

# Room of Errors: Can You Find Risk? A Competency-Based Learning Experience



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## Abstract

**Background:** Registered Dietitian-Nutritionist (RDN) interns are required to be competent in analyzing risk in nutrition and dietetics practice (CRDN 4.10) through competency-based education. Important steps in analyzing risk are to find sources of risk, to explore individual and environmental factors and to identify protective options and strategies to reduce or eliminate the risk.

**Objective:** To describe an interprofessional education (IPE) conducted as a simulation to teach risk errors in the healthcare setting.

**Methodology:** RDN interns, physician assistant (PA), and doctor of physical therapy (DPT) students entered a simulation hospital room with a mannequin patient laying on a hospital bed with 45 risk errors. The interns/students were required to list as many errors as they could identify as well as indicate the source of the risk and decide the best protective strategy or solution within a specified amount of time. After the simulation, a debriefing period followed with communication, collaboration and debate among the students to select the top five highest risks in the room. Interns and students shared and discussed the risks that they found in the room and the reasoning of their top five risk selections.

**Results:** Of the forty-five staged errors in the room, RDN interns recorded from 18 to 34 risks, which included both individual (patient) and environmental risks. During debriefing, students were able to detect risk in their professional area of study with ease. After collaboration, the interns/students collectively selected the top five risks. Interns and students commented that they gained knowledge of risks in each discipline through this simulation experience.

**Conclusions:** Students agreed that analyzing risk is a responsibility of all disciplines and members

of the healthcare team. Working in an interprofessional environment assists students to assess and think beyond their own profession and to collaborate as a team in a professional environment.

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## 1. Introduction

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What is risk in dietetic practice? Where are the areas of potential risk in dietetic practice? How can dietitians manage risk? These important questions regarding risk must be addressed as they relate to nutrition and dietetic professionals, education and teaching or future professionals and the practice of the entire healthcare team. According to the Accreditation Council for Education in Nutrition and Dietetics (ACEND), registered dietitian-nutritionist (RDN) interns are required to be competent in analyzing risk in nutrition and dietetics practice [Competencies for Registered Dietitian Nutritionist (4.10)].<sup>1</sup>

Risk in dietetics has been defined by the College of Dietitians of British Columbia as a “situation or action that involves exposure to danger, physical or mental harm (including financial) or loss to a client/patient and/or to the dietitian”.<sup>2</sup> Unfortunately, risk can occur at any time, by any member of the healthcare team, in a variety of areas and often is unintentional, thus identifying risk is a challenge. The goal of all healthcare providers should be to identify and manage risks before they happen.

Risk management is the “process of analyzing risks to mitigate or prevent harm from occurring”.<sup>2</sup> A framework for managing risk in dietetic practice has been developed by Chatalalsingh.<sup>3</sup> in 2014. This framework includes a four-step risk management process. The first step is to analyze the source, asking questions such as, “How often are the chances of this occurrence?” and “What is the outcome and severity of the occurrence?” The remaining steps explore the protective factors and

then with this information, create the best protective solutions. Finally, through evaluation and reflection of former experiences, decision-making and policy development, risk outcomes should improve. Risk may not be eliminated, but can be reduced. This process may be a model that can be used to teach professionals and students how to identify and manage risk. This framework can be applied in all areas of practice and settings and among all healthcare members. This tool can be used to help individuals “stop, think, seek help, offer suggestions, build team knowledge, and evaluate risk”.<sup>3</sup> With a need to educate healthcare students about risk, using the aforementioned framework, a simulation was developed and conducted at Franciscan Missionaries of Our Lady University (FranU) in Baton Rouge, Louisiana.

## 2. Background

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### *Simulation*

Simulated Environment Teaching Hospital (SETH) is a 4,000 square foot state-of-the-art simulated learning environment located in the School of Health Professions at FranU. Technology in the SETH ranges from computer-based, telehealth, videography, virtual and manikin experiences (low to high fidelity). The director and staff of SETH have enthusiastically engaged the nutrition and dietetic program, as well as all other healthcare disciplines, to assist in scenario and simulation development, highlighting the importance of including dietetics in healthcare simulation experiences. Simulation experiences have been found to build communication, confidence, and critical thinking skills among students.<sup>4</sup>

Designing and executing clinical simulations allows healthcare directors to provide mock or staged experiences to meet accreditation standards and competency requirements for students in their program. As well as meeting accreditation standards, interns and students benefit in risk analysis of a clinical situation. Simulations enrich critical thinking in an evolving situation which may lead to improved patient safety, reduced hospital cost and improved employee safety. These simulations are conducted in a protected environment where students can make mistakes, problem solve, collaborate, communicate while learning from their peers, guided by their instructors.

