Implementing an interprofessional education programme in Lebanon: overcoming challenges

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Abstract

Background: The Lebanese American University has a well-functioning inter-professional education (IPE) programme; this is a fundamental pedagogical approach in healthcare education in which students from different professions learn together, ultimately leading to improving the skills of the health care workforce and thus improving patient outcomes. The programme includes nursing, nutrition, medicine, pharmacy and social work students, and has now been running for 6 years.

Aims: This paper aims at describing the implementation of an IPE programme in Lebanon by focusing on how to overcome the main challenges.

Methods: We describe our experience using the categories of challenges developed by Sunguya et al. (2014), where they analysed published reports of IPE programmes in developed countries. We identified three additional challenges that might be relevant throughout the Middle East/North Africa (MENA) region or in countries with similar socioeconomic characteristics.

Results: The challenges encountered in designing and implementing the IPE programme were similar to other programmes: curriculum, leadership, resources, stereotypes and attitudes, variety of students, IPE concept, teaching, enthusiasm, professional jargon and accreditation as well as assessment of learning, security and logistics.

Conclusions: This paper provides data and successful strategies that can be used by planned or implemented programmes in similar socioeconomic contexts in the MENA region.

Keywords: interprofessional education, curriculum, health care, workforce

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Introduction

Interprofessional education (IPE) "occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes" (*1*). This approach is endorsed by many international health organizations and related accrediting bodies as a means to improve students' learning and patient care (*2–7*). Several studies conducted in Middle Eastern countries show that health profession students are ready for IPE and collaborative practice (*8–11*) and that collaborative practice helps improve patient care and creates positive relationships among health care team members (*9,12–16*). Many health care education programmes worldwide are incorporating IPE under different forms in their curricula (*17*). The objective of this paper is to describe our experience in designing and implementing the IPE programme at the Lebanese American University (LAU) and the strategies used to overcome the challenges encountered.

The university has over 8500 undergraduate, graduate and professional students who study on two campuses that are 35km apart in addition to an affiliated university hospital. The Bachelor of Arts in social work programme and the Bachelor of Science (BSc) and Doctor of Pharmacy programmes were established long ago, while the medical doctorate, BSc in nursing, and BSc in nutrition programmes were established in 2009 and 2010. In 2010 a workgroup was formed among faculty from the five health and social care programmes to develop the learning objectives and structure for an IPE programme. What emerged is a stable and running programme that incorporates both theoretical and clinical aspects.

We describe our experience using the category of challenges developed by Sunguya et al. (*18*), when they analysed published reports of IPE programmes in developed countries. They noted that the challenges identified were "likely relevant to developing countries where resources are even scarcer." Lebanon is a developing country and our experience supports their assertion. We identified three additional challenges that might be relevant throughout the Middle East/North Africa (MENA) region or in countries with similar socioeconomic characteristics.

Implementing interprofessional education: challenges and solutions

Curriculum

Curriculum was identified as the most frequent challenge, occurring in 75% of the programmes Sunguya et al. reviewed (*18*). Challenges mainly included curriculum content, integration, time and schedule, and course rigidity (*16*). In our case, three of the five professional programmes involved were new, yet all five programmes had distinct curricula and different time, schedule and course plans. The workgroup established a mission and programme learning outcomes (Table 1) for IPE. We planned five half-day workshops (which we refer to as IPE steps); community learning activities; and hands-on patient care in the clinical setting, managing to bring together students from all five health and social care programmes at the same time. Students attend the steps over two or three years, depending on their profession; IPE is co-curricular but the workshops are mandatory. The aim is to provide students with common tools for immediate application in their clinical experiences (Tables 1 and 2).

Additionally, we introduced several clinical activities to help students transfer their interprofessional skills to the practice setting. In February 2012, a group of medical, nursing and PharmD students began regular visits to the volunteer outreach clinic in Shatila Palestinian refugee camp. At the clinic, interaction among health care students occurred naturally as they worked together in a small space, supervised by faculty. Bus transportation provided by the university to and from the clinic allowed additional opportunity for interprofessional communication.

