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**Poster Abstracts**

**Keywords**

collaboration, multidisciplinary teams, interprofessional practice, educational reform, curriculum design, nurses, pharmacists, physicians, doctors, dentists, dietitians, medical education, nursing education

**Poster 1. Assessment of the quality of the educational environment during undergraduate clinical teaching years in the King Abdul Aziz University College of Medicine, Saudi Arabia**

Rajaa Allhiani  
King Abdul Aziz University, Jeddah, Saudi Arabia

**Background:** The undergraduate curriculum of King Abdulaziz University's medical school is traditional, like most of the medical schools in the Middle East region. A measure of the educational environment in the College of Medicine, as perceived by students, would assist educators and college administration personnel in gauging the quality of the learning occurring within this important venue.

**Objectives:**

1. To assess the quality of the educational environment during undergraduate clinical teaching years in the College of Medicine, King Abdulaziz University.
2. To detect problem areas that should be remediated.
3. To compare the gender difference in the perceptions of the educational environment in the clinical teaching stage.

**Methods:** During the academic year 2014/2015, the Dundee Ready Education Environment Measure (DREEM) questionnaire was distributed and collected by the undergraduate student leader of the same year to all 280 females and males' clinical stage medical students. Fourth-, fifth- and sixth-year clinical stage students are located in the hospital sites for their clinical teaching. Each medical student in the fourth, fifth and sixth year has an undergraduate administrator who distributed and collected the questionnaire. Comparisons between students' responses, according to their studying years in the college and their gender, were taken in consideration.

**Results:** 196 female and male students completed the questionnaire from a total students sample of 280, representing a response rate of 70%. There were 109 male out of 150, representing 72.6 % and 95 female

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out of 130, representing 73%. The female students composed 48.5% of the total responding students, while the male students represented 51.5%. There were no individual areas of excellence (that is no item scored > 3.5). Although the environment was perceived as more positive than negative in both females and males, the mean total score gave a highly statistical significant difference where the score was 113/200 in the females, when compared to the males score 107/200. In four out of the five subscales females scored higher than males, indicating that the female students appear happier in the clinical stage, as opposed to the male students.

**Conclusion:** The DREEM provides useful diagnostic information about medical schools, whether it is in developing or western developed countries. The DREEM gives a clear indication of the priorities for reform of the curriculum. These data can also serve as a baseline for a longitudinal quality assessment of students' perceptions of the changes planned for the College of Medicine at King Abdulaziz University.

## Poster 2. Using the Readiness for Interprofessional Learning Scale for assessing pharmacy students' attitude toward interprofessional education

*Fadi Alkhateeb*

*Texas A&M Rangel College of Pharmacy, Kingsville, USA*

**Purpose:** Since the release of the Accreditation Council for Pharmacy Education (ACPE) 2007/2016 and Canadian Council for Accreditation of Pharmacy Programs (CCAPP) 2013 standards that contain a deep focus on the need for interprofessional education (IPE) programs, various forms of IPE curricula have been implemented within many colleges of pharmacy in the USA and Canada. Limited research has evaluated pharmacy students' attitudes toward IPE, and little is known about factors that may affect these attitudes. The aim of this study was to test a model of pharmacy students' attitudes toward IPE by using the Readiness

for Interprofessional Learning Scale (RIPLS).

**Methods:** The RIPLS online survey was sent to 340 pharmacy students at a public College of Pharmacy in the spring of 2015. Besides the 18 RIPLS scale questions survey, the survey contained demographic questions, and a question regarding a prior experience with the IPE healthcare environment. Data were collected via Qualtrics and then migrated into SPSS 22 software. RIPLS subscale scores and a total RIPLS score were computed. Multiple linear regression was used to test the model. The independent variables included age, gender, general point average, race, year of school, and prior exposure to IPE.

**Results:** A total of 136 responses were received giving a response rate of 40.0%. The overall pharmacy students' attitudes toward the IPE model were found to be significant ( $F = 54.2, P < 0.001, R\text{-square} = 0.403$ ). Gender, GPA, race, year of school, and prior exposure to IPE had significant influences on pharmacy students' attitudes toward IPE.

**Conclusion:** The proposed model can provide insight into pharmacy students' attitudes toward IPE and may be helpful in developing future approaches and policies to further improve IPE at Colleges of Pharmacy. This is the first study that has used a structured theoretical model to explain pharmacy students' attitudes toward IPE.

## Poster 3. The impact of personality traits on medical sciences students' performance in the preclinical years in the Ras Al Khaimah College of Medical Sciences

*Manal M. Sami, Mahmood Y. Hachim*

*Ras Al Khaimah College of Medical Sciences, Ras Al Khaimah, UAE*

**Background:** A blend of personality characteristics is necessary for people to be successful in medical

studies and eventually in the medical profession. However, there is further debate as to which personality traits are typical of students in medical studies, as compared to students in other academic majors, and which specific personality traits predict medical student performance in the preclinical years.

**Aim of the study:** To identify the most common personality types among first- and second-year undergraduate medical students at Ras Al Khaimah (RAK) College of Medical Sciences and to investigate how the personality traits can affect students' performance in the preclinical years of medical studies during different assessment styles.

**Materials and methods:** The study included 95 students of the preclinical years (year I and Year II) in RAK College of Medical Sciences in the academic year 2010-2011. The students completed the 16 iPersonic personality inventory as part of the career development plan implemented by the Office of Students Affairs. Students' personality profiles were clustered into 16 types and then into main domain of personality. The performance of the students in 18 formal assessments over the preclinical years was retrieved from the records of the Office of Examination. The students' performance in the various courses taught in the first year (anatomy, biochemistry and physiology), as well as second year (microbiology, pathology, pharmacology, forensic medicine, community medicine, and clinical decision making), was recorded. The components assessed were multiple choice questions (MCQs), restricted response essays (RRE), problem based learning (PBL) evaluations, assignments and objective structured practical examinations (OSPE). Students were then classified according to their personality groups and divided into top performance group, poor performance and average performance personalities.

**Results:** The most common occurring personality type was the *engaged idealist* (16.7%) that represents an extroverted, intuition, feeling, judging individual, while *energetic doer* and *sensitive doer* were the

lowest among other personality types (2% and 0%, respectively). The noticeable majority of medical students were judging (60%), intuition (59%), extroverted (54%), feeling (51%). Students with sensing and perceiving preferences showed significantly higher performance in PBL. While those students with sensing preference showed significantly higher performance in OSPEs, extroverted students performed best in MCQs.

**Conclusions:** Students' personality test can be a very good tool to choose the appropriate assessment for the medical students that will be a true reflection of their performance, gain of knowledge and skills.

#### **Poster 4. Pharmaco-economics curriculum: interdisciplinary potential for academics, research and policy**

*Shafqat Shehzad*

*College of Arts and Sciences, Qatar University, Doha, Qatar*

The World Health Organization (2010) in its Framework for Action on Interprofessional Education and Practice recognizes interprofessional education (IPE) as an innovative strategy to address context specific health system challenges. Through IPE, students from two or more professions collaborate with the "intention to improve health outcomes"<sup>1</sup>.

Curriculum theory has witnessed significant developments over time, progressing from mere emphasis on memorization to incorporating plurality within teaching and learning<sup>2</sup>. In health education, the focus beyond the traditional approaches necessitates including insights from various disciplines, all of which aim to improve health outcomes.

Economic factors, such as high costs of essential drugs/medicines and costly pharmacological management of various pains, limit access to care. A pharmacy curriculum that utilizes economic concepts, tools and techniques can help address issues of affordability, rising healthcare costs and access to care.

The pharmaco-economics curriculum uses evaluation techniques (cost analysis, cost effectiveness analysis) and economic policies to see how health outcomes are influenced by financial constraints, societal norms and health agendas.

Through engagement of multi-stakeholders, interaction with the community can be improved, communication can be enhanced, new knowledge can be generated, and innovative policy solutions for health problems can be suggested. Collaborative activities/networking, therefore, can help identify patterns of institutional working/relationship to build effective strategies for extended healthcare coverage. Tedesco, Opertii and Amadio (2014) suggested continuous revisions/innovations in the curriculum<sup>3</sup>. Scott and Hofmeyer (2007) showed how building networks can be used to enhance “knowledge translation and exchange between people and organizations”<sup>4</sup>.

Learning how to advocate and network for cost-effective use of scarce economic resources and linking theory to practice can help build capacity and devise strategies for improved health outcomes. The potential of curriculum revisions in pharmaco-economics that incorporate policy and society agreement on extended healthcare coverage at affordable costs is there and needs to be explored.

