

vSim for Nursing **Curriculum Integration Guide for Faculty**

Developed by the National League for Nursing



Addendum: Medical-Surgical



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■ Introduction

This addendum provides strategies for use of the vSim Medical-Surgical product in nursing programs. It provides faculty with ideas to integrate vSim Medical-Surgical into existing curricula and offers ways to develop and/or enhance current teaching strategies. The addendum is based on data collected from faculty who participated in pilot testing of vSim Medical-Surgical scenarios during Spring 2014 and submitted feedback to the National League for Nursing. Faculty included those providing instruction in classroom, clinical, lab, and simulation settings. Before integrating vSim Medical-Surgical into the curriculum, it is important for faculty to review the primary vSim Curriculum Implementation Guide for specific information on practical preparation for use of vSim and vSim pedagogical considerations.

■ vSim Pedagogical Considerations

Formative Assessment

vSim provides an opportunity for faculty to engage students contextually through the use of story. The problems encountered in these patient stories direct the student toward the achievement of goals as those goals relate to an evolving patient context. Used as a means of formative assessment, the stories focus the participant's progress toward goal attainment and provide constructive feedback for improving performance (Bourke & Ihrke, 2012; NLN-SIRC, 2013, INACSL, 2014).

Faculty in the Medical-Surgical pilot utilized vSim as a formative assessment in the following ways:

- As a means for faculty to understand student learning of content and clinical reasoning/judgment following class, lab, or clinical environments. Faculty in the pilot incorporated vSim in a variety of ways, such as the nursing skills lab, simulation lab, post-clinical follow-up, and/or post-classroom discussion.
- As a benchmark for students to work toward. Among the pilot schools that instructed students to meet a target percentage score on the vSim Medical-Surgical scenarios, most specified a target percentage of 75% or 80%. Slightly more than half of students were likely to repeat the scenarios until achieving slightly higher scores (most frequently 85% or higher).
- As a dose-response measure (i.e., repeating vSim attempts to enhance a student's level of content knowledge or reasoning and decision making). Students get concrete feedback on their thinking in action through the feedback log, which provides specific rationales for the order of decision making as well as inclusion and/or omission of activities in error. Medical-Surgical faculty users reported this feature as extremely valuable for novice learners, as important nursing concepts are introduced. Students begin using the content knowledge immediately, *within* context.
- As a way for faculty to understand the student's performance level and ability to operationalize content. Faculty involved with the vSim pilot found that the scenario score and Feedback Log content were useful for assessing how well students operationalized their content knowledge. This information allowed faculty to guide and correct their students' thinking, as needed. Faculty can view students' best scores as well as scores for every submission of each Post-Simulation Quiz and vSim scenario.
- As a way to direct student remediation. The feedback on quizzes and the virtual simulation provides students with textbook references to direct and focus their remediation activities. (For those who have the corresponding Wolters Kluwer CoursePoint+ product, these references are linked to the corresponding material in the ebook.)

Figure 1 summarizes the evaluation of the vSim scoring features by Medical-Surgical faculty who participated in the pilot study.

