Background

The Australian Diabetes Educators Association (ADEA) is the peak body for health professionals who provide diabetes care with a focus on education and non-medical management of the disorder. The ADEA actively promotes evidenced-based and best practice diabetes education to ensure optimal health and wellbeing for all people affected by and at risk of diabetes. The ADEA was established in 1981 and currently has 2154 members from nursing and allied health disciplines. The ADEA considers diabetes education to be a specialty field of health care practice which is underpinned by ADEA Standards of Practice, accredited tertiary level post graduate courses offered at Graduate Certificate and Graduate Diploma level and a system of Credentialing and Re-credentialing for health professionals.

Models of care for the management of diabetes and the structure of diabetes services have historically been, and continue to be predicated on interprofessional collaboration, cooperation and commitment to achieving optimal outcomes for people with diabetes. The post graduate courses accredited by ADEA and offered by tertiary education providers are interprofessional, being open to all health professionals with students studying the same content irrespective of primary specialisation. The ADEA promotes and supports interdisciplinary learning and practice to enhance skills of health professionals and encourage holistic care to accommodate the health care needs of people with diabetes and support for their families.

ADEA’s submission to the Review focuses on Issue 13:

How best could interprofessional education and the promotion of interdisciplinary practice be expressed in accreditation standards that could reflect the priority accorded to them?

Interprofessional education (IPE) and interdisciplinary practice (IPP) are related yet separate concepts, and while many health professionals work in formally constituted IPP settings, a majority will work in settings where there are other professions, but not formally working as a team e.g. the emerging Super Clinics, and a minority will work as sole practitioners, e.g. GPs or in specialty practices e.g. physiotherapy. Regardless of the work environment, the capacity and willingness to collaborate with other professions (interprofessional collaboration) is necessary for optimal patient outcomes.
Interprofessional practice in Diabetes Care

In preparation for ADEA’s submission to this Independent Review, all members were invited to complete an online survey focusing on their experience of interprofessional learning and interprofessional practice.

Findings

In summary,

Only 18 respondents identified their discipline:
Registered Nurse (13); Dietitian (2); Podiatrist (1); Exercise Physiologist (1); Pharmacist (1)
20 respondents are Credentialed Diabetes Educators, 2 are not credentialed and 15 did respond to that question.
97% of respondents work in a multidisciplinary team
85% have studied in an interdisciplinary class
69% believe they have skills and knowledge to work across discipline boundaries;
58% perform functions usually undertaken by other professions
35% have supervised students from a discipline other than their own

Respondents were asked to list what they consider to be the advantages of learning in an interprofessional group:

- Interdisciplinary learning can broaden perspectives and may enhance knowledge however in practice we work according to our discipline base.
- Encourages referrals and case conferencing.
- In specialty areas there can be cross over of functions however that requires a strong under graduate discipline based knowledge.

Respondents were also asked to list the disadvantages of studying in an interdisciplinary group:

- I was supervised by a clinician who was not from my discipline and learned little because the focus was on her role
- Too much content if lecturer attempts to cover information required by each discipline and general information is often not sufficient for practice.
- Content tends to focus on learning needs of most represented professional discipline
- Course content can be too broad
- Being supervised by a person not from your discipline limits learning skills required in practice and can misrepresent the scope of practice because in a multidisciplinary team we work within the scope of practice for our own discipline largely due to lack of resources and demand for services.
Client safety can be an issue when working across discipline boundaries and for those health professions not registered with AHPRA ensuring quality is of concern.

IPL is most effective following graduation when one has confidence in their professional knowledge and are working in a clinical setting with clinicians from other professions. (ADEA 2017 unpublished data)

Interprofessional Learning

Interprofessional practice is a well-established approach to diabetes care and the management of other chronic disorders. However a minority of health professionals specialise in the management of chronic disorders or are members of IPP teams, rather they work across health services and/or in facilities where their practice is largely discipline based, albeit in collaboration with other disciplines.

There is an increasing focus on interprofessional learning with publications reporting opinion, anecdote and more recently research, and worldwide acknowledgement that interprofessional learning and practice be encouraged. The challenge is to ensure that students and clinicians have opportunities to effectively and productively engage in collaborative learning opportunities that result in sustainable practice outcomes and are practical from the perspective of education providers and health facilities providing clinical placement opportunities.

A review of the literature was undertaken in order to propose how to appropriately and effectively present interprofessional education and interdisciplinary practice in accreditation standards. The literature search focused on findings of research studies.

What can we learn from the literature?