Another clinical IPE experience is offered at the university hospital. Multidisciplinary rounds for internal medicine, infectious diseases, nephrology, paediatrics, cardiology and emergency medicine are held twice a week and include medical and pharmacy students and faculty members from both disciplines.

Over 1100 students have attended at least one of the LAU IPE steps since 2012; the entire sequence has been repeated for five cohort groups.

Leadership

Lack of leadership is a challenge that must be overcome when implementing IPE (*18,19*). Poor planning, lack of coordination and lack of administrative support can strongly impede an IPE initiative. We were fortunate to have full leadership support from the beginning for the development of our IPE programme. The university Board of Trustees approved the establishment of the new schools of medicine and nursing with the condition that nursing and medical students have multidisciplinary learning activities. Development of the IPE programme by the IPE workgroup was also included in the University's strategic plan, which substantiated the value and commitment of LAU leaders to IPE. There has been very little turnover in the workgroup, and new members share the same passion for the programme as continuing members, making them the champions of IPE.

Resources

Securing adequate resources is essential to the implementation of IPE in any institution; this includes financial, physical, material and human resources (*1,19*). Sixteen of the 38 programmes reviewed by Sunguya et al. reported this challenge (*18*). At LAU, IPE started as an unbudgeted initiative. The IPE workgroup members have participated in programme development as a component of their service to the university. For the first 2 years, no support staff was dedicated to assist with logistical implementation of activities. Over time, the School of Nursing was able to allocate 0.5 full-time equivalent staff support to the programme.

A total of 75 small group facilitators for the student workshops is needed per year. This is a challenge as there is no budget to compensate for the time faculty dedicate to the programme; because it is co-curricular it is not factored into their teaching workload. When short on facilitators, we have invited medical residents, which turned out to be effective. Funding to cover costs for refreshments, photocopying instructional materials, and transportation to the volunteer outreach clinic was secured through the respective schools, often on a rotational basis. In recognition of the success of the

Table 1 Mapping of the interprofessional education (IPE) steps to the programme outcomes

IPE programme learning outcome	Mapped to IPE step				
	1	2	3	4	5
Recognize expertise, roles, responsibilities and competence of other professionals	X	X	X	X	X
Use effective communication techniques with other professionals to effect change and resolve conflict when providing patient/client care		X	X		X
Develop interprofessional collaboration in health and social care settings	X	X	X		X
Make decisions with other professionals and the patient/client when planning and implementing health and social care		X	X	X	
Develop IPE case conferences, team meetings, and quality improvement activities				X	X
Demonstrate evidence-based interdisciplinary approaches to provide a safe environment for patients/clients and achieve good patient/client outcomes				X	
Resolve ethical issues that arise in health and social care settings			X		X

programme, for 2015–16 the university budget committee allocated an independent budget to the IPE workgroup.

Stereotypes and attitudes

Stereotyping of professions by faculty, students and institutions is another challenge to overcome. Studies show that within the health care team there is little understanding of the roles of other health professionals, what they do and what they know (*9,18,20*). In Lebanon, as in most countries of the MENA region, the medical profession is usually perceived as dominant over other health professions (*16*), while roles of pharmacists and social workers are both misunderstood and underutilized in the clinical setting (*21,22*).

The initial stereotypes of incoming health and social care students are addressed in LAU IPE Step 1 (Table 2). The initial activity in Step 1 is to have each student independently write their assumptions and perceptions about each of the five professions on a worksheet. This is followed by a simulated interprofessional care conference with the roles of all fieve health and social care professionals portrayed. During small group sessions, faculty facilitators provide students with a description of the five professions and a case, discussing the roles, responsibilities and skills of each profession.

We also address stereotyping from a structural perspective in that speakers as well as small group facilitators for the five IPE steps are selected from all five health professions. This conveys to students that faculty from each profession have the knowledge needed to teach an interdisciplinary group of students.

Variety of students

Differences in student characteristics, learning needs, knowledge levels and approaches to care are another challenge (*9,10,15,18*). We have experienced 2 main differences among the student participants: difference in the size of the professional groups and difference in the level of students, undergraduate level (nursing, BSc pharmacy, nutrition, and social work) and post bachelor degree (medical and PharmD). The first problem is mainly due to enrolment in social work, which remains small, so this profession is underrepresented and often missing in some small groups.

