

Working and learning together: good quality care depends on it, but how can we achieve it?

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Abstract

Educating healthcare professionals is a key issue in the provision of quality healthcare services, and interprofessional education (IPE) has been proposed as a means of meeting this challenge. Evidence that collaborative working can be essential for good clinical outcomes underpins the real need to find out how best to develop a work force that can work together effectively. We identify barriers to mounting successful IPE programmes, report on recent educational initiatives that have aimed to develop collaborative working, and discuss the lessons learned. To develop education strategies that really prepare learners to collaborate we must: agree on the goals of IPE, identify effective methods of delivery, establish what should be learned when, attend to the needs of educators and clinicians regarding their own competence in interprofessional work, and advance our knowledge by robust evaluation using both qualitative and quantitative approaches. We must ensure that our education strategies allow students to recognise, value, and engage with the difference arising from the practice of a range of health professionals. This means tackling some long held assumptions about education and identifying where it fosters norms and attitudes that interfere with collaboration or fails to engender interprofessional knowledge and skill. We need to work together to establish education strategies that enhance collaborative working along with profession specific skills to produce a highly skilled, proactive, and respectful work force focused on providing safe and effective health for patients and communities.

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Most health needs require the collaboration of a group of health professionals. The professionals involved may work together in the same space or be scattered throughout several hospital departments or sectors of care. Whether or not the caregivers see themselves as part of a team, each patient depends on the performance of the whole.

The following are key characteristics of work groups that function well¹⁻⁶:

- Clear aim: shared understanding of goals.
- Clear processes: knowledge of (and respect for) others' contributions, good communication, conflict management, matching of roles and training to the task.
- Flexible structures that support such processes: skilled staff, appropriate staffing mix, responsive and proactive leadership that emphasises excellence, effective team meetings, documentation that facilitates sharing of knowledge, access to needed resources, and appropriate rewards.

Interprofessional collaboration that incorporates these principles can improve patient outcomes and the cost effectiveness of care in a range of settings from primary care to acute hospital care and rehabilitation. Improvements include decreased risk of mortality and morbidity for people with stroke⁷⁻⁹ and traumatic brain injury¹⁰⁻¹³; reduced infant mortality in a high risk Native American population¹⁴; reduced mortality after coronary artery bypass graft surgery¹⁵ and improved levels of function for those after bypass or undergoing rehabilitation for other cardiac conditions¹⁶⁻¹⁹; reduced mortality for the elderly²⁰; decreased cost and greater staff satisfaction on a general medicine inpatient unit²¹; reduction of pain and improved vocational and psychosocial outcomes in chronic pain^{22,23}; and reduced cost and greater functional gain in musculoskeletal and orthopaedic conditions.^{24,25} Despite the methodological difficulties of research in some of

Key messages

- Collaborative working between professions is key to quality care for patients.
- Interprofessional education (IPE) strategies may well contribute to the development of the knowledge and skill required by learners and practitioners, but only if (a) the goals of IPE are agreed among stakeholders; (b) the desired outcomes are clearly specified; (c) the most effective methods of delivery at different stages of professional training are determined; (d) robust evaluation is incorporated using both qualitative and quantitative approaches.
- Barriers to IPE will not disappear by simply being ignored, but they can be managed and overcome.
- IPE must not only foster good communication skills and awareness of the roles of team members, but it must enable students to recognise, value, and engage with the difference arising from the range of health professional knowledge and practice.

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“... it is important that the NHS should work together with the higher education providers and accreditation bodies to develop education and training arrangements which are genuinely multi professional.”⁵⁷

New Zealand

“... to work with the Clinical Training Agency to establish a postgraduate multidisciplinary course on the management of maternal and new born emergencies in the primary care setting.”⁵⁹

USA

“Interdisciplinary training rotations must be a mandatory part of physician and nurse education and must incorporate all the key professions.”⁵⁸

“People should be trained in the kinds of teams in which they will provide care, starting with initial professional training and continuing through graduate training and ongoing professional development.”⁵⁵

Box 1 Comments from policy makers in the UK, New Zealand, and the USA.

these areas, the weight of evidence that “team-work works” is growing and is now hard to ignore.

