Title: Interprofessional Education and Practice Guide No 6: Developing Practice-Based interprofessional learning that has the potential to change practice

Running Title: IPEP Guide No. 6

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Interprofessional Education and Practice Guide No. 6: Developing Practice-Based interprofessional learning using a short placement model

Abstract

Offering undergraduate and post-qualified learners opportunities to take part in, and reflect on, the nature of interprofessional working when in practice remains an important goal for interprofessional educators. There are a plethora of opportunities within hospital and community care for learners to actively participate in health and social care delivery where collaborative practice prevails. However, it remains challenging to know how to establish and sustain meaningful interprofessional practice-based learning. This is because profession-specific teaching is prioritised and many teams are under-resourced leaving little time for additional teaching activities. In some instances practitioners lack the knowledge concerning how to design meaningful interprofessional learning and often feel unprepared for this teaching because of limited interprofessional faculty development. Others are simply unaware of the presence of the different students within their practice area. This guide offers key lessons developed over many years for setting up practice-based interprofessional education. The learning model has been adapted and adopted in different settings and countries and offers a method for engaging clinical front-line practitioners in learning with, and from learners who can help support and in some instances advance care delivery.

Introduction

This guide focuses on developing practice-based interprofessional learning (IPL). Today's aspiration for modernising health and social care education, involves enabling students to

learn within interprofessional teams and with support to take on relevant practice responsibilities (Hirsh, Holmboe, Ten Cate, 2014; World Health Organisation, 2010; Frenk et al., 2010). The opportunity to experience the complexity of front-line collaborative clinical care brings additional insights to students. These include appreciation of underpinning theory on team dynamics, different professional approaches to care, patient-centred team-based care, shared decision making and effective communication while strengthening professional identity (Thistlethwaite & Moran, 2010; Jacobsen, Hansen & Eika, 2011; Billett, 2014). Students endorse interprofessional practice learning as important for obtaining an appreciation of the value of collaborative practice (Gilligan, Outram, & Levett-Jones, 2014; Jakobsen & Hansen, 2014). There must be opportunities within any interprofessional education (IPE) curriculum for students to apply theory to practice in order to become competent interprofessional practitioners (Anderson, Hean, O'Halloran, Pitt & Hammick, 2014).

Educators have long appreciated the value of practice learning for the consolidation of theoretical learning (Paul, Bojanczyk & Lanphear, 1994; Maben, Latter & MacLeod Clarke, 2005). Indeed this has been emphasised by interprofessional leaders, who discuss the cogent role of learning based on actual real life situations, so that students see the complexity and understand the responsibility of different professional team members (Barr, 2002; D'Eon, 2005). In practice students observe professional social interactions which may be conversations in corridors and common staff spaces demonstrating the importance of positive professional relationships (Gittell, 2000; Bleakley, 2013; Gregory, Hopwood & Boud, 2014). Despite these benefits, many educators report that establishing practice-based IPE can be challenging, labour intensive in the development phase and difficult to sustain, often

because of rapid staff turnover and lack of time and resources (Morison & Jenkins, 2007; Jackson & Bluteau, 2007; Furness, Armitage & Pitt, 2012). Evidence from the post-qualified arena (Morey et al., 2002; Légaré et al., 2013) shows practice-based IPE can advance learning and improve patient care.

In this guide we aim to describe a model for short practice-based IPE evolved to ensure students experience what it feels like to work within modern interprofessional health and social care teams. Participating hospital or community practice-teams receiving small interprofessional student groups (2 to 4 members). Following pre-briefing the students work with patients/service users with complex needs against learning outcomes which include clinical issues and aspects of interprofessional working and collaborative practice. Supported throughout with reflective learning, students end their studies presenting recommendations on their patient to the clinical-team. This model can be delivered on a small scale for between 2 and 20 students, or with larger cohorts of several hundred of students (requiring several sites and more cycles throughout the year). We outline the learning design, how to establish the infrastructure to support the learning and how to deliver and evaluate the model. We offer practical examples based on our lessons learnt offering 2 to 4 day placements. Our understandings have evolved iteratively over several years using evaluation data from students, patients, practitioners and facilitators regarding the learning experience and the value of the emergent learning (Anderson & Lennox, 2009). These early understandings were subsequently documented and presented in Lennox & Anderson (2007). This model was developed within a comprehensive IPE curriculum building on early (first year) classroom theoretical sessions followed by later practice-based experience of collaborative learning (Anderson, Ewing & Moore, 2014), which is a

recognised pattern for the delivery of IPE (e.g. Wilhelmsson et al. 2009; Anderson, Smith & Hammick, 2015).