As for level differences, we schedule students for each step relative to their first clinical experience rather than year of enrolment, e.g. no students have had clinical experience at Step 1, while all have considerable experience by Steps 4 and 5.

As differences between professions were recognized by participants early on, students learned from each other and were not surprised when confronted with differences of opinion during the case discussions. Additional activities that facilitated student interactions and minimized apprehension include an ice breaker at the beginning of each small group session and refreshment breaks allowing social interaction. Furthermore, since students meet at 5 different sessions over a 2–3 year period, they gradually explore what is common among their learning and practice and comprehend the value and complementarity of different roles to better serve the patient.

Interprofessional education concept

There is ambiguity about best practices for starting an IPE programme (*18*). We faced this ambiguity at LAU as well. For over a year, the workgroup reviewed and discussed the literature. While we were clear on our mission and programme learning outcomes (Table 1), decisions on the methods for delivering content to meet the outcomes took several months.

We used a top-down approach with faculty designing and implementing the IPE programme but without student input since the programme was new to faculty and students. Our IPE programme is an institutionalized programme, with a process for data collection. More work is planned to integrate IPE into the clinical settings, making collaborative practice an inherent part of patient care.

Teaching

Several challenges in teaching have been identified, including faculty familiarity with IPE, experience teaching large groups, different instructional methods, and consensus and consistency of content (*1,16,18*). We addressed familiarity with IPE by sponsoring a faculty retreat to introduce the LAU IPE initiative. To address content familiarity, a facilitator's guide is prepared for each step and sent to volunteer facilitators ahead of the offering. Faculty members facilitating an IPE step are instructed not to lecture or to "give answers" so that a similar learning experience is found among all small groups, independent of the facilitators' background.

We have successfully engaged 75 faculty and clinicians who have served as small group facilitators and/or presenters for the large group lectures. Faculty facilitators were surveyed to solicit their perceptions about the programme (Table 3). Facilitators rated the content as relevant and offered at an appropriate level for students in their own profession. Several people suggested improving orientation of facilitators to the steps.

Concerns related to workload, performance review and promotion, were raised by faculty (workgroup members and facilitators) due to the nature of the IPE programme, being a co-curricular activity and bearing no academic credits. To address their concerns, in 2013 the IPE workgroup prepared a memo on recognizing faculty involvement in interprofessional education, which was distributed to deans and department chairs. The memo summarized the IPE programme and activities of involved faculty and recommended that their IPE activities be recognized through the annual review and promotion processes.

Table 2 Description of the steps for the interprofessional education (IPE) programme at the Lebanese American University

Step	Student learning outcomes	Level	Audience	Activity sequence
1: Introduction to IPE and collaborative practice	Define IPE and collaborative practice Explain own professional role. Identify similarities and differences within and across health and social care professions. List positive aspects of collaborative practice. List barriers to collaborative practice.	Entry	Medicine, Med I Pharmacy, P1 Nursing, BSc I Nutrition, senior Social work, year 1	Baseline RIPLS survey Lecture: intro to IPE and 5 professions Custom made video revealing the roles of the 5 professions in the care of a patient/client Refreshment break; move to break out rooms Ice-breaker Facilitated case discussion Complete evaluation form
2: Inter-professional communication	Describe the contribution of the various health and social care team members to patient/client care. Describe how effective and ineffective communication among health and social care team members can influence the process and outcomes of patient care. Describe communication techniques that foster effective collaboration. Apply communication techniques to collaborate with other health and social care professionals in identifying and addressing the needs of a patient with a chronic health condition.	Intermediate	Medicine, Med II Pharmacy, P2 Nursing, BSc II Nutrition, dietetic interns Social work, junior	Lecture and videos: Team STEPPS, ISBAR; write-down, read-back; "I pass the baton," CUS Refreshment break and move to breakout rooms. Ice breaker Facilitated case discussion Complete evaluation form
3: Teamwork and conflict resolution	Manage disagreements about values, roles, goals and actions that arise among health care professionals and with patients and families. Examine the roles and practices of effective teams. Employ the knowledge and experience of other professions to make informed decisions, while respecting patient and community values and priorities/ preferences for care.	Advanced	Medicine, Med III Pharmacy, P3 Nursing, BSc III Nutrition, dietetic interns Social work, Senior	Lecture and video- Health care teams and conflict management Refreshment break; move to breakout rooms Ice breaker Facilitated case discussion
4: Improving safety of care through inter-professional collaboration	Explain the magnitude of the patient safety crisis Cite the 6 Institute of Medicine aims for crossing the quality chasm. Explain the difference between the person approach and the system approach to understanding medical errors. Identify actions you, as a health professional, can take to improve patient safety.	Advanced	Medicine, Med III/IV Pharmacy, P3 Nursing, BSc III Nutrition, dietetic interns Social work, Senior	
5: Ethics: an inter-professional approach	Identify ethics principles and theories that guide good clinical decision making. Distinguish an ethical dilemma from other types of ethical concerns that arise in the clinical setting. Explain factors that influence ethical decision-making in the clinical setting. Apply ethics principles and a deliberative approach to address ethical concerns and dilemmas in clinical practice. Collaborate with other members of the interprofessional team to address ethical issues.	Advanced	Medicine, Med III/IV Pharmacy, P3 Nursing, BSc III Nutrition, Dietetic interns Social work, Senior	

