

Interprofessional learning through simulation

Impact of health care teams on patient outcomes: a *case study*



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Foreword

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Australia's health workforce is facing unprecedented challenges. Supply won't meet demand, and the safety and quality of care remain key issues. The national health workforce agency, Health Workforce Australia (HWA), an initiative of the Council of Australian Governments (COAG), has been established to address the challenges of providing a workforce that meets the needs of our community – now and in the future.

Accordingly, ECU has set a priority on meeting these challenges, with a focus on the national health workforce reform agenda set out in the 2008 National Partnership Agreement (NPA) on Hospital and Health Workforce Reform.

In June 2010, ECU was awarded \$4.6M from the Australian Government through a nationally competitive process under the ICTC Program, an initiative which aims to develop interprofessional learning and practice capabilities in the Australian health workforce.

The IpAC Program aims to complement traditional clinical placement activities with high quality interprofessional learning competency development and assessment, so that at the earliest point students gain exposure to best work practices within multidisciplinary teams that have the patient's individual needs as the focus.

Additionally, the IpAC Program has developed interprofessional learning resources and interprofessional health simulation challenges in collaboration with the ECU Health Simulation Centre. The ECU Health Simulation Centre is recognised internationally as a

specialist centre in providing human factors based sequential simulation programs using professional actors. Most simulated learning interactions revolve around a single moment, such as a patient's admission to the emergency department. What we provide at the ECU Health Simulation Centre is a sequential simulated learning event that follows the patient and carer's journey through the healthcare system, for example, from the accident site following a motor vehicle accident, to the emergency department, to a hospital ward, to their home and into the community for GP and allied health follow-up.

Human factors in health care are the non-technical factors that impact on patient care, including communication, teamwork and leadership. Awareness of and attention to the negative aspects of clinical human factors improves patient care.

ECU's involvement in national health workforce reform is all about playing a role that enables the health workforce to better respond to the evolving care needs of the Australian community in accordance with the NPA's agenda. The IpAC Program is an example of how we can work across sectors, nationally and internationally, to determine better ways of addressing the pressing issue of how best to prepare students for the workplace and thus assuring that health systems have safe, high quality health services.

Interprofessional Ambulatory Care Program

ECU's IpAC Program was established with support from the Australian Federal Government through funding from the ICTC Program. The IpAC Program aims to deliver a world-class interprofessional learning environment and community clinic that develops collaborative practice among health professionals and optimises chronic disease self-management for clients.

This is achieved through the provision of clinical placements within the multidisciplinary team at the IpAC Unit, a community clinic that develops communication and collaboration among health professionals and optimises chronic disease self-management for clients.

Additionally, a range of clinical placements are offered at existing health facilities, where trained IpAC Program clinical supervisors provide clinical support and ensure the integration of interprofessional learning into each clinical placement.

The IpAC Unit, in collaboration with the ECU Health Simulation Centre, has developed a range of interprofessional learning through simulation resources. These learning resources are packages consisting of an audiovisual resource and a facilitator's manual, and aim to facilitate interprofessional learning and to support the participants in the development of interprofessional skills.

The interprofessional learning through simulation resources developed by the IpAC Program aim to provide health students and health professionals with the opportunity to learn with, from and about one another by engaging them in interactive live simulation events. These simulations encourage students and professionals to challenge themselves and each other in a safe learning environment.

ECU Health Simulation Centre

ECU houses the only fully functioning Health Simulation Centre of its kind in Western Australia, specifically designed and equipped to address the interprofessional learning needs of the health workforce and implementation of both state and national safety and quality frameworks.

The ECU Health Simulation Centre offers health workforce training and development specialising in clinical skills, human factors, and patient safety training for multidisciplinary health teams. Using a variety of educational techniques, including a broad range of simulation mannequins, professional actors and task trainers, ECU specialises in immersive simulation and observational learning. Supporting the ECU Health Simulation Centre are nursing, medical, paramedic and psychology academic and technical staff whose aim is to cultivate the development of competent and confident health professionals centred on enhancing patient safety.

