



# *vSim for Nursing* Curriculum Integration Guide for Faculty

Developed by the National League for Nursing



## Addendum: Maternity and Pediatric



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## Introduction

This addendum provides for effective use and integration of the Maternity and Pediatric vSim products into existing curricula, and also offers ways to develop and/or enhance current teaching strategies. The vSim for Nursing product suite includes vSim for Nursing | Maternity, vSim for Nursing | Pediatric, and vSim for Nursing | Maternity and Pediatric. Each product is comprised of 10 virtual simulation scenarios (five core scenarios and five complex scenarios), with the combined maternity/pediatric product containing five scenarios from each specialty (mix of core/complex).

The addendum is based on data collected from faculty who adopted or conducted trials of the Maternity or Pediatric vSim products during 2015, and who subsequently submitted feedback to the National League for Nursing. Faculty included those providing instruction in classroom, clinical, lab, and simulation settings. Before integrating Maternity and Pediatric vSim products into the curriculum, it is important for faculty to review the primary vSim Curriculum Integration Guide. This will provide specific information on practical preparation for use of vSim and vSim pedagogical considerations. This addendum will focus specifically on formative assessment and teaching strategies related to the maternity and pediatric course areas.

## vSim Pedagogical Considerations

### Formative Assessment

vSim for Nursing provides an opportunity for faculty to engage students contextually through the use of a story. Students work on care management issues in an evolving patient context. The scenarios focus on progress toward goal attainment and, used as a means of formative assessment, provide constructive feedback for improving performance (Bourke & Ihrke, 2012; INACSL, 2013). Faculty using the maternity and pediatric vSim products felt strongly that the vSim performance scores accurately reflected student performance; the complete explanations provided for the score received, as well as the easily interpreted rationale, assisted in the formative assessment process with students.

Figure 1 below summarizes the evaluation of vSim scoring features by maternity and pediatric faculty who participated in the study.

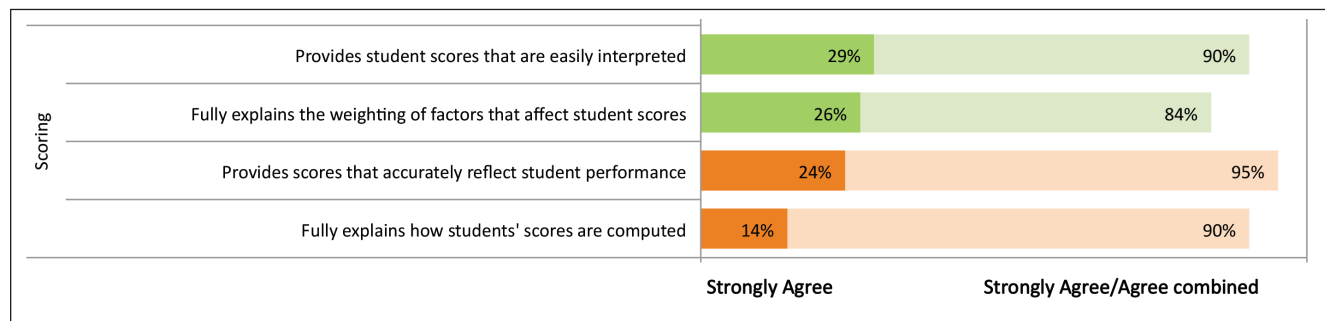


FIGURE 1

Faculty in the maternity and pediatric study utilized vSim as a formative assessment in the following ways:

- In the classroom, as a means for faculty to understand student learning and use an active approach to teaching.
- To help students prepare for human patient simulation in the specialty areas of maternity and pediatric nursing (see discussion below on Curriculum Approaches).
- As a benchmark for students to work toward. The majority of respondents who required students to meet a target percentage score on the vSim scenario specified a target of 80%. Similar to the Medical-Surgical vSim scenarios, students were more likely to repeat the scenarios until achieving slightly higher scores (most frequently 85% or higher).
- As a dose-response measure. In other words, does increasing the number of vSim attempts change the student's level of content knowledge or reasoning and decision-making skills? Faculty reported targeting the use of vSim to improve student achievement on standardized testing in the maternity and pediatric specialty areas. The feedback log provides specific rationale for the order of decision making, as well as for the appropriate inclusion and/or omission of activities in patient care. Students receive concrete feedback on their thinking in action.
- As a way to direct student remediation. The feedback provides students with textbook references and SmartSense links to direct and focus their remediation activities.

