

**Advancing Clinical Judgment Through Virtual Simulation: An E-Learning Vision,
Plan, and Funding Proposal for a Pre-Licensure Nursing Program**

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Advancing Clinical Judgment Through Virtual Simulation: An E-Learning Vision, Plan, and Funding Proposal for a Pre-Licensure Nursing Program

This proposal is written for the Department of Nursing and Health Sciences at a mid-size public university in the northeastern United States, which admits approximately 120 pre-licensure baccalaureate students each year across a traditional four-semester sequence and an accelerated second-degree track. The department's defining constraint is not student demand or faculty expertise but clinical capacity: competition with three neighboring programs for a shrinking pool of acute-care placement sites means that students are increasingly assigned to observation-heavy rotations, and no two students in a cohort encounter the same set of patient conditions before they sit for licensure. That variability shows up downstream as uneven clinical judgment, faculty anxiety about practice readiness, and a first-attempt NCLEX-RN pass rate that has drifted below the program's own benchmark.

This paper proposes a blended, simulation-integrated e-learning model in which every pre-licensure student completes a standardized sequence of virtual patient simulations with structured pre-briefing and debriefing, monitored through a shared analytics dashboard, so that clinical judgment is developed deliberately rather than left to the accident of placement assignment.

Vision

The Future of E-Learning in Education

For two decades, e-learning in professional education was largely a distribution problem: how to move lectures, readings, and assessments to learners who could not be in the room. The next decade will be defined by a different question, namely how to move practice itself. The most consequential shift underway is the migration of e-learning from content delivery toward

structured, repeatable rehearsal of professional judgment, instrumented so that both learner and instructor can see performance develop over time. Three forces are driving this. First, the evidence base has matured: a meta-analysis of 12 randomized controlled trials found significant gains in applied knowledge and clinical performance for learners using virtual simulation, with the strongest effects when scenarios exceeded 30 minutes and included post-scenario feedback (Sim et al., 2022). Second, the pandemic forced a generation of faculty through an involuntary apprenticeship in online facilitation. Third, learning analytics have made the invisible visible; where an instructor once inferred competence from a handful of observed encounters, a well-designed platform now yields a continuous record of decisions, errors, and recoveries.

The future I anticipate, therefore, is not one in which online modules replace human teaching. It is one in which e-learning guarantees a floor of standardized, evidence-based practice for every learner, while faculty time is redirected toward debriefing, coaching, and remediation. Debriefing, not the simulation itself, is where learning consolidates, and technology that frees faculty attention for that conversation is technology worth funding (Cho & Kim, 2024).

A Specific Vision for the Department

By the end of the 2027–2028 academic year, every pre-licensure student in this department will complete a required, curriculum-mapped sequence of virtual patient simulations covering the high-acuity conditions that clinical placements can no longer reliably supply, including obstetric hemorrhage, pediatric respiratory distress, sepsis recognition, and acute behavioral health crisis. Each simulation will be framed by a 15-minute asynchronous pre-brief and followed by a faculty-facilitated debrief conducted in person or synchronously online. Course coordinators will review a shared dashboard weekly to identify students whose decision patterns signal risk, triggering targeted coaching before a clinical failure occurs rather than after.

Simulation hours will substitute for a defined portion of traditional clinical hours within the limits set by the state board of nursing, which is a substitution the landmark national study by Hayden et al. (2014) established as safe when facilitators are trained and debriefing is rigorous. The result will be a program in which practice readiness is designed rather than hoped for.

Objectives

- Implement a curriculum-mapped virtual simulation sequence across all four pre-licensure semesters, reaching 100% of enrolled students by Fall 2028.
- Increase mean Lasater Clinical Judgment Rubric scores at the final clinical evaluation from a baseline of 2.6 to 3.2 on a 4-point scale within four semesters.
- Raise the first-attempt NCLEX-RN pass rate from 86% to at least 93% within three graduating cohorts.

Personal Reflection

This vision matters to me because I have sat on the other side of it. Early in my teaching, I signed off on a student who had met every documented requirement and who had simply never been assigned a deteriorating patient; she was competent on paper and unprepared in fact, and that gap was a failure of curriculum design rather than of her effort. I want to lead a program where no student's readiness depends on which unit had an open slot on a Tuesday, and where the evidence of their growth is visible early enough for me to do something about it.

E-Learning Plan

Realizing this vision is primarily a leadership problem rather than a procurement problem. The platforms already exist and the evidence already supports them; what does not yet exist in this department is the shared conviction, the workload structure, and the governance alignment that would let the technology take hold. The plan below addresses change

management, the leadership values required to carry it, and the organizational conditions that will shape implementation.