Simulations create a staged learning environment that allowing students to fully interact and replicate real life experiences with minimized patient risk while students improve on professional skills.<sup>5,6</sup> Simulations are used across several medical professions and are often conducted in several phases. The phases in simulation begin with a pre-briefing assignment or gathering where the scenario is explained. The simulation and scenario enactment, the second phase, is usually followed by assessing the students' knowledge. The final phase is the debriefing session. In the debriefing session, the facilitator allows the students to reflect, share and discuss the simulation.<sup>7</sup> Questions typically asked during debriefing sessions include, "What were the positive learning points or things that went well in the simulation? What would you change in the scenario or do differently? What are some take-away points or comments? The final phase in debriefing allows the students to engage with and learn from each other.

Some of the positive findings seen in dietetic internship interns that have completed internship programs that offer simulation are improved medical nutrition therapy skills, increased confidence, self-efficacy and better reasoning skills.<sup>7</sup> In addition, select students from undergraduate programs where they had limited real-life, hands-on experiences, but then were able to engage in simulation experiences during their internship showed significant improvements in various professional skillsets, as reported by their program directors.<sup>6</sup>

The practice of designing interprofessional simulation experiences, where multiple disciplines interact, more closely aligns with the real world and teaches about roles and responsibilities of each member of the healthcare team and allows for communication and collaboration with each other when caring for various patients. Use of interprofessional simulation experiences during professional training may aid in providing a solid foundation for quality healthcare as students start their careers.

### ***Interprofessional Education (IPE)***

An interprofessional education (IPE) experience is an interdisciplinary, cross-collaboration between two or more fields to help increase healthcare professional cohesion and skills. The goals of an IPE include increasing a student's own understanding of their role for patient care as well as to gain insight of other healthcare professional roles in a team setting.<sup>8</sup> According to the World Health Organization<sup>9</sup> and the Institute of Medicine,<sup>10</sup> the use of IPE to improve health professionals' education flourished, reduced health-

care costs, increased limited health resources for underserved populations, and improved patient safety.<sup>9,10</sup> There are a variety of ways in which IPE has been implemented in nutrition and dietetic curricula including the use of IPE grand rounds or clinics, IPE workshops, IPE case studies, IPE simulations, IPE courses, and IPE interviews.<sup>11</sup>

A study in 2020<sup>12</sup> required students to participate in a simulated interprofessional grand round experience and devise a discharge plan for a patient. The disciplines included were dietetic interns, PA and DPT students. The students' perceptions of healthcare team members' roles and responsibilities following this IPE experience were assessed. The survey results found the most common trend was that students often misunderstand the roles and responsibilities of different healthcare team members. Not knowing the value of and assistance that other healthcare providers have was a gap in their knowledge. This study demonstrated how interprofessional simulation experiences can have beneficial effects on knowledge and attitudes across healthcare disciplines, and it provides rationale for continued use of IPE experiences.<sup>12</sup>

An IPE research study in 2019<sup>13</sup> included ten dietetics students and thirteen exercise physiology students. These students collaborated on different treatment options for patients with diabetes mellitus. Results showed that post IPE, students' interactions improved with other healthcare professionals exhibited through confidence in communication and improved assessment and management skills.<sup>13</sup>

A similar IPE study published in 2020<sup>14</sup> involved nursing, nutrition, and speech-pathology

students. These three healthcare professional student groups collaborated while caring for a patient during a simulated clinical experience. Findings revealed an increase in student nutrition knowledge, knowledge of other healthcare professional roles, practical knowledge of clinical decision-making skills and the ability to prioritize care and interventions.<sup>14</sup>

Based on these findings, there is currently an increased need for advanced skills and experience in health professionals entering the healthcare field. One of the ways this is accomplished is by exposing students to situations through interprofessional simulation.<sup>15</sup> Simulation enables students to work on skills necessary to handle different clinical situations. Students have the ability to learn and receive valuable feedback that further enhances their skills and ability to critically think.<sup>16</sup>

### ***Competency-Based Education (CBE)***

In recent years, Competency-Based Education (CBE) has been adopted in simulation experiences by various health professions, with implementation expanding to practicing professionals and undergraduate students. The focus of CBE in the training of health professional students is to ensure learners possess and demonstrate proper skills and knowledge to provide high-quality patient care.<sup>17</sup>

