IMPLEMENTING QUALITY AND SAFETY EDUCATION FOR NURSES (QSEN) PROJECT AT AUBMC

by

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Finally, to my colleagues at the American University of Beirut Medical Center (AUBMC), I direct my deepest regards for the sacrifice they offered concerning my schedule shifts.
Title: Implementing Quality and Safety Education For Nurses (QSEN) project at the American University of Beirut Medical Center AUBMC

Aim: The main purpose of this project is to propose a quality and safety educational program to prepare nurses to provide quality and safe care. Specific aims of this project are to explain what QSEN program is; highlight the importance of adopting the QSEN project; compare QSEN curriculum with the Hariri School of Nursing (HSON) undergraduate and graduate curriculum; compare QSEN curriculum with the American University of Beirut Medical Center (AUBMC) orientation program; and propose quality and safety curriculum for hospital orientation program.

Method: Literature review was undertaken to identify the importance of having quality and safety education for nurses at an early stage. This was followed by a comparison of the QSEN proposed program and the curricula at HSON and AUBMC orientation program. Common areas for quality and safety were identified as well as areas that are not addressed in the AUB/AUBMC nursing programs; specifically the ‘Systems Thinking’ approach to teaching and applying QSEN.

Proposed program: An additional content namely, systems thinking was suggested to the available program at AUBMC orientation. The cost of applying the proposed program along with the business plan was presented, and a SWOT analysis was undertaken to assess the importance and the success of the program.

Conclusion: Applying QSEN competencies and systems thinking has the potential to decrease the error rates at AUBMC, and thereby to control rates of morbidity and mortality. A reduction in errors will decrease organizational variable costs. The sooner nurses know and understand QSEN competencies/system thinking and learn how to apply it, the better the patient outcomes can be achieved.
LIST OF ABBREVIATIONS

AUB: American University of Beirut
AUBMC: American University of Beirut Medical Center
CE: Clinical Educators
CPDC: Clinical and Professional Development Center
IOM: Institute of medicine
JCI: Joint Commission International
QSEN: Quality and Safety Education for Nurses
NM: Nurse Managers
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CHAPTER 1

INTRODUCTION

Quality and safety of care are two of the main foundations of nursing practice (Hunt, 2012). It all started with Florence Nightingale in 1855, long before defining quality and safety by the Institute of Medicine. Nightingale analyzed mortality rates among British troops and significantly reduced those rates by creating and providing organizational and hygienic practices along with the world’s first performance measures of hospitals in 1859 (Mitchell, 2008).

Quality and safety as defined by the Institute of Medicine (IOM) in 2001 are “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” and “the prevention of harm to patients” respectively (Mitchell, 2008, p.1-2). Mitchell in 2008 stated that patient safety is the most important component of quality in the health care system. Safety is considered indistinguishable from the delivery of quality health care which proves that quality and safety cannot be provided separately. Despite the fact that quality and safety are two constituents measured independently, quality is usually measured by quality indicators and safety by the number of errors, near misses, mortality and morbidity rates and more (Mitchell, 2008). Consequently by providing good quality of care and safe environment for patients, errors will be decreased and avoided, thus morbidity and mortality rates will decrease. To provide quality and safe care, healthcare providers including nurses should be competent in doing so; they should be taught and trained prior to practicing patient care independently. Nevertheless, the main question is when should it be taught?
The quality and safety education for nurses (QSEN) project is a new concept already introduced in the United States. It addresses the challenge of preparing future nurses with the knowledge, skills, and attitudes necessary to continuously improve the quality and safety of the healthcare systems they work in (QSEN.org, 2014). QSEN may be introduced at the Bachelor or Master level or in the orientation program of each institution for fresh graduates and new staff. It initially focuses on competencies related to patient centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics (Hunt, 2012). In other words, QSEN proposes a new approach that incorporates systems thinking. It provides the nursing students with a solid foundation of knowledge, skills, and attitudes needed (Hunt, 2012), to help meet the challenges of improving healthcare quality and safety measures (Dolansky & Moore, 2013). In Lebanon and specifically at our center, nurses and nursing students are claimed to be prepared to provide quality and safe care, however, it is not known if this preparation is sufficient enough to qualify them to do so.

A. Background

Nurses need preparation if they are to utilize QSEN to its maximum potential to improve patient safety and to build a patient safety culture that will provide sufficient and sustainable protection of future patients. There are many approaches to preparing nurses for their role in patient safety. Since this project aims at introducing QSEN at AUBMC it is important to consider the preparation of nurses for patient safety at the Hariri School of Nursing (HSON), whose graduates serve at AUBMC. Preparation for patient safety at HSON can be considered at two levels, BSN and MSN.

A convenient place to begin considering the preparation of nurses at (HSON) is to note the BSN learning objectives as stated in the HSON Student Handbook, 2013-14,( p.7) table 1. A full outline of the BSN curriculum is presented in appendix A.
Table 1. RHSON Undergraduate Program Learning Outcomes

1. Integrate knowledge from the arts, humanities, fundamental and basic medical sciences, and nursing theory in professional practice.
2. Demonstrate competency in clinical skills and critical thinking.
3. Utilize current research knowledge related to health promotion and maintenance, illness prevention and restoration of health of individuals, families and groups with diverse cultural backgrounds.
4. Demonstrate leadership skills in the care management of clients in different health settings based on current health care policy.
5. Collaborate with other health providers to promote the wellbeing of individuals.
6. Demonstrate responsibility, accountability, and continued professional development.
7. Participate in professional and community organizations for the promotion of the nursing profession in Lebanon and the region.
8. Demonstrate effective use of personal, interpersonal and group communication skills in practice.
9. Espouse principles of professional ethics and personal integrity in nursing practice.”

At the Masters level, safety and quality issues are addressed in depth as reflected in the program learning outcomes (Table 2, Graduate student handbook, 2013-2014, p.8) and the curriculum. Graduate level students accumulate work experience and improved critical thinking skills that they use in tackling safety and quality issues in their MSN program. The full curriculum is presented in appendix B. Still, the question remains: is it enough?

Table 2. RHSON Graduate Program Learning Outcomes

1. Integrate theory and research in nursing and related disciplines as basis for advanced nursing practice and role development.
2. Initiate, participate in, and utilize nursing research.
3. Deliver advanced practice nursing based on critical thinking, advanced knowledge and skills in specialized area of nursing.
4. Demonstrate advanced clinical decision-making across health care settings.
5. Analyze the impact of socio-cultural, ethical and legal issues on nursing practice and health care delivery.
6. Assume leadership roles in education and management, utilizing inter-and Intra-disciplinary approaches.
At AUBMC Orientation Program for new nurses, patient safety is addressed. The program was last updated in November, 2014 a whole day of the five day program addresses patient safety. The full program is presented in (Appendix C), the objectives of the day on patient safety are presented in table 3 (AUBMC orientation program, November 2014, p.4).

Table 3. AUBMC orientation program, November 2014

DAY 4:
Quality Improvement & Safety at AUBMC and Patient Care

<table>
<thead>
<tr>
<th>Topic</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Performance Improvement Plan</td>
<td>8:00AM- 9:00AM</td>
</tr>
<tr>
<td>Performance Improvement Basics &amp; Principles</td>
<td>9:00AM- 10:00AM</td>
</tr>
<tr>
<td>Coffee Break</td>
<td>10:00AM- 10:15AM</td>
</tr>
<tr>
<td>Introduction to National Database of Nursing Quality Indicators (NDNQI) and Dashboards</td>
<td>10:15AM- 11:45AM</td>
</tr>
<tr>
<td>Safety Goals, JCIA and MOH Standards</td>
<td>11:45AM- 1:00PM</td>
</tr>
<tr>
<td>Lunch Break</td>
<td>1:00PM- 2:00PM</td>
</tr>
<tr>
<td>Preoperative Verification</td>
<td>2:00PM- 3:00PM</td>
</tr>
<tr>
<td>Put Patient Safety First</td>
<td>3:00PM- 4:00PM</td>
</tr>
</tbody>
</table>

B. Significance

The significance of this project is twofold. First, by applying QSEN at the undergraduate level or at the organization’s orientation program, nurses will be empowered with the knowledge, skills, and attitude to improve quality and safety across the healthcare system at an early stage. Besides, when nurses are not trained at an early stage about the importance of safety and quality, they might show reluctance in accepting any new initiative taken, and the significance of the change will not be translated adequately. Therefore, when safety and quality measures are taught at an early stage, in a clear and meaningful manner, nurses will provide efficient and safe care to the patient, improve productivity of care, take initiatives, and find ways to develop quality of care and safety. In addition, it is important to indicate that by lacking a solid background before employment, the risk of errors increases in the healthcare organization, which will affect the quality of care and safety provided to patients (Dolansky & Moore, 2013).
Secondly, as Hunt mentioned in 2012, referring to the IOM document called “To Err is human: building a safer health system”, it was revealed that the estimated cost of medical errors ranged between 17 billion and 29 billion dollars across USA. That fact urged several agencies such as the Joint Commission International (JCI) to create standards for healthcare organizations to follow in order to decrease yet control errors, therefore decreasing the cost on the patients and organizations.

Knowing that AUBMC is a JCI accredited hospital, it means that it cares about providing a safe environment for patients along with exceptional quality of care, thus the importance of having prepared and qualified nurses with the knowledge, skills, and attitude to improve the quality and safety of their clients.

C. Purpose

The main purpose of this project is to propose a quality and safety educational program guided by systems thinking to prepare nurses to provide quality and safe care. Specific aims of this project are to: explain elements of the QSEN program; highlight the importance of adopting the QSEN project; compare QSEN curriculum with the HSON undergraduate and graduate curriculum; compare QSEN curriculum with the AUBMC orientation program; and propose a revised quality and safety curriculum for hospital orientation program.
CHAPTER 2

LITERATURE REVIEW

The QSEN program proposes a new approach to patient safety that incorporates systems thinking, which helps nurses to meet the challenges of improving healthcare quality and safety measures (Dolansky & Moore, 2013). In this chapter, the historical, theoretical and empirical overview of the QSEN program is presented.