Change Management

Barrier 1: Faculty Skepticism and Workload Compression

Several senior clinical faculty regard screen-based simulation as a dilution of bedside learning, and their skepticism is not unreasonable: a poorly facilitated simulation is genuinely worse than a good clinical day. Compounding this, debriefing well is labor-intensive, and faculty who are already carrying overloads correctly perceive any new modality as additional uncompensated work.

1. Run a hands-on demonstration during the fall faculty development day in which faculty complete a scenario as learners and then experience a structured debrief, followed by a short anonymous survey capturing their specific objections.
2. Recruit two respected clinical faculty as paid pilot facilitators with a one-course release, certify them in debriefing, and have them present their own cohort data at the January department meeting.
3. Sustain momentum with a monthly one-hour facilitator community of practice and a standing agenda item at department meetings where dashboard trends are reviewed openly.

These steps address the two real drivers of resistance in sequence. Experiencing a rigorous debrief firsthand answers the quality objection more convincingly than any vendor presentation, and course release converts the workload objection into a negotiated term. Peer champions carry credibility that administrative mandates cannot purchase.

Barrier 2: Regulatory and Accreditation Constraints

Substituting simulation for clinical hours is governed by the state board of nursing, and any change to the ratio requires documented evidence, board notification, and alignment with accreditation standards. Faculty and administrators have both been burned by initiatives that outran their approvals.

1. Commission a written regulatory scan in the first quarter that maps current state board simulation-substitution limits, required facilitator qualifications, and reporting obligations against the proposed sequence.
2. Convene the curriculum committee and the accreditation liaison early to co-author the substitution proposal, so that the people who must defend it are the people who wrote it.
3. Maintain a continuous evidence file of facilitator credentials, scenario mapping to program outcomes, and student performance data, reviewed each semester against reporting requirements.

Front-loading the regulatory work converts the board of nursing from a late-stage obstacle into an early-stage design constraint, and a continuously maintained evidence file means the next accreditation visit requires assembly rather than reconstruction.

Barrier 3: Uneven Student Technology Access and Readiness

A meaningful share of students in this department are first-generation, work substantial hours, and rely on shared devices or campus bandwidth. A simulation sequence that assumes a modern personal laptop and reliable home internet would widen precisely the equity gap the vision claims to close.

1. Survey the incoming cohort on device ownership, bandwidth reliability, and preferred study location before the first simulation is assigned.

2. Negotiate an equipment loan pool with the library and extended simulation lab open hours, and require the vendor to demonstrate performance on low-bandwidth connections and on institutional accessibility standards before contract signing.
3. Embed a short orientation scenario in the first course, staff drop-in technical support during the first three weeks of each term, and track completion-time outliers on the dashboard as an early signal of access problems.

Measuring access before assuming it prevents the most common equity failure in e-learning rollouts, and treating unusual completion times as a support trigger rather than a compliance flag keeps struggling students visible.

Leadership Values and Behaviors

Two values will have to be developed and visibly practiced for this plan to survive contact with the department. The first is evidentiary humility, by which I mean a public commitment to letting the data revise the plan rather than decorate it. The behavior that operationalizes this value is uncomfortable: reporting the pilot results that disappoint alongside those that impress. In a previous learning management system migration I led, midterm survey data showed that the redesigned course shell had made assignment deadlines harder to find, which was the opposite of the intended effect. Presenting that finding to the full faculty, before I had a fix, cost me two weeks of defensiveness and bought several years of credibility; faculty who had opposed the migration became its most careful critics in the productive sense, and adoption in the following term rose sharply because people believed the reported numbers.

The second value is distributed ownership. Innovations that live in the leader's portfolio die when the leader's attention moves, so authority must be genuinely transferred rather than delegated in name. The behaviors that follow are concrete: pilot facilitators, not the project lead,