Gervais<sup>17(p.99)</sup> defines competency-based education (CBE) as "an outcome-based approach to education that incorporates modes of instructional delivery and assessment efforts designed to evaluate mastery of learning by students through their demonstration of the knowledge, attitudes,

values, skills, and behaviors...". ACEND’s future education model standards focus on CBE for nutrition and dietetic education. In the January 2021 Town Hall meeting,<sup>18</sup> it was shared that the value of CBE is that students gain the knowledge and skills and then demonstrate these knowledge and skills by engaging in learning exercises, activities and experiences. For the CBE model to be effective, clear student learning outcomes must be aligned to the experiences provided. IPE and simulation scenarios can be tailored to align with desired learning outcomes.<sup>18</sup>

**Miller’s Competency Pyramid**

The ACEND competencies are built upon

various levels of competency. These competencies align with CBE and are depicted using the Miller’s Competency Pyramid theory(Figure 1).<sup>18</sup> Competency development starts at the “knows” and “know how” level with students showing their ability to recall facts and interpret and apply information. In an education setting, the ‘fact recall’ stage would include testing, such as multiple-choice questions, which depicts a novice level of knowledge. The advanced “knows how” level uses case studies, essays, assignments and worksheets that encourages the student to not only know the information, but the ability to interpret and apply it in a written scenario or word problem.

**Figure 1.** Miller’s Competency Pyramid<sup>19</sup>



<<https://openpress.usask.ca/ideabook/chapter/millers-pyramid-of-clinical-competence/chapter 8>>



The third level “shows” may be fulfilled through use of simulations or objective structured clinical examinations (OSCEs).<sup>20</sup> For example, in a nutrition and dietetics-focused simulation, a student may demonstrate skills with a patient that has diabetes, performing an assessment, conducting a nutrition-focused physical examination, assisting with diabetes medication management, and performing a nutrition education and counseling session. This “shows” level is where simulation can be aligned with the student learning outcomes to meet CBE. During these stages the novice student is gaining knowledge, skills and attitudes that lead to the last stage, the expert level.

In the final stage, which is the highest level, the student “does”. This level is where the competencies are demonstrated in actual professional settings or in alternate situations, such as IPE simulation activities.

### ***Justification***

Risk in the healthcare setting is essential to identify and correct for the proper care of the patient, hospital personnel and the safety of the hospital environment. Once it is identified and analyzed, a risk management process must be incorporated. It is not just a concern in nutrition and dietetic practice, but a concern for all members of the healthcare team. To provide a risk simulation as an IPE using the CBE model of education is a valuable teaching tool to teach students how to address risk, discuss the roles and responsibilities of the healthcare team, and to communicate, collaborate, critical think and problem solve. The objective of this study is to

describe an interprofessional experience (IPE) conducted as a simulation to teach risk and risk management strategies in the healthcare setting.

## **3.Methods**

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### ***Participants***

Participants were a convenience sample of student volunteers from the School of Health Professionals. Clinical students interested in participating in the IPE “Room of Errors” simulation included 14 dietetic interns (RDN), 27 Physician Assistant (PA) students and 31 Doctor of Physical Therapy (DPT) students. The dietetic interns and PA and DPT students have all earned baccalaureate degrees prior to admission to their professional program.

### ***Learning objectives***

The learning objectives were designed by the program directors of the interns or students to meet respective program competencies and learning outcomes. The learning objectives were:

1. Identify medical errors and patient safety hazards in a simulated patient room.
2. Work collaboratively with other health professions to prioritize risk observed and risk management strategies.
3. Recognize the importance of the interprofessional team in ensuring a safe patient environment.