A. Historical overview

The quality and safety education for nurses (QSEN) program is a US national association that provides nurses with guidelines to reshape the nursing practice so that they can ensure high-quality and safe care. It consists of developing quality and safety skills that serve as a resource for nursing faculty to integrate contemporary quality and safety content into nursing education. In other words, it was initiated to incorporate quality and safety competencies into nursing curricula to guarantee that nursing graduates possess the knowledge, skills and attitudes needed to provide such a care (Dolansky & Moore, 2013). It was initially developed for undergraduate and graduate nursing programs (Hunts 2012), and expanded to include quality and safety education for all nurses (Dolansky & Moore 2013). Its main goal is to improve patients’ outcomes by providing nursing students with a solid foundation, so that they have all they need to provide safe and effective quality of care to patients (Hunt, 2012). It also ensures a crucial skill, namely systems thinking, which helps nurses to meet the challenge of improving healthcare as they move beyond the application of the QSEN competencies from individual patients and families, to accelerate the overall improvement of healthcare quality and safety (Dolansky & Moore, 2013).
It all started when the IOM in 2005 reported that over the past decade, and despite the implementation of the JCI goals in the majority of the hospitals around the United States, minimal progress was observed in improving the quality and safety of care provided to patients. In addition, too many errors and issues with quality of care were reported, which raised awareness and alerted the healthcare professionals about the importance of improving healthcare outcomes and the need of addressing this issue in an transparent manner (Dolansky & Moore, 2013; Hunt, 2012). Leaders from schools of nursing responded to the IOM call in 2005 and created the QSEN program. The Robert Wood Johnson Foundation funded a national study to educate nurses about patient safety and quality since nursing plays a central role in patient outcomes (Hunt, 2012).

The mission of QSEN as stated on the QSEN official website (www.QSEN.org) is to address the challenge of assuring that nurses have the knowledge, skills, and attitudes (KSA) necessary to continuously improve the quality and safety of the healthcare systems in which they work (QSEN.org, 2014). The founder of QSEN, Linda Cronenwett, believes that the program can be used as a tool to help nurses identify and link the gaps between education and practice from a quality and safety perspective (Dolansky & Moore, 2013; Hunt, 2012). However, to be able to work through the lens of quality and safety, it is important to integrate systems thinking rather than personal effort (Hunt, 2012).

The QSEN has three phases (appendix D). The first phase started by generating the QSEN program initiatives, and creating six QSEN competencies and their requisite KSAs. The six core competencies are: patient-centered care, teamwork and collaboration, evidence-based practice (EBP), quality improvement (QI), safety, and informatics (Dolansky & Moore 2013; Hunt 2012; QSEN.org, 2014). Those competencies are already integrated in most of the healthcare organizations, but need to be more integrated in the everyday practice (Hunt 2012). Likewise, each nursing student before they graduate, whether at the BS or MS level,
shall complete all the expectations related to each competency (Table 4. Example of competency versus expectation) in relation to knowledge, skills and attitudes (KSAs), (Appendix E) and be able to utilize them in their professional practice role (Hunt 2012).

Table 4. Example of competency versus expectation (QSEN.org, 2014)

<table>
<thead>
<tr>
<th>Competency</th>
<th>Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient centered care</td>
<td>Include patient in decision making, provide compassionate care based on need and values</td>
</tr>
<tr>
<td>Teamwork and collaboration</td>
<td>Interdisciplinary collaboration, shared decision making</td>
</tr>
<tr>
<td>EBP</td>
<td>Use of evidence when providing collaborative care</td>
</tr>
<tr>
<td>QI</td>
<td>Data collection, evaluation, and improvement of patient outcomes</td>
</tr>
<tr>
<td>Safety</td>
<td>Harm prevention</td>
</tr>
<tr>
<td>Informatics</td>
<td>Use technology to promote safety and quality</td>
</tr>
</tbody>
</table>

The second phase consisted of granting support to 15 pilot schools to apply QSEN. Those schools were selected based on their willingness to be cooperative and transparent in relation to quality, safety and improvement. Each school was led by an experienced course coordinator and two faculty members who worked as a team to appraise the teaching strategies designed to apply QSEN competencies. Those faculty members attended two conferences, and participated in additional collaborative conference calls during the study period. The third phase involved creating national forums to educate nursing faculty such as online modules and workshops (QSEN.org, 2014).

B. QSEN in the US

To ensure that the curriculum options can be applied to all types of schools, the QSEN leaders made sure that the schools had different background: three ADN/diploma programs, two BSN-only schools, and twelve BSN/graduate university schools. The QSEN project was piloted in 15 schools of nursing namely:
Accomplishments associated with QSEN implementation have been shared by several universities. According to Case Western Reserve University, one or more of the Pilot Schools main accomplishments include (QSEN.org, 2014): incorporating the six QSEN competencies into the nursing curriculum; refining some courses to include course-specific outcomes that
reflect the QSEN competencies; and developing and integrating competencies in quality improvement into the curriculum. Moreover, faculties have developed and integrated innovative teaching and learning strategies in clinical skills, simulated learning labs, and classroom settings. Clinical education has been redesigned to reflect the competencies, using new techniques such as reformulation of a clinical education center (or dedicated education unit) and creation of toolkits and resources for clinical instructors. In addition, faculty development programs have been conceptualized, designed, and delivered in order to increase full-time and part-time faculty members’ knowledge and skills concerning patient safety strategies and related clinical competencies. Community partners have been also engaged in the curriculum redesign, in particular in redesign of clinical experiences, and finally, continuing education programs were implemented to engage clinical partners and nursing colleagues in the local area in learning about the QSEN competencies and applications in practice.

The QSEN competencies have also been incorporated into nursing textbooks such as the medical-surgical text by Ignatavicious and Workman (2013); and other books, such as Quality and Safety in Nursing: A Competency Approach to Improving Outcomes (Sherwood & Barnsteiner, 2012); Second Generation QSEN, a special issue of the Nursing Clinics of North America (Barnsteiner & Disch, 2012); and Quality and Safety for Transformational Leadership (Amer, 2012) (Dolansky & Moore, 2013).

C. Theoretical overview

Dolansky and Moore (2013) explained that the effect of the use of the QSEN competencies cannot be realized if the nurses do not apply it at an individual and system levels of care. The authors also noticed that even those who are applying QSEN, are mainly applying it at an individual level, that is why the importance of teaching healthcare
professionals how to work and think at a systems level, to be able to provide better quality of care. Moreover, they emphasized the importance of linking the traditional individual care and the contemporary systems of care with the QSEN competencies to be able to provide “optimal patient care” (Dolansky & Moore, 2013).

Dolansky and Moore (2013) defined systems thinking as the “ability to recognize, understand, and synthesize the interactions and interdependencies in a set of components designed for a specific purpose” (Dolansky & Moore, 2013, p.7). It is in other words the ability to understand and value how patterns and interactions work and counteract with each other; how components of a complex healthcare system influence care of an individual patient; and how to link the person’s environment to his/her behavior. So Systems thinking for quality and safety in healthcare is a continuum that range from the personal effort/individual care to the systems thinking/ systems care (Figure 1. Systems thinking continuum for quality and safety example) (Dolansky & Moore, 2013).

<table>
<thead>
<tr>
<th>Personal Effort/ Individual care</th>
<th>Systems thinking/ System care</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will turn my patient</td>
<td>I will ask other nurses about products to prevent ulcers</td>
</tr>
<tr>
<td>I will post a note above the bed to remind others</td>
<td>I will compare our unit ulcer rate with benchmarks</td>
</tr>
</tbody>
</table>

Figure 1. System thinking continuum for quality and safety example (Dolansky & Moore, 2013).

It is believed that by having the right knowledge and applying systems thinking, the risk for errors in the healthcare organization will decrease. Therefore, all nurses whether novice or seniors will have improved prioritization and delegation skills; better problem solving and decision making abilities; better interpersonal relationship; and better skills to enhance workplace quality improvement initiatives (Dolansky & Moore 2013). However, “To teach systems thinking it is important to enhance the learner’s awareness of the interdependencies in people, processes, and services and to view problems as occurring as
part of a chain of events of a larger system, rather than as independent events.” (Dolansky and Moore 2013, p.8).

Nevertheless the main challenge is for nurses to link systems thinking and QSEN competencies, and “to move beyond the application of QSEN competencies to individual patients and families and incorporate systems thinking in quality and safety education and healthcare delivery” (Dolansky & Moore, 2013, p.1). Figure 2 Illustrates with examples the systems thinking continuum for quality and safety in relation to QSEN (Dolansky & Moore, 2013).

There are many ways to teach systems thinking; it can be taught in a work or classroom setting. In a work setting it can be taught by creating flowcharts, process diagrams or conduct root cause analysis. In a classroom setting, they use usually case studies (Dolansky & Moore, 2013).

<table>
<thead>
<tr>
<th>Competency</th>
<th>Personal Effort/ Individual care</th>
<th>Systems thinking/ System care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient - Centered care</td>
<td>Document the presence and extent of my patients’ pain</td>
<td>Use common definitions, terms &amp; rating scales in documenting my patients’ pain</td>
</tr>
<tr>
<td>EBP</td>
<td>Differentiate clinical opinion from research and evidence summaries</td>
<td>Discuss conflicting evidence in the literature with my colleagues</td>
</tr>
<tr>
<td>Teamwork &amp; collaboration</td>
<td>Ensure that my patient is ready for discharge by making sure they have their</td>
<td>Formulate discharge plan with my patients, their families &amp; other</td>
</tr>
<tr>
<td>Prescription</td>
<td>Healthcare Professionals</td>
<td>Performance</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Safety</td>
<td>Wash my hands at the appropriate times in the care of my patients</td>
<td>Get patients &amp; families to participate in the campaign to reduce infection by washing hands</td>
</tr>
<tr>
<td>Quality Improvement</td>
<td>Ensure that I care for central lines using evidence based practice</td>
<td>Have a peer watch my central line dressing change s that I can improve my performance</td>
</tr>
<tr>
<td>Informatics</td>
<td>Protect the confidentiality of my patients’ protected health information in the electronic health record</td>
<td>Attend in-service training updates to learn about new laws regarding health information protection</td>
</tr>
</tbody>
</table>

Figure 2. System thinking continuum for quality and safety example in relation to QSEN.