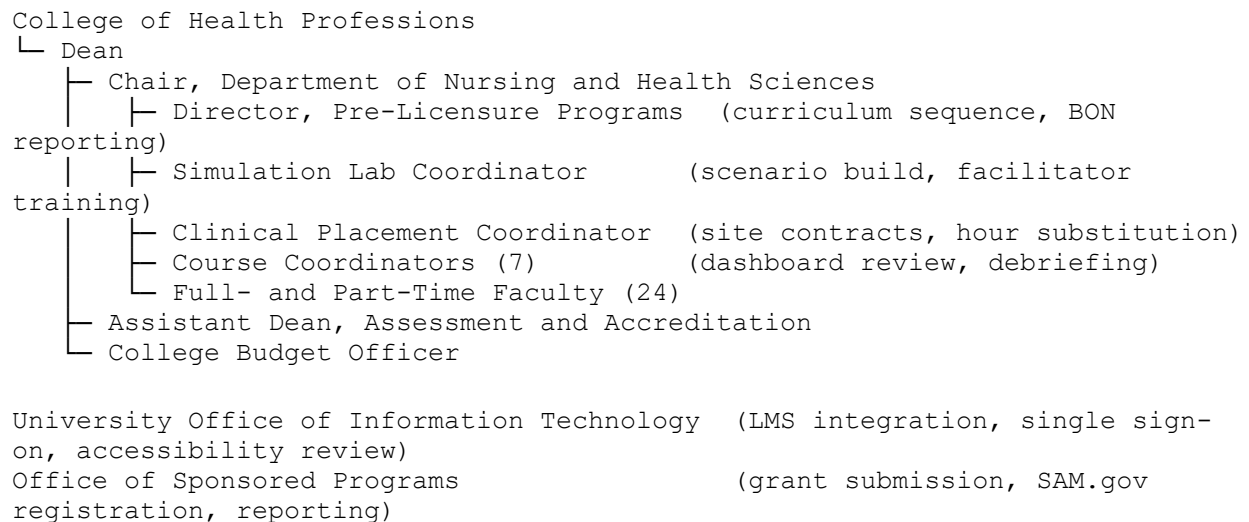
present outcomes to the department; the curriculum committee holds real veto power over scenario selection; and student representatives sit on the review group that evaluates the platform at the end of each term. Sharing credit and sharing decision rights are the same act performed at different moments.

Organizational Issues

The plan must fit a governance structure in which curricular authority, technical capacity, and budget authority sit in three different places. Figure 1 presents a de-identified excerpt of the relevant reporting lines.

Figure 1

De-Identified Organizational Excerpt: Reporting Lines Relevant to Implementation



Note. Titles have been generalized and headcounts rounded to preserve institutional anonymity.

Three organizational realities follow from this structure. First, the project has no single owner: the Director of Pre-Licensure Programs controls the curriculum sequence, the Simulation Lab Coordinator controls scenario quality, and neither controls the budget, which means the implementation plan must be written as a set of negotiated commitments rather than as a directive. Second, the Assistant Dean for Assessment and Accreditation is the natural sponsor,

because the evidence file the plan generates is precisely what that office needs for the next accreditation cycle; aligning the project with an existing institutional obligation is far more durable than positioning it as an innovation. Third, technical decisions are made outside the department: single sign-on, FERPA data privacy review, and accessibility conformance all run through the university IT office, whose review cycles are measured in months. Building those lead times into the schedule from the outset is the difference between a launch and a delay.

Funding Proposal

Economic Justification

The economic case rests on capacity. Nationally, the constraint on nursing education is not applicant interest but instructional and clinical capacity, and the gap is widening: the American Association of Colleges of Nursing [AACN] (2026) reported that 93,176 qualified applications were turned away from baccalaureate and graduate nursing programs in the 2025–2026 cycle, an increase of roughly 30,000 in two years, with insufficient clinical placement sites and faculty cited as the primary barriers. Simulation capacity is one of the few levers that expands throughput without requiring a new hospital partner.

- **Cost reduction.** Substituting 90 clinical hours per student for simulation across the program reduces adjunct clinical supervision at a 1:8 ratio, saving an estimated \$67,000 per year at current adjunct rates across a 120-student cohort.
- **New revenue.** Freed clinical capacity supports an eight-seat cohort expansion. At an in-state tuition contribution of approximately \$14,000 per student per year, that is roughly \$112,000 in annual recurring revenue once the expansion is fully enrolled.

- **Process improvement.** A shared dashboard replaces the manual collection and reconciliation of paper clinical evaluations, which course coordinators currently estimate at 120 hours per semester across the department.
- **Effectiveness.** Sim et al. (2022) found significant improvement in applied knowledge and clinical performance for virtual simulation groups across 12 randomized controlled trials, and Hayden et al. (2014) established that substituting up to half of clinical hours with high-quality simulation produced no measurable deficit in clinical competency or NCLEX outcomes.
- **Equity.** Standardized scenarios guarantee that every student encounters obstetric hemorrhage and behavioral health crisis regardless of placement assignment, removing a source of variance that currently falls hardest on students placed at lower-acuity sites.
- **Social value.** Graduates enter a regional workforce serving medically underserved communities better prepared for the conditions those communities actually present, which is the explicit public purpose the funding source below is designed to serve.