### ***Design***

The “Room of Errors” simulation was originally designed by the PA director focused on risk that may occur to a patient, staff, health

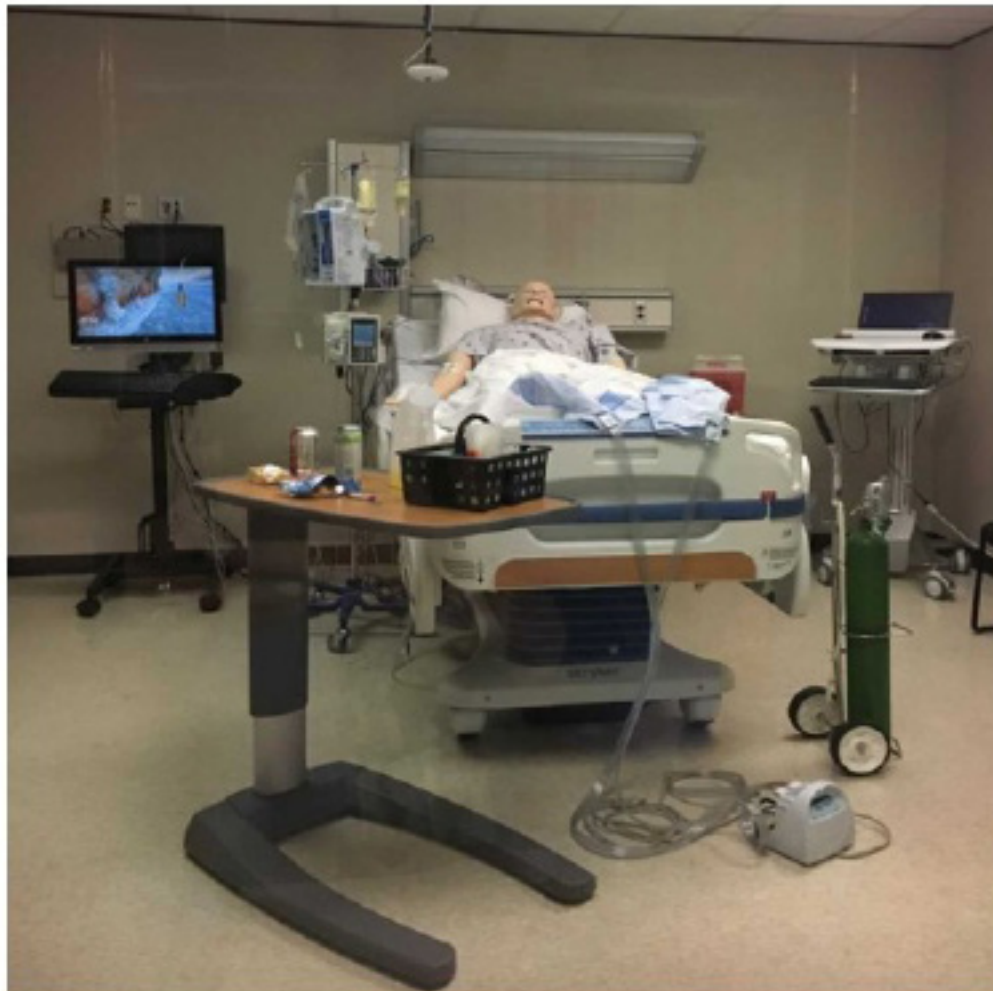
professional and the hospital environment. The PA director identified potential risk errors that a PA might observe in their responsibilities. After positive reviews and literature that supported the concept of a “Room of Errors” the DPT and RDN directors requested the simulation to become interprofessional focus and include risk errors that a DPT and an RDN may observe in their respective professions. A total of 45 risk errors were designed into the simulation experience. A large number of risks were cross-discipline errors while a smaller number of risks were unique to each

profession. These risks were staged in the "Room of Errors" for the IPE simulation in this research (Figure 2; Table 1).

The participants were divided into multi-disciplinary groups of approximately 10-12 students per group scheduled throughout the day. Within each group there were approximately three dietetic interns, five PAs, and six DPT students. This was based on the number of volunteers within each profession so that all interns and students could participate. At the beginning of each simulation, the group of participants gathered in a

**Figure 2.** *Room of Errors Set-up*

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**Table 1.** *List of Errors in the Room of Errors Simulation*