## ■ Teaching Strategies Specific to Maternity and Pediatric Nursing

Faculty viewed vSim as offering more value and utility than other methods for teaching maternity and pediatric content. Students readily embraced the vSim activity, providing an opportunity for faculty to focus their teaching efforts in other ways. 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 through reading assignments and pre-simulation quizzes. Engaging in the virtual simulation scenario, students integrate new knowledge as they care for the patient. Prioritization and decision-making are central to the vSim design. Faculty using the maternity or pediatric vSim products found that the cases provided a strong scaffolding on which students were able to build their knowledge, beginning with the core scenarios and moving to the complex scenarios (see [page 7](#) below). Faculty who used vSim as prep work in advance of human patient simulation reported that students were more comfortable meeting the same patient in the simulation lab, and that students performed better on human patient simulations that included more complexity and integrated maternity and pediatric psychomotor skills.

### Learning Objectives

Faculty involved in the original vSim pilot indicated that clinical reasoning and prioritization was the most common learning objective for which they used the vSim tool. In this study, while “improving clinical reasoning and prioritization” remains the strongest objective, particularly among pediatric faculty, a much larger percentage of users favored the goal of deepening understanding of specific nursing concepts. Preparing for human patient

simulation lab prompted the use of complex scenarios in both specialty areas (see [page 7](#) below). Experiencing the same patient encounter through different technologies helped to reinforce theoretical knowledge and gradually build confidence and competence. Finally, post-simulation quizzes, guided reflection questions, and documentation assignments complete the learning experience.

Figure 2 summarizes the primary learning objectives for utilization of the maternity and pediatric scenarios:

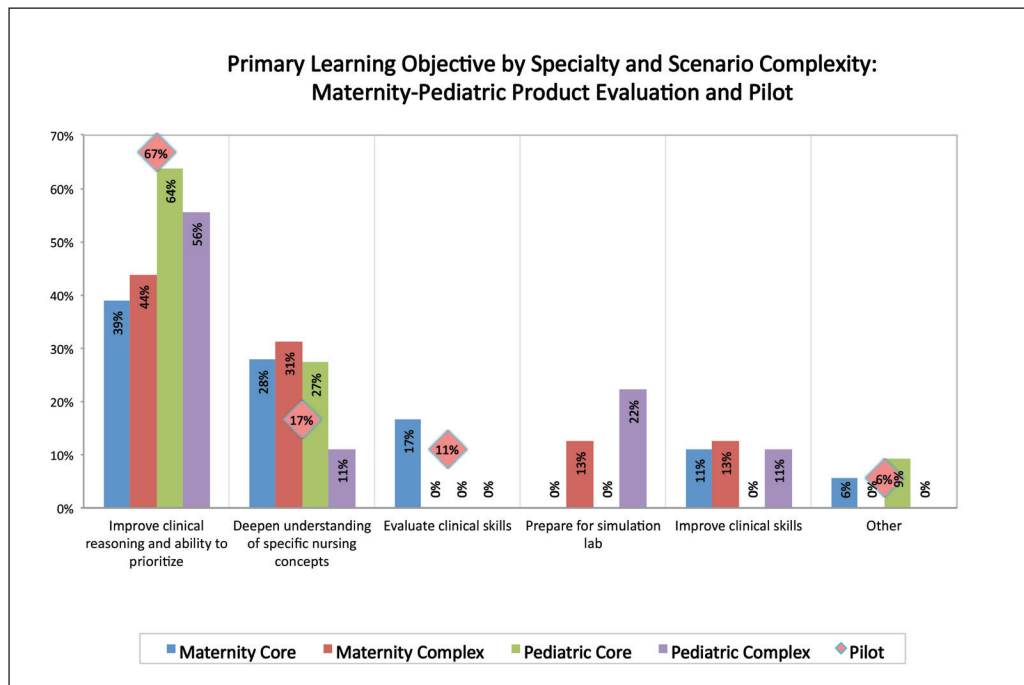


FIGURE 2

## Curriculum Approaches

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 in order to enhance course learning outcomes. Faculty using the maternity and/or pediatric scenarios reported that their primary method of vSim use was active engagement in the classroom, outweighing the use of vSim as an “add on” learning activity (e.g., make-up activity, extra credit, etc.). This was particularly true of the pediatric core and complex scenarios, which were used primarily as classroom activities by 46% and 36% of respondents, respectively. Use of vSim in preparation for simulation was also common, particularly in the case of complex maternity scenarios. To a lesser extent, scenarios were used as a laboratory activity; however, this use was more common for pediatric scenarios than maternity scenarios. Remediation, make-up activities, extra credit, skill review, and homework were seldom cited as primary methods of use. Actively engaging students in the learning process using vSim has enhanced active classroom teaching strategies; consistent use showed an overall increase.