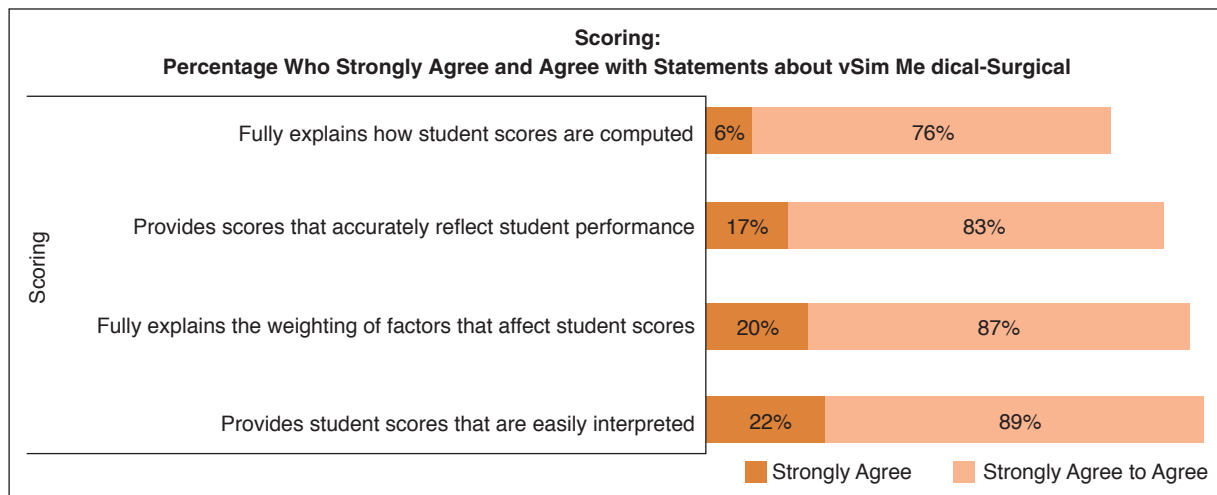


FIGURE 1

vSim Teaching Strategies

Faculty involved in the Medical-Surgical pilot viewed vSim as offering more value and utility than other teaching methods (e.g., case studies on paper, care plans). Students readily embraced the vSim activity, providing an opportunity for faculty to focus their teaching efforts in other ways (e.g., engaging students to use the content vs. lecturing to provide the content). A variety of strategies may be used to integrate vSim into curricula.

Utility as a Teaching Tool

vSim enables students to build and test their knowledge before virtual simulation through reading assignments and pre-simulation quizzes. Engaging in the virtual simulation scenario, students integrate new knowledge as they care for the patient. The Medical-Surgical vSim scenarios move the students further along the learning trajectory from a fundamentals course. The Medical-Surgical scenarios increase in complexity, challenging the student to begin to put concepts together and think through care situations and their decision making. Concepts like perfusion (Carl Shapiro) and fluid and electrolytes (Stan Checketts) are integrated into prioritization and decision making for next steps. Prioritization and decision making are central to the vSim design.

vSim may be incorporated as an adjunct to existing curricular activities to enhance course learning outcomes. Pilot faculty indicated that they added vSim to their course activities (e.g., optional classroom prep activity, post-classroom homework activity) to better meet diverse learning needs. (See "Classroom Approaches" below.)

The quality of vSim content is an important consideration in achieving student learning outcomes. Pilot faculty identified that vSim content quality accurately depicted actual clinical scenarios with a good range of content (Figure 2).