**Keywords:** pharmco-economics, access to healthcare, interprofessional education

**JEL Classification:** A11; A13; I 21

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## Poster 5. Pharmacy education in Iraq: history and developments 1936-2012

Omer Al-Lela<sup>1</sup>, Haydar Fakhri Al Tukmagi<sup>2</sup>, Muhannad Riadh M. Salih<sup>3</sup>, Harith Khalid Al-Qazaz<sup>4</sup>, Ammar Ahmed Mohammed Brifkani<sup>5</sup>, Mustafa Ghazzi Al-Abbassi<sup>5</sup>, Adheed Khalid<sup>6</sup>

<sup>1</sup> University of Duhok, Duhok, Iraq; <sup>2</sup> Baghdad University, Baghdad, Iraq; <sup>3</sup> Alrashed University, Baghdad, Iraq;

<sup>4</sup> Mosul University, Mosul, Iraq; <sup>5</sup> Al-Mustansyriah University, Baghdad, Iraq; <sup>6</sup> Basrah University, Basrah, Iraq

**Background:** Iraq has a population of approximately 30 million and many colleges of pharmacy. The oldest school was opened at Baghdad University in 1936.

**Aim:** Our study's aim is to provide a clear review of pharmacy education in Iraq from 1936 to 2012.

**Method:** This study selected all public and private universities in Iraq for review. Information was obtained by distributing a validated questionnaire among pharmacy colleges, as well as contacting colleges' representatives to collect more information.

**Results:** Iraq has 14 public and four private colleges of pharmacy, five of which were established in different Iraqi public universities before 2000. All colleges of pharmacy offered bachelor's degree programs, while 5 colleges of pharmacy offered MSc degree program (Baghdad, Mosul, Sulaimani, Hawler, and Al-Mustansyriah Universities). In addition, the PhD program was offered in 2 college of pharmacy (Baghdad and Mosul Universities). Now the percentage of female students in colleges of pharmacy is higher than the percentage of male students. Most pharmacy colleges have a unified education curriculum except three colleges in north of Iraq (Kurdistan region) used

different education curriculum. In the last ten years, the number of pharmacy colleges were increased from five colleges to 14 public colleges and four private colleges, but this increase in the number of colleges did not positively increase the academic staff in pharmacy colleges, especially in new colleges of pharmacy. After 2007, many Iraqi pharmacists joined to international universities as master and PhD students in different fields of pharmaceutical science.

**Conclusion:** In Iraq, the academic and nonacademic pharmacists have a strong desire to advance the science and practice of community and hospital pharmacy.

### **Poster 6. The Clinical Skills & Simulation Center (CSSC) assists the assessment of clinical skills through objective structured clinical examinations (OSCEs) for undergraduate fifth-year medical students—with organizational limitations**

*Sumaiah Abdulwahab*

*King Abdulaziz University, Jeddah, Saudi Arabia*

**Aim:** The aim of this study is to find out if the OSCE was an effective method for assessment for the undergraduate medical students.

**Methods:** The survey, consisting of seven questions, was distributed to both male and female fifth-year medical students on family medicine rotation. Each rotation consisted of five weeks, and at the end summative assessments (OSCEs) were performed at the CSSC. The survey was given to 80 medical students immediately after their OSCE. The questions about the clinical stations sought to discover if they were similar to material covered in the clinical teaching sessions. Another question attempted to ascertain if the instructions in each station were clear enough and if the time allowed at the clinical stations was adequate. Since all these medical students had received orientation prior to their OSCE, we were keen to know the outcome, so we included the following four

questions: (1) Was the exam process well explained to you before? (2) Was the exam process well organized? (3) Is this exam format fair? (4) Do you prefer this format over an oral exam?"

**Results:** After analyzing the data collected by SPSS, 81% of the students had reported that the tasks at most of the clinical stations were too different from the material covered during clinical teaching sessions—although after each rotation of five weeks, medical students visit the CSSC once to recap their clinical experiences before the OSCE. 79% of the medical students had declared that instructions in each station were misleading and confusing regarding the scenario of the clinical cases played by the standardized patients. 75% of the medical students stated that there was not enough time. The time allocated for each station was five minutes only. 90 to 93% of the medical students who had participated felt that OSCE was fair exam format and they preferred it over the oral exam. 95% of them stated that having their OSCE at CSSC was organized with audiovisual technology controlling the flow and organizing the OSCE.

**Conclusion:** For medical students the CSSC is an important asset. The faculty of medicine must form a curriculum committee to introduce formative OSCEs for all undergraduates to improve the outcomes and provide development of faculty members through peer-to-peer training to validate the clinical cases in OSCE.

### **Poster 7. Case management through social media**

*Ilham Hashi, Jasmine Little*

*Sidra Medical and Research Center, Doha, Qatar*

Over the past several years smartphone technology and usage has increased significantly, making it widely accessible to the general population. In the UAE, 81% of the population from 16 to 34 years of age own smartphones. Smartphone applications have the capabilities to track one's food and fluid intake, act as

a pedometer, or can serve as adaptive technology for people with disabilities.

Case managers at Sidra Medical and Research Center will utilize smartphone technology, along with the existing patient web portal, as a conduit to facilitate patient and family-centered care. To implement a successful use of this technology, the collaborative efforts of many different professionals are required.

Case managers will need to utilize the input from all health disciplines, including physicians, physical therapists, occupational therapists, dieticians, pharmacists, clinical social workers, nurses, and health informaticists, to ensure that patients are equipped with knowledge to promote, restore and maintain their health. The application could assist women who are pregnant and the pediatric population by providing access to reliable medical information about their conditions, therefore empowering patients to self-manage their care.

The interface will allow for two-way patient-to-case manager communication, and will provide direct access to the patient's individualized care plan goals. This communication will allow the case manager to triage patient needs and concerns and address barriers to care with the interdisciplinary team.

The application will remind patients/families to schedule routine healthcare appointments, such as prenatal/postnatal visits and/or well-baby visits. Patients will have the ability to send secure text messages and one-touch access to call his/her assigned nurse case manager directly. The technology will assist the case manager to monitor the patient's progress with the multidisciplinary plan of care.

## Poster 8. Finding healthcare resources in Qatar

Jasmine Little, Ilham Hashi  
Sidra Medical and Research Center, Doha, Qatar

Availability of and access to healthcare resources in

one's community can make the difference between a positive or a negative patient outcome. Healthcare resources in the community may include: primary care providers near to the family's residence; home care; in-home professional health services; day programs; day hospitals; mental health services; respite services; rehabilitation services; dietetic services; in-home therapy services; early intervention services; durable medical equipment suppliers; laboratory and radiology services; and supply providers. Case managers connect patients with available resources in the community. By participating in an interprofessional collaborative practice, case managers facilitate the highest quality of care across settings and reduce barriers to access of care. How does one locate healthcare resources in the community in a relatively young country? The Case Management Department at Sidra Medical and Research Center has a three-step strategy to locate the community resources in Doha, Qatar and store them in a shared-access database.

**Step one: Locate.** The Case Management Department locates healthcare resources by searching local telephone listings, Internet searches, by word-of-mouth, and liaising with other health centers and health professionals.

**Step two: Authenticate.** The Case Management verifies the information from step one by contacting the facility and/or arranging a meeting with the facility to establish a personal point of contact and clarify services offered and referral procedures. The case manager will also collaborate with Sidra health professionals (i.e. MDs, occupational and/or physical therapists) to ensure that best-practice guidelines are used by the chosen agency/facility.

**Step three: Share.** The final step is the entry of gathered information into the Case Management shared Healthcare Resources Database. Successful population of the Case Management shared Healthcare Resources Database is crucial as it will be one of the most useful tools for the interdisciplinary team to facilitate timely patient flow and transitions.



## Poster 9. An interprofessional pilot for clinical nutrition education

Gareth McCormick

Sidra Medical and Research Center, Doha, Qatar

**Background:** Education in student physician's training programs in terms of the importance of nutrition and its impact on health can be *ad hoc* in nature. A pilot project between Weill Cornell Medicine-Qatar and Sidra Medical and Research Center using a dietitian to deliver the education in an interprofessional (IP) manner was tested as part of the Medicine, Patients and Society 1 module in the first year at Weill Cornell Medicine-Qatar.