An explicit interprofessional approach may not always be needed to achieve the outcomes desired with our patients but, when it is, the practitioner (whether physician, nurse or allied health professional) must be able to understand what other health professionals can do, activate access to other services, communicate the need from their perspective, and participate in follow up. Collaborative working and how best to achieve it is a key quality issue regardless of whether one is a sole practitioner or a member of a highly structured team.

If working well together is necessary for good quality care, then we must find ways for healthcare professionals to become good collaborators and competent team members. Policy makers from several countries agree (box 1). They recognise the importance of team working and collaborative care and, with increasing frequency, are recommending we change professional education to ensure these competencies.

Like other complex professional competencies, learning about interprofessional working cannot wait until training is completed. It should be viewed as a continuum of learning, starting with the pre-qualification experience, continuing into postgraduate education, and extending into continuing professional development. Learning about health care as a whole rather than as a collection of discrete but disjointed actions may also help to create a deeper understanding of the processes of care, preparing professionals to contribute to the development of better systems overall.

But there are problems. Interprofessional learning is not a major part of most pre-qualification courses and the majority of healthcare professionals (including teaching

staff) have little or no formal experience of learning with or about other professions. Much of the interprofessional learning that does take place is not part of mainstream clinical learning and is unlikely to be included in the assessment process.

Further, it is unclear how competency in interprofessional collaboration and team working is best achieved. Models include: (1) students from more than one health profession taught by faculty from only one health profession; (2) students in one health profession taught by faculty from more than one health profession, and (3) students from more than one health profession taught by faculty from more than one health profession.²⁶ A recent Cochrane report²⁷ failed to find any educational evaluation even meeting their required criteria. The paucity of evidence about the effectiveness of interprofessional education programmes should not be taken as evidence that they do not work but rather that the research to date is inadequate. It also cannot be taken as evidence in support of the status quo. Our current educational system not only fails to engender needed interprofessional skills, its discipline specific orientation fosters norms and attitudes that interfere with interprofessional collaboration.^{5 26 28 29} Lack of knowledge of the capabilities of other professionals, lack of respect for their contributions, and lack of competence in interprofessional communication pose important barriers to achieving patient care that is effective and safe.^{5 30}

In this paper we identify a number of important issues that health professionals, educators, and researchers need to consider if we are to make progress in our ability to help learners achieve competence in interprofessional working. We discuss barriers that frequently impede interprofessional educational programmes and describe some recent approaches. Finally, we identify steps we believe are needed if educational programmes are to produce a work force capable of providing the best care for patients.

Issues in interprofessional education

TERMS AND DEFINITIONS

The term interprofessional education (IPE) or interprofessional learning (IPL) has been defined as when healthcare professionals learn together, learn from each other, and/or learn about each others' roles in order to facilitate collaboration.³¹ Although a number of groups such as the Centre for the Advancement of Professional Education (CAIPE) in the UK, the Interdisciplinary Professional Education Collaborative (IPEC) in the USA, and the Centre for Professional Education Advancement (CPEA) in Australia have attempted to clarify concepts and develop coordinated approaches, the unhelpful “semantic quagmire” noted in the early 1990s persists.³² For example, while the term “interprofessional” is gaining prominence, “interdisciplinary” is still often used despite the potential confusion with interdisciplinary activities within a single profession (as in interdisciplinary collaboration

- Level 1: learners' reactions
- Level 2a: modification of attitudes
- Level 2b: acquisition of knowledge/skills
- Level 3: change in behaviour
- Level 4a: change in organisational practice
- Level 4b: benefits to patients/clients

Box 2 Potential outcome from interprofessional learning.³³

among paediatricians, paediatric cardiologists, and paediatric surgeons in the care of children with congenital heart defects). Establishing a shared language in any field is important, but in the case of IPE it is a fundamental requirement for establishing programmes and ensuring they are achieving their desired effect.