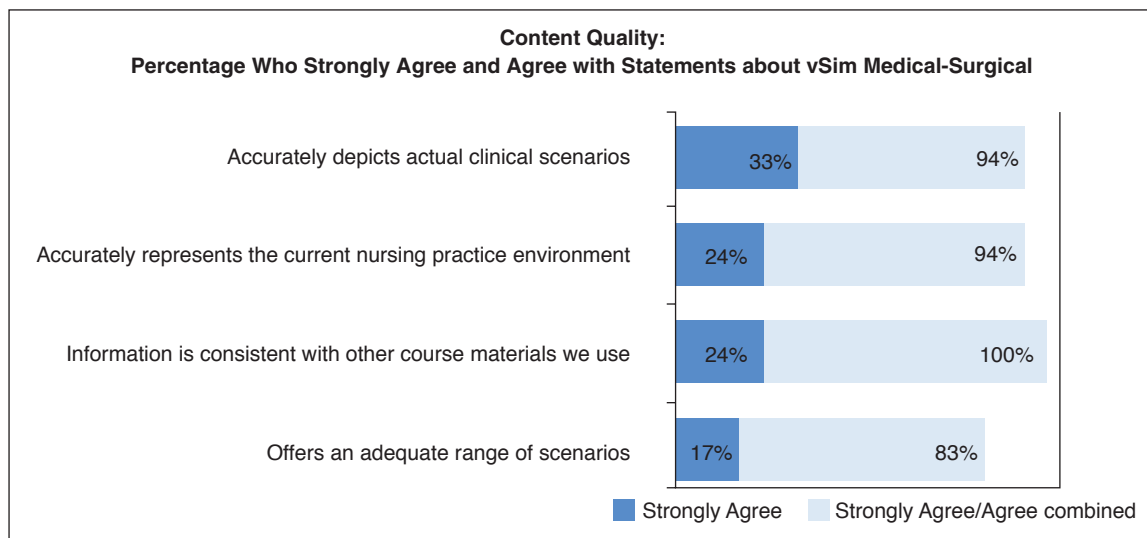


FIGURE 2

Learning Objectives

vSim may also be incorporated as a strategy to enhance prioritization and reasoning skills. When faculty involved in the vSim Medical-Surgical pilot were asked to indicate all of the learning objectives attempted with vSim, participants most frequently indicated “deepening understanding of nursing concepts” and “improving clinical reasoning and ability to prioritize” (Figure 3). Examples of deepening students’ understanding include the Vincent Brody scenario, with its emphasis on differentiating restrictive vs. obstructive respiratory efforts and the complications of each; and the Vernon Watkins scenario, which requires clinical reasoning and prioritization to manage circulatory issues involved with postoperative complications.

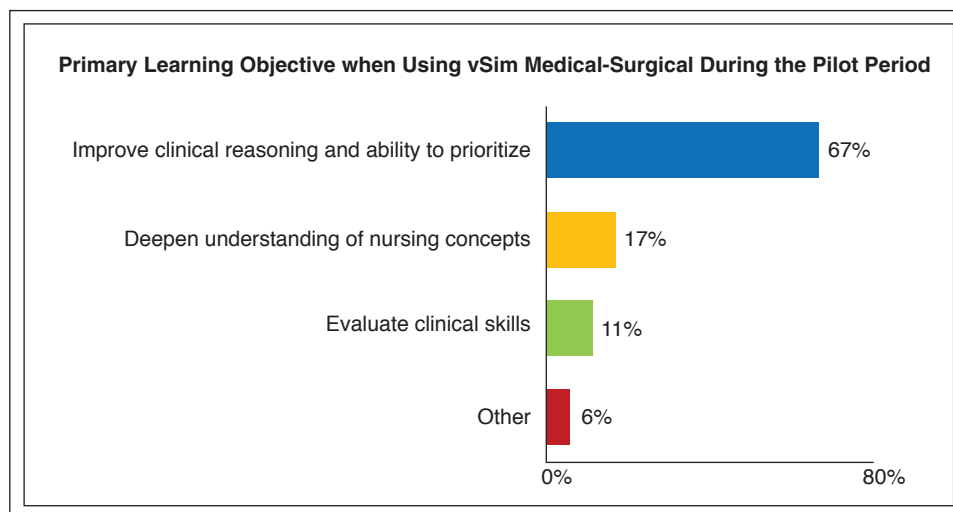


FIGURE 3

Finally, consider how time in the curriculum can best be allocated to meet objectives and how vSim may substitute for other curriculum activities. During the pilot period, more faculty reported that they had used vSim as a

substitute for either classroom teaching or actual clinical experiences (41% and 38%, respectively) than those who reported using it as a substitute for standardized patients (25%), training manikins (19%), or simulation labs (12%). However, even though the same percentage of faculty (41%) expected to substitute vSim for actual clinical experiences in the future, much larger percentages predicted that they would frequently substitute vSim for simulation labs (35%) and training manikins (27%) in the future (Figure 4).