**D. Empirical overview**

Harrison (2014) in her study entitled “Quality and safety education for nurses: a nursing leadership skills exercise”, stated that having the opportunity to understand and apply QSEN concepts is a critical component in preparing nurses to have the knowledge, skills, and attitudes necessary to improve health care. In another study done by Shaar, Titzer and
Beckham, it was identified that many nursing programs in the US have already integrated QSEN competencies into various aspects of the nursing curriculum, but the importance remain in the value of mirroring QSEN competency integration into adjunct faculty orientation, for better implementation in practice (Shaar et al. 2015).

Helms and Walker (2015) showed in their study that nurse educators used QSEN competencies as an alternative method of instruction to provide a meaningful experience and meet clinical objectives. The results of the study proved that nursing students developed better understanding of the patient’s case thus providing better outcomes in terms of KSAs.

Moreover, Altmiller in 2013 believed that QSEN concepts are not new in specialized nursing practices, but they are better defined through the QSEN competencies; this helps nurses’ develop better practice behaviors to ensure quality and safety for the patients they care for and remain active stakeholders in supporting quality and safety practices (Altmiller, 2013). The Gordon and Betty Moore Foundation funded a series of activities in California over 4 years (2009–2013) to support the implementation and evaluation of the impact of incorporating the QSEN content into nursing curricula in 22 schools of nursing in the San Francisco Bay Area. Most of the schools had significant changes in the curricula and academic–clinical partnerships have been strengthened. However, the ultimate outcomes are too soon to assess (Disch et al. 2013). Similarly, Barnsteiner et al. (2013) also mentioned that after applying QSEN program, and choosing that right training method, “ultimate test will be if patient outcomes improve and if today's nursing students practice as competent nursing professionals” (p.74).

So as a summary, QSEN project emphasize the importance of using systems thinking, in relation with its competencies. Chapter 3 includes the proposed revised quality and safety program along with SWOT and cost analysis.
CHAPTER 3

PROGRAM DESIGN

Reference to the specific aims of this project, QSEN program importance and worth is highlighted in the preceding chapters. In this chapter, comparison of QSEN curriculum with the HSON undergraduate and graduate curriculum and the AUBMC orientation program is presented followed by identifying the differences. Then the quality and safety curriculum for hospital orientation program is proposed. The proposed program is based on applying QSEN essentials using systems thinking in the orientation program of AUBMC, taking into consideration the quality and safety sessions already available.

A. Comparison of the QSEN Program with HSON Curricula and AUBMC Orientation Program

To be able to compare QSEN competencies with the available curriculum at HSON, it is important to start by defining each competency. QSEN competencies as defined by the QSEN website are presented in table 5.

Table 5. QSEN competencies definitions (QSEN.org 2014)

<table>
<thead>
<tr>
<th>Competency</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Improvement (QI)</td>
<td>Use data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of healthcare systems.</td>
</tr>
<tr>
<td>Safety</td>
<td>Minimize risk of harm to patients and providers through both system effectiveness and individual performance.</td>
</tr>
<tr>
<td>Teamwork and Collaboration</td>
<td>Function effectively within nursing and interprofessional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care.</td>
</tr>
</tbody>
</table>
**Patient-centered Care**
Recognize the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for patient’s preferences, values, and needs.

**Evidence-Based Practice (EBP)**
Integrate best current evidence with clinical expertise and patient/family preferences and values for delivery of optimal health care.

**Informatics**
Use information and technology to communicate, manage knowledge, mitigate error, and support decision making.

---

Having defined the QSEN competencies, the BS and MS level courses are examined to identify whether QSEN content is included in each. Table 6 illustrates the QSEN content present in the BSN and MSN level courses at the HSON.

Table 6: competencies verses RHSON undergrad and graduate level programs

<table>
<thead>
<tr>
<th>Competency</th>
<th>BSN</th>
<th>MSN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality Improvement (QI)</strong></td>
<td>-Foundation of professional nursing</td>
<td>-Foundations of advanced practice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Developing Health Service Programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Performance Improvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Quality Management and Accreditation in Health Care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Total Quality Management</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>-Nursing care adult I and II</td>
<td>-Advanced Practice in Adult Care I and II.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Advanced Pharmacology and Therapeutics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Health Management &amp; Policy</td>
</tr>
<tr>
<td><strong>Teamwork and Collaboration</strong></td>
<td>-Leadership and management</td>
<td>-Role Development in Nursing Administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Advanced Practice in Nursing Administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Managing Quality With Teams</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Transformational Leadership for Nursing Practice</td>
</tr>
<tr>
<td><strong>Patient-centered Care</strong></td>
<td>-Introduction to nursing practice.</td>
<td>-Advanced health assessment.</td>
</tr>
<tr>
<td></td>
<td>-Health assessment</td>
<td>-Advanced Health Assessment for Mental Health</td>
</tr>
<tr>
<td></td>
<td>-Nursing care of expectant family, of children</td>
<td></td>
</tr>
</tbody>
</table>
Comparing the AUBMC orientation program with the QSEN proposed program, it shows that some concepts are missing or present but unclear (Table 7. QSEN competencies versus AUBMC orientation program) and systems thinking is not addressed.

Table 7. QSEN competencies versus AUBMC orientation program

<table>
<thead>
<tr>
<th>QSEN competency</th>
<th>Availability in AUBMC orientation program</th>
</tr>
</thead>
</table>
| Quality improvement   | -Nursing Certification and Professional Organization Membership  
                         -Orientation to Pain and PCA  
                         -Nursing Performance Improvement Plan  
                         -Performance Improvement Basics & Principles  
                         -Performance Improvement Basics & Principles |
| Safety                | -Point of care testing  
                         -Infection control  
                         -Scope of Practice  
                         -Policies  
                         -Administration of Blood and Blood Products  
                         -Central Line Care and Handling  
                         -Physical Restraints  
                         -Administration of Medications as per Standards of Care and Practice  
                         -Total Parenteral Nutrition  
                         -Infant/Child Abduction  
                         -Safety Goals, JCIA and MOH Standards  
                         -preoperative verification  
                         -Put patient safety first  
                         -Preceptorship, Mentorship, Nurse Residency Program  
                         -Chemical handling  
                         -Protocols  
                         -Emergency medications |
| Teamwork and collaboration | -Consultation and Resources                                                                                      |
Moreover, knowing that senior nurses at AUBMC serve as role models for new nurses, it is important to make sure that all nursing staff at AUBMC is aware and is applying the QSEN/systems thinking in their daily work. The main aim of applying QSEN project is to improve the quality of care and safety provided to patients, thus decreasing errors, morbidity and mortality rate.

As mentioned earlier, the orientation program at AUBMC covers some of the QSEN competencies indirectly, where the components are included in the sessions provided in the orientation but not explicitly and meaningfully. So it is important to shed light on each competency and teach the nurses to use systems thinking rather than personal effort for individual care and available protocols.

Examining AUBMC mission and vision, it is noted that there is emphasis on excellence in nursing care, and exemplary professional nursing practice by providing compassionate and quality patient care; these are major elements for JCI and Magnet accreditation. Moreover, AUBMC’s aim is to maintain what they already accomplished in terms of JCI accreditation and Magnet recognition and further improve the quality of care and safety they are providing to their patients. Its 2020 vision clearly states that they want to be
the “leading academic medical center in Lebanon and the region by delivering excellence in
delivery of patient centered care, outstanding education and innovative research” (AUBMC, 2010, p.1). AUBMC strategic goals are related to quality and safety, patient centered care, service
excellence, and operational efficiency and financial performance. The nurses practicing
values include respect, integrity, teamwork and collaboration, accountability, stewardship and
diversity. (AUBMC, 2013). Having presented AUBMC’s mission, vision, goals and nursing
values, it can be seen that they are aligned with some of the QSEN competencies, thus the
importance and feasibility of introducing QSEN at AUBMC.

B. Proposed program

As per Dolansky and Moore (2013), the clinical environment is an ideal place to teach
systems thinking and link it to QSEN competencies. Thus, initiating QSEN at the healthcare
organization may serve achieving the purpose of having nurses competent in quality and
safety care, since the nurses will be able to link what they are learning to what they are
applying. When nurses apply QSEN competencies when working on their units, they will
serve as role models to nursing students and new nurses on the units (Hunt, 2012).

QSEN initiative will be divided into two major parts: The first part will be teaching
all registered nurses at AUBMC about QSEN program by doing several workshops to ensure
the attendance of all the registered nurses followed by an online exam for validation. Pre and
post workshop tests will be done to monitor gain in QSEN knowledge. A self-learning
package can also be added to Moodle for reference. Second part will be adding a workshop of
6 sessions to the orientation program about QSEN competencies in relation to systems
thinking for novice nurses followed by an exam. The exam shall be added to the general
mandatory exams for all nurses at AUBMC.
For any proposed program, there should be evidence that this program is aligned with the mission and vision of the university or healthcare organization. As such, the objectives of QSEN program should be consistent with those of AUBMC. Moreover, it is important to make sure that such a program is not costing the institution unnecessarily.

The proposed program objectives can be summarized as follows:

1. Developing quality and safety competencies that must be accomplished in the healthcare organization.
2. Developing quality and safety competencies that must be accomplished in the orientation program.
3. Creating learning resources, modules, and interactive case studies to help prepare all registered nurses at the organization and new nurses in the orientation program with the competencies needed to provide quality and safe care.
4. Developing a Web-based learning program, and content-specific teaching materials for nurses in the healthcare organization (Moodle).