List of Errors	
Patient has no identification bracelet	Bed raised too high, with side rails down
Food (chips, condiments, soda) and medical formula on patient's bedside table (with a nothing-by-mouth order)	Bed breaks not engaged
Tube feed syringes left on bedside table; not initiated with patient's nasogastric tube	Bedside commode and walker across the room from patient
Tube feeding formula expired	Hand sanitizer dispenser empty
Tube feeding formula not appropriate for patient's diagnosis	No mask available for CPR
Administration rate on tube feeding pump incorrect	Sharps container not secured to wall; sharp needle lying next to container
Patient's home medications on bedside table	Uncapped syringe on bedside table
Oxygen nasal prongs not properly placed in patient's nose	Medical equipment obstructing walkway in room
Oxygen tubing wrapped around patient's neck	Controlled substance left on bedside table
Oxygen flow rate too high	Medication syringe lacking a patient label
Intravenous (IV) medication pump alarm beeping	Blood collection tubes (containing blood) left in room
IV pump plugged into a regular outlet	Blood on patient's sheet/blanket
Patient's IV dressing is bloody	Urinary catheter removed from patient/lying in bed
Patient's IV is disconnected	Portable urinal (containing urine) on bedside table near food
Antibiotic hung on IV pole (contrary to patient's allergies)	Nurse call button and personal belongings not within patient's reach
5% Dextrose solution hung from IV pole (patient with diabetes)	Compression stockings not properly placed on patient; compression pump not properly connected
Blood thinner for another patient hung on IV pole	Electrocardiogram leads reversed

room where the facilitator read the scenario, identified the learning outcomes and described the IPE simulation. All participants were given a worksheet that had four columns. The columns were labeled, “Problem cited”, “Identify the source of risk”, “Identify risk of harm characteristics”, and “Identify the best protective solutions(s)”. The participants entered the room in silence and were given five to seven minutes to identify as many errors as possible. The time limit allotted for the identification of errors was selected based on the time restraints of the course and the number of times the simulation had to be repeated. It was not expected that all errors would be identified within the time allotted nor were the interns or students told how many errors were staged in the room. The participants were not allowed to speak, ask questions, adjust or move any materials or debris within the simulation room. The participants were able to walk around the room, lean over the mannequin in the hospital bed, analyze any machines, feeding tubes/IVs and monitors surrounding the patient. The participants were required to identify risks independently and were not allowed to talk to each other. After the appointed period of time the participants returned to the debriefing room and were asked to complete the debriefing activities. The debrief period was approximately 30 minutes. The experience from beginning to the end was approximately 45 minutes.

### ***Materials/Instrumentation***

As this study was part of nutrition and dietetic program improvement, the RDN students were requested to complete additional information for

data collecting purposes. The simulation was scheduled during internship class, thus all dietetic interns had the opportunity to be involved. The intern had to option to participate or not; however, all interns were interested in learning about risk and all participated. To enforce CBE, the assignment incorporated Miller’s Competency Pyramid as described hereafter.

Prior to the day of the IPE simulation, the RDN interns were provided a pre-reading assignment that described risk and how to manage risk in dietetic practice. The pre-reading assignment was authored by Chatalalsingh, C. (2014) entitled *A Framework for Managing Risk in Dietetic Practice*.<sup>3</sup> RDN interns were also asked to reflect on potential risk that might occur in nutrition and dietetic practice or anything risk they had experienced and write anything down. It was hoped that this assignment would provide an insight and possibly prepare the RDN interns to better observe risk errors during the simulation. The PA and DPT directors decided on pre-readings for their students that best related to their profession. Completing the pre-readings fulfilled the “Knows” level of Miller’s Competency Pyramid.

Participation in the IPE risk simulation and completion of the risk identification worksheet post-simulation fulfilled the “Shows” level of Miller’s pyramid. The worksheet was to be completed individually. Each participant prioritized the three to five greatest risks observed in the first column. For each risk they had to describe the source of the risk. The third part of the worksheet was to list the risk of harm characteristics, whether individual, family, staff, health profes-

sional or an environmental risk. Finally, for each risk identified, participants were to identify the best protective solution(s).

### **Scenario**

Mr. Smith, an 85-year old male with a past medical history of stroke, hypertension, diabetes mellitus type 2 and hyperlipidemia, was admitted to the hospital for a small bowel obstruction seven days ago. He is now three days status post exploratory laparotomy. During the surgery he was found to have a section of necrotic bowel with a small perforation that was successfully repaired. He is now recovering on the Med-Surg floor. He has an allergy to Penicillin (anaphylaxis).

The patient was started on a clear liquid diet, honey thick consistency, 1:1 assistance with all meals. A nasogastric feeding tube (NGT) was placed to begin trickle feeds since the patient remains on swallowing precautions. The dietitian has been consulted to provide tube feeding recommendations, oral supplements, and advance the diet as tolerated. He is receiving D5 ½ NS IV fluids at 80 ml/hour.

Physical Therapy has been consulted to assess patient for safety with functional mobility and ambulation in order to determine discharge recommendations (home versus facility).

### **Debriefing**

The following steps describe how the debriefing experiences occurred. The debriefing phase was allowed 30 minutes.

