14

Interprofessional Health Care Team Challenge: A New Zealand Perspective

Brenda Flood, Daniel O'Brien and Marion Jones

Introduction

Preparing current and future health professions for collaborative practice requires innovation, vision, a commitment to interprofessional learning and an effective evaluative framework. There are many examples of interprofessional learning (IPL) and the pivotal role it plays in the development of interprofessional collaborative practice. One such IPL activity, originating in Canada, which has gained international popularity in a variety of forms over the last 20 to 30 years, is the health care team challenge. It requires teams of current and future health professionals to work together to design a care plan for a client with complex needs. The aim is for participants to enhance role understanding, to gain an appreciation of how interprofessional practice contributes to patient care, and to develop attitudes and skills for effective teamwork. This chapter draws on international experiences of the team challenge and specifically discusses the development, implementation, and evaluation framework used from a New Zealand perspective.

D. Forman et al. (eds.), *Leading Research and Evaluation in Interprofessional Education and Collaborative Practice*,
DOI 10.1057/978-1-137-53744-7_14

The Team Challenge

The team challenge provides opportunities for students to reflect on and work together to solve real-life problems presented in the case scenario (D'Avray & McCrorie, 2011; Newton et al., 2015). This type of case-based learning allows students to engage in dialogue and construct their own knowledge which enables them to make connections and gain a more informed understanding of collaboration (D'Avray & McCrorie, 2011). It provides a fun and authentic IPL experience, which promotes teamwork and collaboration amongst current and future health care professionals. Learning which is customised and reflects real service delivery is an important part of ensuring the experience is a positive one for the students involved (D'Avray & McCrorie, 2011; Hammick, Freeth, Koppel, Reeves, & Barr, 2005). The goal of the team challenge is to improve collaborative practice (CP) by developing and strengthening the competencies required for effective CP. It provides a safe opportunity for students to develop their knowledge, skills, attitudes and behaviours specifically in relation to working in interprofessional health care teams. It enables them to have an increased understanding of the roles and contribution of other health professions, which along with an ability to work together, provides good preparation for future employment (D'Avray & McCrorie, 2011; Freeth, Hammick, Reeves, Koppel, & Barr, 2005).

There have been many iterations of the health care team challenge globally, however the general aims and structure remain similar. Students from different disciplines are allocated to interprofessional health teams, provided with a range of information based on a real client who may or may not be able to act as a resource for the teams, and are expected to communicate and work together in the development of a collaborative, client-centred care plan. The teams are then required to present their team plans in engaging and creative ways to an audience and judging panel. Boyce, Moran, Nissen, Chenery, and Brooks (2009) suggest that the competitive element of the approach motivates and stimulates engagement in the process.

An interprofessional health care team challenge was established within the Auckland University of Technologies (AUT) Faculty of Health and Environmental Sciences in 2009. The planning for IPL within the faculty was initially led through a transformational leadership model with the development of the National Centre for Interprofessional Education and Collaborative Practice (NCIPECP) (Reid, Jones, & O'Brien, 2015). It was based on the model of Bass (1985)) in which leaders provide role modelling, effective communication, vision and working with others to bring about change. The Team Challenge was developed within the NCIPECP in line with this model.

The team challenge was developed as an interprofessional, experiential, extracurricular activity, initially consisting of AUT students from within the faculty. A local provider of secondary and tertiary health care expressed a keen interest in collaborating to run the event as a professional development activity for its staff, which led to student and health practitioner teams competing together. This added another dimension to the students' learning experience, as they competed against teams made up of registered health practitioners. The registered practitioner teams included staff working within community and inpatient practice environments and a team mentor from within the identified local district health service.

Case Study: New Zealand (NZ) Interprofessional Health Care Team Challenge Application

The preparation for the team challenge begins a number of months prior to the teams presenting at the final team event. There are three stages of planning: preparation for the event, commencing the challenge and presenting at the team challenge event. Each stage has a number of processes that need to be put in place and require communication between different stakeholders. Stakeholders include staff and students from within AUT and other universities represented as well as those staff and students based within the participating local health services.