Lessons learned

Ensure iterative development in partnership with stakeholders

We have learnt that sustainable practice-based IPE can only develop over time, moving from small pilot studies into embedded placement opportunities for entire cohorts. Higher education Institutions (HEIs) should design this learning with practitioners and we recommend three other stakeholders; i) patients/service users and carers, whose experiences authenticate the learning; ii) clinical-teams, who carry the ultimate care responsibilities and support the learners, and iii) students.

Establish the organisational infrastructure

This model requires shared responsibility between partner organisations; this is known to be essential for any successful IPE programme (Gilbert, 2005; Anderson *et al*., 2014). Education leaders within HEIs who seek to build practice-based IPL must identify service organisations as partners. In order to build IPE within existing uni-professional practice settings there must be a high level strategic agreement. This paves the way for service managers to access resources to support this learning which may include; teaching materials, hire of venues, payment if required for participating service users/carers and trained practice-educators. What is required is the redirection of uni-professional resources into IPE. All students receive placement tariffs and pooling these profession-specific budgets has offered us a

sustainable cost effective method. In our region there is a funding agreement between the HEIs and the placement organisations who provide practice-educators. The resources invested produce newly qualified practitioners, who have experienced real IP working on clinical situations; this satisfies professional bodies and goes towards preparing students for new integrated working (Frenk et al., 2010).

In order to participate, each course/school/faculty should follow institutional curriculum approval procedures to embed mandatory IPE placements within uni-professional curricula. The organisational infrastructure outlined in Figure 1 depends upon shared responsibilities between the HEIs and the stakeholder groups (health and social care and relevant other organisations). The 'Educational Steering Group' is then established to bring together all stakeholder partners including service user groups where possible. In each setting an existing uni-professional practice-educator takes on a local *'coordinator role'* to work as a conduit between the HEI, the steering group, the clinical-team, the patient/service user/carer representatives and be accountable to all stakeholders. This coordination role is essential (Gittell, Godfrey & Thistlethwaite, 2013). In our experience doctors, nurses, pharmacists, therapists and social workers have integrated these interprofessional components into uni-professional educational roles. As with uni-professional placements administrative support is required both within each HEI and to support the practice settings. Administrative and coordinator roles work closely together.

INSERT FIGURE 1 ABOUT HERE

Map the curriculum

We have found that after the design of the IPL each participating school should consider the prior learning and skill set (student level) required to attend the practice-based IP event. In

some cases it was only through evaluation processes that we identified when and where to locate the placement in each uni-professional curriculum. Authenticity is important in designing an event. There are two possibilities; i) learning may be placed in a clinical area relevant to a specific mix of professions, for example, mental health (Kinnair, Anderson & Thorpe, 2012); or, ii) focus on generic issues suitable for a wide range of professions, for example, disabled people and social inequalities (Anderson & Thorpe, 2010; Anderson & Lennox, 2009, Anderson, Ford & Thorpe, 2011). Here, different combinations of students can be present and thought is given to how to distribute the smaller professional groups e.g. speech and language therapy.

Uni-professional placements, usually mandatory, occur in the second and third years (equating to third-fifth year or mid-to-late training in medicine). In the main pharmacy undergraduates have less patient contact and must be prepared for working in clinical arenas. We have learnt how to embed IPE within uni-professional placements by aligning the learning outcomes, thus enabling students to achieve their intended learning outcomes interprofessionally rather than uni-professionally. We share examples of how interprofessional learning activities can be linked to learning outcomes and how learning takes place is shown in, Table 1.