- The SETH director, a Registered Nurse, served as the facilitator for the debriefing

experience, which occurred immediately after the participants left the simulated hospital room. Each health profession program student (PA, DPT, RDN) was asked to write all of the risk errors they found on a white board in the debriefing room.

- The facilitator asked each interprofessional group (RDN interns, PA and DPT students) to discuss their list and to prioritize their top three to five risk errors. Their ability to communicate, collaborate, and critically think was the focus of this phase of debriefing. The risks prioritized could have been acquired from their readings, personal experiences, course material, or their beliefs.
- Each interprofessional group discussed, collaborated and communicated their final top three to five risk errors with the entire group. The facilitator reminded the participants that in simulation there are no right or wrong answers, but degrees of most correct and least correct.
- After critical thinking and decision making, the entire group decided on the top three to five risk errors observed in the “Room of Errors”.
- The facilitator asked the group to reflect on the impact of interprofessional teamwork and communication in this activity and to offer testimonial “take away” statements from the IPE simulation experience, if willing.

## Results

In alignment with the research questions, the RDN interns' results are reported. Of the 45 staged risk errors in the room, the RDN interns (n=14) recorded from 15-34 risk errors (Table 2). The risk errors were described in two categories: Individual risk, which encompassed risk to patient, family and staff; and environmental risk, which included safety and sanitation risk concerns in the hospital room. The most frequently reported risk error by the RDN students was that the patient had thin liquids in room and an NPO (i.e., nothing by mouth) sign on the door. The correct diet was a clear liquid – honey thick consistency, so the patient was also not receiving the correct diet, which may have led to aspiration. The next most frequently identified risk error found was the presence of inappropriate and expired tube feeding formula at the bedside, as well as opened mayonnaise, chips and soda on the bedside table. Additional individual risk errors included incorrect placement of oxygen nasal prongs, tubing around patient's neck, unplugged, unlocked and raised bed, no patient ID bracelet, and mislabeled drugs. Some

**Table 2.** Errors identified by Registered Dietitian-Nutritionist interns during the Room of Errors simulation

Most Frequently Identified Errors	Frequency of Identification
Medical formula on patient's bedside table (with a nothing-by-mouth order)	14
Tube feeding formula not appropriate for patient's diagnosis	6
Food on patient's bedside table	5
Blood thinner for another patient hung on IV pole	4
Oxygen flow rate too high	3
Oxygen nasal prongs not properly placed in patient's nose	3
Bedside commode and walker placed too far from patient's bed	3
Oxygen tubing wrapped around patient's neck	2
Patient has no identification bracelet	2
Sharps container on bedside table with a lancet outside	2
Bloody sheets/blankets	2
Tube feed syringes left on bedside table; not initiated with patient's nasogastric tube	2
Nurse call bell not within patient's reach	2
Urinal on bedside table	2

environmental risk errors identified by RDN interns included loose and uncapped needles at the bedside, urine on the floor, blood on the sheets, assistive devices too far for the patient to reach and medical supplies in the bed with patient.

During debriefing, students were able to detect risk errors in their professional area of study with ease and identified these items as the top three to five highest risks in the IPE simulation (Table 3). The highest prioritized risk of errors decided by the RDN students were the inconsistent and incorrect diet and food items in the room, the inappropriate and expired tube feeding formula and numerous unsanitary items throughout the room, such as urine and blood smears on sheets, the floor, and on the bedside table. The PA students agreed that the highest risk was the oxygen nasal prongs misplaced and tubing

**Table 3.** *Errors emphasized by students participating in Room of Errors simulation*

Priority Rank	Registered Dietitian-Nutritionist Interns	Physician Assistant Students	Doctor of Physical Therapy Students
1	Tube feeding equipment-related errors	Oxygen-related errors	Bed-related errors
2	Medical formula/food-related errors	Monitors (EKG, IV pump)-related errors	Bedside commode, walker too far from patient
3	Blood and body fluid contamination-related errors	Medication errors	Medical equipment obstructing walkway
4	Patient lacking identification bracelet	Patient lacking Identification bracelet	Compression stocking/pump-related errors
5	Oxygen tubing wrapped around patient's neck	Blood and body fluid contamination-related errors	

around the neck of the patient who had an oxygen saturation of 89% were all high risk. In addition, the oxygen was turned too low, incorrect medication was left in the room for another patient and the lack of a patient ID bracelet were prioritized. The DPT students prioritized the bed being unplugged and the bed breaks not engaged, side rails down, assisted walking-devise and potty chair too far from the bed for the patient to reach and unused pieces of equipment lying in the floor as obstacles in the room. After collaboration, the RDN, PA and PT students agreed that the lack of patient identification, oxygen levels, tubing around the patient's neck, unsanitary conditions and errors in diet were the five highest risks in the IPE scenario. Groups of healthcare students gained knowledge of risks in each discipline, even though they may have been initially more focused on their specific areas of expertise.