Preparation for the Event

Case Study Development

- Draws on the real-life experiences of a person with complex needs.
- Working alongside a client to create a case study is not always possible.
- Requires input from many health care professionals, drawing on their knowledge and experiences.
- Consideration needs to be given to the diverse learning needs of the learners to ensure the case study incorporates a level of complexity, but remains true to real life.
- In addition to physical signs and symptoms it must also include detail related to the social, psychological, cultural and spiritual context of the person.
- It must be sufficiently detailed to ensure it is realistic and credible.

Additional Scenario

- At the event, and after the presentation of their care plans, each team is provided with a different additional scenario. This adds a twist to the case to which they will need to respond collectively.

Identification of Client Advocate

- This could be someone on whom the case study is based or who has experienced similar issues.
- This could be a person who has experience of working with someone represented in the case study.

Identification of Team Mentors

- Each of the teams is assigned a team mentor.
- The mentor will facilitate good interprofessional practice amongst team members as well as support the interprofessional care plan development.

Identification of Professional Mentors

- Each of the participants within the teams will have access to an expert/advisor from within their profession who they can consult regarding profession-specific information in relation to the case study.

Identification of Judges

- Judges for the event are selected on the basis of their understanding and experiences of interprofessional practice.
- Judges can be selected on the basis of their knowledge of the clinical case, but this would need to be coupled with a sound underpinning in interprofessional practice.

Identification of Team Members

- The team challenge is advertised across the university and health care practice environments in order to generate team participants.
- A wide range of health disciplines is sought.
- It is not essential that each team has the same number or type of health professions.
- Each team is made up of between four and six members from different disciplines.
- Students who agree to participate are allocated into teams.
- Students make a commitment to their team and the event.

Commencement of the Challenge

- The student teams are provided with the case study approximately four weeks prior to the date of the event.
- The methods and regularity by which the teams choose to communicate is up to each team. Some choose to meet face to face or virtually. Some communicate via blogs and Facebook pages.
- The role of the team mentor is to keep the team on track and facilitate interprofessional learning and working within the team.

- Team members are encouraged to locate sources of information from outside of the team.
- In the four weeks prior to the event the teams are able to ask the 'client' (the client advocate) up to five questions. Often these are in the form of the patient's goals, concerns or interests.
- The client responds to these questions in lay language via an intermediary.

The Presentation of the Case Study Care Plan

- On completion of the four-week care-planning process all of the teams come together to present their interprofessional plan for the patient/client at a live public event.
- Each team has five minutes to present their care plan; teams can present their plan in whatever manner they think is appropriate.
- Following the completion of the presentation each team receives an additional scenario. The teams are given a further five minutes to discuss and identify how they might approach the situation and two minutes to present this to the judges.
- Teams are scored on their ability to work and communicate collaboratively, to demonstrate the central role of the patient, and their ability to plan and prioritise appropriate contributions from different health professions.

The Evidence and Interprofessional Education

Interprofessional education (IPE) and CP are recognised nationally and internationally by policymakers as being able to address the increasing demands and complexity in health care, by improving both health systems and health outcomes (Reeves, Tassone, Parker, Wagner, & Simmons, 2012; WHO, 2010). Interprofessional learning has been described as a collective and social process, within and between professionals, and what sets it apart from other types of learning is its emphasis on learning through the experience of practice (Kemmis & Smith, 2008; O'Brien,

Swann, & Heap, 2015). Health care education, like health care services, requires constant evaluation (Attree, 2006) so that the knowledge, skills, attitudes and behaviours being taught adapt to the changing needs of health care employers and patients. However, studies have indicated that research into health care education is not extensive and is fraught with challenges (Attree, 2006).

