Amsterdam Health Education and Discovery

AHEAD

White paper

# How to integrate interprofessional education in your health curricula?

***The following case is fictitious and serves the purpose of illustration***

*A glimmer of light peaks through the curtains of a small flat in a local village. It is 10:30 on a Monday morning. Mr Berksen sighs when the beam of sunlight reaches his eyes. "I am already running late for my appointment with the rehabilitation specialist today. I wonder whether he will be able to get my prosthesis right. So much hassle and I still feel horrible."*

*A lot has changed in the life of Mr Berksen in the last couple of years, all connected with his health and well-being. He used to work as a foreman at a drilling platform in the North Sea, living together with his wife and daughter. He was also an enthusiastic member of his local football team.*

*He has just returned home from a rehabilitation centre where he recovered from the amputation of his lower leg. This was a complication from his type 2 diabetes, which he was diagnosed with three years ago. A year before the operation, he got divorced and needed to find a new home. The divorce had an adverse impact on his job. He was no longer capable of dealing with the stress and has been on sick leave ever since. As a result of this, he has run into financial difficulties and constantly feels tense.*

*Since the operation, Mr Berksen has been supported by a range of professionals: his GP, a district nurse, a physiotherapist, a social worker, an occupational therapist and a rehabilitation specialist. He feels overwhelmed by the sheer number of appointments, all the questions asked and the amount of support that is offered. "Why don't these people talk to each other? It seems like I have to repeat my story over and over again!"*

# Problem statement

Safe, sound and affordable healthcare is one of the major advances of the modern era, although the delivery of healthcare has posed various challenges. Nowadays, life expectancy is increasing, resulting in an aging population and more people who require healthcare. Additionally, scientific and technological advancements in medicine and related disciplines continue unabated. Many illnesses are no longer fatal when treated properly and patients may live with multiple chronic illnesses for a long time. The high knowledge innovation rate also requires specialisation in various health professions in order to stay up to date with the latest evidence.

Moreover, the notion of 'health' is changing. Whereas 'health' used to be mainly interpreted as the absence of illnesses, a new opinion is currently being voiced. Huber and colleagues view 'health' as 'the ability to adapt and to self-manage in the face of social, physical and emotional challenges.' (p. 343, 2011). This perspective implies patient/client empowerment and mastery of coping strategies. This broader perspective of 'health' also touches upon the need to rethink the role and position of social work professionals in relation to the health sector. Although these perspectives on health may easily lead to debate, the ultimate viewpoint is that both are applicable depending on the vulnerability of individuals and their wish to be in control.
Whichever perspective one adopts, it is clear that given the developments, patient and/or client needs exceed the boundaries of individual professions and modernisation is required (Plochg, Klazinga & Starfield, 2009; Kaljouw & van Vliet, 2015; van Vliet, Grotendorst & Roodbol, 2016).

Today's healthcare students are tomorrow's healthcare professionals. Change in the everyday vocational practice of healthcare professionals may start with change in health education. This paper addresses deans, directors, programme managers, team coordinators, teachers and other stakeholders of educational institutions as change agents who can lead the transformation. The main message of this white paper is that catalysts are needed that initiate and speed up the integration of interprofessional education in health curricula within and across health education institutions. Ten catalysts are described that are drawn from the experience of all partners involved in the Amsterdam Health and Discovery (AHEAD) platform.

The AHEAD platform consists of members representing the major healthcare organisations and higher education institutions in the greater Amsterdam area of the Netherlands. The platform is set up to encourage interaction between the professional practice, education and research in the field of health and well-being in order to encourage knowledge sharing and development.

For the purpose of clarity, this first position paper of the AHEAD platform chooses the perspective of the healthcare field and the patient as focal point. The domain of well-being is, however, strongly related to healthcare. We anticipate that this relationship will need to be further strengthened in order to improve individual and population health.

## What is interprofessional practice?

Today's patients often have complex health needs that are no longer adequately met by a multidisciplinary approach, which is still common practice in healthcare. Multidisciplinary collaboration entails multiple health professionals from various disciplines working in tandem from a mostly *independent or parallel perspective.* Each health professional predominantly relies on his or her own (para)medical or nursing background, protocols and procedures in order to deliver healthcare services.