- Quality health care and effective clinical services cannot be provided by any one discipline alone. Teamwork and collaboration between health professionals is required to achieve optimal clinical outcomes for the community and job satisfaction for staff, however merely bringing clinicians from different disciplines into a multidisciplinary team does not guarantee interprofessional care. (Liberati, Gorli, Scaratti, 2016 p 32)
- Health professionals traditionally tend to protect their professional identify, specialist knowledge and pre-existing boundaries and in practice there may not be cooperation between specialities including in the same profession. (Liberati, Gorli, Scaratti, 2016 p 32).

- Begley (2008) differentiates between shared teaching and shared learning which stem from a different ethos.
• **shared teaching** – teaching common content to students from various disciplines, usually in a large group without the intention of developing team work. This approach is not pedagogically sound and does not necessarily encourage students to interact with colleagues from other disciplines. (p277)

• **shared learning** – planned learning opportunities that enhance team working skills, including problem solving and conflict resolution, skills best assessed in practice areas. (p277)

• Regardless of the discipline, undergraduate students grapple with the knowledge and skills required for practice (basic concepts) whereas effective learning with other disciplines requires students to adopt new ways of thinking (threshold concepts) (Senior, 2016 p 1013). For some students, challenging their professional identity by introducing them to interdisciplinary learning during undergraduate courses may alienate them from learning (Senior, 2016 p1014).

• Opinions differ on when to include interprofessional learning opportunities in courses. Keshtkaran (2014) suggests that students need to demonstrate the skills and knowledge of their discipline before commencing IPE and working with other professions, while others (Begley, 2008; Cant, 2015) recommend commencing IPL early in a course because stereotypes of professional identity are more likely to be fixed as time in clinical placements increases and these attitudes can hinder IPL.

• The National League of Nursing (1998) has identified a package of core content for interprofessional learning among all health professionals that includes: behavioral sciences; community health; nutrition; death and dying, health informatics; ethics; interprofessional communication skills; teamwork skills and professionalism. However, the element missing from this core content is clinical practice, therefore engaging in the classroom may not enhance IPP rather the content is reflective of shared teaching rather than shared learning. (Begley 2008)

**Evidence of the effect of Interprofessional Education**

There is a developing body of literature relating to interprofessional learning and practice published in a range of journals including and a journal specific to the topic, the *Journal of Interprofessional Education & Practice*. The number of publications reporting trials of IPL and IPP is also increasing, however authors comment on the lack of rigor evident in the design of trials of IPE, including small sample sizes, lack of strategies to control bias in experimental designs, and predominately non experimental designs. Although studies report a range of positive outcomes, the heterogeneity of IPE interventions means it is not possible to identify which of the interventions are effective or to draw generalisable inferences for the effects of IPE, which according to Begley (p. 281) “…fails to make a convincing argument either for or against inter-professional learning.”
The literature search identified 2 systematic reviews and one 4 year action research study focusing on IPE.

- The effectiveness of IPE in 
  *undergraduate and post graduate university-based programs for health professionals* was appraised in a systematic review of the best available evidence from randomised controlled trials and quasi-experimental studies. (Lapkin, Levett-Jones and Gilligan, 2013) Nine studies were included in the review and found that while collaboration and clinical decision making by students may be enhanced by IPE, there is no evidence that gains attributed to IPE can be sustained over time. These authors note that the small number of studies and the heterogeneity of IPE interventions, means that little is known about which components of IPE are effective. (Lapkin, Levett-Jones and Gilligan, 2013 p101)

- Reeves, Perrier, Goldman et al (2013) updated their earlier systematic review of studies reporting *effects on professional practice and healthcare outcomes of IPE*. Fifteen studies were included reporting results of randomised controlled trials, controlled before and after studies and interrupted time series all comparing effectiveness of IPE interventions to no specific education. No studies included profession-specific interventions. Six outcomes were identified across the studies: patient outcomes; adherence to clinical guidelines; patient satisfaction; clinical process outcomes; collaborative behaviour; error rates and practitioner competency. However, the quality of the evidence was graded low or very low for each outcome, which limited the ability to provide a convincing level of evidence for the effects of the IPE interventions.