To enable large cohorts of students to access these events we offer short events on a cyclical basis throughout the year. Such short placement learning possibilities have been found to provide valuable IPL (Jakobsen & Hansen, 2014). The model has been used in undergraduate and post-qualified training; the adjustment requires modification of the level

of learning outcomes and clinical responsibilities e.g. undergraduate medical students can only point out incorrect prescriptions, qualified doctors can change these.

INSERT TABLE 1 ABOUT HERE

Train the practice-educators

The training of placement practitioners to understand, lead and facilitate this practice-learning is pivotal. The importance of faculty development for IPE is well known (Howkins & Bray, 2008) and outlined in the first interprofessional education and practice guide (Hall & Zierler, 2015). Facilitators from practice bring a wealth of experience and local knowledge to this practice based learning. Providing training for IPE ensures that the traditional transmissive teacher-centred approaches, usual in uni-professional training, are replaced by facilitation, based on constructivist principles. From experience, we have learnt to ensure on-going faculty development (Anderson, Cox & Thorpe, 2009). Facilitators require sensitive insights to enable the critical interprofessional student discussions to take place within an environment of active listening, open mindedness and the ability to seek common ground. Many of these skills are based on emotional intelligence (Goleman, 1998). Facilitators must develop critical self-reflection within this context and awareness of the values held by different professions. A single 'shot' of training is never adequate as clinical staff will move on. Educational partnerships need to be actively sustained and knowledge and skills passed on to new staff wherever turnover is high. Involvement can offer practice staff an opportunity to develop facilitator skills as a first step towards becoming a practitioner-educator. The model brings together academic and practitioner staff so that practice staff are not left alone to support the learning, vital in times of pressure for prioritising patient care.

Underpin learning with theory

We have drawn on constructivist learning theory in the design and evaluation (Piaget, 1950; Biggs, 1996) using a learning cycle adapted from Kolb (Kolb, 1984). We provide learning to take students sequentially through each of the four steps; concrete experience; reflective observation; abstract conceptualisation and active experimentation (Figure 2). This learning develops metacognition as students enhance their understandings (cognitions) as a result of interprofessional interactions (Driessen, 2014). Different stages of the learning cycle are more accessible to different student learning styles, for example, science students may be most comfortable considering problems through theorising. Students with different learning styles may require help at different stages (Coffield, Moseley, Hall & Ecclestone, 2004; Becher, 1989).

INSERT FIGURE 2 ABOUT HERE

Constructing the learning

Provide practical experience (Concrete Experience). We create opportunities for active learning by placing student teams alongside professional practitioners who work collaboratively and aspire to good team working (Clarke, 2006). For example, care of older people e.g. rehabilitation, community and mental health teams (Anderson & Thorpe 2010). Students should complete a holistic health and social care assessment using each student's profession-specific knowledge and skills and gathering information from the practice team. The practice teams will need to work with the coordinator who supports them through the identification of relevant patients/service users. The practice-educators

must be available to support students with logistical/caring/clinical concerns, often easier in hospitals but in community settings arrangements must be in place for contact.

Provide opportunities for reflection (Reflective Observation). We have learned that experience is never enough to ensure learning, as students left unsupervised and/or undirected often fail to make meaning from what they are doing. The students need to pool their understandings and consider the strengths and limitations of the services comparing service users and practitioners' priorities (Schön 1987; D'Eon 2005). The students should be directed to relevant theories and policies that underpin their different profession-specific responses. Interprofessional reflection enables a deeper level of learning (Wackerhausen, 2009). We advise planning for students to return to their learning base where the practice-educator should encourage students to reflect and analyse their experiences. Visiting experts such as an occupational psychologist or specialist practitioners maybe invited to advance these discussions. Students can either return to complete further clinical analysis in the clinical arena or complete their learning in the base room, moving to step 3 of the learning cycle.

Help students to construct new meanings (Abstract Conceptualisation). At this stage we have found that different interprofessional understandings emerge because of the trialogical nature of IPE debate and discussion encouraged by facilitators (Hakkarainen & Paavola, 2007). Students interpret their findings and begin to prioritise the issues they have identified to find new interprofessional meanings. Where the patient has identified unmet needs or concerns the students can explore possible solutions. By the end of this

stage the students are ready to present their analysis to the clinical-team. The practice-educator should guide students to prepare for their presentation with prompts such as: What would you do? What is missing? We have found instances in which care has been improved as the practitioners have acted on student recommendations (Anderson & Thorpe, 2014; Anderson & Lakhani, 2016). Students can continue to work together within the clinical setting or the teaching suite to make sense of their interprofessional activities. Resource boxes or access to the internet for research can be an advantage.