**Method:** In early 2015 a series of four-times, two-hour clinical nutrition lectures with interactive components was delivered to 41 medical students by the nutrition educator from SMRC. The focus was nutrition throughout the life cycle, which included:

- The importance of nutrition from pregnancy/birth, through childhood, into adulthood and elderly years
- Dietetic treatment of diseases common to the stage of the lifecycle.

**Results:** The series was evaluated by the students using a feedback form for positive and negative elements. They reported that the content was relevant and interesting. The interactive components were particularly appreciated, which embraces the concept of IP education (learning with and from each other). The IP components included case study discussions and "checking your understanding" questions pertinent to clinical nutrition. The students also highlighted that they would have liked to engage with more case studies common to the Gulf region.

**Conclusion:** Medical students are interested in clinical nutrition and how it can impact an individual's health. Further exploration to evaluate the need for a more structured clinical nutrition education program for medical students, which permeates throughout their academic years and has more potential to increase

the IP component, is recommended. This could include small group work with nutrition students across the region and further collaboration with nutrition educator at Sidra Medical and Research Center.

## Poster 10. Allied health clinical education in a greenfield site

Jane Reid, Elaine Sigalet

Sidra Medical and Research Center, Doha, Qatar

**Background:** Sidra Medical and Research Center is a greenfield children's tertiary care facility in Doha, Qatar whose vision is to be "a beacon of learning, discovery and exceptional care" ranked among the top children's facilities across the world. To facilitate this Sidra has established a centralized interprofessional educator model including a dedicated allied health education team.

The department is tasked with developing a rigorous educational curricula based on the North American model of health service delivery to support the onboarding of 4000 interprofessional and international clinicians, 300 of whom will be allied health professionals (AHPs).

**Methods:** To succeed in orientating this volume of clinicians, a standardized educational curriculum has been developed to support the transference of competence to the new Sidra environment. The curriculum embraces blended learning, delivering evidence-based practice using "top cases" in each practice setting to frame learning. Each case is supported by relevant e learning, skills stations and simulation-based learning.

**Anticipated results:** The goal is to achieve confidence and competence for incoming clinicians in four weeks; each allied health educator and clinician will orientate her-/himself in a practice setting to enhance collaborative interprofessional relationships where clinicians learn from, with and about each other. It is anticipated that within this period AHPs and the

interprofessional team will be orientated to the “Sidra Way,” an interprofessional, collaborative and family centered approach to deliver safe, effective patient care.

**Discussion:** Sidra Medical and Research Center is one of the first academic centers in the world to have a dedicated allied health clinical education team; consisting of 16 members. Each educator plays a central role in developing interprofessional simulation-based learning to provide opportunities for deliberate practice in a risk-free environment for the interprofessional team. This approach for AHPs is unique and will help contribute to the developing evidence in the use of simulation.

### **Poster 11. The development of a simulation program for allied health professionals to support interprofessional education**

*Jane Reid, Joanne Davies*

*Sidra Medical and Research Center, Doha, Qatar*

**Background:** Interprofessional simulation-based team training is recognized not only as a means to improve communication and teamwork in healthcare, but also as an effective way to analyze systems and improve patient safety. The use of simulation with Allied Health (AH) Professionals (AHPs) is still in its infancy particularly in pediatric settings. The clinical education team at Sidra Medical & Research Centre is one of the first in the world to have dedicated Allied Health clinical educators for each AH profession. In line with the vision for Sidra to be a “beacon of learning, discovery and exceptional care” it is the vision of the AH clinical education team to lead the way in the use of simulation for AHPs in pediatric settings. This will be particularly valuable when we begin onboarding over 300 AHPs.

**Methods:** To date two scenarios have been developed: multi-disciplinary case conference to plan discharge of a complex child, and teamwork in a rehabilitation gym to ensure patient safety. The scenarios include physiotherapy, occupational therapy, speech and

language therapy, dietetics, social work, child life, home care, and physicians. An interprofessional approach has been taken to the development of the scenarios using subject matter experts alongside the education and simulation teams. The participants within the scenarios’ will also consist of an IP team.

**Anticipated Results:** The use of simulation will support an interprofessional, collaborative, family centered approach to the delivery of safe, effective patient care and will be used extensively in orientation. This is particularly important in the formation of new clinical teams that originate from a variety of cultures and countries. The development of AHP specific simulation scenarios will enable many professions to learn with and from each other. This data will enable the team to review gaps in performance and contribute to the developing evidence in the use of simulation for AHPs.

### **Poster 12. Developing a clinical orientation program for allied health professionals at a greenfield site**

*Anne Murphy, Jane Reid, Nicole Pinnock, Robyn Austin, Gareth McCormick, Stephanie Hopkinson*

*Sidra Medical and Research Center, Doha, Qatar*

**Background:** Sidra Medical and Research Center will provide world class healthcare services to women and children in Doha, Qatar by being a “beacon of learning, discovery and exceptional care.” To work toward this end, Sidra’s Development and Continuing Education department is charged with developing and implementing 18 days of clinical orientation for each new clinical professional that arrives to work at Sidra.

**Method:** Sidra has identified subject matter expert educators who are dedicated to each specialty area. Allied health will have over 300 practitioners with 14 dedicated educators responsible for development and delivery of learning modules in their area of expertise. By identifying core competencies and top cases, allied health educators will work with the licensed and



experienced clinical professionals hired to deliver exceptional care at Sidra. The adult learning model, along with a scaffolding approach to education, will be utilized to ensure all clinicians have the opportunity to take their current experience and knowledge and apply it to uni-professional and interprofessional scenarios that will occur at Sidra. The simulation scenarios have five standardized learning objectives that focus on interprofessional teamwork, including effective communication, establishing role clarity, recognizing limitations, utilizing resources, and planning tasks.

**Results:** While onboarding of new staff continues, current allied health professionals have been participating in aspects of the orientation program and have provided feedback to further improve the orientation program. The allied health educators are now working to develop appropriate e learning modules, equipment training, skill stations, and simulation scenarios to ensure that all clinical professionals have the skills to perform their job at Sidra with confidence.

**Conclusion:** Subject matter expert educators in each allied health practice area allow for targeted orientation to ensure a safe patient opening at Sidra Medical and Research Center.

### **Poster 13. Using communication theories in interprofessional collaborative practice**

*Ali Yildirim*

*De Montfort University, Leicester, UK*

Interprofessional collaborative practice (IPCP) is a work practice that involves different health and/or social care professionals who share a team identity and work collaboratively in an integrated and independent manner to solve problems and deliver services. Healthcare and social care professionals work in a number of different areas and sectors. There are a lot of different theories in the interprofessional field, such as sociological, psychological and learning theories.

This paper aims to provide focus on the communication theories and using of these theories in the field of ICPC. Following this, a detailed exploration of key literature and critical reflection upon this will be presented. The report then sets out the methodology that will be adopted to fill this knowledge gap, the progress of the project so far, and how the work will demonstrate an original contribution to knowledge appropriate.

### **Poster 14. The development of an interprofessional education workshop for students from up to four professions**

*Brad Johnson<sup>1</sup>, Myriam Abi Hayla<sup>2</sup>*

*<sup>1</sup>Zayed University, Dubai, UAE*

*<sup>2</sup>University of Calgary in Qatar, Doha, Qatar*

Interprofessional education (IPE) activities that bring together healthcare students from various professions can be effective in the development of skills that will enhance their ability to effectively work with other healthcare professionals. However, developing a comprehensive workshop that focuses on IPE skills can be a challenge. Similarly, bringing together students from different healthcare disciplines can be a logistical challenge because of program and scheduling differences.

To meet these challenges, a weekend workshop was developed and delivered to students from allied health, medicine, nursing, and pharmacy. The workshop development was guided by an IPE competency framework adapted for use in Qatar, by best pedagogical practices and by evidence from the literature. To facilitate interactions, groups of four were formed consisting of members from each of the healthcare professions. As well as to keep the workshop manageable, each one was capped at 16 students for a total of four groups.

In all, some 58 students participated in four workshops over two semesters. Additional challenges were encountered during the development that included

striking a balance between practice in IPE competencies and healthcare elements, keeping the workshop engaging to the students and ensuring attendance by at least four students from each discipline.

The result was a two-day weekend workshop that fully engaged students and provided opportunities learn about and to practice IPE skills. The lessons learned along the way included sequencing of the activities, training of facilitators and actors, and keeping the delivery of the workshop simple.