GOALS AND OUTCOMES

Hammick³³ described a hierarchy of potential benefits as a framework for considering outcomes in IPE. Such a hierarchy (box 2) offers an interesting approach to conceptualising what it is we intend to achieve, and what it is we should evaluate.

Boaden and Leaviss³⁴ have suggested that much IPE has been focused solely on interprofessional relations. They and others³⁵ argue that a focus limited to these issues is unlikely to yield improved teamwork or improved health outcomes.

But if programmes should not focus on merely developing better relationships, what should they do? Opie³⁵ has suggested that, while both personal/professional relations and organisational structures are important (and these are possibly the two dominant themes in teamwork research and training), we need to consider a wider context. She argues that collaborative work functions within multiple and quite different professional discourses, and that we cannot succeed by hoping they will disappear. Rather, they must be explicitly acknowledged. Exploiting the differences in how different members of the team think and approach their clinical practice brings about new ways of resolving clinical problems. The key is that we should not be attempting to remove differences or blur boundaries between what a nurse and doctor might do, or how an occupational therapist and psychologist might approach management. Rather, we need to clarify and understand the different ways of thinking and combine the different knowledge and skills in a way that will benefit patients.

This is no small issue as it proposes that, if we really want to improve patient care, IPE must facilitate students' ability to value the contribution by other professionals to understanding the clinical picture. Two components appear central to this process.³ The first is to reflect on how our own knowledge is presented to others and the second is to question how we attend to other's knowledge. Such principles may be central to IPE that doesn't "erode professional values or, worse, entrench negative stereotypes".³⁶ They also may help to address concerns that IPE might lead to a "dumbing

down" or merging of professions, a real possibility in programmes that are developed without a firm theoretical underpinning.³⁵

PROGRAMME EVALUATION AND RESEARCH

A recent search on both Medline and Cinahl revealed over 3000 references using the search terms "interprofessional" or "interdisciplinary" and "education" or "learning" or "training" for the previous 10 years. Despite the quantity of this information, concerns about its quality have repeatedly been raised because of difficulties in identifying exactly what specific programmes consisted of or what they intended to achieve. Not surprisingly, such methodological problems have contributed to the lack of evidence for the benefits of IPE programmes.

Knowledge of the effectiveness of IPL is limited at least in part because much of the literature is discursive. Until comparatively recently there were few empirical studies and, of those, programmes have often been sketchily described and outcomes poorly identified or justified. As noted above, the Cochrane review of IPL (updated in May 2000) found that no evaluations of programmes (Medline or Cinahl up to 1998 or hand searching of specialist journals) met the criteria of having both a robust experimental design and demonstrating benefit to patient outcomes.²⁷

Some of the members of the initial Cochrane Collaboration panel recently carried out a parallel review which focused on the question: "What kind of interprofessional education under what circumstances produces what kind of outcomes?"³⁷ They considered outcomes other than those of direct benefit to patients including learner reaction, assessment of learning, transference of behaviour, and impact on community/organisation/patient. The 99 papers reviewed included qualitative as well as quantitative designs, but all had methodological limitations. The strongest studies were six with a controlled before/after design, but these were limited in their assessment of long term impact. Twenty three studies were longitudinal, but they did not include a control group.

Recognising these limitations, the authors offered the following conclusions (perhaps most appropriately conceptualised as hypotheses to be tested further):

- (1) The impact of IPE appears to be related to its *duration*, with longer courses more likely to produce individual behaviour and organisational or patient based change.
- (2) *Location* may be important in that only work based experiences were able to report behavioural or organisational/patient based outcomes.
- (3) The *stage of development* of the learner appears to influence possible outcomes. Studies focused on pre-qualifying learners rarely had positive results beyond the reaction and learning of the individual. In contrast, 43 of 59 studies of IPE at the continuing professional education level reported change for organisations and patients.