RIPLS = readiness for interprofessional learning scale.

TeamSTEPPS = team strategies and tools to enhance performance and patient safety.

ISBAR = identify, situation, background, assessment and recommendation.

CUS = I am concerned, I am uncomfortable, this is a safety issue.

Table 3 Evaluation of the steps in the interprofessional education programme by faculty facilitators (*n* = 39)

Evaluation item	Score*				
	Step 1	Step 2	Step 3	Step 4	Step 5
1. The content of this step is important for the students I teach	3.37	3.54	3.50	3.50	3.75
2. The content is at the right level for students	3.41	3.43	3.35	3.27	3.58
3. The amount of content for the topic is about right	3.15	3.29	2.90	2.95	3.25
4. The case study selected helps students apply the content	3.48	3.54	3.40	3.36	3.50
5. I believe the students I teach find the content of this step valuable	3.15	3.18	3.25	3.00	3.42
Overall score for the step	3.31	3.39	3.28	3.22	3.50

**Scores range from 1 (strongly disagree) to 4 (strongly agree).*

Enthusiasm

Enthusiasm is essential for sustaining an IPE initiative (*18*). Factors that may diminish enthusiasm were found to be use of a top-down planning approach and inadequate understanding of the importance of the programme. At LAU, there has been motivation and enthusiasm for IPE, particularly because of the leadership of the workgroup. The members have been endless champions for the programme within their schools and across the university.

Factors that play negatively on student enthusiasm are commuting from one campus to another for the IPE steps. Transportation is therefore provided, with the schools financing on a rotational basis. Attendance diminishes when IPE steps are scheduled close to exams or other major programme requirements. This is avoided by scheduling IPE steps a year in advance in collaboration with chairs/programme directors.

An IPE certificate of participation is presented to students who have completed at least 4 of the 5 IPE steps, which is important to most students. We are trying to increase student enthusiasm by incorporating IPE within their regular curricula, as well as using our clinical simulation centre more extensively for interprofessional activities. The latter is much appreciated.

Our IPE programme still benefits from the excitement of "being first in Lebanon." This innovative approach to health education helps sustain both students' and faculty enthusiasm.

Professional jargon

Specific terminology for different health professions can also create challenges (*18*). Pharmacy, nursing and medicine use a similar jargon, while nutrition and social work jargon differs. We recognized this early on, particularly because our stakeholder group includes social work. They rarely use the term 'patient', replacing it with the term 'client', and they give 'social care' rather than 'health care' to individuals with health problems. The specific jargon used by each profession is discussed in Step 1 along with specific roles; we have worked to ensure inclusive language throughout the didactic programme. Emphasis on jargon is highlighted in Step 2, which focuses on communication. In line with this, interprofessional language competencies were shown to have an impact on patient outcomes (*23*).