Students were asked to verbalize what they learned from the IPE simulation and any ‘take away’ messages or testimonies with all disciplines represented (Table 4). Overall comments from students were very positive. The two highest themes reported verbally were that this simulation helped each healthcare profession to see the important risk errors that other disciplines may focus on, which made them more aware of additional risk concerns compared to their initial observation. The students were able to not only identify risk, but through discussions with each other, they learned ways to properly remove or minimize risk errors. It was also pointed out that the simulation experience provided a platform to teach about the different healthcare professionals’ roles and responsibilities and scope of practice. For example, the PA and DPT students were not aware of what thickened liquids are, why they are needed and used. A few students offered the following insightful testimonies orally:

**Table 4.** Student feedback reported during the Room of Errors simulation debriefing session

Feedback Reported	Number of Students
Simulation helped us identify important medical errors outside our specific discipline/training, that we otherwise might not have noticed	8
Simulation helped us identify specific ways to remove or mitigate risks associated with medical errors	7
Simulation provided the opportunity to increase our overall medical knowledge outside our specific discipline	5
Simulation emphasized the roles and responsibilities of the interprofessional healthcare team, as well as highlighted unique scopes of practice of different healthcare professionals	5
Simulation provided the opportunity to practice interprofessional team-based communication	4
Simulation emphasized that all members of the healthcare team have a responsibility to ensure patient safety	4



“We are not as good alone as we are together.”

“Two or more minds together are better than one.”

“The take home message from this simulation was that it is everyone’s responsibility on the healthcare team to assess risk and to take action when errors are seen.”

“Being aware of risks outside of one’s scope of practice produces a safer environment for patients, families, and healthcare professionals.”

### **Conclusion**

Medical errors can cause patient harm and negatively impact patient outcomes. Competency-based learning that includes IPE simulations can provide an opportunity for RDN interns, PA and DPT students to interact with one another to work through realistic dilemmas in the healthcare setting in order to mitigate risks in their future clinical practices. From this interprofessional simulation, interns and students learned that identifying and analyzing risk in individuals and environments is the responsibility of all clinical disciplines and members of the healthcare team. IPE simulation as an educational tool helps students grow professionally, collaborate, critically think, communicate, and problem solve beyond their specific disciplines.

Simulation can be a beneficial experience in any clinical training program. Clinical faculty can add a Room of Errors simulation in curricular units that include professionalism issues such as medical errors, patient safety or risk management.

Careful planning must include the development of learning objectives that meet the needs of all disciplines participating. Ideally, the simulation would occur in a simulation laboratory setting, though, with creative planning could be executed in a classroom setting if no simulation laboratory is available. Sufficient time should be dedicated to the debrief and group discussion, as this is where the interprofessional collaboration and learning occurs.

Other disciplines appropriate to incorporate would depend on the planned student learning outcomes and scenario objectives. Since the COVID-19 pandemic, the inclusion of respiratory therapy, ICU personnel and palliative care professionals would be a unique experience for students. If these professional programs are not available, another possible resource could be professionals in these fields who volunteer their expertise in scenario building or simulation casting.