BARRIERS TO IPE

There are a number of significant barriers to effective IPE and many appear to be both caused and sustained by structural factors within (or between) our health and education systems.³⁸ Some of these barriers are substantial and will require the coordinated efforts of a range of stakeholders if they are to be logically and appropriately managed.

Differences in the routines of work, both clinically and educationally, can be a major obstacle to introducing workable IPE. In one hospital nurses may be working in three 8 hour shifts while the medical team, caring for the same patients, are quite possibly working an entirely different day with some working through the night. They (and the learners working with them) see patients, discuss plans, and make decisions at different times in different places. If there is no explicit opportunity to communicate, time and energy are wasted and people who might help each other achieve best care for patients (and learn from each other) pass in the hallway.²¹ Similar challenges exist in non-clinical educational settings where, throughout Europe, the USA and Australasia, undergraduate medical courses and nursing and therapy courses are frequently taught at separate universities even if in the same town or city. Thus, although students may do clinical attachments in the same hospitals, on the same wards, and even focus on the same patients, their requirements, rotations, methods of evaluation, and tuition will be separate. In this sort of situation any real connection or synergy between their courses is difficult to maintain. Recognition of these differences and advance agreement on how they will be handled can prevent waste and save missed opportunities.³⁹

The *scheduling challenge* is a major barrier to sustaining IPE over time. Even within one university there may be calendars with quite different semester lengths or separate holiday dates for health professional programmes. For example, one IPE programme at Case Western Reserve University in the USA once faced three separate weeks scheduled as “spring break” within the one semester. Ideas to cope with this challenge included (1) identifying settings where learners already come together such as clinical sites; (2) identifying and reserving common times for interprofessional meetings university wide; (3) supplementing face to face encounters with asynchronous communications such as email and electronic bulletin boards.³⁹

There may well be *variation in learners’ age, educational level and clinical experience*, even in an educational experience targeted at a particular subgroup (e.g. pre-qualification or postgraduate). The interprofessional graduate course mentioned above at Case Western Reserve University includes medical students, nursing students, epidemiology/biostatistics graduate students, students seeking a masters degree in public health (MPH), and others. All are in graduate school and have baccalaureate degrees, but the epidemiology/biostatistics and MPH students often include experienced physicians and nurses obtaining graduate degrees.

As the students work together in teams, opportunities for structured reflection have been built in to help each find a way to contribute to the group.⁴⁰ Others also have found that supposedly “mismatched” learners can work well together when there is attention to ground rules and clear expectations for group process and behaviour.⁴⁰⁻⁴²

Differences in academic policies make it difficult to teach the professions together. One might have learners from programs in which assessment is pass/fail mixed with learners who must earn a letter grade. Academic credit may be counted differently for the same work. Faculties of specific schools and programmes have authority and responsibility to set academic requirements and are subject to different rules of accreditation. Attempts to set a unified set of rules across professions, even within one university, have been difficult to maintain.⁴³ It may be more practical to understand the differences and work to ensure that each student receives appropriate credit according to discipline specific rules.

Another structural barrier is the *complexity of the design* required for IPE and the *considerable commitment and time required* to create and sustain it.³⁹ Interdisciplinary contributions may not be recognised by university reward systems that focus on individual performance. It is possible for an interprofessional group to generate academic products that will contribute to each individual’s recognition and advancement, but it requires the group and their organisations to agree on this as part of their shared goals.⁴⁰⁻⁴⁴