### **Poster 15. The development of a rubric to evaluate IPE competencies in game and scenario activities**

*Brad Johnson<sup>1</sup>, Brigitte Lepine<sup>2</sup>, Myriam Abi Hayla<sup>2</sup>*

*<sup>1</sup>Zayed University, Dubai, UAE*

*<sup>2</sup>University of Calgary in Qatar, Doha, Qatar*

Over the past ten years, a number of interprofessional education (IPE) competency frameworks have been developed and used extensively to guide IPE development and implementation. A research project conducted in Qatar sought to integrate and adapt elements of these existing frameworks into a set of shared core IPE Competencies (SCC) that best reflected healthcare practice in Qatar.

This SCC was then to be used to guide the development of an IPE student workshop. Consequently, a weekend workshop was developed based on the SCC framework and delivered to healthcare students from allied health, medicine, nursing, and pharmacy. Embedded in the workshops were games and healthcare scenarios designed to provide practice in elements of the SCC competencies. All of the activities, games and scenarios, were video recorded. A rubric was developed based on the SCC and was used to review and code the video data.

The process of developing the rubric included several iterations and associated coding development. The SCC competencies rubric needed to be flexible and yet easy

to use. The process of developing the rubric revealed challenges in the creation of the activities as well as challenges in the application of the rubric.

The results of the analysis showed that participants quickly learned to work together in games-based activities, and that this had a positive impact on their ability to work together in the more complex and challenging healthcare scenarios.

### **Poster 16. Designing an interprofessional educational curriculum for health and social care students: The LAU IPE Steps**

*Anna Farra, Rooney Zeenny, Aline Milane, Nadia Al Asmar, Nadine Zeeni, Nancy Hoffart, Soumana Nasser*

*Lebanese American University, Beirut, Lebanon*

**Purpose:** The aim of this presentation is to describe the Lebanese American University (LAU) interprofessional education (IPE) Steps program, a curriculum that brings together students from five healthcare programs for joint learning.

**Design:** LAU offers degree-granting programs in medicine, nursing, nutrition, pharmacy, and social work. In 2010, faculty members from these programs formed an IPE workgroup to develop the learning objectives and structure for an IPE program.

What emerged is the LAU IPE Steps framework, a series of five half-day workshops. Students are given content and techniques that they apply to case studies in small groups. Each small group has students from at least three professions and is facilitated by a faculty member from any of the participating programs. The five topics are introduction to IPE and collaborative practice, interprofessional communication, teamwork and conflict management, healthcare quality, and ethics.

Content is delivered using a variety of presentation formats. Cases for each topic were written to ensure that all five professions have a valid role. An IPE certificate is distributed to each student who participated in at least four of the five steps.

**Evaluation:** We have been running the IPE Steps Program for four years; 905 students have participated. 74 faculties have served as small group facilitators. Thus, the progression of knowledge and skills gained through the IPE Steps has sustained student and faculty interest. Students' evaluations after each step have been positive; they consistently respond that they would recommend IPE to others and anticipate applying what they learned in the future.

We observe students interacting freely in the clinical setting, which suggests they are beginning to practice collaboratively. We continue to add new elements to the IPE Steps to address their recommendation to have more IPE learning activities in the clinical setting.

### **Poster 17. Implications of providing an immediate feedback by using practical checklists on anatomy learning**

*Mohamed Ahmed Eladl, Nermine Samir Nosseir  
College of Medicine, University of Sharjah, Sharjah, UAE*

**Background:** Students have an essential need to know how well they are doing. Judgments of experts who have observed their performance highlight attention of shortcomings and therefore increase their motivation.

Recently, there is a considerable development in the feedback applications in medical education and it has been proven to be required for both teachers and learners to identify weaknesses and achieve improvement. Students complained that assessment criteria need more explanation. They want to know and use the reasoning behind judgments. We noticed that feedback is not given timely and not linked to the learning objectives. The aim of this study is to know the impact of giving an immediate feedback to the students during practical anatomy learning.

**Methodology:** The research was conducted in the College of Medicine, University of Sharjah. Practical checklists were prepared for each of the anatomy

practical courses during cardiovascular unit, including all the objectives to be identified, as well as some questions.

The students work on these checklists then received a written feedback report including recommendations from the anatomists in real time as the anatomists were assessing the checklists. 90 students participated in an anonymous survey to assess the students' satisfaction. In addition, focus group discussions were conducted to discuss if this reflects on their way of learning anatomy.

**Results:** All students agreed that immediate feedback could provide students with the opportunity to reflect on their learning. 87% of the students agreed that the checklist was an efficient tool for linking the feedback with the learning objectives. 92% thought that their motivation to discuss during the practical class was enhanced when they receive an immediate feedback. 80% of the students thought that the continuous feedback process would improve quality of learning anatomy.

**Conclusion:** Providing an immediate feedback by using practical checklists seems to have a positive impact on anatomy learning.

### **Poster 18. Enhancing informal students' peer teaching is an effective learning approach in a problem-based medical education context**

*Nermine Samir Nosseir, Mohamed Ahmed Eladl  
University of Sharjah, Sharjah, UAE*

**Background and aim of the study:** Peer teaching is a mutually beneficial approach that involves sharing of knowledge, ideas and experience between the students. It is becoming a progressively valuable part of many courses, and it is being used in a variety of contexts and disciplines. Informal peer teaching includes wide range of valuable activities in which the students are helping each other within the college but out of the educational contact hours. It could be either one-to-one contact or

within small groups.

The aim of the study is to enhance and evaluate the students' informal peer teaching in a problem-based medical education context.

**Methodology:** The research was conducted in the College of Medicine, University of Sharjah. Informal peer teaching was introduced to the students at the beginning of the year by providing them with lecture-free hours in their timetable. These hours, in which the students can perform the peer teaching, are between the lectures.

Following the final exam, 85 students participated in an anonymous questionnaire to assess the students' perception. In addition, focus group discussion with 15 students was conducted to discuss how the informal students' peer teaching reflects on their way of learning.

**Results:** 83% of the students revealed that informal peer teaching is considered an important source of learning, 90% mentioned that they gained a lot of knowledge from their peers during the lecture free hours. 87% stated that it was easier to ask questions from their peers than from the tutors. 85% considered presenting a topic to their colleagues a positive experience. 75% claimed that the best way of learning is teaching, and that it helps in developing in-depth knowledge.

**Conclusion:** Students' informal peer teaching is an effective learning tool that could have a greater role in medical education.

## **Poster 19. Curriculum review of four medical institutions in Qatar to determine the extent and nature of interprofessional education in their programs**

*Myriam Abi Hayla, Kim Critchley, Brad Johnson  
University of Calgary in Qatar, Doha, Qatar*

Interprofessional education (IPE) has been widely discussed in Western countries but very little in the Gulf

countries. The World Health Organization (WHO) defined IPE as the process by which students and practitioners from different professions learn together through interaction to collaborate in providing health services. The WHO also reported deficiencies in the preparation of medical students to work in healthcare teams, which is essential in improving the quality of health and social care services.

This study aims to review the curriculum of four medical institutions in Qatar to determine the extent and nature of IPE constructs or content in their programs. This will help in defining the courses that could be merged and that students from different healthcare background can attend altogether.

The work was based on a documentary curricula analysis from medical, nursing, pharmacy and health sciences programs including College of North Atlantic-Qatar, Qatar University, Weill Cornell Medicine-Qatar and University of Calgary in Qatar. The results showed that there are notions of IPE in the programs. The need to highlight IPE in healthcare institutions in Qatar in a separate course is needed.

## **Poster 20. Healthcare students' views on their training and role in cardiovascular disease risk assessment and management**

*Oraib Abdallah<sup>1</sup>, Suad Aden<sup>1</sup>, Monica Zolezzi<sup>1</sup>, Alla El-Awaisi<sup>1</sup>,  
Stella Major<sup>2</sup>, Diana White<sup>3</sup>, Kathleen de Leon-Demare<sup>3</sup>,  
Behrokh Nikaiin<sup>3</sup>*

<sup>1</sup> College of Pharmacy, Qatar University, Doha, Qatar

<sup>2</sup> Weill Cornell Medicine-Qatar, Doha Qatar

<sup>3</sup> University of Calgary in Qatar, Doha, Qatar

**Background:** Cardiovascular disease (CVD) is the leading cause of death and disability worldwide. Early assessment and management of risk factors is known to have significant impact in preventing CVD and its associated burden. CVD prevention strategies are best approached by a team of healthcare professionals.

Thus, it is important to educate healthcare students for the provision of interprofessional CVD risk assessment and management (RAM).