Figure 3 represents faculty reporting of their primary method of using maternity and/or pediatric vSim scenarios:

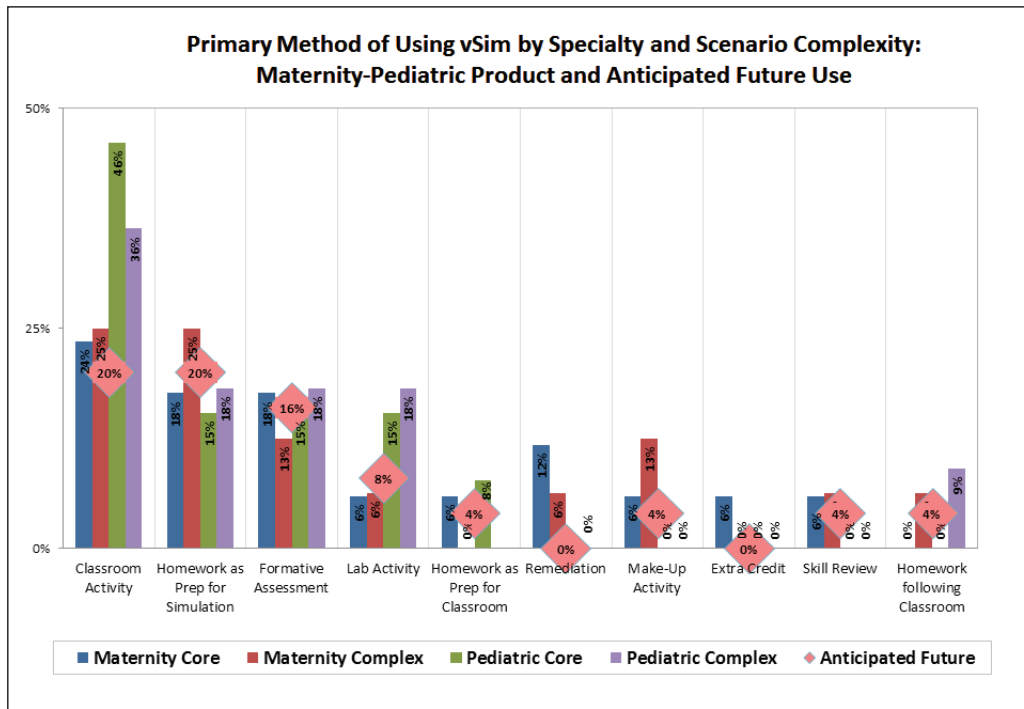


FIGURE 3

### Flipping the Classroom

vSim can be used to facilitate an active classroom approach to engage dialogue with students on content knowledge using an interactive patient story that unfolds within context.

**EXAMPLE:** Examine the pathophysiology of, and care management strategies for, sickle cell anemia with pediatric patient Brittany Long, or preeclampsia with maternity patient Olivia Jones.

### Small Group Conversations

vSim can be completed as small group activities in the classroom. Teachers can role-model their thought processes by engaging in dialogue with students on care management strategies and rationales for action. A group setting can also provide an opportunity for students to think cooperatively through a situation, which can help them assess both the *what and the why surrounding patient care decisions*.

**EXAMPLE:** Examine a group vSim Feedback Log of care management activities surrounding seizures experienced by pediatric patient Jackson Weber, or care complications of umbilical cord prolapse with maternity patient Carla Hernandez. The associated debriefing questions can be used to uncover student content knowledge and rationale for action.

### Small Group Concept Mapping

Concept mapping for concept-based curricula can target important maternity and pediatric concepts, such as fluid balance (pediatric patient Eva Madison – Vomiting and Diarrhea) or infection (maternity patient Brenda Patton –

Group B Streptococcus). These conversations can be structured to emphasize important care issues highlighted through the use of an active concept map. vSim provides context that can bring the concept map to life.