There is emerging evidence that well-planned and executed IPL experiences with students from different professions learning in groups from, with and about each other promotes the adoption of positive attitudes towards each other (Anderson, Thorpe, & Hammick, 2011). Effective interprofessional learner experiences have also been shown to result in greater collegiality, and the broadening of knowledge, experiences, attitudes, perceptions and understandings of other professions and CP (Cooper, Spencer-Dawe, & McLean, 2005). Salvatori, Berry, and Eva (2007) similarly report that IPL promotes role understanding, along with effective communication and teamwork. It prepares health professional students to think differently, so that they understand others' perspectives, and can solve patient problems in new ways (Barr, 2009).

Others argue that further understandings of the effectiveness of IPL and practice are necessary to determine the benefits for patients and the health care system, with more longer-term evaluations of actual behaviour change resulting from IPE being called for (Cook, 2005; D'Amour, Ferrada-Videla, Rodriguez, & Beaulieu, 2005; Freeth et al., 2005; Reeves et al., 2012; Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013; Zwarenstein, Goldman, & Reeves, 2009). Paradis and Reeves (2013) also point toward the continuing need for robust evidence to underpin the IPL activities that are created and implemented.

The World Health Organization (WHO) (2013) has advocated that IPE should be implemented in all health care practitioner curricula. Despite this, there remains a gap in the research which links interprofessional education and learning to actual behaviour change and changes in clinical practice which result in better health outcomes. It is evident that IPE is complex, therefore multiple and appropriate educational interventions are necessary in order to address the learning goals for interprofessional practice (Moore, 2009). The complexity of interprofessional educational interventions, such as the team challenge, has made it particularly challenging

to evaluate effectiveness and determine what aspects, in relation to the context and mechanisms of the learning, result in successful outcomes (Moore, 2009). Attree (2006) suggests that complex longitudinal evaluation would assist in the identification of a relationship between IPE, such as the team challenge, and student behaviours.

Thistlethwaite, Kumar, Moran, Saunders, and Carr (2015) argued that, in order to provide evidence of genuine change and benefits of IPE, there is a need to go beyond short-term outcome evaluation and consider more realist and longitudinal approaches. Newton et al. (2015) noted that evaluations of the health care team challenge in Australia, Canada and the USA have included pre- and post-surveys to identify changes in interprofessional knowledge, skills and attitudes; surveys to measure changes in beliefs, behaviours and attitudes to interprofessional socialisation; and measures of attitudes to teamwork, collaboration, professional identity and roles. Responding to feedback from team, educator and audience participants, along with critical evaluation of past successes and challenges, has also contributed to the evolution and maturing of team challenge (Newton et al., 2015). Selecting an evaluative framework that would broaden the team challenge evaluation, from short-term and outcome-based, to consider more realist and longitudinal evaluation approaches was an important consideration.

Evaluative Framework

In order to identify and support change, improve practice, and extend the scope and reach of IPL, a robust approach to evaluation is required. In implementing the health care team challenge the need for evaluation was considered early and incorporated into the project plan. The manner in which we evaluated the team challenge was broadly based on realist evaluation developed by Pawson and Tilley (1997). It acted as a framework for considering what aspects of the interprofessional health care team challenge worked, for whom, under what circumstances and how it would need to be refined (Ogrinc & Batalden, 2009; Pawson & Tilley, 1997, 2004). Realist evaluation recognises that programmes such as the team challenge take place and are embedded within complex social systems,

involving both health and education. It is therefore necessary to consider the layers of complexity inherent within them (Pawson & Tilley, 2004). This understanding of the contextual conditions pertaining to health professional clinical education is emphasised in order to monitor and make improvements. Realist evaluation provides an explanation for why a particular activity works. This can be achieved through coming to understand the mechanisms, processes or ways in which the activity brings about change and the conditions in which these mechanisms come into play (Pawson & Tilley, 1997). Being aware of what contexts support or do not support IPL is central to realist evaluation. The intended and unintended consequences of IPL are described in realist evaluation as outcomes, which come about because the mechanisms are acting within certain contexts (Pawson & Tilley, 1997). Employing multiple measures, allows for a more sensitive approach to the evaluation of complex activities such as the health care team challenge (Pawson & Tilley, 1997). Researchers suggest that realist evaluation requires the IPL activity to be developed and implemented in a manner that allows data to be gathered, informing analysis of its mechanisms, contexts and outcomes (Thistlethwaite et al., 2015).