Attitudinal barriers are less concrete and can be more difficult to discuss, let alone address constructively. In the “real world” differences in financial rewards and professional goals do exist, as does an extremely competitive environment in many countries. Some attitudinal factors are fundamental to the way different professions think and talk about their work and, if not made explicit, can be deceptively powerful and disruptive. Differences in *language* and in the interpretation of that language may cause one professional group to be offended by statements felt by others to be completely acceptable. For example, physicians tend to hold the term “patient” as one that evokes the best of the patient-physician relationship—intimacy, advocacy, confidentiality, and respect. Other professionals may disagree, preferring the term “client” as one that implies equality of power, autonomy, and respect. Differences of this nature are unlikely to be successfully overcome by single profession educational experiences. There is a need for educators and clinicians to work across boundaries and to agree on what vocabulary can be shared (requiring an open mind and a sense that “If it’s important to him, it’s important to me”). They can then model choices of language that show respect for others and design learning exercises in which the differences (and the reasons for them) are made explicit and explored.⁴⁵

Other attitudinal barriers include *historical rivalries* among the professions and *fears of*

dilution of professional identities.^{33 34} Some professional bodies have indicated concern that IPE could diminish the autonomy of professions who have worked very hard to attain it.⁴⁶ A fear that professional identity may be lost should not be dismissed as an irrational concern. There are examples of such things in our history^{47 48} and suggestions about IPE include that “. . . a new common foundation programme will be put in place to enable students and staff to switch careers and training paths more easily”.⁴⁹ While there is a role to be played by having a work force that can “substitute for one another” when appropriate, there is a real need to be clear about what IPE should be aiming to achieve. We would suggest it is not to have everyone learn the same things, but rather to learn to understand and capitalise on the different competencies various professions bring to patient care.

One reason that attitudinal barriers may be extremely pervasive and difficult to address is in part because they cross over into clinical practice. Clearly, a student who sees competition rather than collaboration among professionals in practice will discount prior classroom based teaching that claims the benefits of interprofessional work. While some argue that such factors support IPL being located primarily in the clinical or community setting (where it can build benefits for patients at the same time as one is building benefits for learners),⁵⁰ it has been successfully introduced in a number of different clinical and academic settings.

Some recent examples

There are a number of examples of good practice, some of which have been comprehensively documented elsewhere.^{33 51 52} We mention here two initiatives in the USA where multisite demonstration projects have recently been completed, the first involving qualified practitioners working with older adults⁵³ and the second involving both undergraduate trainees and qualified practitioners.^{40 50 54} Both groups grappled with the barriers described above but created interprofessional learning experiences that have been sustained over an extended period. Each has incorporated evaluation as part of programme planning, and used their multisite structure to generate lessons for future work.

GERIATRIC INTERDISCIPLINARY TEAM TRAINING (GITT)

The GITT included eight sites working under sponsorship from the John A Hartford Foundation.⁵³ The goals included: (1) creating national training models based on partnerships between “real world” providers of geriatric care and educational institutions that train health professionals; and (2) developing well tested curricula for geriatric interdisciplinary team training.

The emphasis was on graduate level trainees (advanced practice nurses, master’s level social workers, and medical residents (registrars) in the primary care fields). Each of the eight sites

pursued the same goals using strategies responsive to local resources and culture. Three models emerged, depending on local requirements:

- The *academic model* featured faculties from schools of medicine, nursing, social work, and other disciplines teaching geriatric teamwork.
- The *clinical model* placed the healthcare delivery site in a leadership position, working with trainees placed there by partner academic programmes.
- The *mixed model* included elements of both the academic and clinical models—for example, with the same faculty members serving as both educators and clinicians.

An independent team of researchers formally evaluated the programmes, and the following needs have so far been identified⁵³:

- (1) to locate champions: someone with authority and influence in each participating profession to support the initiative;
- (2) to pick a skilled programme manager: someone responsible for bringing people together and coordinating the work among partners;
- (3) to train faculties and clinicians first: teachers must be able to incorporate team principles and skills into their work and model them for learners;
- (4) to create a long term benefit for clinical partners and institutions: a programme that creates value for everyone involved is more likely to be successful than one that moves from one grant to another;
- (5) to include a home healthcare setting as part of the programme: in the care of the elderly, visiting patients in their homes broke down barriers among the professions and highlighted the value of each contribution;
- (6) to provide booster doses of GITT: continued attention to team training and communication is needed to sustain initial gains.