## Coursework

### Core-Complex Differentiation

The individual vSim for Nursing | Maternity and vSim for Nursing | Pediatric products offer both core and complex versions of a patient scenario (the combined product, vSim for Nursing | Maternity and Pediatric, offers only one predetermined scenario per patient, either the core or complex case). Faculty can choose to use either the core or complex version of a scenario (or both) based on a number of factors (e.g., *the right challenge level; specific skill set desired; exposure to content in class*). Core versus complex case considerations can also address clinical placement gaps and ensure that all students in the course have consistent experiences. As an example, faculty reported using complex maternity vSim scenarios to assist students' cognitive preparation prior to simulation lab. Because of the difficulty of ensuring student exposure to complex maternity experiences in real clinical environments, use of vSim in conjunction with clinical simulation provided consistency for rich learning opportunities.

A common theme from faculty using the pediatric scenarios was their desire to use *high frequency, low risk* case experiences for pediatric learning; during focus groups the faculty stated that because pediatric clinical placements can be so difficult to find, and because pediatric experiences in the hospital tend to be in high-acuity settings, students need more exposure to common pediatric cases. Therefore, faculty members chose the core pediatric vSim scenarios to fill this gap. Exposing students to low-risk pediatric case situations creates a solid foundation of usual and customary pediatric care issues to build on, resulting in better application and use of knowledge.

In contrast, faculty stated that both the core and complex scenarios for maternity helped to fill gaps in the curriculum. Faculty chose to use the core maternity scenarios to provide exposure to *high frequency, low risk* encounters, since at-risk mothers constitute a large number of OB experiences in the hospital today. Use of the vSim core maternity scenarios allows students to practice delivery of safe and effective nursing care during more common OB situations. Faculty also chose to use the complex maternity scenarios to provide students with exposure to *low frequency, high risk* encounters. These cases could be presented prior to clinical placement in order to provide exposure to high-risk cases that the students might observe in acute care settings, or to ensure that all students have consistent exposure to high-risk patients, especially because OB clinical experiences are often limited in scope. Maternity care can span complexity across the curriculum with maternal/child care in beginning coursework (i.e., utilizing core maternity modules) and complex care in later coursework (i.e., utilizing complex maternity modules).

Use of standardized testing in specialty nursing areas like maternity and pediatric care can also highlight gaps in student learning across the curriculum. Student proficiency with important core maternity and pediatric concepts may need to be fostered earlier in order for the student to advance to more complex content areas. Supplementing coursework with vSim scenarios targeted at those gaps can facilitate student learning achievement in those areas.

Faculty involved in the study felt strongly that making a decision to use core versus complex scenarios was mainly impacted by getting at the "right challenge level" for their students. Faculty also had "other" reasons for choosing core versus complex. These included choosing modules based upon particular content; looking for scenarios that addressed a specific skill set; or modules that covered content that students had been exposed to in class or clinical.

Figure 4 illustrates the most common reasons for choice of core versus complex scenarios.

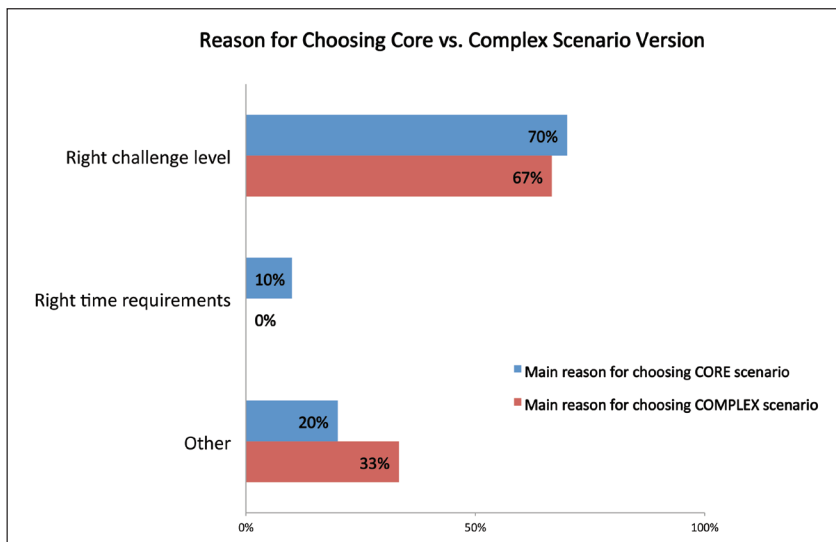


FIGURE 4

**EXAMPLES:** Pediatric Scenarios: Consider the use of vSim to assist with pediatric curriculum content that is centered on foundational concepts like pediatric pain (Brittany Long – Sickle Cell Anemia Acute Pain Crisis) or pediatric neuro (Jackson Weber – Generalized Tonic-Clonic Seizures). In contrast, consider use of vSim for teaching core concepts across the curriculum and the lifespan, such as oxygenation (Sabina Vasquez – Pneumonia Leading to Respiratory Distress) or fluid and electrolytes (Eva Madison – Dehydration).