Accreditation

Lack of IPE accreditation standards poses a challenge because it lessens the importance of the effort and leaves faculty without guidelines for planning an IPE programme (*18,24*), although it is already a component of the accreditation standards and programme guidelines of several professions (*4,25,26*). Our schools of pharmacy and nursing have demonstrated how the LAU IPE steps address the standards during recent accreditation visits by the Accreditation Council for Pharmacy Education (*4*) and the Commission on Collegiate Nursing Education (*25*). In the case of pharmacy, the programme was featured on the American Association of Colleges of Pharmacy website as an example of how IPE standards are being met (*27*).

Other challenges encountered

We have faced some challenges that were not revealed in other IPE reports.

How does one assess a learning activity that is co-curricular and involves participants from multiple programmes? The IPE workgroup has collected indirect assessment data including faculty and student readiness for IPE and perceptions of the programme elements (*11*). We have also aligned the learning outcomes of each specific IPE step to the LAU IPE programme learning outcomes and surveyed faculty facilitators to further improve the programme and address problems raised (*28*). To date, however, we have not assessed the short-term or long-term student learning outcomes (*29,30*). We are in the process of developing a method to assess the long-term outcomes of our programme based on international guidelines (*7*).

The volunteer outreach clinic in Shatila camp closed down due to concerns for student and faculty safety. Indeed, many similar clinical services for at-risk populations in the MENA region are probably facing safety concerns.

Location logistics are also a challenge for us: LAU health professions students are spread across 2 campuses and several clinical locations. For IPE workgroup meetings we have the benefit of videoconference capacities; videoconference cannot, however, be used to deliver the IPE steps in its present format, so we arrange bus transportation for students for every step.

Plans for the future

Simulation-based education and deliberate practice has proven superior to traditional clinical education (*31*), also in interprofessional education settings. There is a clinical simulation centre available to all health profession students at LAU. The university also offers a diploma in simulation training with attendees from the different schools, increasing possibilities for creating a good platform for collaborative practice (*32*). Our goal is to build an interprofessional simulation-based education programme.

As mentioned already, IPE improves learners' knowledge, skills and understanding of collaborative practice, but the ultimate goal is improved patient outcome. The Institute of Medicine advocates for opportunities for IPE across the entire learning continuum, "These opportunities are greatest as learners move into the practice environment, where new interdependencies and relationships are formed and utilized" (*33*). Our IPE steps follow the students' progression through each school's academic programme. Clinical IPE activities are needed to bridge the gap between theory and clinical practice. A conference on advancing patient care through interprofessional collaboration was organized by the IPE workgroup in 2016 to introduce collaborative practice to the clinical workforce with 200 participants from Lebanon and the Middle East region (*34*).

Conclusion

At LAU we have encountered most of the implementation challenges identified by others and have addressed them quite successfully. Students' self-reported readiness for interprofessional education before and after the LAU IPE steps, their evaluation of the programme learning outcomes and their satisfaction with the learning experience have been positive overall (*11*).

Lessons learned from our experiences in designing and implementing the IPE programme in a developing country are similar to what others in developed countries have experienced to facilitate the integration of the IPE programme in health education (*19,35*).

Other strategies for success that build on the enthusiasm and dedication of the IPE workgroup are:

- give students practical tools with immediate case-based application at each IPE step;
- have a longitudinal programme, with each student participating over 2–3 years;
- ensure that all professions are represented at each step;
- use a continuous quality improvement approach to study and refine the IPE activities.

We still have challenges to face, mainly to build a framework for measuring the impact of our IPE programme on patient outcomes. Our IPE programme, like most, is a work in progress, yet it has become an inherent part of LAU's 5 health and social care programmes. We share our experience in the hope that others may find some of our strategies useful as they introduce and implement interprofessional education.