INTERDISCIPLINARY PROFESSIONAL EDUCATION COLLABORATIVE (IPEC)

The Interdisciplinary Professional Education Collaborative (IPEC) began in 1994 with four sites which increased to 10 in 1997.^{40 50 54} The Institute for Healthcare Improvement sponsored the initiative with support from the Health Resources and Services Administration (US Public Health Service) and start-up funds from the Pew Health Professions Commission. The formal demonstration project ran until 1999 and participants continue to collaborate on a variety of follow up projects. The goal of the IPEC was to improve health, health care, and education of the health professions—especially IPE—through the use of continuous improvement methods. Its objectives were to:

- equip health professionals with the ability to continually improve the health of the individuals and communities they serve;
- integrate practice and learning in continuous improvement as part of the daily work of delivery of health services and education of the health professions;
- expand our learning with regard to improving health and the education of the health professions.

Across the 10 sites participants included pre-qualification and graduate learners in health administration, health education, health information, medicine, nursing, pharmacy, physician assistants, physical therapy, psychology, public health, recreation therapy, social work, and statistics. With the expansion of the collaborative in 1997 there was a particular focus on community health under a programme called “Community Based Quality Improvement Education for the Health Professions”. Most sites began with a community health need—for example, health services for the homeless in Philadelphia, self-care of people with diabetes in rural South Carolina, preventive services for the elderly in rural Oregon—and then built educational experiences into efforts to meet that need. Like the GITT, each IPEC site agreed on the common goals and then developed a strategy responsive to local needs, values, and resources. Across all 10 sites the work depended on partnerships between academic programmes and community healthcare providers.

IPEC demonstrated that IPE could be created in a way that benefits both learners and communities.⁵⁵ Knapp and colleagues identified the following strategies:

- (1) Understand community health issues: in order to create a concrete, meaningful learning experience for students priority setting activities using community health data must be completed prior to student involvement.
- (2) Connect the institution and the community: the faculty must have knowledge of the community and the health issues being addressed. They must facilitate the two way connection between the educational institution, students, and the community.
- (3) Define a target community: student improvement projects must target smaller populations within the context of the larger whole.
- (4) Understand the people you wish to serve: to design and implement appropriate client sensitive services it is imperative to gain knowledge from the people you wish to serve.
- (5) Identify appropriate short term projects: it is difficult for students in one semester or even one year to develop and implement health improvement projects that will have an impact on a broad community health measure. Yet students can conduct projects that can be done in a short time frame and contribute to the knowledge base.
- (6) Practise interprofessional teamwork: community health improvement work is intrinsically interprofessional and is therefore an excellent format to explore teamwork with students.

A three site collaborative in the UK (Health Improvement through Interprofessional Education Programme) began in 1999 with sponsorship by the NHS Executive South West and their early experience included similar barriers and lessons.^{50 56} In addition, some new initiatives (such as the “New Generation Project” at the University of Southampton in the UK) are putting such lessons into practice from the very inception of projects. Each of these initiatives highlight some key issues to be faced in

mounting IPE programmes, not the least of which is effective partnership and appropriate resource allocation. In order to justify the substantial investment of time and resources required, there are a number of steps that need to be taken.

Steps to professional education that prepares learners to collaborate for the best care of patients

If interprofessional working is central to good patient care, then being able to work in a team and collaborate with other professionals can no longer be an “optional extra” but must become a core competency. We need approaches that will help all healthcare professionals to become more effective collaborative workers, not simply to improve relationships but to achieve better outcomes in health care. For any education programme to work it has to be supported by professions, valued by students, and hold its appropriate place in curricula and assessment processes. The barriers are considerable and the evidence to help us is slim. So, where do we go from here?

