Nursing & Health Sciences | BSN | Assessment 1

Free NURS-FPX4020 Assessment 1: Enhancing Quality and Safety

Complete Distinguished-Level Model Sample

Course code	NURS-FPX4020
Course	Improving Quality of Care and Patient Safety
Deliverable	3-5 page quality-and-safety analysis with APA references
Quality-improvement focus	Closed-Loop Insulin Medication Safety Bundle
Author metadata	Flexpath assignment help

Model scenario notice. The patient, clinical unit, baseline data, event details, and performance results in this sample are fictional. They are used to demonstrate complete academic analysis without representing an actual patient or organization.

How to use this sample. Study the organization, evidence integration, clinical reasoning, and alignment between the root-cause analysis and the improvement plan. Do not submit this file as your own work. Replace the hypothetical details with your own course-approved scenario and original analysis.

Canonical sample page

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Enhancing Quality and Safety: Preventing Insulin Administration Errors

Introduction. Medication administration is one of the most visible nursing responsibilities, but it is also a complex system process. A single dose depends on accurate orders, reliable technology, appropriate staffing, clear communication, uninterrupted attention, and timely monitoring. This paper analyzes a fictional insulin administration event on an adult medical-surgical unit. The incident is not presented to blame one nurse. Instead, it is used to show how workflow weaknesses can line up and reach a patient. The proposed response is a Closed-Loop Insulin Medication Safety Bundle that combines barcode verification, high-alert medication safeguards, interruption control, education, and continuous feedback.

Quality-and-safety incident. Mr. R. is a fictional 68-year-old patient with type 2 diabetes who was admitted with pneumonia. During the evening medication pass, a float nurse prepared rapid-acting insulin for two patients. The bedside scanner repeatedly failed to connect. At the same time, the nurse received a phone call about another patient and responded to a non-urgent alarm. Under time pressure, the nurse used a printed worksheet and selected a manual barcode override. Ten units of rapid-acting insulin intended for another patient were given to Mr. R. His blood glucose later fell to 42 mg/dL. He became diaphoretic and confused, received intravenous dextrose, and required extended monitoring. He recovered without permanent injury, but the event created avoidable harm, delayed care, and distress for the patient and team.

Why this is a priority. Insulin is a high-alert medication because an error can rapidly produce severe hypoglycemia, neurological injury, falls, cardiac instability, or death. The event also shows why medication safety cannot depend only on memory and vigilance. The World Health Organization frames medication-related harm as a major preventable patient-safety burden and recommends system-level action across prescribing, dispensing, administration, and monitoring (World Health Organization, 2024). A robust response therefore has to strengthen the process around the nurse, not simply remind staff to be more careful.

Scope and assumptions. The paper assumes the unit uses electronic medication administration records and barcode medication administration (BCMA), but scanner reliability, override governance, and high-alert medication training are inconsistent. Baseline performance numbers used later are illustrative. In a real organization, the improvement team would validate event reports, audit data, staffing patterns, equipment logs, and patient outcomes before setting final targets.

Factors Leading to the Medication Administration Risk

Technology and workflow factors. The scanner malfunction was the most immediate system barrier. When technology fails repeatedly, staff can begin to view bypasses as normal work rather than exceptional work. Mulac et al. (2021) found that BCMA policy deviations occur within real clinical workflows and can weaken the protection the technology was designed to provide. In this event, the manual override removed the electronic patient-medication match at the exact moment when two insulin doses were being handled. The printed worksheet also lacked real-time alerts and increased the chance of selecting information for the wrong patient.

Human-factors and environmental factors. The nurse experienced multiple interruptions while performing a high-risk task. Interruptions force attention to shift, increase memory load, and make it easier to resume a task at the wrong step. Nurses interviewed by Alteren et al. (2021) described medication administration as a demanding environment in which they continually balance interruptions, patient needs, and competing duties. The event also occurred during a busy evening pass, when alarms, telephone calls, admissions, and staffing changes were concentrated. These conditions did not remove professional accountability, but they made an error more likely and harder to detect.