To apply the QSEN program at AUBMC, it is important to note that there is no need for any costly preparation, since workshops will be provided in the AUBMC auditorium, where necessary logistics are already available. If the AUBMC auditorium is not available, sessions can always be done at the AUB School of nursing. It is important that attendance will be taken in each session to follow up and monitor staff compliance. At the beginning of the workshop, a pretest will be provided to assess staff initial knowledge in relation to QSEN competencies and systems thinking. A posttest will be done on Moodle within a week. If any staff was not able to attend the sessions provided, he or she shall read the self-learning package that will be provided on Moodle and sit for the online exam. However, if AUBMC
suggest starting the program with a small sample for piloting, the program will be taught to senior nurses, preceptors, mentors and managers, since they are responsible for new orientees and serves as role models to all nursing staff. At a later stage, QSEN training to all nurses will be done after evaluating the pilot training. QSEN program will be the same, in both stages, whether at the workshop or in the AUBMC orientation program. It will be composed of 6 sessions covering QSEN competencies and their relation to systems thinking, with a coffee and lunch break (Appendix F)

Moreover, no additional equipment are needed to apply the QSEN program, since all classrooms and auditoria are equipped with projections, and all nursing stations have computers with access to Moodle on duty. All attendance sheets will be provided from the Clinical and Professional Development Center (CPDC) department if the AUBMC adopted the QSEN program.

Concerning the human resources needed, QSEN program will be applied in collaboration with the CPDC department. Clinical educators will be responsible for follow up of the attendance of the nurses, each in his/her area. They will facilitate the reservation of the location of the presentations, and will add the sessions to the nursing classroom orientation program. Moreover, the IT department will have a role in adding the self-learning package and the exams on Moodle. As mentioned earlier, a business plan and a situation analysis are done to make sure the QSEN program is aligned with and serves AUBMC vision and mission.

C. Business plan

In order to be able to estimate cost, remuneration and equipment needed for the QSEN program, it is important to identify what are the staffing needs, space requirement, marketing strategies needed and budget plan. As mentioned earlier, the proposed program is
divided into two phases, phase one introducing QSEN program to AUBMC staff through workshops, and phase two adding QSEN competencies to the available orientation program for new employee.

The staffing needs differ between phase one and two. In phase one; more staff is needed since we are introducing the new QSEN program by doing workshops. In phase two, less staff is needed since the orientation program is already there and we are adding QSEN sessions only. Staffing needs are presented in Table 8.

Table 8. Staffing needs for applying QSEN at AUBMC

<table>
<thead>
<tr>
<th>Staff needed in phase one</th>
<th>Staff needed in phase two</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 1 Registered Nurse (RN) or Clinical Educator (CE) for registration</td>
<td>- 2 Senior RNs or CEs to teach the sessions</td>
</tr>
<tr>
<td>- 2 Registered Nurse (RN) or Clinical Educator (CE) for sessions</td>
<td>No other staff is needed since they are already available in the orientation program</td>
</tr>
<tr>
<td>- 1 program coordinator to monitor the flow of the workshops. (Senior RN with a Master’s degree in administration OR a clinical educator)</td>
<td></td>
</tr>
<tr>
<td>- IT</td>
<td></td>
</tr>
<tr>
<td>- 1 dietary department employee</td>
<td></td>
</tr>
<tr>
<td>- 1 housekeeping employee</td>
<td></td>
</tr>
</tbody>
</table>

The space requirements related to each phase are presented in Table 9.

Table 9. Space requirement for applying QSEN at AUBMC

<table>
<thead>
<tr>
<th>Space needed in phase one</th>
<th>Space needed in phase two</th>
</tr>
</thead>
<tbody>
<tr>
<td>- AUBMC auditorium (SB101) OR</td>
<td>- Wherever AUBMC orientation program is held.</td>
</tr>
<tr>
<td>- HSON classrooms</td>
<td></td>
</tr>
</tbody>
</table>
Concerning the marketing strategies needed, a proposal shall be written that include the importance of the QSEN program and a summary of the proposed program along with budget plan. The proposal shall be sent to the nursing administration department and chief of staff executive for revision and approval. No marketing is needed for the participants, since the program will be mandatory to all the nurses and will be registered at earlier stage. Staff in phase one will be informed by email, and by their managers and clinical educators for reservations for the workshop. New staff will attend sessions as part of their classroom orientation program.

D. SWOT analysis

A SWOT analysis is done to assess the feasibility of introducing such a program to AUBMC. Based on the information gathered from the literature and analyzing the mission, vision and strategic goals of the organization, the strengths, weaknesses, opportunities and threats are analyzed. The SWOT analysis is presented in table 10.

Table 10. SWOT analysis for applying QSEN at AUBMC

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- AUBMC mission, vision, strategic goals and nursing values are aligned with the proposed program objectives</td>
<td>- Staff might consider it as extra work</td>
</tr>
<tr>
<td>- QSEN program is cost effective</td>
<td>- Nurses do not currently think from a systems perspective</td>
</tr>
<tr>
<td>- Human resources (staff) needed to apply program are available (AUBMC staff)</td>
<td>- Initially the program will be generic rather than specialty oriented</td>
</tr>
<tr>
<td>- The QSEN program can be easily incorporated into the existing orientation program</td>
<td>- Staff resistance to additional training modules and examinations</td>
</tr>
<tr>
<td></td>
<td>- Train the trainer</td>
</tr>
</tbody>
</table>
- Training QSEN for existing nurses is related to AUBMC mission vision and goals
- Added value to maintain JCI and magnet

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Training in QSEN is available</td>
<td>- Competitive healthcare organization apply QSEN before AUBMC</td>
</tr>
<tr>
<td>- QSEN is not yet applied outside the US</td>
<td></td>
</tr>
<tr>
<td>- AUBMC can achieve another first by being the first healthcare organization in the region to implement QSEN</td>
<td></td>
</tr>
<tr>
<td>- Better educated nursing workforce</td>
<td></td>
</tr>
</tbody>
</table>

E. Cost allocation

In the budget plan, the resources are identified and used in a minimal cost. Identifying the direct (like remuneration) and indirect cost (like utilities, telephones) is calculated. Budgeting a program depends usually on funds, thus the importance of receiving funds from AUBMC. The purpose of budgeting is done for financial control, management and planning purposes.

Before elaborating the budget plan, it is important to mention that there will be seven workers in the program. All team members are employees of AUBMC and will be paid in time spent in the workshop. Revenues for such a program cannot be calculated or estimated at this stage but can be done on a yearly basis after implementing QSEN in all the organization in the form of controlling errors and saving unnecessary costs accordingly.

Cost allocation in this program will be easier than other programs. QSEN proposed program will be done at AUBMC premises, which will keep the cost of utilities (projection for education, desks, chairs and tables), rent, telephone calls, classroom education, electricity
and cleaning utilities insignificant. AUBMC already have those mentioned items with or without the QSEN program.

Stationary and printing cost in phase one is different from that of phase two. In phase one, pens, papers (pretest) and attendance sheets and evaluation sheets are needed. In phase two, attendance sheets are already available; there is a need to increase the number of the evaluation sheet by one for each new employee that include all 6 sessions.

Remuneration of all the staff needed in the program will not be paid from the program budget since they are all already employed at AUBMC and are receiving their salaries from AUBMC as per contract. The time that those staff give for the program from their off, will be compensated either by odd time, or paid as straight hours for every hour spent. Pay rates per hour for each team member will be the same as his/her contract states at AUBMC.

The workshop will be divided into 6 sessions, each session for an hour. A 15 minutes pretest will be done before the initiation of the workshop, along with a 30 minutes registration and welcome note. A 30 minutes coffee break will be given after the second session, and an hour of lunch break after the fourth session. Evaluation of the sessions will be done at the end of each. So the working hours per team members are summarized in table 11.

Table 11. Cost allocation for applying QSEN at AUBMC

<table>
<thead>
<tr>
<th></th>
<th>Workshop phase 1</th>
<th>Orientation program phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff</strong></td>
<td>Working hours and responsibilities</td>
<td><strong>Staff</strong></td>
</tr>
<tr>
<td><strong>Program coordinator</strong></td>
<td>8 hours: monitoring the flow of the workshop. Welcoming the staff and observing the pretest.</td>
<td>2 RNs or CEs for topic presentation.</td>
</tr>
<tr>
<td><strong>2 RNs or CEs presenting the topics</strong></td>
<td>6 hours: teaching the sessions (preferable master prepared staff).</td>
<td>All other staff allocated in phase one is not needed, since they are already available in the</td>
</tr>
<tr>
<td>Staff</td>
<td>Number of staff needed</td>
<td>Number of staff needed</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Program Coordinator</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>RN</td>
<td>1 or 2</td>
<td>8.5</td>
</tr>
<tr>
<td>CE</td>
<td>1 or 2</td>
<td>8.5</td>
</tr>
<tr>
<td>IT</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Dietary employee</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F. Estimated cost

Considering that the staffs responsible to provide the workshop are working outside their duty hours, the cost of each workshop will be calculated in table 12.

Table 12. Estimated cost of applying QSEN at AUBMC

As per the Human Resource department at AUBMC, there are 650 registered nurses. Each workshop will accommodate around 50 attendees. So, 14 workshops are needed to cover all nurses. Two additional workshops shall be done for management team (NM, CE, Leaders). Each month two workshops will be presented. So to teach all staff about QSEN, it will need seven months.
Indirect costs like electricity, tables, chairs, projection cannot be calculated since it is already available at AUBMC. In addition, the cost of the coffee break items shall be added to the calculated cost to have a more accurate account of the expenses. Coffee break cost for 50 staff members as priced by AUBMC is 200 $. So the estimated cost of the project in phase 1 will be: (number of workshops) x (coffee break fees + cost per workshop) = 16 x (200$ + 116, 45$) = 5064$. In relation to the orientation program, the cost will be adding to each orientation program, the cost of one workshop.
CHAPTER 4

CONCLUSION

Even though most of the QSEN competencies are available in an informal manner in the AUBMCs orientation program, it is important that new nurses understand and apply QSEN competencies in a systems thinking method from the very beginning, which will help them provide better quality of care and safe treatment to the patients. In addition, it will let new nurses be more proactive in any quality or safety initiative taken, and will be less reluctant when change is needed.

A. Recommendations

Quality and safety are rapidly advancing throughout the years, so it is important to always review and evaluate the QSEN competencies, knowledge, skills and attitudes to be always updated and be useful for all nurses to ensure the highest level of care possible. This can be done by adding new competencies or even customizing each competency depending on the specialty unit.