**Objective:** This study aimed at exploring medical, nursing and pharmacy students' preparedness and perceived barriers for the provision of CVD-RAM services.

**Methods:** A quantitative, cross-sectional survey was conducted online which targeted third- and fourth-year pharmacy, medical and nursing students at three different universities in Doha, Qatar. Cronbach's alpha was used to determine internal consistency of the used questionnaire. The students' demographic and educational characteristics, including knowledge, skills, preparedness, confidence, and perceived barriers toward CVD-RAM were analyzed using descriptive and inferential statistics (Kruskal-Wallis test for ordinal data and Chi-square test for categorical data).

**Results:** The survey response rate was 39%. The majority of responses were obtained from pharmacy students. Less than half of all participating students (n=38, 47%) were able to identify all the main six risk factors necessary to estimate absolute CVD risk. Training assessing the individual CVD risks and in the use of CVD risk assessment tools differed among the three student cohorts. The majority of students agreed or strongly agreed to 10 out of 13 preparedness statements.

Time was the top major barrier for the provision of CVD-RAM perceived by medical students, whereas nurses perceived poor public acceptance as their major barrier for the provision of CVD-RAM. Pharmacy students indicated lack of support as their major barrier. Cronbach's alpha of the scales used in the questionnaire revealed very good internal consistency.

**Conclusion:** Findings reflect that all student cohorts perceived similar levels of preparedness in CVD-RAM. However, the majority of students were not able to identify all six risk factors needed to estimate CVD

risk, which suggests a need to intensify educational strategies. Implementation of interprofessional education programs may provide the opportunity to homogenize and intensify students' knowledge and skills in CVD-RAM.

## Poster 21. Simulation-based learning to teach dispensing and counseling in patients' native language to pharmacy students

*Maryam S. Alowayesh, Salah Waheedi  
Kuwait University, Kuwait*

**Objective:** To assess the effect of simulation-based learning (SBL) on pharmacy students' ability to dispense medications with counseling patients' in their native language and to measure student satisfaction with this teaching method.

**Design:** Students were taken through seven stations that represented the steps of dispensing. These stations were specially designed and timed to enable the students to live the experience as a real pharmacist. Students should check the prescription for its validity, carry out therapeutic assessment on it, communicate with the physician for any interventions, prepare cautionary and advisory labels, pick-up the correct drug from the pharmacy, prepare and print the label, then finally counsel the patient in his/her language (Arabic). Students completed a post-session satisfaction survey to assess their overall experience and to receive their suggestions for future modifications.

**Assessment:** 49 third-year pharmacy students completed the survey. The overall experience was considered positive by 75% of the students, 64% preferred this method over the traditional dispensing lab. 70% of students felt that this method is better in assessing their skills. Students commented that this experience made them feel like real pharmacists. Teaching dispensing through SBL enabled the professor to assess students' communication skills with

physicians, counseling patients in Arabic, students' ability to dispense, and to do all the required steps on time. Some of the mentioned skills could be easily neglected by the students and overlooked by the assessor during the traditional method, where the students were given a prescription and asked to do everything in writing.

**Conclusion:** The students went through the steps of dispensing in a systematic fashion, as they spent sufficient time at each station. Hence, we can expect that they are better acquainted with interacting with physicians, and that they are well trained in counseling in Arabic.

## **Poster 22. Comparison of recommended sanctions for lapses of academic integrity as measured by Dundee Polyprofessionalism Inventory I: academic integrity from a Saudi and a UK medical school**

*Salman Guraya<sup>1</sup>, Sue Roff<sup>2</sup>, Bob Norman<sup>3</sup>*

<sup>1</sup> *Taibah University, Medina, Saudi Arabia*

<sup>2</sup> *University of Dundee, Dundee, UK*

<sup>3</sup> *University of Leicester, Leicester, UK*

Professionalism has been recognized as an integral facet of medical education worldwide. The understanding and application of medical professionalism, a complex social construct, is influenced by regional, cultural, contextual, and religious factors across the globe. Unfortunately, very little research has been done to determine cultural differences that might influence the understanding of medical professionalism.

Academic integrity, moral code, or ethical policy of academia belong to the core attributes of medical professionalism. It is imperative to investigate the perceptions of medical students and staff about their knowledge and understanding of academic integrity. There are varying perceptions and understandings

about attributes of academic integrity across the globe, and although, most academic institutions endeavor to adhere to disciplinary frameworks for handling the lapses, there is no universally agreed protocol recommending sanctions for lapses of academic integrity. To identify and understand the similarities and differences in recommendations for lapses of academic integrity owing to regional and cultural variations, this study explored the perceptions of the medical staff and undergraduate medical students of Taibah University, Saudi Arabia, and those of University of Leicester, UK, using the 34-statement Dundee Polyprofessionalism Inventory I: Academic Integrity.

A total of 411 respondents formed this study group. Broadly, University of Leicester staff and students together ranked higher sanctions than the staff and students of Taibah University. The most significant difference—five vs. eight—in median rank score of the recommended sanctions proposed by students and staff together from both schools was reported for 'engaging in substance misuse, e.g. drugs'. For 'forging a healthcare worker's signature on a piece of work', a statistically significant median variation of four vs. nine was suggested by the staff of Taibah University and University of Leicester, respectively. Clinical staff was found to be stricter than non-clinical staff from both medical schools. 'Involvement in pedophilic activities' was given the highest and 'lack of punctuality' the lowest sanction by the respondents from both medical schools. The results identified some degree of congruence, as well as some significant dissimilarities in the sanctions for academic dishonesty. This information can be utilized in targeting further education to standard setting of professionalism across the globe. Such standards will facilitate the migration of international medical graduates across various cultures by promoting their fitness to practice, especially probity and honesty, as defined by the UK General Medical Council.



## Poster 23. Value of didactic echocardiographic sessions in students' academic performance during cardiovascular block in a PBL undergraduate medical curriculum

Sultan Al-Howti, Mohammed G. Al-Ghamdi

King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

**Background:** Echocardiogram (echo) is a commonly used diagnostic tool in cardiovascular medicine. Echo has the ability to demonstrate the anatomic cardiac structures, the dynamic nature of the heart and pathological features of heart disease. The impact of didactic echo sessions on the academic performance of undergraduate medical students has not been studied.

**Aims:** The aim of this study is to evaluate the incremental value of an extra-curricular, weekly, focused echo lecture on the students' academic performance, during the cardiovascular block of a curriculum using problem-based learning.

**Methods:** This is a prospective, randomized, intervention-control, open labeled study with blinded endpoints. 77 male students were randomized into active or control study groups. The active study group received six didactic, multimedia echo sessions in addition to the standard curriculum which was delivered to both groups. Outcomes of interest include students' grade point averages (GPAs) and total and domain-specific written exam marks at the end of block.

**Results:** Both groups were similar in the socio-demographic characteristics and baseline GPAs. 18 out of 39 students (46%) in the active group attended all sessions. No statistically significant difference was found between the study and control groups GPAs at the end of block, total marks or domain specific marks. Academic performance was significantly better among those students who attended all sessions, as compared

to those who did not, with obvious dose response effect. In comparison with the control group, students who attended all sessions achieved significantly better score in physiology, pathology and clinical aspects.

**Conclusions:** Echocardiogram is a potential educational tool to improve students' academic performance. More studies with larger sample size are required to support our findings.

## Poster 24. Implementing a sustainable pharmacy immunization and injection training program through interprofessional collaboration

Christopher Louizos, Grace Frankel, Casey Sayre, Christine Leong, Dana Turcotte, Neal Davies

University of Manitoba, Winnipeg, Canada

In 2014, Manitoba joined other Canadian provinces by approving legislation allowing pharmacists to administer immunizations and other injections. To address the challenge of training practicing pharmacists and pharmacy students in an unfamiliar skill set, a stakeholder group consisting of professionals from pharmacy, nursing, and later medicine was formed.

The stakeholder group, termed the Immunizations and Injections Program Group (IIPG), developed a training program useable for both practicing pharmacists and pharmacy students that included a didactic and practical lab portion. Online delivery was largely utilized for the didactic portion. Nurse instructors were employed at a minimum of a six-to-one participant to instructor ratio for the practical lab component for education, demonstration and evaluation roles.

Pharmacist instructors with immunization experience obtained out-of-province were educated on new assessment, monitoring and legal requirements for the practice advancement. The newly developed training program has been successfully used to train over 600 participants.