Interprofessional learning

Interprofessional education occurs when two or more professions learn with, from and about each other in order to improve collaboration and quality of care (Centre for the Advancement of Interprofessional Education, 2002).

Interprofessional learning is the learning arising from interaction between students or members of two or more professions. This may be a product of interprofessional education or happen spontaneously in the workplace or in education settings (Freeth, Hammick, Reeves, Barr, & Koppel, 2005). It has been found that interprofessional education can improve collaborative practice, enhance delivery of services and have a positive impact on patient care (Canadian Interprofessional Health Collaborative, 2008).

The World Health Organization (WHO) has recognised the importance of interprofessional education and collaborative practice in developing a health workforce that is able to meet the complex health challenges facing the world and assist in the achievement of the health-related Millennium Development Goals (World Health Organization, 2010). In developing its framework for action, the WHO have recognised that models of interprofessional collaboration are most effective when they consider the regional issues and priority areas (including areas of unmet need) in the local population (World Health Organization, 2010). In doing so, interprofessional education and collaborative practice can best maximise local health resources, reduce service duplication, advance coordinated and integrated patient care, ensure patient safety and increase health professional's job satisfaction (World Health Organization, 2010).

The end goal of interprofessional education is to create a health workforce with improved levels of teamwork, collaboration, knowledge-sharing and problem-solving, eventually leading to better patient and client outcomes in health settings (Braithwaite et al., 2007).

Interprofessional learning through simulation

Simulation in education refers to the re-creation of an event that is as closely linked to reality as possible. Gaba (2004) defined simulation as a technique, rather than a technology, to replace or amplify real life experiences with guided experiences often immersive in nature to evoke or replicate aspects of the real world, in a fully interactive pattern. Simulation provides a safe learning environment for students to practice, where they are free to make mistakes, correct them and improve the processes of care (Kenaszchuk, MacMillan, van Soeren, & Reeves, 2011). Simulation is the bridge between classroom learning and the real life clinical experience, allowing students to put theory into practice.

Interprofessional learning through simulation combines the principles of interprofessional learning and the use of simulation as an educational methodology. Interprofessional learning through simulation provides students with the opportunity to practice working with other health professionals and allows participants to explore collaborative ways of improving communication aspects of clinical care (Kenaszchuk, et al., 2011).

Many of the interdisciplinary team core competencies, such as problem solving, respect, communication, shared knowledge and skills, patient-centred practice, and the ability to work collaboratively (Canadian Interprofessional Health Collaborative, 2010) can all be developed by interprofessional learning through simulation.

Teamwork and interprofessional practice and learning are being recognised as central to improving client care and outcomes and enhancing client safety (Sargent, 2008). Promoting patient safety through team efforts is one of the five core competencies identified by the Institute of Medicine (2003).

In today's healthcare setting, no one health professional can meet all of the client's needs and therefore a healthcare team approach is required. Interprofessional learning through simulation provides learning opportunities to prepare future healthcare professionals for the collaborative models of healthcare being developed internationally (Baker et al., 2008).

How to use this resource package

This interprofessional learning through simulation resource package has been designed to support the facilitation of interprofessional learning among students and practitioners with an interest in developing their skills and knowledge of interprofessional practice.

The package consists of two components: an audiovisual resource and a supporting manual. In order to optimise the learning opportunities from this package it is recommended that participants are firstly introduced to the concepts of interprofessional learning and human factors in health care.

The audiovisual resource depicts an interprofessional team meeting, highlighting the benefits of intensive collaborative therapy in patient outcome. Additionally, the resource draws attention to the benefits of promoting self management. The package has been created in a

format to enable flexibility in its application depending of the educational setting. We recommend the following format:

1. Facilitator guided discussion around the concepts of interprofessional learning, human factors in health care and chronic disease self management.
2. The scenario can be paused at the moment each discipline starts their summary of assessment. At this moment the facilitated discussion will focus on the scenario specific learning competencies (samples given within manual), followed by a discussion of what the participants expect the discipline representative will do for this client.
3. When the scenario is be paused after each summary, the discussion can include whether the assessment and activities cover what the participants expected and what the consequences of the information obtained are for a range of disciplines.
4. Facilitator guided discussion regarding the barriers to interprofessional practice and chronic disease self management, relating these to personal (future) practice is essential in improving interprofessional practice.