Of significance to the initiative of QSEN is to have clinical educators and advanced practice nurses certified in QSEN training that is available on the QSEN.org website so that nurses and others are trained by qualified personnel.

Importantly, AUBMC has other health workforce members in addition to nurses working on quality and safety issues, so applying QSEN for nurses and teaching systems thinking for all disciplines should be considered. Applying QSEN project shall be done in collaboration with the Quality and Safety Department at AUBMC.
Last recommendation is to find creative approaches to establish a culture of safety at AUBMC that is deep-rooted in the staff values and beliefs. Examples of such approaches could be story telling of successful quality and safety practices; and case studies of interprofessional collaboration where quality and safety are addressed.

B. Conclusion

Applying QSEN competencies and systems thinking has the potential to decrease the error rates at AUBMC, and thereby to prevent preventable morbidity and mortality. A reduction in errors will decrease organizational variable costs. The sooner nurses know and understand QSEN competencies/systems thinking and learn how to apply it, the better the patient outcomes can be achieved. Furthermore, having nurses at all levels competent in systems thinking and proficient in QSEN competencies will further enhance the reputation of AUBMC and provide patients and nurses with a safer environment in which to be treated and work.
REFERENCES


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American University of Beirut Medical Center (2013). Alignment of nursing strategic Goals with that of AUBMC strategic goals [Brochure]


Definition of health and safety in English: (health and safety)
http://www.oxforddictionaries.com/definition/english/health-and-safety


Quality & Safety Education for Nurses (QSEN) (American Association of Colleges of Nursing) http://www.aacn.nche.edu/qsen/home


APPENDIX A
Undergraduate Course Descriptions

AUB Catalogue 2013-2014

Course Descriptions

NURS 200 Introduction to Nursing 2.0; 2 cr.
Introduces concepts basic to the nursing profession. The nature of nursing as a profession, past, present, and future, is studied with a focus on the role of nurses in meeting the health needs of humanity throughout the health–illness continuum. Fall.

NURS 201 Introduction to Nursing Practice 1.2.3; 2cr.
This course introduces students to concepts and interventions basic to nursing practice. The course uses the nursing process as the organizing framework, and the concepts of health, nursing, client, and environment are integrated throughout. Performance of basic client care skills are emphasized, including the scientific rationale for both health promoting and health restoring nursing interventions. Prerequisites: NURS 200 and HUMR 246. Spring.

NURS 202 Health Assessment 1.2;3 2 cr.
The course focuses on assessment of health across the life span and provides the student with the knowledge and skills needed to assess the health status of individuals from infancy to old age. Emphasis is placed on assessment of the physical, psychosocial, and cultural dimensions of the individual. The course includes lectures and practical experiences in the assessment of individuals to identify normal and abnormal findings. Corequisite: NURS 201. Spring.

NURS 203 Biostatistics for Nurses 3.0; 3cr.
This course is designed to introduce the BSN students to the concepts and applications of statistics in the nursing field. The course starts with a general overview of probability, types of data, and ways to summarize and present them. The course then introduces the concept of hypothesis testing and the methods to carry them. Applications on the computer using the SPSS software will be discussed in class. Summer

NURS 205 Foundation of Professional Nursing 2.0; 2 cr.
In this course students will explore recent issues affecting the nursing profession in terms of role expansion of the nurse. The nursing process is covered as an organizing framework for nursing practice.

NURS 210 Pathophysiology 2.0; 2 cr.
This course focuses on the biologic alterations that affect body dynamic equilibrium or homeostasis. The content of this course is organized into three areas of focus based on the health–illness continuum: 1) control of normal body function; 2) pathophysiology or alteration in body function; and 3) system or organ failure. Prerequisites: BIOC 246, HUMR 246, PHYL 246, and MBIM 237. Summer

NURS 300 Nursing Care of Adults I, Theory and practicum 2.2; 6; 5 cr.
This course covers scientific principles in the care of adults presenting with medical–surgical problems. This course builds on the framework of man, environment, health and nursing. The practicum provides students with opportunities to apply knowledge in clinical practice. Prerequisites: NURS 202, NURS 210. Fall.

NURS 302 Nursing Care of Adults II, Theory and practicum 2;2; 6; 5 cr.

This course is a continuation of NURS 300. Emphasis is placed on the following dysfunctions: metabolic and endocrine, neurologic, eye ear nose throat, renal and urinary, integumentary, hepatic and biliary, rheumatic, as well as the infectious process. Prerequisites: PHRM 240, and NURS 300. Spring.

NURS 304 Nursing Care of the Expectant Family, 2;2;6;5 cr. Theory and Practicum

This course focuses on reproductive health, from conception to the neonatal period. The content stresses the nurse’s role in reproductive health and risk. The practicum provides clinical application of knowledge, focusing on women in the childbearing cycle, the newborn, and families as clients in the hospital and outpatient settings. Prerequisites: NURS 202 and NURS 210. Fall.

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Course Descriptions

NURS 306 Nursing Care of Children, Theory and Practicum 2;2;6; 5 cr.

This course focuses on the care of children, from infancy through adolescence. Topics include ambulatory and in–patient care, as well as primary, secondary and tertiary care. The practicum provides the students opportunities to assess health needs of children based on knowledge of growth and development, and to implement nursing care, based on the nursing process. The roles of nurse as teacher, patient advocate and nurturer are emphasized. Prerequisites: PHRM 240, NURS 304, and PSYC 210. Spring

NURS 307 Practicum I 0.9; 0cr.

This course is designed to provide students with opportunities to practice advanced nursing skills learned in previous nursing courses, and builds on experiences gained

In the Junior years. Prerequisites: N 300, N 301, N 304 and N 306. Summer

NURS 308V Maternal Child Nursing, Theory and Practicum 3.9; 6 cr.

This course focuses on the childbearing family from conception to the newborn period as well as primary and tertiary care of the ill child from infancy to adolescence. The clinical component emphasizes the application of knowledge acquired in class in the care of the childbearing family and children with illnesses from infancy to adolescence.

NURS 311V Nursing Care of Adults, Theory and Practicum 3.9; 6 cr.

Facilitates the development of advanced knowledge and application of scientific principles in the care of clients representing medical–surgical problems of the adult population. This course builds on the framework of person, environment, health status, and nursing. The clinical component provides an opportunity for advanced clinical application of concepts discussed in class in the care of patients and their families.
NURS 312 Mental Health and Psychiatric Nursing 2.8; 5 cr.

The holistic philosophy of clients as bio–psycho–social entities is stressed in both mental health and mental illness. General theories of psychiatry and mental health therapies are presented. The course provides clinical experience in psychiatric–mental health settings. Emphasis is placed on the quality of coping abilities of clients in varying degrees of stress and crisis. Opportunities are provided for students to work collaboratively with multi-disciplinary health teams to assess, plan, and implement relevant nursing interventions in both mental health and illness. Prerequisites: SOAN 201, and PSYC 201. Fall and spring.

NURS 313 Leadership and Management 2.8; 5 cr.

in Nursing, Theory and Practicum

This course discusses concepts of leadership, management, creativity, analysis, power, change, and evaluation. Students investigate, analyze, and conceptualize the different modalities of leadership, utilizing nursing and management theories. The practicum allows the student to explore his/her role as a potential leader. The learner observes and assists in the practice of different modalities of leadership and managerial skills in a variety of health care settings.

NURS 314 Community Health Nursing, Theory and Practicum 2.8; 5cr.

The course provides knowledge in the broad area of the field of nursing, public health, and primary health care. The levels of prime concern are the small group, including the family and its individual members, and the large group, including the community. The focus of the clinical component is on the promotion and maintenance of high levels of health and well-being, and prevention of illness and disability. Fall and spring.

NURS 400 Critical Care Nursing, Theory and Practicum 2.4; 4 cr.

This course focuses on the care of clients with critical care problems. Emphasis is placed on cardiovascular and respiratory problems, neurologic disturbances, shock, sepsis, metabolic and endocrine imbalances, altered nutrition, renal failure, emergency and disaster nursing. The practicum provides opportunities to apply knowledge in clinical settings. Prerequisite: NURS 302. Fall.

NURS 402 Mental Health and Psychiatric Nursing, 2.8;5 cr. Theory and Practicum

This course provides the mental health setting for self-awareness and therapeutic use of self in effective communication. The holistic philosophy of clients as bio-psycho-social entities is stressed in both mental health and mental illness. General theories of psychiatry and mental health therapies are presented. The practicum provides clinical experience in psychiatric-mental health settings. Emphasis is placed on the quality of coping abilities of clients in varying degrees of stress and crisis, with experiences in working with multi-disciplinary health teams to assess, plan, and implement relevant nursing interventions. Prerequisites: Senior standing, SOAN 201, and PSYC 201. Fall.
NURS 404 Nursing Informatics 2.0; 2 cr.

This course focuses on the history of health care informatics, basic informatics concepts, and health information management applications. The student progresses from developing knowledge of basic concepts and methods of health care informatics; to learning about specific information management applications in health care administration, practice, education, and research; and finally to a hands-on experience with a specific application of his/her own choosing. Prerequisite: Consent of instructor. Fall.

NURS 405 Critical Care Nursing, Theory and Practicum 2.6; 4 cr.

This course addresses the management of critically ill adults. Emphasis is placed on diagnostic reasoning, interventions, and outcome assessment in patients presenting with complex cardiovascular, respiratory, renal and metabolic problems, as well as trauma. The clinical component provides experiences where students apply concepts learned in class in critical care areas in the hospital. Prerequisite: NURS 311V.

NURS 406 Nursing Research 3.0; 3 cr.

Focuses on the process involved in the scientific approach and its application to nursing. Special emphasis is on the basic research steps, the research design, assessment measures, and data analysis with a focus on research utilization. Prerequisite: NURS 203. Fall.

NURS 408 Community Health Nursing, Theory and Practicum 2.8; 5 cr.