Ogrinc and Batalden (2009) describe the basic steps used in realist evaluation. The first is the selection of a working theory, which Pawson and Tilley (1997) state should be framed in terms of a proposition. Step two requires detailed consideration of the context in which the team challenge will be taking place, the different mechanisms by which the challenge is operated and the outcomes (Ogrinc & Batalden, 2009). An example of context in relation to the AUT-based team challenge is that participants are placed into teams of up to six different health disciplines. A possible mechanism is the collaboration that can take place during regular face-to-face team meetings. The context has a significant influence on what mechanisms are 'in play', with both mechanism and context helping to explain outcomes and the patterns that may emerge. Outcomes of collaborative face-to-face encounters may include: a greater understanding of the roles and perspectives of the other disciplines; a wider appreciation of the client and their needs; the development and use of innovative approaches to care. An example of a theory, mechanism, context and outcome related to the health care team challenge is provided in Table 14.1.

Table 14.1 Health care team challenge—example of theory, mechanism, context and outcome

Theory	Mechanism	Context	Outcome
Interprofessional experiential learning will facilitate better understanding of others' roles	Opportunities to interact with others. Sharing own role and having others' roles clarified	Teams of students from different disciplines	Increased understanding of others' roles

Step three involves the implementation of the team challenge, whilst at the same time observing and evaluating the context and mechanisms in play. This incorporates step four which comprises the collection of qualitative and/or quantitative data. Step five is the refinement of the intervention/theory to inform future team challenges.

Applying Realist Evaluation to the Team Challenge

Pawson and Tilley (1997) emphasise that 'programme evaluation can only be as good as the theory which underpins it' (p. 83). Drawing on theory to inform and guide interprofessional development is of critical importance in the advancement of effective, meaningful, and sustainable IPL (Suter et al., 2013). Theory is used to inform and shape IPE development: it guides thinking, understandings and its construction; it enables the clear articulation of the IPE practices employed; and helps us to understand and consider possible resistance and barriers to IPE development, fostering sustainability (Hean, Craddock, Hammick, & Hammick, 2012). It is argued that those developing IPE need to take advantage of the range of theories available to articulate and defend best IPE practice (Hean et al., 2012). In realist evaluation, the interprofessional theory base informs and allows for the identification of specific propositions which can then be evaluated through observations and other methods (Pawson & Tilley, 1997).

Model of IPE

In the development of the team challenge within the New Zealand context consideration was given to the available evidence and theory which

could inform its development, implementation and evaluation. Newton et al. (2015) considered that a major strength of the team challenge is its sound theory base. The interprofessional programme at AUT is underpinned by the University of British Columbia Model of IPE which recognises that learners are at different stages of readiness for IPE and have specific learning needs at different times in the learning process (Charles, Bainbridge, & Gilbert, 2010). This allows us to tailor the IPL activity to the particular stage of the learner. The stages inherent in this model are incremental and move the learner from exposure to interprofessional practice and concepts, and then through to immersion and mastery, which requires critical reflection on and application of these experiences into practice. The team challenge is one IPL activity that necessitates a deeper understanding of complex issues and, as such, requires students with a strong sense of self and of their profession. Final year students are recruited because they are considered to be at an appropriate stage of readiness to immerse themselves in the team challenge, with a solid grounding in their professions. Realist evaluation of this theoretical perspective in this context might consider: 'The proposition that final year students are more able to understand and deal with complex clinical issues in an interprofessional context, is the working theory that will be tested'. The mechanism of change is that the students are interacting and learning together on an authentic clinical case. The context is that the final year students from different disciplines are all on clinical placement with a designated health provider. Some intended outcomes resulting from having all final year students in teams could be that previous clinical education experiences and knowledge of conditions increases their confidence in their own role; enabling them to be open to other ways of approaching an issue.