Opportunities for further reading and exploration of the scenario are provided in the *Further Information* and *References* sections of this resource manual.

Scenario brief

Gyuri Csaba is a 54 year old Hungarian gentleman who had a basal ganglia stroke two months ago. He was hospitalised for seven days before being discharged to a Homelink service. The stroke resulted in arm and shoulder weakness on his right side, mild haemianopia affecting his field of vision in his right eye and both receptive and expressive aphasia. He has been prescribed a range of medication following his stroke as a preventative measure and to address his hypertension and cholesterol levels.

Gyuri has recently been referred to the Interprofessional Ambulatory Care Program to assist him with his integration back into the community. The care team, consisting of a speech pathologist, physiotherapist, occupational therapist and dietitian, meet to discuss Gyuri's care needs and the goals for his rehabilitation.

List of characters

- Dietitian
- Occupational Therapist
- Neighbour
- Patient
- Physiotherapist
- Speech Pathologist

Key learning competencies

The key learning competencies for this scenario are based on the IpAC Program learning objectives as well as the Canadian Interprofessional Health Collaborative (CIHC) Competency Framework (Canadian Interprofessional Health Collaborative, 2010). The specific competency areas for this scenario are:

- Leadership characteristics
- Interprofessional communication
- Team functioning
- Role clarification
- Client/family centred care

Leadership characteristics

Leadership is a combination of three dynamic factors: the group, the environment and the task. Effective leadership requires the following attributes:

- Designation of a central person who can guide the group toward its goal.
- The knowledge and skills to achieve the desired outcome.
- The ability to delegate tasks to appropriate team members.
- An appreciation and understanding of both the team and the client's needs.
- Establish communication between the group members.

Interprofessional communication

The interaction between professionals demonstrates:

- Communication that is relevant to the client's medical history.
- Communication that is consistently authentic and demonstrates trust.
- Active listening to team members (including the patient/family).
- Communication that ensures a common understanding of care decisions.
- The development of trusting relationships with clients/families and other team members.
- Cultural empathy for all members of the care team: colleagues, clients and family.

Team functioning

Professionals support a team approach by:

- Establishing and maintaining effective and healthy working relationships and team interactions.
- Respect team ethics and demonstrate trust and mutual respect for members of the team.
- Be an active participant in collaborative decision making.
- Be an effective and engaged participant in discussions and interactions among team members demonstrating open communication and attentive listening.
- Demonstrates respect for the knowledge and skills of the range of disciplines represented in the team.

Role clarification

The interaction between the health care team demonstrates:

- Awareness of knowledge and competencies of own role as well as those of other members of the health care team.
- Clear communication of the health care professional's role, knowledge, skills, and attitudes in an appropriate manner.
- Health professionals are respectful and understand the important role of others in the health care team.
- Questions to clarify roles, responsibilities and skills within the care team are encouraged. This information is appreciated when offered.

Patient/family centred care

The interaction between team members and the client/family demonstrates:

- Sharing of information with patients/family in a respectful manner.
- Communication with patient/family is clear, understandable and free of jargon.
- Communication with patient/family relates to the client's daily life.
- Listening respectfully to the needs of all parties to ensure the most appropriate care.
- Interaction is supportive to the client/family and their needs.
- Facilitation of client decision making.

Key discussion points

The following discussion points are useful to support facilitated discussion at each of the pause points. Specific suggestions for each pause point are also given.