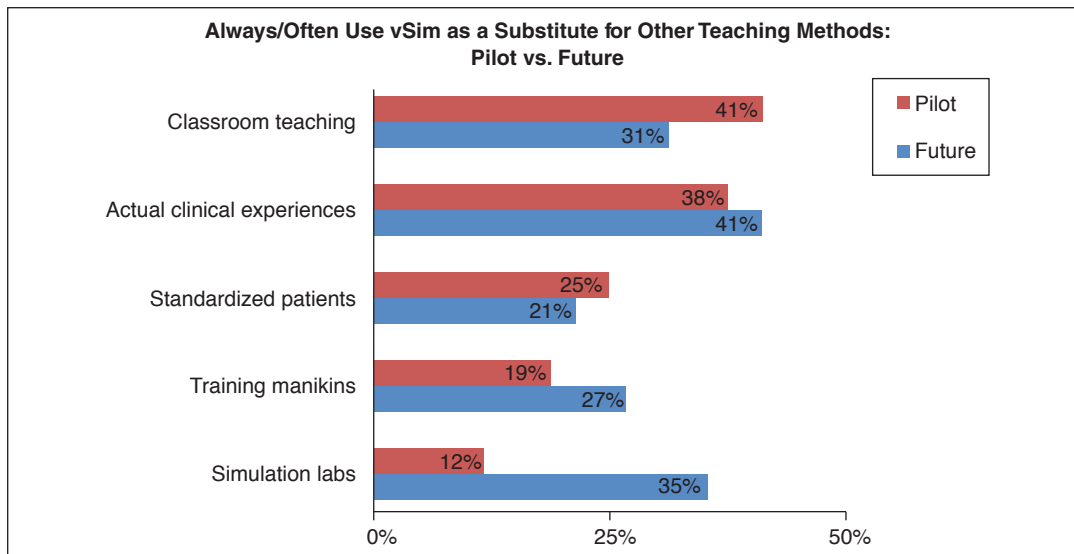


FIGURE 4

Curriculum Approaches

The use of simulation in the classroom continues to grow in use as an effective interactive teaching strategy, engaging students in learning through the use of doing (Skiba, Connors, & Jeffries, 2008). Using vSim as a classroom approach to demonstrate thinking in action provides an opportunity for immediate feedback. This helps to strengthen student thinking and enhances course learning outcomes. vSim Medical-Surgical builds on context for learners who have completed fundamentals and now need to focus on using their content knowledge in conjunction with their reasoning skills. vSim provides a platform to further their clinical reasoning as they use more complex content pieces within context. vSim scenarios can be assigned for students to complete either as preparatory or follow-up coursework.

Completion of vSim components can serve as an electronic ticket to class, lab, clinical, or simulation lab. Students in the pilot reported the scenarios helped give them a starting point from which to focus their learning in preparation for discussion. The prep work generated good questions for further discussion. Students reported that a vSim assignment did not feel like "busy work," as they were actively involved in decision making with immediate feedback.

As with preparation, vSim can be used as an adjunct follow-up activity after a class, lab, clinical, or simulation lab. Students in the pilot study reported being able to take their time, do the activity on their own, and then go back and repeat the activity after class. Figure 5 illustrates the primary uses of the vSim Medical-Surgical scenarios.