- Although these systematic reviews reported a range of positive outcomes, one finding from both reviews was that the heterogeneity of IPE interventions means it is not possible to identify effective interventions or to generalise the benefits of IPE. (Lapkin, Levett-Jones and Gilligan, 2013; Reeves, Perrier, Goldman et al 2013)

- A four-year action research study across the Australian Capital Territory health system was designed to determine whether IPE results in interprofessional communication, trust, problem solving, and knowledge sharing. (Braithwaite Westbrook, Nugus et al 2012.) During the study there were 2,407 substantial face-to-face encounters between researchers and health professionals designed to increase interprofessionalism across the health system. The study used validated tools to assess attitudes to IPE, but did not include patient outcomes as endpoints. Results demonstrated that despite IPE, attitudes regarding quality of interprofessional care, teamwork and collaboration and professional identity did not change significantly over the 4 years of the study. However attitudes towards the role of the doctor as central to health care were stronger at conclusion than at the commencement of the study. (Braithwaite Westbrook, Nugus et al 2012.) This finding may indicate that interprofessional collaboration is one component of the professional socialisation that commences during undergraduate education and continues during professional practice and will
develop regardless of whether there are specific interventions included in formal learning sessions.

It is a common theme across the literature that clinicians are more responsive than students to opportunities for intra professional learning, and that medical students are less responsive than students studying other professions.

- Students studying various health professions have acknowledged the benefits of interprofessional learning, however medical students generally score lower on attitudinal scales than nursing and allied health students and are more likely to place the doctor at the center of the team (Cant, Leech and Hood 2015, p 93; Keshtkaran, Sharif, Ramkod 2014, p997).

- Keshtkaran, Sharif and Ramod (2014) found that the medical the students in their study showed significantly less favorable attitudes to interdisciplinary learning and interdisciplinary clinical teams than nursing and pharmacy students. Medical students were less agreeable to sharing knowledge, believing they require more knowledge and skills than other health professionals and therefore learning with other professions may interfere with progress in their course.

- While doctors are most likely to direct care by multidisciplinary teams, within teams there may be no collaboration between specialities of the same profession. (Liberati, Gorli, Scaratti 2016). “Doctor centrality” was also a finding of a 4 year longitudinal study of introducing interprofessional learning for clinicians across a health service (Braithwaite Westbrook, Nugus et al 2012)

- Hylin, Lonka & Ponzer (2011) used a pre-test post-test design to assess nursing, medical and occupational therapy students’ responses to an interprofessional clinical course where they worked in teams to take responsibility for patient care as well as for their own learning. At the conclusion of the course students from each discipline reported significantly (p<0.005) greater understanding of their own roles, but did not report increased knowledge of others' profession. (p207)

**Making interdisciplin ary learning achievable**

The AHPRA Annual Report 2013-2014 (p140) states there were 120,459 registered students across Australia, 64,175 of whom were nurses studying at one on the 36 tertiary education providers accredited to offer Bachelor of Nursing degrees. There are 19 tertiary education providers across Australia offering medical qualification, however only 13 also offer nursing programs. With more than 50% of all registered health students across Australia being enrolled in nursing programs, it is likely that interprofessional learning groups will comprise predominately nursing students.
One approach to approach to interprofessional learning for undergraduate students that has demonstrated effectiveness is the annual **Trans-Tasman HealthFusion Team Challenge** (http://www.healthfusionteamchallenge.com/) where teams of students from various health disciplines respond to scenarios in a simulation setting. Learning and practicing skills in clinically simulated settings is a significant component of undergraduate and postgraduate clinically based courses, therefore the role of simulation in IPE needs to be further explored. Providing opportunities for interdisciplinary teams to practice in clinical simulation settings has been found to enhance IPP and participants value the experience. Parry et al. (2017 p11)

**Case study of interdisciplinary learning**

The School of Nursing & Midwifery and the School of Medicine at a large metropolitan University collaborated to develop four units that would be compulsory for 3rd year students enrolled in the Bachelor of Nursing (Advanced) course and optional for 2nd year medical students. The units had one 3 hour face-to-face Problem Based Learning (PBL) tutorial each week for 6 weeks of the semester. The aim was for students from both Schools to work together in small groups using a PBL approach on case studies. The units, Indigenous Health Care; Chronicity and Palliative Care; Leadership in Graduate Practice and Evidence Base Practice were selected because the multidisciplinary approach to care is usual in these areas and these units aligned with recommended core content for interprofessional learning by the National League of Nursing (1998). Indigenous Health Care included a clinical placement in an Aboriginal health facility.

There were 20 BN (Adv) students however only 6 medical students volunteered to participate. After Week 3 of the semester, none of the medical students attended the tutorials.