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Organizational and communication factors. The unit had no rapid escalation route for broken scanners, no clear rule defining acceptable overrides, and no targeted independent double check for rapid-acting insulin. Float staff received general orientation but no unit-specific validation of the insulin workflow. The charge nurse was not notified when the scanner failed, and the pharmacist was not routinely involved in reviewing override patterns. These gaps reveal fragmented ownership: nursing carried the final administration responsibility, while technology, pharmacy, education, and quality teams each managed only one part of the process.

Safety culture factors. Staff informally believed that reporting near misses created extra paperwork without visible improvement. A weak feedback loop can suppress useful information and allow unsafe workarounds to continue. Schroers et al. (2021) identified workload, distractions, communication problems, and system conditions among nurses' perceived causes of medication administration errors. A just culture should therefore distinguish human error from reckless behavior, encourage reporting, and use reports to redesign the system.

Evidence-Based and Best-Practice Solutions

1. Restore a closed-loop barcode process. The unit should require scanning of both the patient wristband and medication at the bedside, with a clearly defined downtime procedure. Every scanner should have an assigned location, daily functionality check, spare battery, and rapid replacement path. Manual overrides should require a reason code and should be reviewed weekly. Grailey et al. (2023) showed that BCMA adoption is shaped by behavioral and organizational barriers, meaning that reliable equipment, useful training, and a workflow that staff can realistically follow are essential. The solution is not a punitive ban on overrides; it is a safe exception process that makes the correct action easier than the workaround.

2. Add targeted high-alert safeguards. Rapid-acting and concentrated insulin should receive an independent double check when the dose, patient identity, current glucose, insulin type, timing, or meal status creates elevated risk. The second nurse should independently verify the order and patient rather than merely co-signing. Standardized insulin storage, clear labeling, separation of look-alike products, and removal of unnecessary floor stock should support the check. The Institute for Safe Medication Practices (2024) recommends layered defenses for high-alert medications because no single safeguard can prevent every error.

3. Reduce non-urgent interruptions. A protected medication zone, visible cue, or agreed team signal can redirect non-urgent requests during preparation and administration. The intervention should not block urgent patient care. It should instead create a triage rule: emergencies interrupt immediately; routine calls and questions wait or go to a designated coverage nurse. Staff must rehearse how to pause, restart, and re-verify after any interruption.

4. Provide pharmacist-led, simulation-based education. Education should include insulin pharmacology, hypoglycemia recognition, safe use of BCMA, override criteria, independent double checks, and recovery after an interrupted task. A short simulation allows nurses to practice with a broken scanner, competing demands, and a patient who asks questions. Jaam et al. (2021) found that pharmacist-led education was associated with fewer medication errors across included studies. Education is strongest when it is linked to competency validation and follow-up coaching rather than a one-time lecture.

5. Use transparent measurement and feedback. A dashboard should track BCMA scan compliance, override reasons, high-alert double-check completion, interruptions, insulin-related near misses, and actual harm. Data should be shared at huddles without naming individual staff. The team should examine patterns by shift, device, location, and workflow step. Monthly Plan-Do-Study-Act cycles can test one change at a time and prevent the project from becoming an unfocused policy rewrite.

Cost Reduction and Value

The proposed bundle requires scanner maintenance, staff education time, pharmacy and quality support, and dashboard development. Those are real costs, but they are smaller and more predictable than the costs of preventable hypoglycemia, rescue treatment, additional laboratory testing, extended length of stay, incident investigation, patient complaints, and staff turnover. A successful plan also protects capacity: nurses spend less time troubleshooting, managers spend less time investigating recurring events, and patients avoid care that should never have been needed. Cost reduction is therefore achieved through harm prevention and workflow reliability, not through cutting staffing or eliminating safety checks.