**EXAMPLES:** Maternity Scenarios: Consider use of complex maternity care situations such as Severe Preeclampsia (Olivia Jones), Moderate Postpartum Hemorrhage (Fatime Sanogo), and Shoulder Dystocia (Amelia Sung) for inclusion in higher-level maternal care curricula.

Figure 5 shows the use of specific maternity and pediatric vSim scenarios by specialty and complexity:

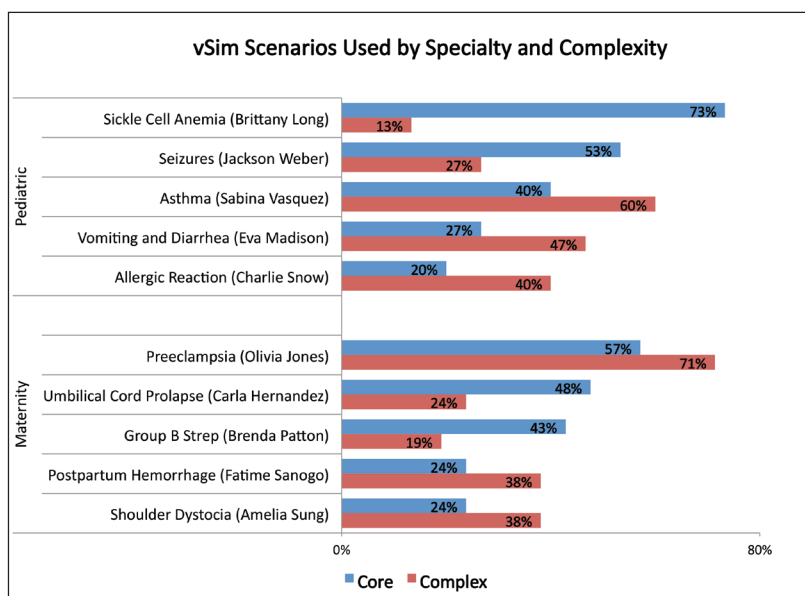


FIGURE 5



## 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.
- Course Planning—If you have also adopted a Wolters Kluwer textbook, the textbook’s Lesson Plans or Syllabi on thePoint can help you integrate the vSim for Nursing scenarios into your course curriculum. You will find vSim scenarios mapped to relevant textbook learning objectives or class units. The vSim for Nursing maternity and pediatric products map to the following Wolters Kluwer texts:
  - vSim for Nursing | Maternity is mapped to Ricci, S. (2013). *Essentials of Maternity, Newborn, and Women’s Health Nursing*, 3rd Edition, and is integrated into Lippincott CoursePoint+ for Ricci: *Essentials of Maternity, Newborn, and Women’s Health Nursing*, 3rd Edition.
  - vSim for Nursing | Pediatric is mapped to Kyle, T., and Carman, S. (2013). *Essentials of Pediatric Nursing*, 2nd Edition, and is integrated into Lippincott CoursePoint+ for Kyle & Carman: *Essentials of Pediatric Nursing*, 2nd Edition.
  - vSim for Nursing | Maternity and Pediatric is mapped to Ricci, S., Kyle, T., and Carman, S. (2013). *Maternity and Pediatric Nursing*, 2nd Edition, and is integrated into Lippincott CoursePoint+ for Ricci, Kyle & Carman: *Maternity and Pediatric Nursing*, 2nd Edition. In addition, vSim for Nursing | Maternity and Pediatric is also integrated into Lippincott CoursePoint+ for Pillitteri: *Maternal & Child Health Nursing*, 7th Edition.
- NLN 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 and Guided Reflection  
<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>

## References and Further Reading

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- Skiba, D.J., Connors, H.R., Jeffries, P.R. (2008). Information technologies and the transformation of nursing education. *Nursing Outlook*, 56(5), 225-230. doi:10.1016/j.outlook.2008.06.012