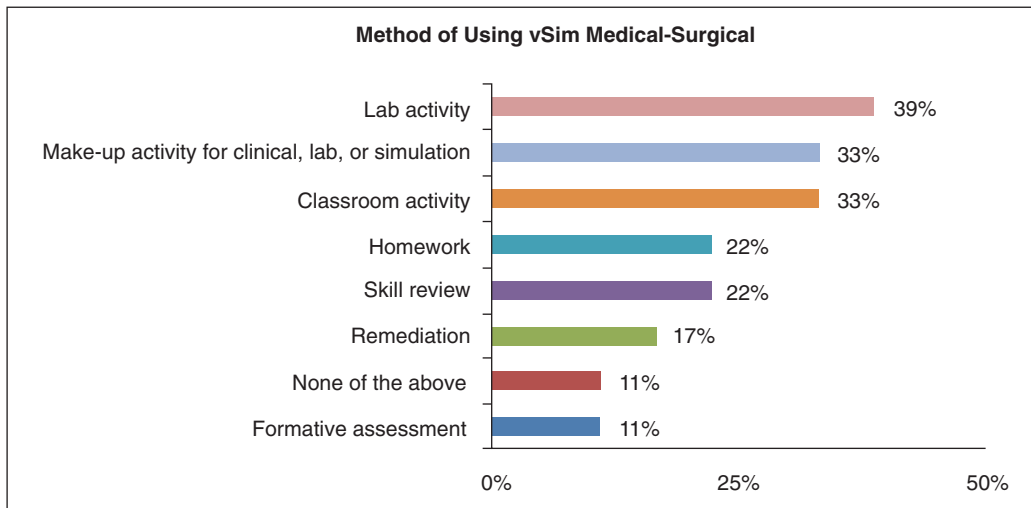


FIGURE 5

Aside from the actual clinical scenario, the Pre-Simulation and Post-Simulation Quizzes were the vSim elements rated highest by pilot faculty, with a 67% rating of “Excellent.” Guided Reflection Questions and Documentation Assignments followed with 56% and 39% ratings of “Excellent,” respectively (Figure 6).

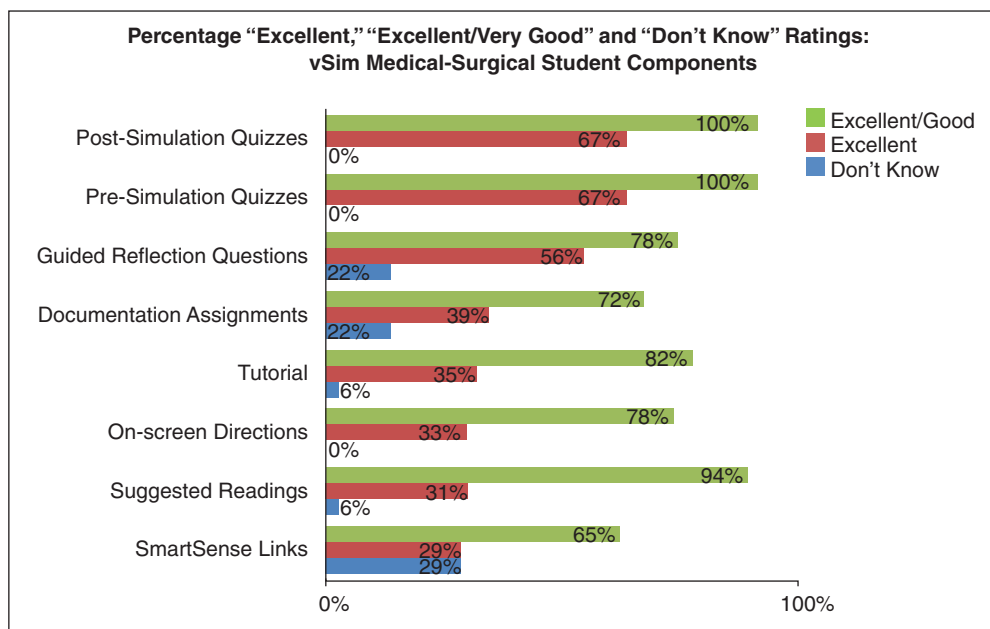


FIGURE 6

Flipping the Classroom

vSim can enhance a “flipped approach” to classroom lectures by bringing the clinical into the classroom. Using a guided approach, instructors can engage students in a dialogue about the correct clinical actions and the students’ reasoning for those actions. All or parts of the vSim scenario and student workflow on thePoint can be used in this way.

EXAMPLE: Examine the pathophysiology and care management strategies of hypoglycemia during Skyler Hansen’s visit to the emergency department.

Classroom Group Debriefing

vSim completed as a group activity provides an opportunity for students to dialogue with one another on rationales for action. Guided by faculty, clinical reasoning can be role modeled. A group setting can also provide an opportunity for students to think cooperatively through a situation and help them assess both the *what* and the *why* surrounding patient care decisions.