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Mise en œuvre d'un programme d'enseignement interprofessionnel au Liban : surmonter les difficultés rencontrées

Résumé

Contexte : L'Université américaine de Beyrouth possède un programme d'enseignement interprofessionnel (EIP) performant ; il suit une approche pédagogique fondamentale pour l'éducation sanitaire, selon laquelle des étudiants provenant de différents corps de métier apprennent ensemble, ce qui, au final, entraîne un développement au niveau des compétences parmi les professionnels de santé et, par conséquent, une amélioration des résultats pour les patients. Ce programme regroupe des étudiants en soins infirmiers, en nutrition, en médecine, en pharmacie et dans le domaine des services sociaux et il fonctionne depuis six ans.

Objectif : Le présent article vise à décrire la mise en œuvre d'un programme d'EIP au Liban en s'attachant plus précisément aux moyens de surmonter les principales difficultés rencontrées.

Méthodes : Nous décrivons notre expérience concernant l'utilisation des catégories de difficultés élaborées par Sunguya et al. (2014) dans leur analyse de rapports publiés sur des programmes d'EIP mis en place dans des pays industrialisés. Nous avons identifié trois difficultés supplémentaires susceptibles de s'appliquer partout dans la région du Moyen-Orient et de l'Afrique du Nord ou dans des pays présentant des caractéristiques socioéconomiques semblables.

Résultats : Les difficultés rencontrées lors de la conception et de la mise en œuvre du programme EIP étaient proches de celles observées avec d'autres programmes : cursus, leadership, ressources, stéréotypes et attitudes, diversité des étudiants, concept de l'EIP, enseignement, enthousiasme, jargon professionnel et accréditation, ainsi que contrôle des connaissances, sécurité et logistique.

Conclusion : Cet article fournit des données et des stratégies probantes qui peuvent être utiles à des programmes futurs ou déjà mis en œuvre dans des contextes socioéconomiques semblables au sein de la région du Moyen-Orient et de l'Afrique du Nord.

تنفيذ برنامج تعليمي لأصحاب المهن المختلفة في لبنان: التغلب على التحديات

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الخلاصة

الخلفية: يوجد في الجامعة اللبنانية الأميركية برنامج فعَّال لتعليم أصحاب المهن المختلفة، وهو مقاربة تربوية أساسية في التعليم في مجال الرعاية الصحية يتعلم فيها طلاب ينتمون إلى مهن مختلفة معًا، مما يؤدي في نهاية المطاف إلى تحسين مهارات القوى العاملة الصحية، وبالتالي تحسين المخرجات الخاصة بالمرضى. يتضمن البرنامج طلابًا في التمريض والتغذية والطب والصيدلة والعمل الاجتماعي وهو برنامج يتواصل تشغيله منذ ٦ سنوات.

الهدف: ويهدف هذا البحث لوصف تنفيذ برنامج تعليم أصحاب المهن المختلفة في لبنان من خلال التركيز على كيفية التغلب على التحديات الرئيسية.

طرق البحث: نصف في هذا التقرير الخبرات التي اكتسبناها باستخدام فئات التحديات التي وضعها سونجويا وزملاؤه (٢٠١٤)، عندما حللوا ونشروا تقارير حول برامج تعليم أصحاب المهن المختلفة في البلدان المتقدمة. لقد حددنا ٣ تحديات إضافية قد تتعلق بجميع أنحاء إقليم الشرق الأوسط وشمال أفريقيا أو بالبلدان ذات السمات الاجتماعية والاقتصادية المماثلة.

النتائج: لقد اتضح لنا أن التحديات التي يواجهها تصميم وتنفيذ برنامج تعليم أصحاب المهن المختلفة كانت مماثلة للتحديات لتي تواجهها البرامج الأخرى: المنهج الدراسي، والقيادة، والموارد، والتصرفات النمطية والمواقف، وتنوع الطلاب، ومفهوم برنامج تعليم أصحاب المهن المختلفة، والتدريس، والحماس، والمصطلحات الفنية و الاعتماد، إلى جانب تقييم التعلم، والأمن واللوجستيات (الاحتياجات اللوجستية).

الاستنتاجات: يقدم هذا البحث البيانات والاستراتيجيات الناجحة التي يمكن استعمالها في البرامج التي يجري التخطيط لها أو تنفيذها في السياقات الاجتماعية والاقتصادية في إقليم الشرق الأوسط وشمال أفريقيا.

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