Interprofessional Competencies

The knowledge, skills, attitudes and behaviours required for interprofessional teamwork led us to consider an interprofessional competency framework and how this could support the team challenge learning content. The Canadian Interprofessional Health Collaborative describes six competency areas necessary for effective interprofessional

collaboration: client-centred care, interprofessional communication, interprofessional teamwork, role clarification, interprofessional leadership and conflict resolution (CIHC, 2010). Introducing the learners to the competency framework enabled them to recognise the knowledge, skills, attitudes and behaviours required for effective interprofessional practice. By engaging in the learning process they were able to experience each competency area, and apply it first-hand. Realist evaluation of this theoretical perspective in this context might include: 'The proposition that role understanding is necessary for effective interprofessional practice is the working theory that will be tested'. A possible mechanism of change is that each team member informs others of their role. This is implemented through the use of an IPL activity called the 'talking wall', which is the context. Some intended outcomes resulting from opportunities to learn about the roles of other disciplines could be that they have more confidence in approaching or referring to other health professions in practice, which allows them to identify when another health profession may be able to contribute to a person's care.

Principles of IPE

The team challenge also draws on the principles of IPL identified by Howkins and Bray (2008) and include: collaborative learning, in which collaborative work is underpinned by mutual respect and the valuing of others' contributions; egalitarian learning, in which the aim is for everyone to learn from a level playing field, so that differences in status and power do not interfere with the learning process; group-directed learning, in which the group identifies strategies that work for them when undertaking their collective responsibilities; experiential learning, in which students interact from, with and about one another, and draw directly from real life experiences; reflective learning, in which they make sense of and share their experiences in a safe and secure environment; and lastly applied learning, in which the content specifically relates to practice. These principles underpin the team challenge and provide guidelines for how learners will work together and interact, enabling team mentors and learners to shape the learning interactions. Realist evaluation of this theoretical

perspective in this context might include: 'The proposition that collaborative learning will encourage team members to work together in practice is the working theory that will be tested'. The mechanism of change is that the team members develop a strategy collaboratively for how they are going to work together. The context is the development of a team care plan. Some intended outcomes resulting from collaborative learning are that team members are able to see the benefit of a team approach to planning care and develop greater respect and valuing of others.

Learning from Evaluation

In order to evaluate the theories identified in relation to the team challenge, mechanisms relating to the teaching structures and processes were identified, along with systematic consideration of the contextual aspects related to the mechanism and possible outcomes (Ogrinc & Batalden, 2009). As part of an educative evaluation of the learning activity, a number of qualitative and quantitative tools were used to gather relevant data related to the context, mechanisms and outcomes. Feedback was gained from all stakeholders including the students, profession advisors, team mentors and audience following completion of each event, by way of focus groups and questionnaires.

This feedback process has contributed to the further development and refinement of the New Zealand-based team challenge. Feedback on the contextual challenges such as physically getting together guided changes, including establishing teams on the basis of their locality within the clinical environment. The outcome of this is that it has increased the number of teams able to participate. Similarly, feedback on unclear expectations and time commitments generated the development of an information pack which clearly documented these problems and resulted in reduced feedback on them. The possible mechanism in play with these examples is the removal of barriers to engagement.

There is a need to look longitudinally at the team challenge's impact on those who participated. Has the experience informed later clinical practice, has this led to better health outcomes and experiences for patients? While it can be argued that experiences such as the team challenge are essential for

shaping the health professionals of the future, these claims remain largely unsubstantiated. There is a need to generate further evidence which demonstrates the impact IPE has both on working interprofessionally and on its impact on the outcomes for clients. This is critical to ensuring the long-term sustainability of the New Zealand-based team challenge and IPE in general.