Table 1*Three-Year Budget Request and Projected Recurring Return*

Category	Year 1	Year 2	Year 3	Total
Virtual simulation platform licenses	\$186,000	\$186,000	\$186,000	\$558,000
Faculty release and facilitator training	\$96,000	\$78,000	\$78,000	\$252,000
Simulation lab equipment and upgrades	\$140,000	\$40,000	\$25,000	\$205,000
Analytics integration and IT support	\$62,000	\$34,000	\$34,000	\$130,000

Student device loan pool and support	\$48,000	\$22,000	\$22,000	\$92,000
Evaluation, data collection, reporting	\$46,000	\$46,000	\$46,000	\$138,000
Total request	\$578,000	\$406,000	\$391,000	\$1,375,000
Projected recurring annual return	—	\$179,000	\$179,000	—

Note. Figures are institutional planning estimates. Projected recurring return combines adjunct supervision savings and tuition from cohort expansion and is realized from Year 2 forward.

Funding Source and Acquisition Strategy

The identified source is the federal Nurse Education, Practice, Quality and Retention — Simulation Education Training (NEPQR-SET) program administered by the Health Resources and Services Administration (HRSA) through its Bureau of Health Workforce. The most recent competition, HRSA-23-129, made \$10.5 million available, and published grantee awards have totaled approximately \$1.5 million each over the period of performance (HRSA, 2023).

Eligibility extends to accredited schools of nursing, which this department satisfies.

The fit is unusually close. HRSA describes the program's purpose as strengthening the nursing workforce by expanding simulation-based training to increase student "readiness to practice upon graduation," with a stated goal of increasing the number and capacity of nursing students serving rural and medically underserved populations (HRSA, 2023). The proposal above is that sentence rendered as a budget: the license and equipment lines expand simulation capacity, the faculty release line builds facilitator capability, and the cohort expansion increases the number of graduates entering a regional workforce that serves designated underserved counties.

Four steps are required to secure the funds. First, confirm institutional registrations in SAM.gov and Grants.gov through the Office of Sponsored Programs, since lapsed registration is the most common avoidable disqualification. Second, secure letters of commitment from at least

two clinical partners serving underserved populations, as academic-practice partnership is a scored element. Third, assemble the internal package — accreditation documentation, facilitator credentials, and the evaluation plan — by the sponsored programs deadline. Fourth, monitor the HRSA funding page for the next notice of funding opportunity, since the figures cited here come from the FY2023 competition and must be verified against the current announcement.

Persuading internal stakeholders requires a different argument than persuading HRSA. For the Dean and the College Budget Officer, the decisive fact is that the recurring return continues after the grant period while the largest cost lines do not, so the institution inherits capacity rather than an obligation. For the Assistant Dean for Assessment and Accreditation, the grant funds evidence infrastructure the next accreditation cycle will require regardless.

Conclusion and Evaluation

The problem this department faces is not that its students learn too little online. It is that what they learn at the bedside has become unpredictable, and unpredictable preparation produces uneven practitioners. A curriculum-mapped virtual simulation sequence, facilitated by trained faculty and monitored through shared analytics, converts that variance into something designed and observable. The leadership work is largely a matter of sequencing: demonstrate quality before asking for adoption, resolve regulatory questions before they become obstacles, and transfer ownership before attention moves elsewhere.

Table 2

Success Indicators, Baselines, Targets, and Data Collection Methods

Indicator	Baseline	Target	Data Collection Method
Mean Lasater Clinical Judgment Rubric score at final clinical evaluation	2.6 of 4.0	3.2 of 4.0	Faculty scoring in the clinical evaluation system each semester; means compared across cohorts

First-attempt NCLEX-RN pass rate	86%	$\geq 93\%$	State board of nursing quarterly program reports
Scenario completion within assigned window	— (new)	$\geq 90\%$	Platform analytics exported to the LMS gradebook weekly
Faculty facilitator retention across terms	0% (new)	$\geq 80\%$	Facilitator roster review plus end-of-term faculty survey

Note. Baselines marked as new reflect measures introduced with the initiative.

Data collection will follow three streams. Platform analytics will be exported weekly and reviewed by course coordinators, giving an in-semester signal rather than a post-mortem.

Clinical judgment scores and NCLEX results will be analyzed annually against the pre-implementation baseline, comparing the first pilot cohort to the two preceding it. Finally, a short end-of-term instrument will ask students and facilitators to rate, on a five-point scale, how well the sequence prepared students for the clinical situations they actually encountered, with an open response item to surface problems the dashboard cannot see. Together these streams answer the only question that ultimately matters: whether graduates walk onto a unit ready for the patient in front of them.

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