- How would you describe the quality of communication between team members?
Describe examples of the team members demonstrating:
 - mutual respect
 - understanding of the unique contributions of each team member
 - open communication and active listening
- Have the team members been working towards an agreed client centred outcome? How have they achieved this (together and individually)?

Pause point 1: introduction

- Who is the leader of the meeting, how and why is this decided?
- After hearing the synopsis of Mr Csaba's history, what do you think may be some of the issues the care team may need to focus on?

- What will the Speech Pathologist be assessing and how will she treat Mr Csaba?

Pause point 2: Speech Pathologist

- What assessment and treatment did the Speech Pathologist offer? Was this as you expected? What else does a Speech Pathologist do?
- What is your opinion of how she started her summary of her contact with Mr Csaba? Why would she do this?
- How is the Speech Pathologist supporting the patient?
- How is the Speech Pathologist supporting the role of other health professionals in the delivery of care for Mr Csaba?
- What may be some of the issues that need to be considered when working with/treating a client with communication difficulties? How can these be addressed?
- How do you think Mr Csaba's communication difficulties may be impacting on his daily functioning, social participation and mental health?
- How will what the Speech Pathologist does affect what the Occupational Therapist does in this case?
- What will the Occupational Therapist be assessing and how will she treat Mr Csaba?

Pause point 3: Occupational Therapist

- What assessment and treatment did the Occupational Therapist offer? Was this as you expected? What else does an Occupational Therapist do?
- What impact does the work of the Physiotherapist have on that of the Occupational Therapist in this scenario?
- How is the Occupational Therapist supporting the role of other health professionals in the delivery of care for Mr Csaba?
- What do you think of the role of the neighbour, Anne, in this scenario? Do you think she adds value to the meeting? Why? Is she involved in the decision making?
- How important do you think it is to understand the social supports available to a client returning home after a stroke? How can this inform the discharge process and outpatient care?
- What will the Dietitian be assessing and how will she treat Mr Csaba?

Pause point 4: Dietitian

- What assessment and treatment did the Dietitian offer? Was this as you expected? What else does a Dietitian do?
- How can the Speech Pathologist and Dietitian work together for Mr Csaba? What may be an area of overlap in skills and knowledge?
- What strategies has the Dietitian employed to inform Mr Csaba's diet and cooking techniques?
- Is her communication clear and understandable? Is there anything else she could have done to help Mr Csaba with the recommended dietary changes?
- How is the Dietitian supporting the role of other health professionals in the delivery of care for Mr Csaba?

Pause point 5: Physiotherapist and end of scenario

- What assessment and treatment did the Physiotherapist offer? Was this as you expected? What else does a Physiotherapist do?
- How is the Physiotherapist supporting the role of other health professionals in the delivery of care for Mr Csaba?
- Is his communication with the client clear and understandable?
- Is his communication in the meeting clear and understandable?
- How do you think the client is feeling following his experience with the IpAC Program?
- How has the collaboration between the professionals supported the rehabilitation of Mr Csaba?
 - What will the Physiotherapist be assessing and how will he treat Mr Csaba?

Literature review

In order to function, brain cells need a constant supply of oxygen and glucose from the bloodstream. A stroke, also previously known as a cerebrovascular accident (CVA), occurs when the blood supply to part of the brain is disrupted causing brain cells to die. This lack of blood supply can be due to a lack of blood flow (i.e. ischaemia) or a leakage of blood (i.e. haemorrhage). The area of the brain that is affected will be unable to properly operate and this can result in a range of physical, cognitive, psychological and social impairments and even death (Kim, Warren, Madill, & Hadley, 1999). Indeed, stroke is the second most common cause of death globally with approximately 25% of stroke patients dying within a month of their stroke, increasing to 50% at 12 months (Doonan, Fisher, Macleod, & Davis, 2008). Stroke is also a leading cause of disability; in Western countries it has a greater impact on disability than any other chronic disease (Brewer & Williams, 2010). In Australia, almost 50% of stroke survivors report a disability resulting in ongoing impairment (Graven et al., 2011).