This course provides knowledge in the broad field of nursing, public health, and primary health care. The levels of primary concern are the small group, including the family and its individual members, and the large group, including the community. The practicum provides field practice through collaboration with other health professionals in primary care settings, with focus on health promotion, maintenance, and the prevention of illness and disability. Prerequisite: Senior standing. Fall

NURS 410 Leadership and Management in Nursing, Theory and Practicum 2.8; 5 cr.

This course discusses how professional nursing incorporates the concepts of leadership, management, creativity, analysis, power, change, and evaluation. In this course students investigate, analyze, and conceptualize the different modalities of leadership, utilizing nursing and management theories. The practicum allows students to explore their role as potential leaders. Students observe and assist in the practice of different modalities of leadership and managerial skills in a variety of health care settings. Prerequisite: Senior standing. Spring.

NURS 411 Intensive Practicum in Area of interest 0.9; 0 cr.

This course focuses on preparing students towards their transition to professional nursing practice. Opportunities are provided for students to synthesize knowledge and refine skills acquired in the planning, provision and evaluation of nursing care, communication, and interdisciplinary practice in a clinical area of their interest. Consent of instructor is required for the site of clinical practice. Prerequisite: Senior standing. Spring.
NURS 500 Nursing Theory 2.0; 2 cr.
This course provides analysis and evaluation of nursing theories and conceptual frameworks with implications for practice and research. Overview of theory development is presented with a focus on the students’ area of study.

NURS 501 Foundations of Advanced Practice 3.0; 3 cr.
The course provides students with knowledge about the advanced nursing practice (ANP) role, and focuses on the foundations and philosophy of care. Legal and ethical issues related to ANP, such as regulation, are explored. The role of nursing in affecting health care system change is emphasized.

NURS 502 Advanced Nursing Research 4.0; 4 cr.
This course focuses on complex research designs and analysis of multiple variables. The interrelationship of theoretical frameworks, quantitative/qualitative design, sample selection, data collection instruments, and data analysis are analyzed in terms of clinical nursing research problems.

NURS 503 Advanced Health Assessment 2.3; 3 cr.
This course focuses on the advanced comprehensive assessment of individuals using a case based approach. Students are provided with advanced knowledge and skills in clinical interview, focused history taking, psychosocial and physical assessment, and diagnostic reasoning.

NURS 503 A Advanced Health Assessment for Mental Health 1.0; 1 cr.
This theory course focuses on the comprehensive health assessment of clients using a biopsychosocial approach. Mental health students will build on their knowledge and skills in clinical interviewing, focused history taking, and critical analysis of client data to identify actual and potential health problems. The focus will be on the differential diagnosis of various case presentation with organic and psychological etiologies.

NURS 504 Advanced Pathophysiology 3.0; 3 cr.
This is a course in advanced pathophysiology related to acute and chronic illnesses experienced by adults. Emphasis is placed on pathophysiologic nursing phenomena experienced across diseases, their manifestations and assessment measures. Case studies are used to illustrate application to advanced nursing practice.

NURS 505 Advanced Practice in Adult Care I 2.6; 4 cr.
This course builds on NURS 504 and includes a theory and a clinical component. Emphasis is on the application of pathophysiologic, psychologic and pharmalogic principles and advanced practice skills in the management of adults with potential and actual health problems. The practicum provides opportunities for students to begin development of their advanced practice roles in specialty areas of their choice. Prerequisites: NURS 503, NURS 504.

NURS 506 Advanced Practice in Adult Care II 0.16; 4 cr.

This is a practicum in which students apply content learned in NURS 503, 504, 505 and 515, and use concepts learned in NURS 501 and NURS 509, in the advanced management of adult clients with various illnesses. Interdisciplinary collaboration, research utilization, educational activities and case management are emphasized in a specialty area of practice. Prerequisites: NURS-505 and NURS-515.

NURS 507 Role Development in Nursing Administration 3.0; 3 cr.

This course focuses on administrative skill development, managerial roles and responsibilities, and organizational effectiveness in a changing health care environment. Emphasis is placed on strategic management, interdisciplinary collaboration, business ethics, and international health management.

NURS 508 Advanced Practice in Nursing Administration 0.16; 4 cr.

This practicum focuses on developing advanced management and administrative nursing skills in hospitals and primary health care settings. Prerequisite: NURS 507.

NURS 509 Role Development in Nursing Education 3.0; 3 cr.

This course addresses principles of teaching and learning, instructional methods, test construction and use, as well as curriculum and program development as applied to nursing. The course enables students to apply educational theory and research in various settings such as schools of nursing and staff development centers.

NURS 512 Advanced Psychiatric and Mental Health Assessment 1.3; 2 cr.

This course focuses on the advanced comprehensive mental health assessment of individuals using a case based approach. Students are provided with advanced knowledge and skills in clinical interview, focused history taking, mental status examination and diagnostic reasoning. The student performs comprehensive assessment and D.S.M. IV diagnosis on adult populations.

NURS 513 Advanced Research Methodology 2.0; 2 cr.

This course is intended to familiarize students with advanced concepts and methods in research. The course addresses issues related to chance, bias, and confounders, and how to control their effects. Students have the opportunity to have hands–on experience with psychometric tests as well as multivariate analysis techniques.

PHRM 314 Advanced Pharmacology and Therapeutics 3.0; 3 cr.
This course covers pharmacology and drug therapy related to advanced nursing practice. General principles of pharmacokinetics pharmacotherapeutics, pharmacogenetics and considerations for special populations are covered. Classes of drugs, their mechanism of action, drug selection, dosage, therapeutic and adverse effects, and patient monitoring are discussed using case studies of clinical conditions. Students are required to have taken pharmacology at the undergraduate level before PHRM 314.

NURS 516 Psychopathology and Human Behavior 3.0; 3 cr.

This theory course examines the effects and/or sequels of alterations in selected bio-behavioral processes in the adult human suffering from illnesses with critical onsets and long-term unstable conditions. It focuses on the study of the brain and behavior and the neurological, physiological and biochemical foundations of cognition, mood and affect. Students will be exposed to advanced assessment skills, selected theories and research to identify complex psychiatric disorders and interventions utilizing case studies.

NURS 517 Models of Treatment-Psychotherapy 1.6; 3 cr.

(Bio-behavioral Nursing Interventions)

In this course, students learn the models of treatment of psychiatric and mental health disorders, and become trained on psychotherapeutic interventions in acute settings. Theories on individual psychotherapy, crisis intervention, group and family therapy are covered. This course has a clinical component where students do practicum in a psychiatric care department. In this course students learn the application of the acquired knowledge in the field of practice and start to practice their role.

NURS 518 Group and Family Psychotherapy 1.6; 3 cr.

This course is complementary to the ―Models of Treatment‖ course, and it focuses on group and family psychotherapeutic interventions. Students synthesize knowledge of theories in the provision of care to groups and families with complex psychiatric problems. Family and group intervention strategies are discussed in a variety of settings. Students explore the practice of these interventions in psychiatric care departments.

NURS 519 Clinical Residency in Acute Psychiatric Care 0.16; 4 cr.

The purpose of this clinical practicum course is to provide opportunities for students to apply the content learned from courses. Students will use assessment skills, selected theories, and research to identify complex health problems and interventions for diverse populations. The focus is on advanced case management and practice of the role, which is further developed as the student integrates theory and practice skills in acute and chronic or community settings. Students will spend 224 hours of clinical hours under the supervision of a preceptor.

NURS 520 Managing Quality With Teams 3.0; 3 cr.

This course addresses theory and application of quality teams, their composition, purposes, function, and decision making tools. Process improvement team and the use of mapping processes for process improvement are a main focus.
NURS 522 Principles and Practice of Community Health Nursing 2.3; 3 cr.

This course introduces concepts and issues relevant to the advanced practice of public and community health nursing. Areas of focus include health promotion, management of chronic disease and health education. The course will use case studies in class and field work in the community.

NURS 523 Advanced Community Assessment and Interventions 2.3; 3 cr.

This course focuses on the nursing assessment of the health of communities using a case based approach. Students are provided with advanced knowledge and skills in population and individual needs assessment and community based interventions. Clinical experience will be provided.

NURS 524 Clinical Residency in Public and Community Health Care 0.16; 4 cr.

The purpose of this clinical course is to provide students with opportunities to apply content learned in community courses, with a focus on advanced case management and health promotion. Assessment skills, theories and research will be utilized in identifying health problems and planning community interventions. Prerequisites: NURS 522 and NURS 523.

NURS 525 Transformational Leadership for Nursing Practice 3.0; 3 cr.

The purpose of this course is to promote critical thinking about, and utilization of, transformational leadership behaviors in nursing settings. The course encourages a reflective approach to cultivating an effective personal leadership style, with a particular emphasis on transformational leadership. Students will assess their leadership behaviors, develop strategies to improve, and practice targeted leadership behaviors. Students develop an evidence-based transformational leadership plan with short, medium and long-term objectives during the course.

NURS 527 Developing Health Service Programs 3.0; 3 cr.

The purpose of this course is to introduce students to the development and implementation of programs/projects intended to improve practice and health system outcomes. The course will focus on the theory and practice of organizational communication in its various forms - internal, external, informal and formal - and introduce conceptual approaches and techniques of program evaluation. Opportunities for gaining access to health service organizations for project work will be provided. Students will prepare a project plan as part of the course.

NURS 528 Practicum 0.2; 2 cr.

This is a practicum in which students apply the various roles of the advanced practice nurse in their area of specialty. The aim is to extend the clinical experiences obtained during the residency and enhance advanced practice competencies, in preparation for specialty certification.

NURS 526 Comprehensive Exam 0 cr.

NURS 598 Project 3 cr.
Special projects directed toward acquiring skills needed in the development of programs relevant to nursing care within the student’s area of interest. Projects vary depending on the track of study.

NURS 599 Thesis 6 cr.

HMPD 302 Health Management & Policy (3 credits): The course focuses on the managerial and planning skills needed by all public health graduates. The course is designed to introduce students to policy making; the role of private and public sector planners, decision makers and administrators in the policy-making process; policy/program implementation; management; and evaluation.

HMPD 311 Health Information Systems (2 credits): This course will introduce basic concepts of information systems, with an emphasis on applications in the management and operations of health care organizations.