In contrast, interprofessional collaboration requires a number of health professionals who *work together synergistically as one team*. Interprofessional team-based communication and decision-making processes lead to interprofessional practice (IPP) in which team members have a shared responsibility and integrate their vocational expertise in order to deliver the best healthcare services. Depending on the patient request and healthcare setting (intramural, transmural or extramural), integrated care involves the rearrangement of relationships and roles between health professionals in order to increase coordination and continuity of care across and within different institutions (Plochg & Klazinga, 2002).

## What does interprofessional education entail?

Interprofessional practice (IPP) is connected with interprofessional education (IPE). IPE entails students from two or more health curricula learning about, from and with each other during vocational training in order to improve collaborative practice and delivery of healthcare (WHO, 2010). IPE must be regarded in the context of vocational expertise and IPP. Figure 1 illustrates how vocational expertise, unique and shared amongst health professionals, relates to interprofessional competencies (Barr, 1998; Flin, O'Connor & Crichton, 2008).

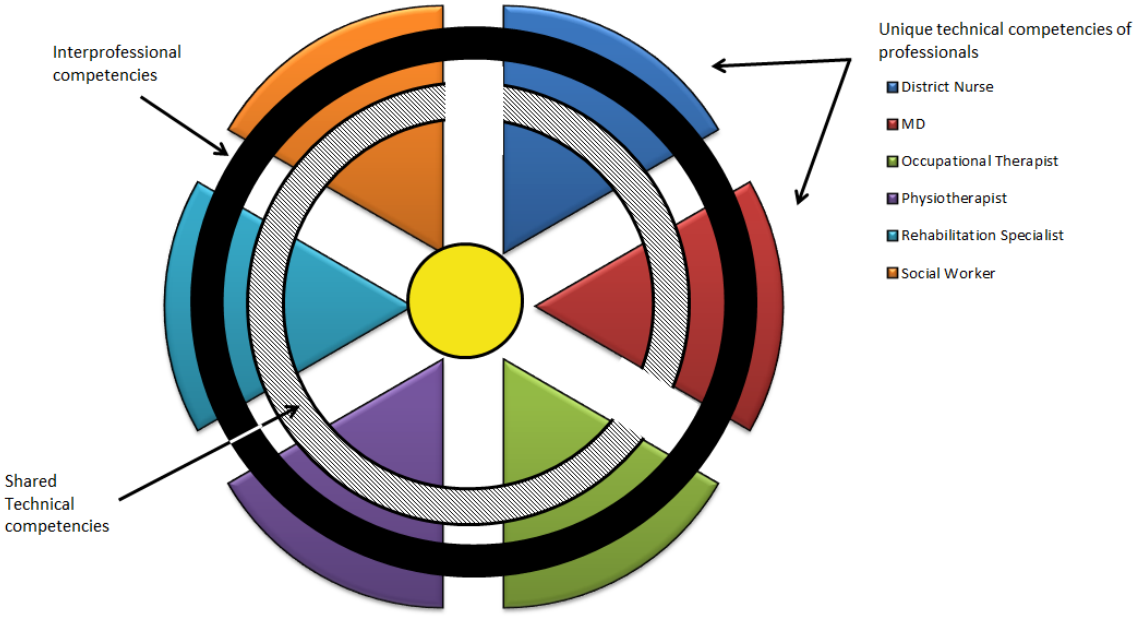


**Figure 1**: Interprofessional competencies embedded in vocational expertise.

The fictitious case of Mr Berksen is used to illustrate figure 1 and explains how an interprofessional team approach may work. On returning home from the rehabilitation centre, Mr Berksen (represented by the central yellow circle) is supported by a team of healthcare

professionals. The wedges reflect different professions that belong to different (health) fields, such as medical, paramedical, nursing, mental health, psychosocial and social work. In the case of Mr Berksen, these are his GP, a district nurse, a physiotherapist, a social worker, the rehabilitation specialist and an occupational therapist. Each of these professionals has his or her own unique expertise as represented by the different wedges. That expertise entails the 'tools of the trade'. Some professionals may share part of their expertise to some extent (represented by the grey band). For example, the physiotherapist and the rehabilitation specialist both rely on extensive expertise of the musculoskeletal system.

