement such as "patient doing well" can affect clinicians who never met the original nurse. Good documentation should therefore be timely, factual, patient-specific, and limited to information relevant to care. Structured fields support reporting and decision support, while narrative notes

capture context that fixed categories may miss. Both have value when they are used deliberately.

Clinical decision support can strengthen communication by identifying allergies, interactions, abnormal trends, overdue care, and possible deterioration. Yet it can also create alert fatigue. A nurse who receives many low-value warnings may begin clicking through them automatically. Informatics competence requires understanding that an alert is an aid rather than a command. The nurse should evaluate the underlying patient data and escalate concerns when the digital recommendation does not fit the clinical situation.

Medication-administration technology provides another example. Barcode systems can help confirm patient, drug, dose, route, and time, while smart pumps can support safe dosing limits. These safeguards reduce some forms of error but cannot determine whether a medication makes sense clinically. A successful scan does not replace assessment of allergies, kidney function, blood pressure, laboratory results, or the reason the medicine was ordered.

Patient-facing communication also depends increasingly on informatics. Portals allow people to review results, instructions, appointments, and messages, while telehealth can support follow-up and education. These tools improve access only when patients can actually use them. Language, disability, broadband access, health literacy, age, privacy, and digital confidence can all create barriers. Nurses therefore need to offer support and alternatives rather than assume that electronic communication is automatically accessible.

Data and Safety

Nursing documentation creates data that are later used for much more than one encounter. Information entered at the bedside may contribute to quality dashboards, staffing analysis, reimbursement, infection surveillance, research, public reporting, and population-health planning. The AACN Essentials explicitly connects accurate data entry with clinical decision-making and population-level knowledge (AACN, 2026). This means that a seemingly minor documentation error can propagate well beyond the original patient record.

Privacy is equally important. Nurses should access records only when they have a legitimate clinical or operational reason. Electronic systems make improper access easy to detect because audit logs record who viewed information and when. Password sharing, screenshots, unapproved messaging apps, personal cloud storage, and casual discussion of patient information create unnecessary risk. Mobile devices can be useful clinical tools, but convenience does not justify sending protected information through insecure channels.

Cybersecurity now belongs within nursing safety practice. Healthcare systems face phishing, ransomware, credential theft, malicious links, and service outages. Nurses may not configure firewalls or investigate malware, but they are frequent users of digital systems and can recognize suspicious behavior. Reporting an unusual login prompt, avoiding unknown attachments, protecting credentials,

and following approved workflows are practical patient-safety actions.

Downtime planning is another part of competence. Electronic records, medication systems, and interfaces can fail through maintenance, cyberattack, power loss, or network disruption. Nurses need to know how orders, medication administration, documentation, patient identification, and communication continue during downtime and how paper records are later reconciled. Technology becomes safer when the organization has prepared for its temporary absence.

Artificial intelligence introduces a newer challenge. The existing Academic Master discussion of [artificial intelligence in patient-clinician decision-making](#) is increasingly relevant because AI can summarize records, generate notes, estimate risk, and support patient education. These systems can also produce inaccurate output or reproduce bias. Nurses should use only approved tools, verify generated content, and allow clinical judgment to prevail when automated output conflicts with direct assessment.

Competency Assessment

The TIGER initiative and TANIC framework remain useful because they divide informatics competence into areas such as basic computer skills, clinical information management, and information literacy (Collins, 2016; Hübner et al., 2016). Self-assessment can reveal perceived strengths and weaknesses, but confidence is not the same as competence. A nurse may feel comfortable with an EHR yet document poorly, misunderstand privacy, or struggle to locate reliable evidence. Self-rating should therefore be combined with simulation, observation, feedback, and actual performance.

My own reflection should focus on what I can demonstrate. I need to be able to document accurately, find trustworthy clinical evidence, protect patient information, use communication systems appropriately, understand how exchanged data affect care, and recognize when technology creates a new safety risk. I should also understand the limitations of the tools I use instead of assuming that a system is correct because it is computerized.

Competency	Development Goal	Evidence of Progress
Clinical documentation	Write concise, patient-specific notes and verify copied information	Instructor or preceptor review shows fewer corrections and stronger clinical relevance
Information literacy	Search nursing databases and distinguish strong evidence from weak sources	Use current guidelines and peer-reviewed evidence in clinical assignments

Privacy and security	Apply approved communication, access, and device practices consistently	Complete privacy/cybersecurity training and demonstrate safe behavior in simulation
Decision support	Use alerts and risk tools without replacing clinical judgment	Explain why an alert applies or does not apply in case-based exercises
Data interpretation	Understand dashboards, trends, and quality measures	Participate in a quality-improvement or de-identified data project

The existing discussion of [nursing informatics in clinical practice](#) also shows why competence develops through use rather than one course. EHR documentation, medication scanning, evidence retrieval, patient education, and quality improvement should appear throughout nursing education. Students should encounter realistic errors and workflow problems during simulation so they learn to question systems before those problems occur with real patients.

Professional Growth

Strong informatics skills support both bedside practice and future career development. Nurse educators need to teach digital professionalism and evaluate technology critically. Managers need to interpret operational data and understand workflow. Researchers need data governance and analytical literacy. Quality specialists need to convert clinical data into improvement work. Nursing informatics specialists require deeper expertise in system design, implementation, standards, workflow analysis, and change management.

My development plan should therefore continue after graduation. I should seek feedback on documentation, learn how local systems exchange information, become familiar with downtime procedures, participate in quality-improvement work, and continue strengthening evidence-search skills. Where possible, I should also participate in technology selection or testing because frontline nurses often recognize usability problems that developers and administrators do not see.

The AACN Essentials make nursing involvement in technology design an explicit professional expectation. Nurses understand how care actually occurs under interruptions, workload, emergencies, and competing priorities. Their input can identify excessive clicks, unsafe defaults, confusing labels, inaccessible patient interfaces, and alerts that fail to support the workflow. Informatics competence therefore includes the confidence to report design problems constructively rather than silently adapt to them.

Nursing informatics ultimately supports communication by improving the way clinical information is created, interpreted, exchanged, and protected. The goal is not to make nurses more dependent on

technology. It is to ensure that technology strengthens judgment, continuity, patient participation, and safety. My own development should therefore be measured not by how many digital systems I can operate, but by whether I can use those systems to communicate accurately, recognize risk, protect privacy, and make better clinical decisions.

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