Conclusion

The team challenge provides a real-life interprofessional experience in a simulated context. It promotes teamwork and a more informed understanding of collaboration in preparation for practice. However IPE by its very nature is complex and because of this, it is challenging to evaluate. A realist approach to evaluation recognises and operates in complex social situations. It provides an explanatory framework for identifying why the IPL activity was successful or not for the purpose of refining, developing and sustaining it. It provides the direction of change for the IPL activity. Gathering further evidence of the impact of IPL and specifically the team challenge on interprofessional practice, and how it results in benefits for clients is required. Realist evaluation can provide a framework which will contribute to this evidence base and increase understandings of how, for whom and in what circumstances IPL brings about the desired outcomes. This framework will facilitate the ongoing refinement and development of the team challenge, and indeed IPL in general, into the future.

References

Anderson, E. S., Thorpe, L. N., & Hammick, M. (2011). Interprofessional staff development: Changing attitudes and winning hearts and minds. *Journal of Interprofessional Care*, *25*(1), 11–17. http://doi.org/10.3109/13561821003721311.

Attree, M. (2006). Evaluating healthcare education: Issues and methods. *Nurse Education Today*, *26*(8), 640–646. http://doi.org/10.1016/j.nedt.2006.07.014.

Barr, H. (2009). An anatomy of continuing interprofessional education. *Journal of Continuing Education in the Health Professions, 29*(3), 147–150. http://doi.org/10.1002/chp.20027.

Bass, B. M. (1985). *Leadership and performance*. New York: Free Press.

Boyce, R. A., Moran, M. C., Nissen, L. M., Chenery, H. J., & Brooks, P. M. (2009). Interprofessional education in health sciences: The University of Queensland Health Care Team Challenge. *The Medical Journal of Australia, 190*(8), 433–436.

Charles, G., Bainbridge, L., & Gilbert, J. (2010). The University of British Columbia model of interprofessional education. *Journal of Interprofessional Care, 24*(1):9–18. http://doi.org/10.3109/13561820903294549.

CIHC (Canadian Interprofessional Health Collaborative). (2010). *A national interprofessional competency framework.* Vancouver.

Cook, D. A. (2005). Models of interprofessional learning in Canada. *Journal of Interprofessional Care, 19*(1), 107–115. doi:10.1080/13561820500082354.

Cooper, H., Spencer-Dawe, E., & McLean, E. (2005). Beginning the process of teamwork: Design, implementation and evaluation of an inter-professional education intervention for first year undergraduate students. *Journal of Interprofessional Care, 19*(5), 492–508. http://doi.org/10.1080/13561820500215160.

D'Avray, L., & McCrorie, P. (2011). Interprofessional education—What works, what doesn't work and what might work? In S. Kitto, J. Chesters, J. Thistlethwaite, & S. Reeves (Eds.), *Sociology of interprofessional health care practice: Critical reflections and concrete solutions* (pp. 119–138). Hauppauge, NY: Nova.

D'Amour, D., Ferrada-Videla, M., Rodriguez, L. S. M., & Beaulieu, M. (2005). The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. *Journal of Interprofessional Care, 19*, 116–131. doi:10.1080/13561820500082529.

Freeth, D., Hammick, M., Reeves, S., Koppel, I., & Barr, H. (2005). *Effective interprofessional education: Development, delivery, and evaluation*. Chichester, UK: Wiley-Blackwell.

Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systematic review of interprofessional education: BEME Guide no. 9. *Medical Teacher, 29*(8),735–751. http://doi.org/10.1080/01421590701682576.

Hean, S., Craddock, D., Hammick, M., & Hammick, M. (2012). Theoretical insights into interprofessional education: AMEE Guide No. 62. *Medical Teacher, 34*(2), e78–e101. http://doi.org/10.3109/0142159X.2012.650740.