Active Experimentation. We have learnt that a vital part of student learning occurs when students can share their new constructed understandings with their peers and the clinical-teams (Vygotsky, 1978). Learning can be enhanced when different student teams have learnt from different patients/clinical situations and come together to share their insights. Giving an interprofessional presentation develops additional skills, as all students are asked to participate. Students may make naive false assumptions which can be explored while new insights are praised. We have found that the student feedback works best when the coordinator and practice-educators invite the clinical-team, academics and local managers to hear the student feedback. A top tip for the practice-educator is to act as a host to ensure the session runs smoothly and to summarise and consolidate the learning. In some adaptations of the model patients are present and participate, offering feedback (Anderson, Ford & Thorpe 2011). All students should complete written reports on their recommendations and evaluation forms. The coordinator disseminates the student recommendations to the clinical-team.

Follow ethical principles

Educators should follow ethical principles when working with vulnerable people and dealing with sensitive personal information. These principles apply for working with service users, practitioners/educators and students.

Volunteer hospital in-patients are more readily accessible whereas in the community a secondary referral process is needed. The coordinator should work with community practitioners to identify relevant patients willing to share their experiences.

The clinical team must plan an induction and consent process. In all cases there is an induction conversation outlining what participation means and consent is obtained; in some situations written consent may be preferable e.g. community. With hospital in-patients this mostly happens in the days leading up to the placement but in community settings the consent process can begin weeks or months in advance. In all cases checks are made just before the students arrive that the patients/service users remain available for the focus of the student activity.

Participants must be able to withdraw at any point and where appropriate consent should include access to clinical records. All patients/service users should receive support before, during and after participating from clinicians, educators or trained patient-mentors. In some courses service users can participate in steering groups and help to design the learning. Service users can be involved in delivery and evaluation and in one example they provide feedback on students' learning.

Coordinators must adhere to HEIs professional bodies and local organisations codes of practice for teaching and learning and comply with relevant policies and legislation, ensuring that no one is disadvantaged and that support is available to access these opportunities. There must be processes for recording and acting on any incidents or concerns identified by students, facilitators, clinicians or service users.

Students should be reminded of their professional responsibilities regarding the security of information and ethical principles concerning anonymous reporting. This applies to all those who manage in-patient and service user information including practitioners and facilitators. Where professionals provide information about people in their care this will be explicitly agreed by the patient/service user. Students must recognise the obligation to stay within the scope of their competence; they must know when to seek advice and how to do this. Students learning in community settings need policies and guidance on safety.

Assess the student learning

Assessment is essential to ensure students value the learning and can locate this within their curriculum. As these IPE placements are mandatory, credit bearing assessment strategies must be in place in the same way as for uni-professional learning. We use a Professional Portfolio where interprofessional practice-learning is recorded as a short essay or as a reflective written account (Domac, Anderson, O'Reilly, Smith, 2015). We do not grade observed behaviour but peer and self-assessment forms for attitudinal and behavioural feedback can be used.

Facilitators should sign off attendance and if required give students feedback on their engagement. Processes must be in place for reporting professional fitness to practice issues to the student's course.

Evaluate the learning

Evaluation forms an integral part of the educational delivery and is pivotal for quality assurance. A range of methodologies can be used including action research methodologies which aim to '*improve education by changing it and learning from those changes*' (Kemmis & McTaggart, 1992). We advise evaluation which focuses on the preparation for the teaching (presage factors), the process of teaching (process factors) and the outcomes or impact of the learning (product factors) (Biggs, 1993; Freeth & Reeves, 2004; Anderson, Smith & Hammick, 2015). Use of the Model requires cyclical processes of quality assurance whereby evaluation data is shared with the steering group who can make changes to the delivery as required.