How Nurses Coordinate Care to Improve Safety

Bedside nurses are central because they see where the designed workflow and real workflow differ. They should scan at the bedside, confirm patient identity using two identifiers, assess glucose and meal status, explain the medication, monitor the response, report near misses, and stop the process when equipment or information is unsafe. The charge nurse coordinates coverage during protected medication periods and responds when a scanner fails. The nurse educator validates competency and provides coaching. The pharmacist reviews insulin orders, storage, dosing patterns, and override reports. Information technology maintains equipment and builds meaningful alerts. Providers clarify ambiguous orders and align insulin with nutrition. Quality and risk staff analyze trends, support PDSA testing, and communicate learning.

Coordination also includes the patient. Mr. R. should be encouraged to state his name and date of birth, ask what insulin he is receiving, and report symptoms of hypoglycemia. This does not transfer responsibility to the patient. It creates another opportunity to detect mismatch and supports informed participation. The nurse should use plain language and teach-back, especially when explaining changes made after an event.

Key Stakeholders and Contributions

Stakeholder	Primary contribution	Reason for involvement
Bedside and charge nurses	Workflow design, bedside scanning, double checks, monitoring, near-miss reporting	They perform the process and identify practical barriers.
Patients and family partners	Identity confirmation, questions, symptom reporting, feedback	They experience the process and can reveal communication gaps.
Pharmacy	Insulin standardization, education, order review, storage and override analysis	Medication-use expertise is required for high-alert safeguards.
Information technology / biomedical support	Scanner reliability, connectivity, alert design, response time	BCMA cannot work when devices and interfaces are unreliable.
Nurse education and unit leadership	Competency, staffing support, coaching, accountability	Sustained practice change requires reinforcement and resources.
Quality, risk, and finance	Measurement, event review, PDSA support, cost and outcome analysis	They connect patient outcomes, system learning, and organizational value.

Proposed Quality-Improvement Initiative

Aim. Within 90 days, the adult medical-surgical unit will reduce insulin-related administration errors and near misses by 50%, achieve at least 95% patient-and-medication barcode scanning, document targeted independent checks in at least 90% of eligible insulin administrations, and reduce non-urgent medication-pass interruptions by 30%. These targets should be adjusted after validating the actual baseline.

Implementation. During weeks 1-2, the team will verify baseline data, inspect devices, map the current workflow, and interview staff. During weeks 3-4, one pod will test the downtime algorithm, protected medication signal, and double-check checklist. During weeks 5-8, the intervention will expand after staff feedback and competency validation. During weeks 9-12, the team will standardize successful steps, address weak performance areas, and present results to nursing practice and medication-safety committees.

Evaluation. Process measures include scan compliance, overrides by reason, device response time, double-check completion, and staff competency. Outcome measures include insulin errors, near misses, rescue dextrose use, severe hypoglycemia, and length-of-stay impact. Balancing measures include medication-pass duration, delayed urgent care, alert burden, and staff perception of workload. A plan that improves one metric while creating hidden delay or documentation burden should be revised.

Conclusion

The insulin event resulted from a chain of technology failure, interruption, workload pressure, weak exception handling, and fragmented accountability. Telling nurses to be more careful would not correct those conditions. A closed-loop bundle creates multiple opportunities to stop an error before it reaches the patient. Nurses lead the work by translating evidence into a safe bedside process, coordinating the interdisciplinary team, involving patients, and using data to improve the system. When the plan is supported by reliable equipment, high-alert safeguards, just-culture reporting, and continuous feedback, it can improve safety while also reducing avoidable cost.

References

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APA note. URLs and DOIs are included as live links for research verification. Confirm your institution's current APA 7 requirements before submission.

Distinguished-Criteria Alignment

Expected performance area	Where this sample demonstrates it
Specific quality-and-safety issue and contributing factors	Fictional insulin incident analyzed through technology, human factors, environment, communication, and culture.
Evidence-based solutions and cost reduction	Five integrated interventions are linked to current evidence and to preventable-harm costs.
Nursing coordination	Specific bedside, charge-nurse, educator, pharmacist, IT, provider, quality, and patient roles are explained.
Stakeholders	Stakeholder table links each group to a concrete contribution and rationale.
Professional communication and APA	Logical headings, current scholarly evidence, complete reference list, and direct links support verification.