## Poster 25. Physiomics: the language link is key to interprofessional medical education and collaborations as well as translational discussions and research

Alfreda Haggard<sup>1</sup>, Judith K. Gwathmey<sup>2</sup>

<sup>1</sup> Community College of Qatar, Doha, Qatar

<sup>2</sup> Boston University, Boston, USA

The common vocabulary for medical education is from anatomy and physiology, which form the very foundations of medicine, surgery and healthcare. Anatomy is the study of the structure and relationship between body parts, whereas physiology is the study of the function of body parts and the body as a whole, i.e. the way in which the human heart pumps an average of 4.7 liters of blood through a network of vessels that are 161,000 kilometers long. Although there are specializations within each of these sciences, they both strongly lend themselves to the understanding of health and disease.

Both fields span from the single molecule to genomics and proteomics. Together they bridge basic science to clinical practice and, therefore, lend themselves to translational discussions and a bench to bedside approach. Anatomy and physiology can serve as the foundation for all levels of healthcare providers, physicians and scientists. This enables them to forge partnerships and meaningful relations between each other, both nationally and internationally.

Medical challenges can be addressed through a co-piloting approach that maximizes the use of human talent and human capital, using the shared vocabulary of physiomics (anatomy and physiology). We propose an educational model where students in various medical disciplines—medicine, nursing, pharmacy, pharmacology, optometry, etc.—take a common core of physiomics courses, where their shared insights can foster better cross-field communication and greater insights. Such shared curricula could also

benefit students in dentistry, physical therapy, nursing, and medical technologies, and help them better communicate their medical knowledge and research programs to those outside of their discipline.

## Poster 26. The global pharmacist

Naziha Alem<sup>1</sup>, Sudaxshina Murdan<sup>1</sup>, Nicole Blu<sup>2</sup>, Sally-Anne Francis<sup>3</sup>, Emily Slater<sup>2</sup>, Mike Munday<sup>1</sup>, Jean Taylor<sup>1</sup>, Felicity Smith<sup>1</sup>

<sup>1</sup> University College London School of Pharmacy

<sup>2</sup> University of London, London, UK

<sup>3</sup> Independent research pharmacist, Essex, UK

**Background:** Is the 'global pharmacist' one who is able to work anywhere in the world? Or one who is a global citizen? Development education is an approach to learning about global and development issues for a more just and sustainable world. It has mainly been conducted in schools, and scarcely at universities.

**Aims:** In this context, the UK Government funded a project to make medicine, pharmacy and veterinary undergraduates at University College London (UCL) and Royal Veterinary College into global citizens.

**Methods:** Learning and teaching activities to achieve this aim were developed and evaluated. In this poster, the work conducted at the UCL School of Pharmacy is discussed.

**Results:** The extent of global learning in the existing curriculum as well as student and staff perceptions about global learning were determined. A global awareness resource pack was created to facilitate discussions in tutorials. Activities, such as an interactive lecture *The global pharmacist*, creation of posters *Pharmacy in my country* by students and a 'global pharmacy' photo competition were undertaken.

Joint workshops with medical, pharmacy and veterinary students and staff were held. In the workshops, students—in mixed discipline groups—were presented with a scenario (outbreak of bird flu in Sudan) and

asked to role-play their response. An external speaker gave a seminar about her experience of working as a pharmacist for NGOs and in crisis situations.

*Médecins Sans Frontières* attended the careers fair and advised students about requirements of working with them. A set of draft global pharmacy learning outcomes was prepared, and the document *The global pharmacist* was published and launched. At this event, the draft global pharmacy learning outcomes were discussed with a wider pharmacy community.

**Conclusions:** Staff and students, and the broader pharmacy community agreed that pharmacy students, to become better pharmacists, should learn about global issues.

### Poster 27. Using community website as an informal learning environment among pharmacy students

Sara K. Baderden<sup>1</sup>, Omer Q. B. Al-Lela<sup>2</sup>, Ramez M. Alkoudmani<sup>3</sup>,

<sup>1</sup> Al-Mustansyriah University, Baghdad, Iraq

<sup>2</sup> University of Duhok, Duhok, Iraq

<sup>3</sup> International Islamic University of Malaysia (IIUM), Kuala Lumpur, Malaysia

**Objective:** This study was conducted to analyze students' insights into informal learning by means of social networks and community websites.

**Methods:** Survey forms were distributed to all 360 students of the Kulliyah of Pharmacy of IIUM. Data analysis was done with IBM SPSS software 20, and descriptive statistics were used to study the demographic characteristics of the students in relation to their use of social networking sites.

**Results:** 240 students provided responses. The results revealed that the highest rating with a mean (SD) of 4.53 (0.63) was related to accessing course notes and other teaching materials. Most students agreed—with a mean (SD) of 4.18 (0.73)—that social networking sites

were helpful to their courses.

**Conclusion:** The findings of the study indicate that pharmacy students at IIUM use social networking sites and other community websites as tools for academic purposes.

### Poster 28. Patient satisfaction with an interprofessional approach to wound care in Qatar

Shaikha Ali Al-Qahtani, Emmanuel Ngwakongnwi, Kim Critchley

University of Calgary in Qatar, Doha, Qatar

Qatar's healthcare system is undergoing tremendous transformation to provide high quality healthcare of international standards to the growing population in accordance with Qatar's National Vision (QNV) 2030. Providing high-quality healthcare requires that healthcare workers work effectively with their colleagues across other disciplines, often referred to as interprofessional collaboration (IPC).

This proposed study will investigate patient satisfaction with an interprofessional approach to wound care, a necessary step to assess how well the service is performing since it was established. Patient satisfaction is an indicator of quality of care. It has been extensively used to investigate patient outcomes and improve health services in various hospital settings. Despite available literature on patient satisfaction, we found none particularly related to wound care delivered through an interprofessional approach. This gap in literature justifies the proposed study, to fill a gap especially here in Qatar and the Middle East where little respective research has been done.

The proposed study will use a cross-sectional design to survey hospital in- and outpatients of Hamad General Hospital in Qatar. It will determine patients' level of satisfaction with wound care services, delivered through interprofessional teams. The sample will be one of convenience, including all patients who accessed

wound care services of the in- and outpatient Wound Care Services Department at Hamad Medical Center over a six-month time period. Data collection will last for three months from October to December 2015. This proposed study could have major implications for Qatar especially as there are efforts to introduce interprofessional Education in Qatar, in particular as there is very limited literature on the subject for Qatar and the Middle East.

### **Poster 29. Why is there a growing need to explore interprofessional collaboration in the UK?**

*Ejaz Cheema*

*Umm-Al-Qura University, Mecca, Saudi Arabia*

The National Health Service (NHS) in the UK introduced a new contractual framework for community pharmacy in 2005, with the intention of moving pharmacists towards a more clinical service-oriented role (National Pharmacy Association & British Medical Association, 2009). For example, community pharmacies in the UK can provide health checks for people aged 40 to 74 years. Within these health checks, pharmacists can carry out a full vascular risk assessment and provide advice and support to help reduce the risk of heart disease, stroke, diabetes and obesity (National Pharmacy Association & British Medical Association, 2009).

However, such extensions in activities and services delivered by community pharmacists in the UK may conflict with the work of general practitioners (GPs) and health professionals working in hospitals. Therefore, there is a need for formal links to ensure coherence of treatment approaches and evidence-based integration of pharmacy-delivered services with other health services (Blenkinsopp, 2007).

However, one question remains: how can we educate our future healthcare professionals in a way that enables them to work towards the common goal of

providing patient-centered care while recognizing each other's services? The recently conducted review of interprofessional education in the UK included data from 52 universities and 63 interprofessional education-related modules. The review stressed the need not only to diversify the current interprofessional education, but also to build the necessary infrastructure required to improve the growth and effectiveness of interprofessional education (Barr, Helme & D'Avray, 2014).

Future interprofessional education should also aim to explore collaborative partnerships between GPs and pharmacists and assess the impact of their combined efforts on patient healthcare outcome. This will help develop a better understanding between GPs and pharmacists, which would ultimately be very useful in the delivery of effective healthcare to patients.