HMPD 315 Performance Improvement (3 credits): The course examines the two dimensions of the service delivery process; the provider, and the service. In this context, the course consists of two interrelated modules emphasizing the role of human resources management and service excellence in improving the performance in health care settings.

HMPD 325 Quality Management and Accreditation in Health Care (2 credits):

A course that examines at multiple levels the theory and practice of quality management and accreditation in health care organizations. The objectives of the course are to: (1) convey an understanding of quality of care, with particular attention to conceptual framework for continuous quality improvement, quality assessment, improvement and patient safety including approaches, methods and tools, (2) explain how to develop a quality improvement plan, performance indicators and measurement systems for quality and accreditation; and (3) address ethical issues related to quality management, risk management and patient safety with particular attention to Lebanon and the region.

HMPD 342 Financial Management and Accounting (3 credits): The course covers the basic skills of modern financial management and accounting, and the utilization of its concepts and tools to make decisions in health care organizations. Required in the administration track.

MNGT 330 Total Quality Management (3 credits): An advanced analytical account of TQM as a modern management philosophy and program for achieving and sustaining customer satisfaction. Relevant TQM knowledge base will be highlighted with emphasis on the executive role and intensive use of practical applications.

MNGT 332 Human Capital Management (3 credits): An advanced analysis of the human resource function and the challenge of managing human capital in a modern corporation. The course highlights the interrelationships of the different human resource management functions and the strategic role of the HR in today’s environment, and capitalizes on new trends and actual case examples to illustrate current HR best practices. Required in the administration track.
MNGT 340 Organization Theory (3 credits): An analytical overview of management thinking with special emphasis on concept-formation, methodology, organizational models, management functions, processes and major schools of thought.

Minor in Education. Possible Courses include:

EDUC 301 Seminar in the History and Philosophy of Education (3 credits): Development of educational thought and practice through primary sources. Systems of educational theory will be examined from the age of Pericles to post World War II, with special emphasis on contemporary educational practice. Annually.


EDUC 317 Theory and Methods of Testing (3 credits): Theory and practice of test construction and use. The goal is to build a broad background of information and skill for the proper evaluation of psychological tests and the correct interpretation and use of test results. A wide variety of tests will be examined, with emphasis on major tests of intelligence and aptitude, achievement, and personality. Alternate years. Required for the minor in education.

EDUC 326 Theory and Design of Curriculum (3 credits): Examination of organization, scope, and sequence of curricula with special emphasis on various approaches to curriculum development. Annually. Required for the minor in education.
APPENDIX C

American University of Beirut Medical Center Nursing Services Clinical & Professional Development Center
RN Orientation Program/November 2014/AK & RS 2

Dear Registered Nurse Orientees:
By the end of the program, you are expected to:
1. Attend all the sessions included in the course outline.

2. Score a minimum of 60% in the following exams as indicated in schedule:

☐ Emergency Medications (ACLS Drugs)
☐ Physical Assessment
☐ Administration of Intravenous Fluids
☐ Calculation of Medications (passing grade: 70%)
☐ Administration of Blood/ Blood products (passing grade 80%)

☐ General Mandatory Exam:
☐ Infection Control
☐ Application of Restraints
☐ Safety
☐ Age Related Specifics
☐ JCIA questions
☐ Communication & Etiquette
☐ Nurse’s code of ethics and patient’s bill of rights
☐ Material Safety Data Sheet (MSDS)
☐ Emergency Management Plan
☐ Fire Safety

Exams to be taken are indicated on your schedule.
Thank You,

Clinical & Professional Development Center
Table 1. History of QSEN

<table>
<thead>
<tr>
<th>Phase</th>
<th>Details</th>
<th>Websites and References</th>
</tr>
</thead>
</table>
| Phase 1ª  
October 2005- March 2007 | QSEN competencies and their requisite KSAs  
QSEN.org website | qsen.org/competencies/pre-licensure-ksas/  
Cronenwett et al., 2007 |
| Phase 2ª  
April 2007–October 2008 | Funded 15 pilot schools to use the IHI Learning Collaborative method to develop, test, and disseminate teaching strategies  
http://qsen.org/teaching-strategies/ |
| Phase 3ª  
November 2008- February 2012 | National forums to educate nursing faculty  
Incorporation of nurses into the Veterans Affairs (VA)  
Quality Scholars program (VAQS- 2 year pre or post-doctoral fellowships in quality and safety)  
Faculty modules to the QSEN website  
8 regional Faculty Development workshops (train the trainer) were coordinated by the AACN | http://qsen.org/conferences/  
VAQS.org  
http://qsen.org/faculty-resources/learning-modules/  
Barnsteiner et al., 2013 |
<table>
<thead>
<tr>
<th>Phase 4&lt;sup&gt;a&lt;/sup&gt;</th>
<th>American Association of Colleges of Nursing (AACN) funded to further develop graduate competencies and coordinate 5 graduate level faculty development conferences</th>
<th><a href="http://qsen.org/faculty-resources/aacn-workshop-modules/">http://qsen.org/faculty-resources/aacn-workshop-modules/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2012-March 2014</td>
<td></td>
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<tr>
<td>San Francisco Bay Area (SFBA) QSEN Faculty Development Institute&lt;sup&gt;b&lt;/sup&gt; 2009-2013</td>
<td>AACN implementation and evaluation of impact of incorporating the QSEN content into 22 schools of nursing in the San Francisco Bay area. Funding for a series of workshops for faculty and clinical leaders</td>
<td>Disch et al., 2013 apps.aacn.nche.edu/qsenec/GBMFoveview.html</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Academic/Clinical Partnership and collaboration in QSEN Lourdes University and ProMedica&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Innovative educational model for undergraduate education that includes a clinical integration partner to assist with the QSEN-based clinical education model</td>
<td>Didion, Kozy, Koffel, Oneail, 2013 <a href="http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/04/academic-clinical-partnership-and-collaboration-in-quality-and-s.html">www.rwjf.org/en/research-publications/find-rwjf-research/2013/04/academic-clinical-partnership-and-collaboration-in-quality-and-s.html</a></td>
</tr>
<tr>
<td>QSEN Institute July 2012 to present</td>
<td>The Frances Payne Bolton School of Nursing at Case Western Reserve University continues to host the website and the National QSEN forum</td>
<td>QSEN.org</td>
</tr>
</tbody>
</table>
**APPENDIX E**

**PATIENT CENTERED CARE**

**Definition:** Recognize the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for patient’s preferences, values, and needs.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
</tr>
</thead>
</table>
| Integrate understanding of multiple dimensions of patient centered care:  
  - patient/family/community preferences, values  
  - coordination and integration of care  
  - information, communication, and education  
  - physical comfort and emotional support  
  - involvement of family and friends  
  - transition and continuity | Elicit patient values, preferences and expressed needs as part of clinical interview, implementation of care plan and evaluation of care  
Communicate patient values, preferences and expressed needs to other members of health care team  
Provide patient-centered care with sensitivity and respect for the diversity of human experience | Value seeing health care situations “through patients’ eyes”  
Respect and encourage individual expression of patient values, preferences and expressed needs  
Value the patient’s expertise with own health and symptoms  
Seek learning opportunities with patients who represent all aspects of human diversity  
Recognize personally held attitudes about working with patients from different ethnic, cultural and social backgrounds  
Willingly support patient-centered care for individuals and groups whose values differ from own |

Describe how diverse cultural, ethnic and social backgrounds function as sources of patient, family, and community values

Demonstrate comprehensive understanding of the concepts of pain and suffering, including physiologic models of pain and comfort.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
</tr>
</thead>
</table>
| Assess presence and extent of pain and suffering  
Assess levels of physical and emotional comfort  
Elicit expectations of patient & family for relief of pain, discomfort, or suffering  
Initiate effective treatments to relieve | Recognize personally held values and beliefs about the management of pain or suffering  
Appreciate the role of the nurse in relief of all types and sources of pain or suffering  
Recognize that patient expectations influence outcomes in management of pain or suffering |  

Examine how the safety, quality and cost effectiveness of health care can be improved through the active involvement of patients and families
Examine common barriers to active involvement of patients in their own health care processes
Describe strategies to empower patients or families in all aspects of the health care process

Remove barriers to presence of families and other designated surrogates based on patient preferences
Assess level of patient’s decisional conflict and provide access to resources
Engage patients or designated surrogates in active partnerships that promote health, safety and well-being, and self-care management

Recognize the boundaries of therapeutic relationships
Facilitate informed patient consent for care

Discuss principles of effective communication
Describe basic principles of consensus building and conflict resolution
Examine nursing roles in assuring coordination, integration, and continuity of care

Assess own level of communication skill in encounters with patients and families
Participate in building consensus or resolving conflict in the context of patient care
Communicate care provided and needed at each transition in care