All professionals master interprofessional competencies (represented by the black band). Interprofessional competencies are denominated differently in various frameworks (Thistlethwaite, et. al., 2014). For example, the Canadian Interprofessional Health Collaborative (CIHC) distinguishes interprofessional communication, role clarification, team functioning, participative leadership, conflict resolution and patient/client/family/community-centred care. The interprofessional team approach builds on the capacity of individual professionals to use their interprofessional competencies to act as an integrated care team in the interest of the patient.

# Catalysts for integrating IPE in your health curricula

Although the World Health Organization (WHO) had already emphasised the importance of IPE in 1988 and reinforced its necessity again in 2010, it is still not common practice at educational institutions. Efforts should be geared towards integrating IPE within existing health curricula. Conceptual grounding is often lacking (Freeth, et al., 2005), evidence on the effectiveness of IPE is scarce (Reeves, et al., 2008; Reeves, et al., 2010) and many barriers exist (Lawlis, Anson & Greenfield, et. al., 2014). In the following section, ten catalysts are described that initiate and speed up the development of interprofessional education and its implementation in health curricula. The catalysts are based on our experiences and the literature in this field. The first four catalysts are geared towards organisational change. The next five are pointers for effective interprofessional education. The tenth overarches all catalysts and reflects our main conclusion.

## 1. Setting the institutional agenda

Healthcare reform may only be set in motion when a real sense of urgency is felt. The WHO has initiated and reconfirmed the need to reform the current healthcare system internationally. On a national level, the urgency needs to be felt too. In 2015, the Dutch Minister of Health, Welfare and Sports Edith Schippers adopted the advice of the Committee for Innovation in Healthcare Professions and Education (Kaljouw & van Vliet, 2015). The committee presented a new concept of healthcare for The Netherlands. The concept is geared towards attaining a sustainable healthcare system by 2030. A key element of such system is the notion of 'care packages' delivered by interprofessional teams as essential for the delivery of safe, sound and affordable care. It distinguishes a range of interprofessional and more general competencies that are deemed essential. Although not beyond debate, the report has many implications for healthcare education. It creates the required urgency on a central governmental level to position IPE on the strategic agenda of educational institutions. Without such firm strategic ambition, the desire to integrate interprofessional

education in curricula may easily evaporate. The second report gives further direction to designing boundary crossing education and training for health and well-being (van Vliet, Grotendorst & Roodbol, 2016).

## 2. Employ the power of educational institutions

Educational institutions have the capacity to catalyse pedagogical change within *and* between institutions. These institutions are capable of transforming high-level IPE ambitions into hands-on innovative IPE training concepts and paving the road for implementation. A committed management team is conditional for this, as the complex arena of stakeholders may easily cloud the ambitions on a more operational level, especially when bridging institutions and curricula.

Management teams are facilitated by a programme management approach (see also Molen, 2013). A programme is a temporary organisational structure aimed at realising complex organisational goals while facilitating collaboration. Installing a clear organisational structure, such as an inter-institutional working group on IPE, helps set priorities, focuses energy and resources, links the new developments to existing infrastructure and disseminates the importance of the ambition as felt by the management. This is important because change never comes easily. Being able to fall back on clear and well-agreed roles, responsibilities and mandates of new organisational bodies and individuals therein is essential when balancing interests across curricula and stimulating decision-making.

## 3. Mix and mingle

Educational reform is a gradual process with potential hiccups and pitfalls. Integrating IPE in health curricula across educational institutions is no different and requires a well-thought-out change process. Although initial change initiatives may focus on framing the shared value of IPE ambitions and developing new training concepts, later on it needs to be implemented within the existing educational infrastructure of multiple curricula.