Discussion

As we have shown, our sustainable placement model was developed iteratively over time. Development and delivery involves partnerships between HEIs, clinical-teams, patients and lead roles such as the coordinator. Development involves establishing the organisational infrastructure, mapping learning outcomes onto practice learning opportunities, training practice-educators and involving patients/service users using ethical principles. As with any learning, student assessment and evaluation is required.

Of the lessons we have learnt perhaps the most important has been the value of a theoretical approach to learning. Clinical-teams are most effective in supporting the students in their learning when trained in these learning theories. We have seen transformative learning occur when students learn through being inquisitive in their search for explanations and in applying their different professional knowledge in a problem solving manner (Knowles, 1984). Stakeholder engagement can result in a learning community of practice so that the host team benefit beyond contact with the students (Wenger, 1998). At a time when the general public ask searching questions about the mystery behind their care we present this guide to help clinical-teams form communities of learning and become more aware of each other's roles to promote a collaborative safe culture (Habermas, 1984; Parker, 2000; Reeves, Ross & Harris, 2014).

We have learned to support and ensure patient-centred learning, a key ingredient for IPE. To some extent this model enables the patient/service user's agenda to drive the learning by encouraging students to seek solutions; a positive ingredient for effective practice-based IPE (Davis, Weidner, Rodgers, Tallia & Matson, 2015). Working closely with patients on steering groups and considering ethical principles remain paramount for any practice-based IPE. Short IPE placements require constant effort to sustain due to the numbers of stakeholders involved and it can be challenging to ensure opportunities are available to all students from large cohorts. However, we have begun to confirm that students prefer these short practice-based events to classroom events (Domac et al., 2015). More research is required to establish the optimal length of interprofessional practice placements. We have seen the benefits of IPL which immerses students in trialogical engagement; students approach patient care using different professional lenses which illuminates why all are

required to advance the quality of care. Comparisons should be made between uni-professional observation placements and bringing students together for short active interprofessional experiences. Additionally, the time IPE students can offer to patients is a helpful resource for over stretched practitioners (Mitton, Peacock, Storch, Smith & Cornelissen, 2011; Lennox & Anderson, 2012; Anderson & Thorpe, 2014).

Acknowledgement

We wish to highlight that Dr Angela Lennox CBE, was the original co-designer of the Leicester Model. Ann Jackson who took the model to Warwick Medical School and international colleagues who have modified this learning model in Saitama and Chiba in Japan.

Declaration of interest

The authors report no conflicts of interest. The authors are responsible for the writing and content of this paper.

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Figure 2: Applying Theory to the Leicester Model Learning Cycle (Kolb 1984)