EXAMPLE: Examine a group vSim Feedback Log of care management activities provided for acute asthma patient Jennifer Hoffman. The associated debriefing questions can be used to uncover student content knowledge and rationale for action, generating higher level learning conversations in the classroom.

Small Group Conversations

vSim can be completed as small group activities in the classroom, with faculty role modeling their thinking in dialogue with students on Medical-Surgical concepts and rationales for action. A group setting can also provide an opportunity for students to think cooperatively through a situation and help them assess both the *what* and the *why* surrounding patient care decisions. Learning is incorporated through the variations in thinking and decision making, and corresponding correct rationale.

EXAMPLE: Assign half of the students the Doris Bowman post-op pain and opioid intoxication scenario in preparation for a class on post-op care and respiratory function, and the other half of the students the Lloyd Bennett post-op hip arthroplasty and post-op care and circulatory function. Students bring their feedback log as a ticket to class, using the logs in small groups to differentiate the post-op issues and discuss outcomes and variations in prioritization and decision making, and associated rationale.

Post-Clinical Learning

Clinical faculty can structure post-clinical conversation around a vSim concept to emphasize a patient care theme and relate this to patient care issues students encountered in the clinical setting.

EXAMPLE: For early clinical rotations, assign students the vSim on metabolism using diabetes as the clinical model (Skyler Hansen). Use the feedback log during a post-clinical conversation to compare and contrast diabetic care issues of patients on the clinical unit and the associated correct rationale and links to latest evidence. As clinical skills progress, assign students Stan Checketts, focused on fluid and electrolyte imbalances post-operatively, to compare and contrast surgical and nonsurgical patients across the care continuum. The associated Guided Reflection Questions can be used to uncover student content knowledge and rationale for action.

Small Group Concept Mapping

vSim can be very effective in a concept-based curriculum by targeting scenarios to operationalize important patient care concepts, such as oxygenation, surveillance, infection, inflammation, fluid balance, and others. This discussion

can be structured to identify issues that can be outlined on a concept map. vSim provides immediate feedback and rationale that can bring the concept map to life.

EXAMPLE: Examine the concept of oxygenation and map the associated pathophysiology and intervention strategies using Carl Shapiro and his diagnosis of chest pain, and the associated complications with rhythm and perfusion.

■ Resources and References to Support Simulation

Resources

- vSim Instructor Resources: Take advantage of the materials available for faculty on the vSim product page on thePoint, including a Professional Competency Map, Scenario Overviews, and Debriefing Guides (see the Instructor's User Guide on thePoint).
- Wolters Kluwer Customer Success Training: Get support and training designed to help you and your students succeed with vSim for Nursing. Training resources are available for faculty and students.
- Visit <http://thepoint.lww.com/success> for more information.
- Lesson Plans: If you have also adopted the corresponding Wolters Kluwer textbook (Hinkle, J.L. & Cheever, K. H. *Brunner & Suddarth's Textbook of Medical-Surgical Nursing*), the textbook's Lesson Plans on thePoint can help you integrate the vSim for Nursing scenarios into your class curriculum. You will find vSim scenarios mapped to relevant textbook learning objectives.
- National League for Nursing Simulation Innovation Resource Center (SIRC), <http://sirc.nln.org/>
 - SIRC Courses
 - Teaching and Learning Strategies
<http://sirc.nln.org/mod/resource/view.php?id=96>
 - Curriculum Integration
<http://sirc.nln.org/mod/resource/view.php?id=98>
 - Debriefing Foundations
<http://sirc.nln.org/mod/resource/view.php?id=97>
 - Evaluating Simulations
<http://sirc.nln.org/mod/resource/view.php?id=99>
 - SIRC Annotated Bibliography–Simulation Literature
<http://sirc.nln.org/mod/data/view.php?id=711>

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