In order to become acquainted with each other's organisational infrastructure and curricular idiosyncrasies early on, concept development and implementation activities should ideally be mixed so implementation experiences can be used as feedback for the development of subsequent interprofessional training programmes. That can be done through a piloting approach. Piloting is a testing approach during which a new interprofessional training concept is tested on a limited scale for a limited time period. The aim is to experience and document training effectiveness, as well as to expose operational issues that challenge future full-scale implementation. A prerequisite for this approach is that any development and/or implementation team consists of members from all curricula and institutions involved, possibly led by co-project leaders representing the major institutions. This ensures a good connection to the operational practice of any curriculum.

## 4. Spread the news

Communication about the IPE programme-in-the-making is of strategic importance to its success. Strong leaders make IPE ambitions tangible, but that does not guarantee it will become operational practice. Reality may be more or less obstinate. Schedules need to be aligned across curricula to embed shared courses, examination and assessment bodies

need to come to agreements to enable uniform assessment for all students, IPE developments need to match with ongoing curricular innovations, and so forth.

A communication strategy is vital not only to spark the intrinsic motivation of teachers and staff and have them on board, but also to regularly inform development teams that need to know how the new shared courses fit within their curriculum. Face-to-face communication still has the most impact. As in our view IPE development / implementation teams consist of representatives from all curricula involved, its members can function as a forward operating base regularly reporting back to home base and informing line authority, curriculum teams and teachers of their own curriculum. There is much more to say about proper communication strategies, but we perceived this to be one of the best ways to foster acceptance of IPE.

## 5. Understand IPP so you can teach it

Although there is no single accepted definition of interprofessional practice, and terms and concepts are often used interchangeably, the very nature of interprofessional practice requires looking beyond one's profession while striving for synergy and integration. More clarity is needed about what mechanisms drive these processes and which theoretical lenses are beneficial for increasing our understanding of it. A clear understanding of the drivers of IPP and a deliberate choice for underlying theories unfolds guidelines for developing effective IPE programmes. One can think of theories such as boundary crossing (Akerman & Bakker, 2011), changing perspectives (Ivanitskaya, Clark, Montgomery, & Primeau, 2002), team effectiveness (Salas, Cooke & Rosen, 2008; Kraiger & Wenzel, 1997), naturalistic decision-making (Klein, 2008) and communities of practice (Wenger, 1998) to name but a few. D'Armour, Ferrqada-Videla, San Martin Rodrigbuez & Beaulieu (2005) give an overview of theories mentioned in relation to IPE.

## 6. The natural bond between IPE and simulation

Interprofessional competencies are embedded within vocational expertise. One cannot learn these competencies in isolation, apart from technical expertise or professional setting (see also figure 1). The authenticity aspect is essential to any interprofessional training approach. In addition, skills are a major component in interprofessional competencies.
Simulation is an effective approach for training interprofessional skills, especially for team training (Salas & Cannon-Bowers, 2001). Simulation involves any initiative to mimic professional practice by simplifying reality to some extent, while allowing for experiential learning. Simulation formats may range from role playing without any technical support to fully-fledged simulation games, or from virtual reality applications to interprofessional training wards in operational care settings, and anything in between.

The required level of realism (and related budget for constructing it!) necessitates a careful consideration of the actual training task and desired proficiency level. Simulation fidelity is a multi-faceted concept (Visschedijk & Van der Hulst, 2012). The relationship between level of fidelity and training effectiveness is not straightforward (Norman et.al., 2012). A properly executed training needs analysis is required in order to decide upon the actual learning tasks, proficiency levels, training gap, training setting, scenario parameters and so forth. This information provides a rational for choosing an effective simulation approach.

## 7. Start with IPE (don't finish with it)

Traditionally, at the start of any health curriculum students enter the funnel of their professional branch. Within the formal curriculum there is hardly any exposure to students of other health curricula. The funnel force is even stronger after graduation, as each branch has its own institutionalised scope. This inclination to professionalise within the boundaries of separate systems encourages different health professional groups to cling to their independence and autonomy impeding any natural interaction with health professions of different origins (Cooper, Carlisle, Gibbs & Watkins, 2001).