Firstly, we must agree on the goals. The key questions are:

- What kind of education?
- For what kind of student?
- Leads to what kind of impact?
- On what kind of outcome?³³

What exactly are the knowledge, skills, and attitudes related to interprofessional work that are required for best care? Along with individual expertise, knowledge of healthcare systems, communication skills and respect for the work of other professions, it would appear that the ability to both share one’s own knowledge and to listen and respond to that of others is key to working well in teams.³⁵ Our aim should be to produce health professionals who are prepared and positive about this aspect of their work. We would suggest great caution about ideas that IPE should aim to have learners and workers that can easily move between different professions.^{49 57} Such a goal seems to risk what we have suggested to be valuable differences between the health professionals that are vital for best patient care.

Secondly, we must agree on the most appropriate methods. While there is considerable agreement on the need to build interprofessional competencies, there is little evidence to support one approach over another. Can separate health professional student populations, working in collaboration with educators and clinicians from other disciplines, acquire the learning needed, or must students from different disciplines learn together? The first, while not easy, is clearly less complex and may be more sustainable than the second. If the second results in better care, then we must work harder on the obstacles.

Thirdly, what should be learned when? We argued above that interprofessional working, like other complex professional skills, should be taught as a continuum, starting early and continuing throughout professional and continuing education. But what exactly should be offered when? Koppel *et al* found that changes

in individual behaviour and benefits for organisations and patients occurred primarily when IPE was designed for professionals in practice, yet demonstrable learning took place at the pre-qualifying level.³⁷ In contrast, effective interprofessional teamwork in the care of complex patients requires individual professional competence and ongoing learning focused here may be more effective. Since important attitudes about working with other professionals emerge long before the end of training, attention to these should be part of the early aspects of professional education and reinforced throughout.

Fourthly, we must attend to the need of health professional faculties to develop their own competence in interprofessional working. IPEC suggested the following for education in the context of interprofessional teams⁴⁵:

- Encourage teams to invest time in developing a shared aim.
- Develop team skills through practice and reflection.
- Pay attention to internal team relationships.
- Identify changes in the educational infrastructure required to help sustain interprofessional learning.
- Use multiple methods of communication to bridge barriers of schedules and geography.

Overall, we must test the assumptions we may have made about learning for interprofessional work. We need to ensure that arguments in support of one method of learning or another are articulated and tested. This is a necessary precursor to developing appropriate programmes that can be fully supported and sustained by the education and healthcare communities. To achieve such advances we need to open up discussion among the stakeholders involved: policy makers, healthcare and education providers, clinicians, patients, and students. With a few notable exceptions that we have already referred to, much of the discussion about education has been aired in specialist literature. If we bring everyone together at a starting point we agree upon (our shared goal for better care for patients), we can broaden the discussion and undoubtedly advance our ability to address these questions.

Campbell and Johnson³⁶ have suggested that an exclusive reliance on positivist frameworks and quantitative methods is unlikely to help us answer all the questions that occur in evaluating IPE. Qualitative methods can be and, as highlighted above, have been used to get a better understanding of what might be the best indicators of success or the barriers to achieving that success. Such work is a key adjunct to the appropriate use of quantitative evaluation. If interprofessional work is important to good patient care, then we must learn more about how to prepare health professionals for that work using the methods most suitable for the questions at hand.

Conclusions

Interprofessional education may be a tool that will increase the ability of healthcare professionals to collaborate more effectively, form

well functioning coherent teams, and contribute to better healthcare outcomes. This result cannot be expected from some magical cascade of benefit, nor can we expect that these goals will be achieved without some change to our current system of education. To continue with the status quo may in fact be damaging.^{30 58} While there are understandable calls for “proof” that IPL is effective, we (and our patients) cannot afford to stand still where we are.

To create successful IPL we must agree on what we hope to achieve, and then create and examine new hypotheses about how education is designed, when it should occur, and how it is evaluated. As professionals we must reflect on how we present our own knowledge to others, and how we attend to other’s knowledge. It would be helpful if leaders in the different professions show the way, and if funding bodies support such initiatives. These steps will help us to develop a knowledge base that sustains and promotes collaborative work in addition to specialist knowledge and skill. Our patients deserve both.

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