### **Poster 30. Student perspective of interprofessional learning approach for teaching tobacco cessation module among healthcare professional students in Qatar**

*Alla El-Awaisi<sup>1</sup>, Ahmed Awaisu<sup>1</sup>, Maguy El-Hajji<sup>1</sup>, Bayan Alemrayat<sup>1</sup>, Ghadeer Al-Jayyousi<sup>2</sup>, Norman Wong<sup>3</sup>, Mohamud A. Verjee<sup>4</sup>*

*<sup>1</sup> College of Pharmacy, Qatar University, Doha, Qatar*

*<sup>2</sup> Department of Health Sciences, College of Arts and Science, Qatar University, Doha, Qatar*

*<sup>3</sup> School of Health Sciences, College of the North Atlantic in Qatar, Doha, Qatar*

*<sup>4</sup> Weill Cornell Medicine-Qatar, Doha, Qatar*

The team approach is the most effective way to deliver quality patient care. Interprofessional education (IPE) provides health science students the opportunity to experience collaborative practice before graduation. The IPE method is a recent development for health science students in the Middle East. Measuring its impact will help develop effective methods to implement IPE in various health science curricula. Using a health promotion topic for an IPE session, such as smoking

cessation, may also have the beneficial approach of reinforcing key information in combination with the team approach.

50 students from four disciplines and three different educational institutions were recruited to take part in a smoking cessation IPE. Their attitudes were measured pre- and post-event using the *Readiness for Interprofessional Learning Scale*. Results were not statistically significant, due to various factors. Some trends implicate that students may have gained a positive attitude towards interprofessional collaboration.

### **Poster 31. Comparing Saudi Arabian nursing students' VARK scores to those of other health students in the Arab-speaking world**

*Bridget Stirling*

*University of Calgary in Qatar, Doha, Qatar*

Learning style preferences influence how well groups of students respond to their health professional curricula. This study took place at the College of Nursing, in the world's largest all-female university in Riyadh, Saudi Arabia.

The purpose was to develop knowledge around the preferred learning styles of students, to better lead students to understand the course content and, in turn, offer improved patient care. After gaining ethical approval from the university and signing informed consent, a culturally, gender and linguistically adapted version of the VARK (visual, aural, read/write, kinesthetic) learning styles index was offered to all nursing students at the university.

Participants included 124 female student nurses from years one to four. A cross-sectional design was used. 80.5% of all participants had at least some preference for kinesthetic learning. 38.2% had a strong preference for kinesthetic learning, while 10.6%, 4.9%, and 2.4% had a strong preference for aural, reading/writing, and visual learning, respectively. The preferences for learning

differed from previous studies that assessed medical and dental students in Saudi Arabia.

This poster will outline the comparison between these different groups of health science students. Implications for working together in clinical teams, learning new skills and information, and understanding evidence to direct patient care will also be considered.

### **Poster 32. Narrative pedagogy for interprofessional education**

*Daphne Kennedy*

*University of Calgary in Qatar, Doha, Qatar*

Today's healthcare environments require professionals to cope with and adapt to increasingly complex clinical situations. Due to a shortage of healthcare workers, professionals are required to work effectively as part of a team to deliver effective, safe and comprehensive care. Collaboration, however, is more than working alongside other professionals; it occurs when "individuals from different backgrounds with complementary skills interact to create a shared understanding that none had previously possessed or could have come to on their own".

To prepare student professionals to work together as a team, to critically think about situations, and come to a shared understanding, educators need to rethink their teaching methodology and the underlying assumptions that guide their practice.

On this poster I will outline the ways in which I integrated an innovative pedagogical approach, narrative pedagogy and the *WHO Framework for Action on Interprofessional Education and Practice* to guide student nurses as they work together to arrive at a shared understanding of the meaning of narratives through dialogue and reflection. As part of preparing a "collaborative practice-ready workforce", I will outline how narrative pedagogy can be implemented as part of interprofessional education that includes two or more professions.

### **Poster 33. Challenges to implementing interprofessional education with nurses: a review of the literature**

*Carnelle Symes, Carolyn Wolsey*

*University of Calgary in Qatar, Doha, Qatar*

Interprofessional education (IPE) is a global initiative for improved collaboration among healthcare providers and overall improvement in patient outcomes. The pillars of IPE education are teamwork, collaboration, knowledge sharing, and problem solving. Nurses have been involved in IPE to varying degrees globally.

We seek to understand from a review of the literature challenges to implementing IPE with nurses in both practice and educational settings. The focus of this review will be to highlight local and regional literature related to nurses and IPE.

This literature review will provide insight to professionals seeking to engage nurses in IPE and assist with increasing the knowledge base for the development of partnerships amongst healthcare professionals. We as nurses at University of Calgary in Qatar seek to use this information to better equip our nursing graduates to integrate IPE into their future nursing practice.

### **Poster 34. Making it count: exploring perceptions of interprofessional roles within the community via clinical simulation**

*Pamela Zielinski*

*University of Calgary in Qatar, Doha, Qatar*

This poster presentation will discuss the experiences of nursing students in Qatar using clinical simulation and role play in order to explore and reflect on interprofessional practice within a mock community health setting.

The writer developed a community health clinical simulation scenario that was presented to three groups of 12 students each. The scenario was based

on a group of six community members in various interprofessional and civilian roles interacting with a group of five community health registered nurses with various backgrounds. The roles of the community members included: one business owner, one team leader paramedic, one detective and one traffic safety expert from the police department, and two motor vehicle collision (MVC) victims' mothers.

The scenario was an initial meeting between the different professions and the two victims' mothers to start discussion of the assessment, planning, implementation, and evaluation of a project that would aim at combatting the recent rise in MVC-related deaths in their community. Through this community health-based simulation activity, student nurses were able to role play and identify their own stereotypes and perceptions of other interprofessional roles.

Furthermore, self-reflection and debriefing were both used to help students build on their experiences, reflect on any pre-held misconceptions, and to advance their knowledge.

### **Poster 35. Intraprofessional collaboration: a concept analysis**

*Sarah Ann Balcom<sup>1</sup>, Shelley Doucet<sup>2</sup>*

*<sup>1</sup>University of Calgary in Qatar, Doha, Qatar*

*<sup>2</sup>University of New Brunswick, Saint John, Canada*

**Background:** Healthcare providers often work together collaboratively to deliver quality patient-centered care. The World Health Organization considers interprofessional collaboration, or collaboration amongst healthcare providers who have different professional backgrounds, a way of improving health worldwide.

While there is a body of research focused on interprofessional collaboration, less is known about 'intraprofessional' collaboration, or collaboration between healthcare providers who share a professional background and thus have similar—yet distinct—roles in patient care. Currently, there is no widely accepted



definition of ‘intraprofessional collaboration’, which limits research and causes confusion for those interested in this topic. Barriers to interprofessional collaboration, such as hierarchies and rivalries, are also barriers to intraprofessional collaboration and need to be further studied within this intraprofessional context.

**Method:** The researchers will use Walker and Avant’s (2011) eight-step concept analysis model to develop an understanding of intraprofessional collaboration. They will (1) select a concept; (2) determine the purpose of the analysis; (3) identify the uses of the concept; (4) determine the defining attributes; (5) identify the model case; (6) identify any related, contrary or invented cases; (7) identify any antecedents and consequences; and (8) define empirical referents. Our search will include dictionaries, thesauruses, stakeholder interviews, and published, as well as grey, literature sources. This will provide a comprehensive review across disciplines and sources, which will enable a broad literature search.

**Findings and significance:** This concept analysis will provide a comprehensive operational definition for the term ‘intraprofessional collaboration’, which will promote the sharing of knowledge to further advance this field of study and practice. As governments seek to reduce healthcare costs, we will increasingly see different levels of healthcare providers from the same professional background working together. This concept analysis is work in progress, and preliminary findings will be shared.

### **Poster 36. Interprofessional education: an initiative to introduce oral health to senior medical students at Weill Cornell Medicine-Qatar**

Rafif Tayara<sup>1</sup>, Mohamud Verjee<sup>2</sup>

<sup>1</sup>POHET (Pediatric Oral Health Education Team) cofounder and pediatric dentist

<sup>2</sup> Weill Cornell Medicine-Qatar, Doha, Qatar

Oral health is an essential component of overall health and childhood caries is the most common chronic

disease of childhood. This is a clear indication that our existing health system must be challenged. The need for team-based care in addressing oral health in pediatric clients and families is clear. Historically grown professional gaps in practice must be intentionally bridged to allow for collaboration across and within the health professions. IPE facilitates the development of these essential skills, provides opportunities for collaborative practice and, ultimately, provides coordinated care.

From that perspective, we conducted an initiative collaboration to introduce a one-time oral health didactical course within the medical students’ program at Weill Cornell Medicine-Qatar. Early childhood caries, its detection by medical students and residents, its early prevention and diagnosis, oral health diseases and their relationship with systemic illnesses in adults, and oral trauma in children were also discussed.