Implementing IPE at the start of any health curriculum overcomes compartmentalisation and incorporates interprofessional collaboration as a natural ingredient of anyone's professional repertoire. In order to achieve that, IPE needs to be a recognisable element of a curriculum with sufficient practice time. Learning does not occur immediately. It requires prolonged practice opportunities of sufficient impact throughout all years of a curriculum.

## 8. Learn a new language

Team members must be able to understand each other, across the apparent boundaries of their profession. A vehicle for creating a shared language within an interprofessional team is the International Classification of Functioning (ICF) model. This model allows for discussions about complex care requests of the required depth and breadth without the confusion that would be present in the absence of a shared language (see figure 2). It enables communication about a patient's functioning and disability within the context of a patient's activities and participation in everyday life. The model is useful to interpret patient needs in relation to health professions involved, including the field of well-being. The classification facilitates interprofessional discussions and interprofessional care. The ICF model as such is useful for professional practice, but also for the transformation of education, when adopted as the standard language for interprofessional communication in any training context for health and well-being curricula.

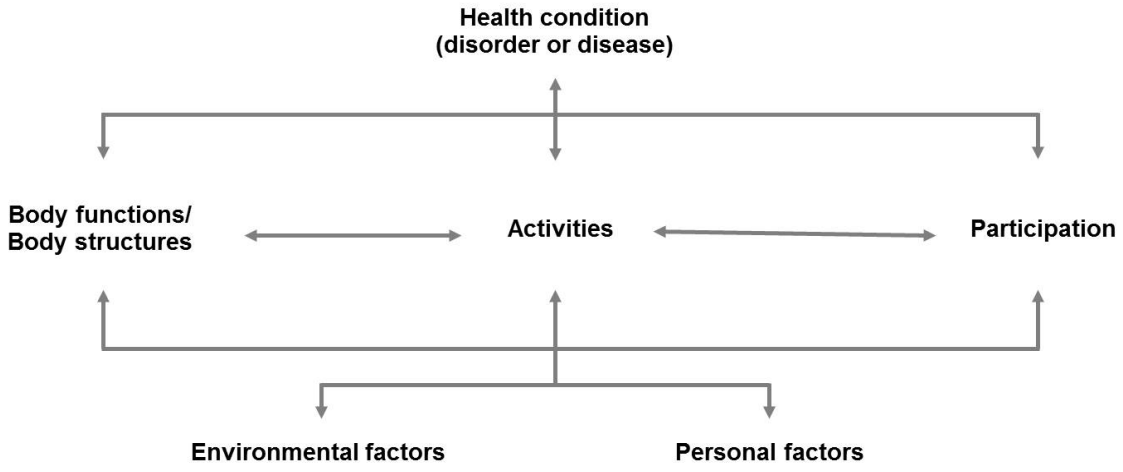


**Figure 2**: ICF model (adapted from https://www.icf-casestudies.org/index.php?lang=eng)

## 9. Seeing is believing

Interprofessional competencies involve communication and teamwork skills in relation to the patient. But there is more to it than that. Interprofessional competencies also include attitudinal aspects of collaborative practice that are sometimes less overtly observable. Such attitudinal aspects include professional values such as respect and open-mindedness and ethical codes that are part of any professional identity (cf. IECEP, 2011).

Role modelling is frequently used for teaching the more intangible professional identity aspects of IPP and making the implicit explicit. Role modelling can be employed by having two teachers from different professions form a partnership. Working with a partnership in teaching may help to uncover multiple perspectives on patient needs, gives the opportunity to share and contrast real-life examples and anecdotes from the workplace, and reveals the intricacies of how professionals from different origins relate to each other. It serves as a real-life example of how interprofessional collaboration may materialise. Role modelling makes interprofessional collaboration tacit and tangible for students (Steinert, 2009).