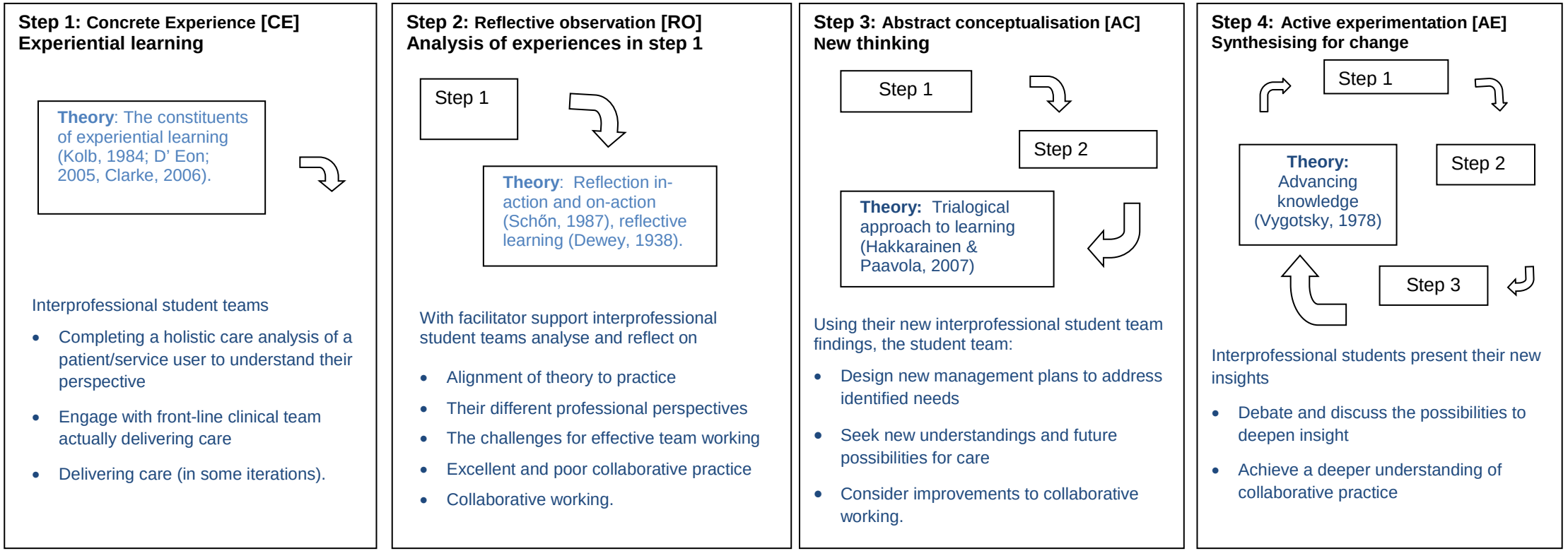

Figure 1: Organisational Structure

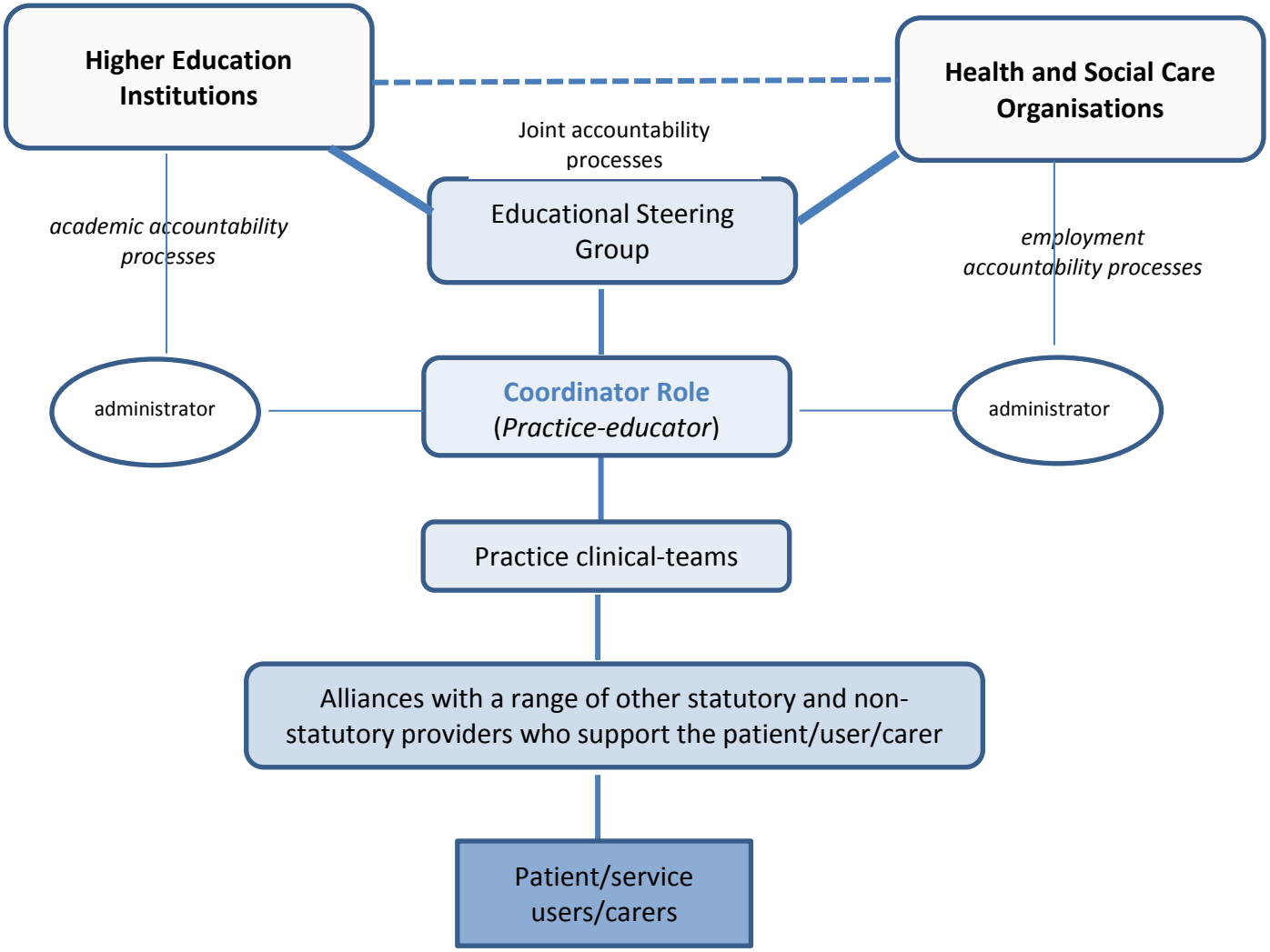

Table 1. Curriculum Mapping

Where: Clinical Context	What: Extracts from Aim and Learning Outcomes	Examples of Learning Activities *All students are in mid-to-late training*
Setting: Hospital acute ward **Who:** Pharmacy with medical students **Topic**: Polypharmacy in older patients with Comorbidities (Anderson & Lakhani, 2016)	**Aim:** Understand the complex nature of polypharmacy in the care of the elderly and the appropriate interprofessional analysis for safe patient care **Learning outcomes** *(Presented aligned to a competence model)* **Knowledge** Demonstrate what is meant by polypharmacy and its implications on safe prescribing in the older person Ascertain if prescribing adheres to the medicines code and apply the rationale behind the STOPP START campaign Analyse how the different professions patient observations can assist in safe prescribing **Skills** Demonstrate effective verbal communication with members of the student and ward team Demonstrate a holistic understanding of care through engagement with the patient and ward team **Attitude** Demonstrate a positive approach to team working Value the contribution of students other than your own profession	**Day 1: Morning** o Student allocation to small interprofessional teams o Student pre-brief led by a hospital pharmacist and medical-educator o Preparation for assessing in-patients' drug regimes **Afternoon** o Students work with in-patients alongside the ward team o Students meet consented patients and access patient notes and relevant records o Students reflect with the clinical team **Day 2: Morning** o Students complete information gathering and analysis o Students prepare to report their findings **Afternoon** o Interactive feedback discussion with clinical and teaching team o Students report their findings in writing