TEAMWORK AND COLLABORATION

**Definition:** Function effectively within nursing and inter-professional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe own strengths, limitations, and values in functioning as a member of a team</td>
<td>Demonstrate awareness of own strengths and limitations as a team member</td>
<td>Acknowledge own potential to contribute to effective team functioning</td>
</tr>
<tr>
<td>Initiate plan for self-development as a team member</td>
<td>Function competently within own scope of practice as a member of the health care team</td>
<td>Appreciate importance of intra- and inter-professional collaboration</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
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</tr>
<tr>
<td>Act with integrity, consistency and respect for differing views</td>
<td>Assume role of team member or leader based on the situation</td>
<td>Value the perspectives and expertise of all health team members</td>
</tr>
<tr>
<td>Describe scopes of practice and roles of health care team members</td>
<td>Initiate requests for help when appropriate to situation</td>
<td>Respect the centrality of the patient/family as core members of any health care team</td>
</tr>
<tr>
<td>Describe strategies for identifying and managing overlaps in team member roles and accountabilities</td>
<td>Clarify roles and accountabilities under conditions of potential overlap in team member functioning</td>
<td>Respect the unique attributes that members bring to a team, including variations in professional orientations and accountabilities</td>
</tr>
<tr>
<td>Recognize contributions of other individuals and groups in helping patient/family achieve health goals</td>
<td>Integrate the contributions of others who play a role in helping patient/family achieve health goals</td>
<td></td>
</tr>
<tr>
<td>Analyze differences in communication style preferences among patients and families, nurses and other members of the health team</td>
<td>Communicate with team members, adapting own style of communicating to needs of the team and situation</td>
<td>Value teamwork and the relationships upon which it is based</td>
</tr>
<tr>
<td>Describe impact of own communication style on others</td>
<td>Demonstrate commitment to team goals</td>
<td>Value different styles of communication used by patients, families and health care providers</td>
</tr>
<tr>
<td>Discuss effective strategies for communicating and resolving conflict</td>
<td>Solicit input from other team members to improve individual, as well as team, performance</td>
<td>Contribute to resolution of conflict and disagreement</td>
</tr>
<tr>
<td>Initiate actions to resolve conflict</td>
<td></td>
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</tr>
<tr>
<td>Describe examples of the impact of team functioning on safety and quality of care</td>
<td>Follow communication practices that minimize risks associated with handoffs among providers and across transitions in care</td>
<td>Appreciate the risks associated with handoffs among providers and across transitions in care</td>
</tr>
<tr>
<td>Explain how authority gradients influence teamwork and patient safety</td>
<td>Assert own position/perspective in discussions about patient care</td>
<td></td>
</tr>
<tr>
<td>Choose communication styles that diminish the risks associated with authority gradients among team members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify system barriers and facilitators of effective team functioning</td>
<td>Participate in designing systems that support effective teamwork</td>
<td>Value the influence of system solutions in achieving effective team functioning</td>
</tr>
</tbody>
</table>
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**Examine strategies for improving systems to support team functioning**

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### EVIDENCE BASED PRACTICE (EBP)

**Definition:** Integrate best current evidence with clinical expertise and patient/family preferences and values for delivery of optimal health care.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate knowledge of basic scientific methods and processes</td>
<td>Participate effectively in appropriate data collection and other research activities</td>
<td>Appreciate strengths and weaknesses of scientific bases for practice</td>
</tr>
<tr>
<td>Describe EBP to include the components of research evidence, clinical expertise and patient/family values.</td>
<td>Adhere to Institutional Review Board (IRB) guidelines</td>
<td>Value the need for ethical conduct of research and quality improvement</td>
</tr>
<tr>
<td></td>
<td>Base individualized care plan on patient values, clinical expertise and evidence</td>
<td>Value the concept of EBP as integral to determining best clinical practice</td>
</tr>
<tr>
<td>Differentiate clinical opinion from research and evidence summaries</td>
<td>Read original research and evidence reports related to area of practice</td>
<td>Appreciate the importance of regularly reading relevant professional journals</td>
</tr>
<tr>
<td>Describe reliable sources for locating evidence reports and clinical practice guidelines</td>
<td>Locate evidence reports related to clinical practice topics and guidelines</td>
<td></td>
</tr>
<tr>
<td>Explain the role of evidence in determining best clinical practice</td>
<td>Participate in structuring the work environment to facilitate integration of new evidence into standards of practice</td>
<td>Value the need for continuous improvement in clinical practice based on new knowledge</td>
</tr>
<tr>
<td>Describe how the strength and relevance of available evidence influences the choice of interventions in provision of patient-centered care</td>
<td>Question rationale for routine approaches to care that result in less-than-desired outcomes or adverse events</td>
<td></td>
</tr>
<tr>
<td>Discriminate between valid and invalid reasons for modifying evidence-based clinical practice based on clinical expertise or patient/family preferences</td>
<td>Consult with clinical experts before deciding to deviate from evidence-based protocols</td>
<td>Acknowledge own limitations in knowledge and clinical expertise before determining when to deviate from evidence-based best practices</td>
</tr>
</tbody>
</table>

### QUALITY IMPROVEMENT (QI)

**Definition:** Use data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of health care systems.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe strategies for learning about the outcomes of care in the setting in which one is engaged in clinical practice</td>
<td>Seek information about outcomes of care for populations served in care setting</td>
<td>Appreciate that continuous quality improvement is an essential part of the daily work of all health professionals</td>
</tr>
<tr>
<td></td>
<td>Seek information about quality improvement projects</td>
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</tbody>
</table>

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48
### Recognize that nursing and other health professions students are parts of systems of care and care processes that affect outcomes for patients and families

- Use tools (such as flow charts, cause-effect diagrams) to make processes of care explicit
- Participate in a root cause analysis of a sentinel event

### Give examples of the tension between professional autonomy and system functioning

- Use quality measures to understand performance
- Use tools (such as control charts and run charts) that are helpful for understanding variation
- Identify gaps between local and best practice

### Explain the importance of variation and measurement in assessing quality of care

- Design a small test of change in daily work (using an experiential learning method such as Plan-Do-Study-Act)
- Practice aligning the aims, measures and changes involved in improving care
- Use measures to evaluate the effect of change

### Describe approaches for changing processes of care

- Design a small test of change in daily work (using an experiential learning method such as Plan-Do-Study-Act)
- Practice aligning the aims, measures and changes involved in improving care
- Use measures to evaluate the effect of change

### Value own and others’ contributions to outcomes of care in local care settings

- Appreciate how unwanted variation affects care
- Value measurement and its role in good patient care

### Explain the importance of variation and measurement in assessing quality of care

- Design a small test of change in daily work (using an experiential learning method such as Plan-Do-Study-Act)
- Practice aligning the aims, measures and changes involved in improving care
- Use measures to evaluate the effect of change

### Describe approaches for changing processes of care

- Design a small test of change in daily work (using an experiential learning method such as Plan-Do-Study-Act)
- Practice aligning the aims, measures and changes involved in improving care
- Use measures to evaluate the effect of change

### Value local change (in individual practice or team practice on a unit) and its role in creating joy in work

- Appreciate the value of what individuals and teams can to do to improve care

### SAFETY

**Definition:** Minimizes risk of harm to patients and providers through both system effectiveness and individual performance.

<table>
<thead>
<tr>
<th>Knowledge</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Examine human factors and other basic safety design principles as well as commonly used unsafe practices (such as, work-arounds and dangerous abbreviations)</td>
<td>Demonstrate effective use of technology and standardized practices that support safety and quality</td>
<td>Value the contributions of standardization/reliability to safety</td>
</tr>
<tr>
<td>Describe the benefits and limitations of selected safety-enhancing technologies (such as, barcodes, Computer Provider Order Entry, medication pumps, and automatic alerts/alarms)</td>
<td>Demonstrate effective use of strategies to reduce risk of harm to self or others</td>
<td>Appreciate the cognitive and physical limits of human performance</td>
</tr>
<tr>
<td>Discuss effective strategies to reduce reliance on memory</td>
<td>Use appropriate strategies to reduce reliance on memory (such as, forcing functions, checklists)</td>
<td></td>
</tr>
<tr>
<td>Delineate general categories of errors and hazards in care</td>
<td>Communicate observations or concerns</td>
<td>Value own role in preventing errors</td>
</tr>
</tbody>
</table>
Describe factors that create a culture of safety (such as, open communication strategies and organizational error reporting systems) related to hazards and errors to patients, families and the health care team. Use organizational error reporting systems for near miss and error reporting related to hazards and errors to patients, families and the health care team.

Describe processes used in understanding causes of error and allocation of responsibility and accountability (such as, root cause analysis and failure mode effects analysis) Participate appropriately in analyzing errors and designing system improvements. Engage in root cause analysis rather than blaming when errors or near misses occur.

Discuss potential and actual impact of national patient safety resources, initiatives and regulations Use national patient safety resources for own professional development and to focus attention on safety in care settings. Value vigilance and monitoring (even of own performance of care activities) by patients, families, and other members of the health care team.

**INFORMATICS**

**Definition:** Use information and technology to communicate, manage knowledge, mitigate error, and support decision making.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain why information and technology skills are essential for safe patient care</td>
<td>Seek education about how information is managed in care settings before providing care</td>
<td>Appreciate the necessity for all health professionals to seek lifelong, continuous learning of information technology skills</td>
</tr>
<tr>
<td>Identify essential information that must be available in a common database to support patient care</td>
<td>Navigate the electronic health record</td>
<td>Value technologies that support clinical decision-making, error prevention, and care coordination</td>
</tr>
<tr>
<td>Contrast benefits and limitations of different communication technologies and their impact on safety and quality</td>
<td>Document and plan patient care in an electronic health record</td>
<td>Protect confidentiality of protected health information in electronic health records</td>
</tr>
<tr>
<td>Describe examples of how technology and information management are related to the quality and safety of patient care</td>
<td>Employ communication technologies to coordinate care for patients</td>
<td>Value nurses’ involvement in design, selection, implementation, and evaluation of information technologies to support patient care</td>
</tr>
<tr>
<td>Recognize the time, effort, and skill required for computers, databases and other technologies to become</td>
<td>Respond appropriately to clinical decision-making supports and alerts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use information management tools to monitor outcomes of care</td>
<td></td>
</tr>
<tr>
<td>reliable and effective tools for patient care</td>
<td>processes</td>
<td>Use high quality electronic sources of healthcare information</td>
</tr>
</tbody>
</table>
## APPENDIX F

QSEN program for workshops and orientation program

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00AM - 8:30AM</td>
<td>Welcome and pretest</td>
</tr>
<tr>
<td>8:30AM - 9:30AM</td>
<td>Quality improvement</td>
</tr>
<tr>
<td>9:30AM - 10:30AM</td>
<td>Safety</td>
</tr>
<tr>
<td>10:30AM - 11:00AM</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:00AM - 12:00PM</td>
<td>Teamwork and collaboration</td>
</tr>
<tr>
<td>12:00PM - 1:00PM</td>
<td>Patient centered care</td>
</tr>
<tr>
<td>1:00PM - 2:00PM</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>2:00PM - 3:00PM</td>
<td>Evidence-based practice</td>
</tr>
<tr>
<td>3:00PM - 4:00PM</td>
<td>Informatics</td>
</tr>
<tr>
<td>4:00PM - 4:25PM</td>
<td>Evaluation</td>
</tr>
</tbody>
</table>