## 10. Practice what you preach

This paper aims to identify catalysts for crossing boundaries when integrating IPE across health curricula and education institutions. That ambition requires change at all levels, with all people involved. Whether that be mixed student teams from different health curricula, teacher teams with different backgrounds, curriculum teams in different educational institutions and/or a steering committee populated with stakeholders from different institutions. Developing and implementing an IPE programme supposes mastery of interprofessional competencies of any stakeholder involved, not only at student level. That is the 'Droste-effect'. In order to bring about change, one needs to master change oneself.

Ultimately, safe, sound and affordable health care including a satisfied patient is the primary focus of our attention. Interprofessional practice is one means to achieve that. When a patient voices a complex health need, from the outset such a request goes beyond the agenda of any individual caregiver. Having an interprofessional team that knows its strengths, is aware of its weaknesses, and that functions on the basis of mutual trust, respect, and interdependent professionalism, is the best any patient can get. IPE has the potential to contribute to that in many ways. We want to contribute to that endeavour and go AHEAD!

*Six months after the amputation Mr Berksen is working hard to feel well again. Although he was initially overwhelmed by the amount of support and attention from all the different healthcare providers, he now realises that it is up to him. He is responsible for his recovery and, above all, the way he wants to live his life given all the changes that have occurred. The professionals have helped him with expressing his needs, which was just as beneficial for the professionals involved. They coordinate their efforts with regard to the treatment plan and execute that in tandem. Although the recent past was turbulent for Mr Berksen, he feels confident he can resume his life again and live it as he sees fit.*

# References

- Akkerman, S.F. & Bakker, A. (2011). Boundary crossing and boundary objects. *Review of educational research* 81(132), 132- 169.

- Barr, H. (1998). Competent to collaborate: Towards a competency-based model for interprofessional education. *Journal of Interprofessional Care*, 12(2), 181-187.
- De Best, J. & Christoph, N. et. al. (2015). *Stepping stones in IPE. A first inter institutional pilot on IPE for health curricula*. Proceedings of NIPNET, Kölding, Denmark. Retrieved from: http://nipnet15.com/wp-content/uploads/2016/02/26-November-Presentation-NIPNET-final-1.pdf
- Christoph, N. & de Best, J. (2015). *Theoretical underpinnings for IPE curriculum design.* Proceedings of NIPNET, Kölding, Denmark. Retrieved from: http://nipnet15.com/wp-content/uploads/2015/12/Theoretical-underpinnings-for-IPE-curriculum-design-FINAL-Noor-Christoph-AMC.pdf
- Norman, G., Dore, K., & Grierson, L. (2012). The minimal relationship between simulation fidelity and transfer of learning. *Medical education*, 46(7), 636-647.
- Cooper, H., Carlisle, C., Gibbs, T. & Watkins, C. (2001). Developing an evidence base for interdisciplinary learning: a systematic review. *Journal of Advanced Nursing*, 35, 228–237.
- D'Armour, D., Ferrada-Videla, M., San Martin Rodriguez, L. & Beaulieu, M. D. (2005). The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. *Journal of interprofessional care*, 19(1), 116 – 131.
- Flin, R. H., O'Connor, P., & Crichton, M. (2008). *Safety at the sharp end: a guide to non-technical skills.* Ashgate Publishing, Ltd.
- Freeth, D. S., Hammick, M., Reeves, S., Koppel, I., & Barr, H. (2008). *Effective interprofessional education: development, delivery, and evaluation*. John Wiley & Sons.
- Huber, M., Knottnerus, J. A., Green, L., van der Horst, H., Jadad, A. R., Kromhout, D., ... & Schnabel, P. (2011). How should we define health? *BMJ: British Medical Journal*, 343.
- Interprofessional Education Collaborative Expert Panel. (2011) *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, D.C.: Interprofessional Education Collaborative.
- Ivanitskaya, L., Clark, D., Montgomery, G & Primeau, G. (2002). Interdisciplinary Learning: Process and Outcomes. *Innovative Higher Education*, 27(2), 95-111.
- Kaljouw, M. & van Vliet, K.(2015). *Naar nieuwe zorg en zorgberoepen, de contouren. [Towards new health and health professions, the outlines].* Amsterdam, The Netherlands. National Health Care Institute. Retrieved from: https://www.rijksoverheid.nl/documenten/rapporten/2015/04/10/naar-nieuwe-zorg-en-zorgberoepen-de-contouren
- Klein, G. (2008). Naturalistic Decision making. *Human Factors*, 50 (3), 456–460.
- Kraiger, K., Wenzel, L.H. (1997) Conceptual development and empirical evaluation of measures of shared mental models as indicators of team effectiveness. In (Eds.), Brannick, M.T., Salas, E. *Team performance and assessment measurement*: 57 theory, methods, and applications. Lawrence Erlbaum Associates, Mahwah, NJ, 63–84.
- Molen, M. van der. (2013). *Projectmanagement voor opdrachtgevers*. [Project management for commissioning partners]. The Netherlands: van Haren publishing.
- Lawlis, T.R., Anson, J. & Greenfield, D. (2014). Barriers and enablers that influence sustainable interprofessional education: a literature review. *Journal of interprofessional care 28*(4), 305 – 310.
- Plochg, T. & Klazinga, N.S. (2002). Community-based integrated care: myth or must?. *International journal for quality in health care*, 14(2), 91 – 101.