Howkins, E., & Bray, J. (2008). *Preparing for interprofessional teaching. Theory and practice*. Oxon, UK: Radcliffe Publishing.

Kemmis, S., & Smith, T. (Eds.). (2008). *Enabling praxis: Challenges for education*. Rotterdam, The Netherlands: Sense Publications.

Moore, S. M. (2009). Commentary on 'realist evaluations a framework for the assessment of teaching about the improvement of care'. *Journal of Nursing Education, 48*(12), 667–668. doi:10.3928/01484834-20091113-08.

Newton, C., Bainbridge, L., Ball, V., Baum, K. D., Bontje, P., Boyce, R. A. et al. (2015). The health care team challenge™: Developing an international interprofessional education research collaboration. *Nurse Education Today*, 35(1): 4–8. 5p. doi:10.1016/j.nedt.2014.07.010

O'Brien, D., Swann, J., & Heap, N. (2015). Can the communities of practice model explain the complex organization of an interprofessional student-led health clinic? *Journal of Allied Health, 44*(1), e11–e16.

Ogrinc, G., & Batalden, P. (2009). Realist evaluation as a framework for the assessment of teaching about the improvement of care. *Journal of Nursing Education, 48*(12), 661–667. doi:10.3928/01484834-20091113-08.

Paradis, E., & Reeves, S. (2013). Key trends in interprofessional research: A macrosociological analysis from 1970 to 2010. *Journal of Interprofessional Care, 27*(2), 113–122. http://doi.org/10.3109/13561820.2012.719943.

Pawson, R., & Tilley, N. (1997). *Realistic evaluation*. London: Sage.

Pawson, R., & Tilley, N. (2004). *Realist evaluation*. London: British Cabinet Office.

Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: Effects on professional practice and healthcare outcomes. *The Cochrane Collaboration* (3). doi:10.1002/14651858.CD002213.pub3.

Reeves, S., Tassone, M., Parker, K., Wagner, S., & Simmons, B. (2012). Interprofessional education: An overview of key developments in the past three decades. *Work, 41*(3), 233–245. http://doi.org/10.3233/WOR-2012-1298.

Reid, D., Jones, M., & O'Brien, D. (2015). Building interprofessional leadership in a clinical setting. In D. Forman, M. Jones, & J. Thistlethwaite (Eds.), *Leadership and collaboration: Further developments for interprofessional education*. Hampshire, England: Palgrave Macmillan.

Salvatori, P. S., Berry, S. C., & Eva, K. W. (2007). Implementation and evaluation of an interprofessional education initiative for students in the health professions. *Learning in Health and Social Care, 6*(2), 72–82. http://doi.org/10.1111/j.1473-6861.2007.00152.x.

Suter, E., Goldman, J., Martimianakis, T., Chatalalsingh, C., DeMatteo, D. J., & Reeves, S. (2013). The use of systems and organizational theories in the interprofessional field: Findings from a scoping review. *Journal of Interprofessional Care, 27*(1), 57–64. doi:10.3109/13561820.2012.739670.

Thistlethwaite, J., Kumar, K., Moran, M., Saunders, R., & Carr, S. (2015). An exploratory review of pre-qualification interprofessional education evaluations. *Journal of Interprofessional Care, 29*(4), 292–297. doi:10.3109/13561820.2014.985292.

World Health Organization. (2010). *Framework for action on interprofessional education and collaborative practice*. Geneva: WHO. Available from: http://www.who.int/hrh/resources/framework_action/en/.

WHO (World Health Organization). (2013). *Transforming and scaling up health professionals' education and training: [Internet]*. Geneva: WHO. Available from: http://www.who.int/hrh/resources/transf_scaling_hpet/en/.

Zwarenstein, M., Goldman, J., & Reeves, S. (2009). Interprofessional collaboration: Effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews* (3). doi:10.1002/14651858.CD000072.