**Lessons learned**

1) **Opportunities for IPE need to be incorporated into the design of courses at the development stage.**

The nursing and medical courses are structured differently, which made accommodating the units within the two courses difficult. The nursing students enroll in a total of 24 units to complete the 3 year course, while MBBS students enroll in 5 units to complete the 5 year course. Bachelor of Nursing units are offered over a 13 week semester while the MBBS has annual units offered across the year. Medical students are based in clinical facilities from year 3 of the course, and are rarely on campus which limits involvement in IPE to students in years 1 and 2 of the course and these have had little exposure to clinical settings.

2) **Cooperation across education providers may be required to ensure groups are truly interprofessional and not dominated by nursing student at undergraduate level.**
For example, the Bachelor of Nursing program at one university currently has around 4,000 students enrolled across the three years, many studying part time. The MBBS program has a total enrollment of less than 500 students, and the combined enrollment in allied health courses is around 1500. Not all allied health courses are monitored by APHRA which may further reduce their participation in IPE as curricula are outside the National Registration and Accreditation Scheme. Therefore, by necessity multidisciplinary learning groups will be predominately nursing students.

3) Successful implementation of IPE in clinical settings will require health facilities to be involved in the design of units and will require considerable resources to provide appropriate clinical supervision and facilitation.

The current shortage of clinical placements for all disciplines means that some students are being paced out of pattern for example during the semester breaks and over the long summer break. As a result, coordinating placements of multidisciplinary groups of students is difficult.

Not all students participating in this trial of IPE could be offered a clinical placement in an Aboriginal Health facility as the services did not have capacity to accommodate all requests from universities for clinical placements for various health disciplines.

Discussion

How best could interprofessional education and the promotion of interdisciplinary practice be expressed in accreditation standards that could reflect the priority accorded to them?

While current evidence that interprofessional learning translates into interprofessional practice in inconclusive, Lapkin, Levette-Jones, Gilligan C, (2013) state “It is important to note that a lack of sufficient evidence of the effectiveness of IPE does not necessarily equate to evidence of ineffectiveness.”(p91) Current Australian accreditation standards do require education providers to provide opportunities for students enrolled in entry to practice courses for nursing and midwifery to participate in IPL during their study. (Australian Nursing and Midwifery Accreditation Council 2012). The conundrum is how to develop accreditation standards that encourage education providers to design innovative approaches to learning and clinical practice that will provide students with most benefit from IPE, and is sustainable for education providers and health services.

Successful implementation of models of care based on IPP does not rely solely on exposure of clinicians to theory and clinical experiences during entry to practice courses. Postgraduate courses and ongoing professional development activities also provide opportunities for IPE and IPP at a time in their careers when clinicians have consolidated their discipline specific knowledge and are better placed to contribute skills and knowledge to patient care.
Interprofessional practice is already well established in health care. Multidisciplinary teams have been part of the usual approach to care for diabetes for more than 20 years, with the concept of shared care between GPs and specialists doctors, nurses and allied health being initiated in the late 1980’s. With few exceptions, clinicians work in a variety of health care settings where they engage routinely in interdisciplinary collaboration as the key to improving patient outcomes and to achieving an effective and efficient health workforce. While clinicians working in MDTs report that their scope of practice is determined by professional boundaries and in reality there is little blurring of boundaries, that does not mean they are not collaborating with practitioners from other disciplines.

If one purpose of interprofessional practice is to broaden future workforce opportunities for practitioners and options for health service providers in addition to enhancing patient outcomes, that goal signals broadening the scope of practice of clinicians. Post graduate education and scope of practice are linked and currently Registered Nurses and Registered Midwives do have opportunities to undertake additional formal courses of study, accredited by AHPRA, that enable them to cross traditional professional boundaries. Designing and successfully implementing clinical protocols and approaches to care that facilitate, or indeed authorise clinicians to work across traditional professional boundaries as routine care will require a seismic shift by health care providers and clinicians with amendments to organisational and clinical policy, clinical structures, role descriptions and lines of accountability in addition to changes to course content. The most difficult change to achieve will be shifting the culture in health care, and that is unlikely to be achieved through the content of accreditation standards.

Sustaining a health workforce that is relevant to the current health environment and to current models of care, flexible and responsive to change, and delivers safe and high quality care is a primary concern and function of the health professions and of Government and its agencies. As health professionals practice their craft, opportunities to experience the gains that come from professions collaborating to achieve optimal outcomes for patients will assist help them to learn the skills and develop the attitudes required to become part of the collaborative practice-ready health workforce.

To that end, the ADEA supports and encourages inclusion of IPE accreditation standards for all health disciplines. However the challenge is to ensure that standards are practical and achievable from the perspective of education providers and health facilities providing clinical placement opportunities and translate into course content required to prepare graduates for contemporary practice.

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