## REFERENCES

1. Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics (ACEND). (2021). *ACEND Accreditation Standards for Nutrition and Dietetic Internship Programs*. <https://www.eatrightpro.org/-/media/eatrightpro-files/acend/accreditation-standards/secdraft-2022standardsdinotrack-4142021.pdf?la=en&hash=C3E2CADE0DB90DE4D8C4D0B5E4E7153CB0C62C6A>
2. College of Dietitians of British Columbia (CDBC), *Managing Risk in Practice Q&A*. 2021. Available at: <https://collegeofdietitiansofbc.org/managing-risk-in-practice-qa/>
3. Chatalalsingh, C. A Framework for Managing Risk in Dietetic Practice. *Resume*. 2014:4-8. <https://www.collegeofdietitians.org/resources/professional-practice/workplace-issues/a-framework-for-managing-risk-in-dietetic-practice.aspx>
4. Franciscan Missionaries of Our Lady University. SETH. Accessed August 24, 2021. <https://franu.edu/academics/engaged-learning/seth>
5. Cooper, C. (2018, July). Using Simulation in Dietetics Education. *Today's Dietitian*, 20(7), 30–34.
6. Safaii-Waite, S. (2019). Introduction to Dietetic Simulation. In: *Medical Nutrition Therapy Simulations* (pp. 1-5). Jones & Bartlett Learning. [www.google.com/books/edition/Medical\\_Nutrition\\_Therapy\\_Simulations/AiFBDwAAQBAJ?hl=en&gbpv=0](https://www.google.com/books/edition/Medical_Nutrition_Therapy_Simulations/AiFBDwAAQBAJ?hl=en&gbpv=0)
7. Sanko, J. (2017). Simulation as a teaching technology: A brief history of its use in nursing education. *Quarterly Review of Distance Education*, 18(2), 77–85.
8. Bedford, S., Repa, L., & Renouf, A. (2020). Supervision in interprofessional education: Benefits, challenges, and lessons learned. *Journal of Psychotherapy Integration*, 30(1), 16–24. <https://doi-org.ezproxy.franu.edu/10.1037/int0000167>
9. WHO (World Health Organization). 2010. Framework for action on interprofessional education and collaborative practice. Found at: [http://www.who.int/hrh/resources/framework\\_action/en/index.html](http://www.who.int/hrh/resources/framework_action/en/index.html). Accessed: March 7, 2019.
10. Institute of Medicine. 2015. *Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21726-chapter-3>
11. Hark, L.A., & Dean, D. (2017). From the Academy: Position of the Academy of Nutrition and Dietetics: Interprofessional Education in Nutrition as an Essential Component of Medical Education. *Journal of Academy of Nutrition and Dietetics*, 117, 1104-1113. doi: [10.1016/j.jand.2017.04.019](https://doi.org/10.1016/j.jand.2017.04.019)
12. Furr, S., Lane, S. H., Martin, D., & Brack-

- ney, D. E. (2020). Understanding roles in health-care through interprofessional educational experiences. *British Journal of Nursing*, 29(6), 364–372. <https://doi-org.ezproxy.franu.edu/10.12968/bjon.2020.29.6.364>
13. O’Shea, MC., Reeves, N.E., Bialocerkawski, A. *et al.* Using simulation-based learning to provide interprofessional education in diabetes to nutrition and dietetics and exercise physiology students through telehealth, *Adv. Simul* 4, 28 (2019). <https://doi.org.10.1186/s41077-019-0116-7>
  14. Hsiao, P. Y., Clark, N., & Boothby, J. (2020). Developing an interprofessional simulation with nursing, nutrition, and speech-language pathology students. *Teaching and Learning in Nursing*, 15(2), 128–133. <https://doi-org.ezproxy.franu.edu/10.1016/j.teln.2020.01.004>
  15. Shepherd, I., Burton, T. (2019). A conceptual framework for simulation in healthcare education - The need. *Nurse Education Today*, 76, 21-25. doi: [10.1016/j.nedt.2019.01.033](https://doi.org.10.1016/j.nedt.2019.01.033)
  16. Society for Simulation in Healthcare (SSH). About Simulation. 2019. Accessed August 24, 2021. <https://www.ssih.org/About-SSH/About-Simulation>
  17. Gervais, J. (2016). The operational definition of competency-based education. *The Journal of Competency-Based Education*. 1(2), 98-106. doi: [10.1002/cbe2.1011](https://doi.org.10.1002/cbe2.1011)
  18. AbuSabha, R., Swain, J. Competency Based Education. ACEND Virtual Town Hall Meeting; January 19, 2021. <https://www.eatrightpro.org/-/media/eatrightprofiles/acend/public-notices-and-announcements/virtualtownhallmeetingjanuary2021.pdf?la=en&hash=08FEA78BFAC7236FE1951049E17F0D995ABDD7DE>
  19. Table 1. Millers Pyramid of Clinical Competency. In: *The Ideal Book*. University of Saskatchewan. Accessed August 24, 2021. <https://openpress.usask.ca/ideabook/chapter/millers-pyramid-of-clinical-competence/chapter8>
  20. Objective Structured Clinical Examination. University of South Dakota. Accessed August 23, 2021. <https://www.usd.edu/medicine/osce>

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