Evolving educational curricula, changing policies in professional organizations and credentialing standards and community-based programs will help realize these goals. All health professionals must keep the child at the center of all discussions and embrace a shared responsibility for children’s oral health.

### **Poster 37. What do physicians think of provision of enhanced services by community pharmacists in the UAE?**

Sanah Hasan<sup>1</sup>, David C. M. Kong<sup>2</sup>, Kay Stewart<sup>2</sup>

<sup>1</sup> Sharjah University, Sharjah, UAE

<sup>2</sup> Monash University, Clayton, Australia

**Objectives:** This study aimed to explore physicians’ views of pharmacists’ roles in providing enhanced services through community pharmacies in the UAE.

**Methods:** A qualitative approach involving semi-structured interviews conducted one-to-one or in group discussions was employed. The interviews explored participants’ views of pharmacists’ primary care services including screening and monitoring of

disease, health advice, referral, lifestyle and preventive care, supply of printed information, counseling on medications, patient record keeping, and pharmacist intervention in chronic disease management. Data were analyzed using the framework approach.

**Key findings:** 53 physicians participated; 27 were interviewed individually and 26 participated in five group discussions. Four major themes were identified: competence, business orientation, territorial control, and service delivery. Participants were supportive of verbal counseling about medications, checking for drug dosing, interactions, duplications and errors, and keeping patient medication profiles. Physicians generally did not favor pharmacists' involvement in screening or monitoring of disease, providing information about diseases, diagnosis or long term management of disease, or intervention directly with patients, mainly due to a perceived lack of competence, territorial encroachment and business orientation of community pharmacists.

**Conclusions:** Despite some reservations, participants showed support for pharmacists' involvement in providing primary care services, provided certain quality and territorial issues were addressed. Understanding physicians' attitudes will facilitate interventions to enhance the contribution of community pharmacists to primary care in the UAE and possibly in other regions with similar healthcare systems.

### **Poster 38. Safety Facilitators' diaries: the quality improvement journey in Qatar**

*Mouna Bahsoun, L. Diba, K. Magno  
Hamad Medical Cooperation, Doha, Qatar*

Quality improvement is the focus of the Safety Facilitators' work under the *Best Care Always Campaign*, Hamad Medical Corporation's partnership with the Institute for Healthcare Improvement. Before that background, this poster will highlight the different aspects of interprofessional collaboration to improve

patients' safety and care outcomes in one of the clinical workflows at Women's Hospital from October 2013 till present.

The primary role of the Safety Facilitators is to bring the care teams together to ensure improvement in patient safety through meaningful cross-discipline communication and collaboration. The interprofessional collaboration is translated by the diversity of the team's educational and professional backgrounds. Safety Facilitators guide care teams through improvement activities and assist them in learning from suboptimal outcomes and in jointly designing new processes. To put it into practice, the model for improvement is used under the motto *Simplify and Standardize*. Also, rapid testing cycles of Pan-Do-Study-Act are carried out.

An example is the achievement of the Labor Induction Unit of Women's Hospital that consistently conducted daily safety briefings for three shifts during nurses' handover. Safety briefings data, as well as other process and outcome data, are posted in the units and known by all staff. Each team goes through a self-assessment process, to evaluate the improvement activities carried out during each month. Our care teams have consistently improved quality scores.

The Safety Facilitators faced challenges related to systems, to the human side of change and technology. This was because systematic monitoring and evaluating processes and outcomes were not embedded as a fundamental component of the healthcare organization. Also, frontline staff did not optimally use change concepts, and electronic health records were introduced just in early 2015.

Safety facilitators play a pivotal role in the improvement journey to advance healthcare in Qatar. Interprofessional collaboration between care team members is necessary to maintain the focus on the improvement process and keep patient safety at the center of care.

## Poster 39. The impact of pharmacist-managed anticoagulation clinic on patient safety and outcome in Qatar using single interdisciplinary consultation system

Manal Zaidan, Ahmed Mahfouz, Ashfaq Patel, Mohammed Al-Hashemi, Alejandro Tuli, Jaham Said, Ahmed Al-Momani, Ahmad Saad, Moustafa Al-Khalil, Ibrahim Al-Emadi, Eslah Ataby, Vanessa Aguana, Swapan Pradhan  
Hamad Medical Cooperation, Doha, Qatar

**Objectives:** To develop an interdisciplinary single consultation system to manage patients on anticoagulants and to study its impact on patient's outcome after establishing a structured anticoagulation clinic managed by dedicated trained pharmacists.

**Methods:** A multidisciplinary team developed business plan in 2012 to establish pharmacist-managed anticoagulation (PMAC). The team was responsible for reviewing policies, protocols, workflows, and forms, together with a follow-up of implementation and quality of service.

PMAC followed 150 referred patients. The pharmacist checks international normalized ratio (INR) via point of care testing, reviews medication history, adjusts warfarin dosage according to approved protocols, counsels the patient according to the warfarin education checklist, and dispenses warfarin. A dosing schedule form is given to the patient, including instructions and the next visit. A well-structured patient assessment and interdisciplinary care plan are documented electronically.

Patients have participated in the planning of their warfarin dosing according to their lifestyle and diet. A process and protocol of referring the patient back to the physician or the emergency department has been established according to well-defined criteria. Time in therapeutic range (TTR) is selected as a clinical indicator to assess the impact of PMAC on patient care. Serving time defined from patient arrival to the clinic until receiving the medication was the indicator of the efficiency of PMAC workflow.

**Results:** As preliminary data for randomly selected 25 patients, the mean calculated TTR using the Rosendall method (3 months before and after referring to PMAC) was 76.09%  $\pm$  15.56 [95% CI: 69.65-82.52] versus 69.24%  $\pm$  26.44 [95% CI: 58.34-80.14] for the same patients after follow-up in PMAC; however, the difference was statistically insignificant (P=0.265). The mean serving time was 66.81 minutes [95% CI: 55.76 to 77.83 minutes] for a comprehensive metabolic panel (CMP) compared to 17.66 minutes [95% CI: 13.95 to 21.34 minutes] for PMAC (P=0.0001).

**Discussion/ Conclusion:** The mean TTR for PMAC is non-inferior to CMP while the mean serving time is significantly lower in PMAC compared to CMP with less number of staff (four versus eight, respectively). PMAC was established successfully with improving the assessment of patient adherence, enhancing patient education, and resolving drug-related problems. PMAC provides healthcare professionals with consistent interdisciplinary single consultation and documentation.


## Poster 40. Perceptions of pharmacy students, pharmacists and pharmacy academics in Qatar to interprofessional education and collaborative practice

Alla El-Awaisi<sup>1</sup>, Lesley Diack<sup>2</sup>, Sundari Joseph<sup>2</sup>, Maguy El-Hajj<sup>1</sup>

<sup>1</sup> Qatar University, Doha, Qatar

<sup>2</sup> Robert Gordon University, Aberdeen, UK

**Background and objective:** Interprofessional education (IPE) is a valuable educational approach for preparing students in different healthcare disciplines to provide patient care in a collaborative team atmosphere. Despite the availability of evidence that supports the effectiveness of IPE as an important aspect of developing health professions' students and its effectiveness, there is minimal published research on this topic in the Arab countries. The objective of this research is to explore the views, attitudes and perceptions of pharmacy students, pharmacists



and pharmacy faculty in Qatar to interprofessional education and collaborative practice.

**Setting and Method:** A mixed-methods design is used as the conceptual framework for this research. This research comprised two phases: (1) An online anonymous survey, which incorporates the validated Readiness for Interprofessional Learning Scale (RIPLS), was developed and sent to all pharmacy students, all pharmacy faculty and to a stratified cluster random sample of practicing pharmacists in Qatar. (2) Focus groups were conducted for each cohort to explore IPE and collaborative practice further. This research has been approved by the Institutional Review Boards of the Robert Gordon University and Qatar University.

**Results and conclusions:** Students, pharmacy academics and practicing pharmacists consider IPE important, and this research shows that the three different groups demonstrated positive attitudes towards IPE and collaborative practice. A lot of efforts and hard work are needed to drive integration and implementation of IPE forward at the College of Pharmacy of Qatar University. This research is the first of its kind in the region; it will generate a body of knowledge regarding the development, implementation and evaluation of IPE in healthcare in the Middle East that is comprehensive and unique. The knowledge and experience gained from this research will inform an ongoing and continual improvement process to maintain the initiative as the healthcare system in Qatar grows and evolves to meet the needs of its population.