Setting: Community hospital and community. **Who:** Medical, nursing, social work, health psychology, pharmacy and policing students **Topic**: Mental health patients (Kinnair, Anderson & Thorpe, 2012)	**Aim:** To explore the contribution of different disciplines in mental health team working **Learning Outcomes** **Knowledge** Analyse the importance of the promotion of mental health and the prevention of psychiatric disorders. Appreciate the effects of stigma on service users and their families **Skills** Generate a comprehensive interagency care plan for a service user and evaluate the role of the various statutory and non-statutory agencies in the delivery of this care plan Analyse the care given to service users with mental health difficulties and critically appraise the current working practices **Attitude or values** Value the importance of involving service users and their carer's in the generation of care plans and in identifying unmet physical, psychological and social needs Be aware of the need to tolerate uncertainty in clinical practice and be more receptive about the views of others	**Day 1: Morning** o Student allocation to small interprofessional teams o Student pre-brief led by a consultant psychiatrists, academics and community IPE tutors o Exploration of care planning in mental health, stigma and health promotion. **Afternoon** o Each student team is allocated one patient (in-patient or community) o Students visit their patient and complete a holistic assessment o Students reflect with relevant practitioners e.g. doctors, nurses, social workers etc. **Day 2: Morning** o Students complete information gathering and analysis o Students complete their clinical work with members of the patients' team o Students prepare to report their findings **Afternoon** o Interactive feedback discussion with clinical and teaching team o Students report their findings in writing