- Plochg, T., Klazinga, N.S. & Starfield, B. (2009). Transforming medical professionalism to fit changing health needs. *BMC Medicine* 7(64).
- Reeves, S., Zwarenstein, M., Goldman, J., Barr, H., Freeth, D., Hammick, M., & Koppel, I. (2008). *Interprofessional education: effects on professional practice and health care outcomes*. Cochrane Database Syst Rev, 1(1).
- Reeves, S., Goldman, J., Burton, A., & Sawatzky-Girling, B. (2010). *Synthesis of systematic review evidence of interprofessional education.* Journal of Allied Health, 39(3), 198-203.
- Salas, E., Cooke, N.J. & Rosen, M.A. (2008). On teams, teamwork, and team performance: discoveries and developments. *Human Factors*, 50(3), 540-7.
- Salas, E. & Cannon-Bowers, J.A. (2001). The science of training: a decade of progress. *Psychology*, 52, 471 – 499.
- Thistlethwaite, J.E., Forman, D., Matthews, L.R., Rogers, G.D., Steketee, C. & Yassine, T. (2014). Competencies and frameworks in interprofessional education: a comparative analysis. *Acad Med, 89*(6), 869-75.
- Visschedijk, G.C & van der Hulst, A. (2012). *Hoe realistisch moet een serious game zijn*? (How realistic should a serious game be?) Homo Ludens magazine.
- Van Vliet, K., Grotendorst, A. & Roodbol, P. (2016). *Anders kijken, anders leren, anders doen. Grensoverstijgend leren en opleiden in zorg en welzijn in het digitale tijdperk. [Boundary crossing education and training in health and wellbeing in the digital age.].* Amsterdam, The Netherlands. National Health Care Institute. Retrieved from: http://www.opleidenvoor2030.nl/
- Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. UK: Cambridge University Press.
- WHO (1988). *Learning together to work together for health*. WHO technical report series 769. Retrieved from: http://apps.who.int/iris/bitstream/10665/37411/1/WHO_TRS_769.pdf
- WHO (2010). *Framework for Action on Interprofessional Education and Collaborative Practice.* Retrieved from: http://www.who.int/hrh/resources/framework_action/en/.

# About the Authors

**Dr Noor Christoph** [n.christoph@amc.nl] is senior researcher at the Center for Evidence Based Education of the Academic Medical Center (AMC) and project manager for the UAS-AMC steering committee IPE. She obtained a PhD in instructional design, simulation games and reflection from the University of Amsterdam (UvA). Her work revolves around the development and implementation of innovative training approaches across institutions. She is member of the AHEAD platform.

**John de Best** [j.b.n.de.best@hva.nl] is PhD candidate and lecturer at the Amsterdam University of Applied Sciences' School of Health Professionals (ASHP). As a registered nurse and educational scientist he is interested in how interprofessional education can be integrated in health curricula. He is member of the UAS-AMC steering committee IPE

and the AHEAD platform.