Stroke can occur in an individual of any age, although epidemiological studies indicate an exponential increase in risk from middle age onwards (Ellekjaer, Holmen, Indredavik, & Terent, 1997; Macrae & Douglas, 2008). Approximately 75% of first strokes occur in individuals over the age of 65 years and over 90% of stroke victims are over the age of 45 years (Ellekjaer, et al., 1997; Warlow, Sudlow, Dennis, Wardlaw, & Sandercock, 2003). It is estimated that one in 34 Australians aged 85 years or older has had a stroke (Macrae & Douglas, 2008).

Age-related health conditions such as stroke will present an increasing challenge for health care professionals, providers and governments as the world experiences a general increase in the absolute and relative size of an ageing population, particularly among Western countries (Hooyman, 2006). It is estimated that the world's population aged over 60 years will have doubled from 11% in 2007 to 22% by 2030 (Dickens, Richards, Greaves, & Campbell, 2011). The first of the "baby boomer" generation (those born between 1946 and 1964) entered the 65-year-plus cohort in 2010. With improvement in healthy lifestyles and medical care resulting in longer life expectancies it is expected that one in 26 baby boomers will live to be 100 by 2025 (Hooyman, 2006). This has increased the relative size of the cohort at high risk of stroke in the Australian population.

The ageing population has focused attention on the health care needs of older people and how these needs may change in the future with a predicted increase in demand for health and social services over the coming decades (Dickens, et al., 2011). Increases in overall life expectancy coupled with anticipated increases in the prevalence of lifestyle diseases and complex and chronic health conditions associated with ageing have resulted in a shift in focus from acute health care services to chronic disease models of care. These include incorporating preventive, home-based, collaborative teams and client-focused interventions to increase client education and disease self-management (Nisbet, Lee, Kumar, Thistlewaite, & Dunston, 2011; World Health Organization, 2006).

The world's ageing population will have a powerful influence on demands for health care but it will also significantly impact on health workforce supply and service provision (Nisbet, et al., 2011). In 2006, the World Health Organization (WHO) estimated a worldwide shortage of almost 4.3 million doctors, midwives, nurses and support workers (World Health Organization, 2006). This has resulted in WHO mandating the development of innovative policies and programs to address influences impacting on the provision of quality health services around the world (World Health Organization, 2010). Interprofessional collaboration has been highlighted as one potential solution to address imbalances between the limited supply of skilled health workforces and increased demand for health and social care services (World Health Organization, 2010).

Interprofessional collaboration

WHO defines collaborative practice as “*when multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality of care*” (World Health Organization, 2010, p. 13). In this model of working, different professionals collaborate to provide a service to clients that best meets their needs, and those of their families, in the most efficient and timely way possible. The resultant service is something that is not easily achieved by any one health professional and which, through collaboration and the generating and sharing of complementary skills, leads to the development of working partnerships resulting in outputs greater than the sum of the individuals involved in the client's care. The resultant care is more holistic, not being confined to a narrow set of professionals but rather the skills and expertise of a wider variety of professions to best meet the needs of the client (American Psychological Association, 2008). WHO identifies a range of benefits from interprofessional education, collaboration and

practice, including higher levels of satisfaction, better acceptance of care and improved health outcomes following treatment by a collaborative team (World Health Organization, 2010). The range of potential outcomes resulting from collaborative practice are outlined in Table 1.

Table 1: Outcomes of collaborative practice

Collaborative practice can improve:
- Access to and coordination of health services
- Appropriate use of specialist clinical resources
- Health outcomes for people with chronic diseases
- Patient care and safety
Collaborative practice can decrease:
- Total patient complications
- Length of hospital stay
- Tension and conflict among caregivers
- Staff turnover
- Hospital admissions
- Clinical error rates
- Mortality rates
In community mental health settings collaborative practice can:
- Increase patient and carer satisfaction
- Promote greater acceptance of treatment
- Reduce duration of treatment
- Reduce cost of care
- Reduce incidence of suicide
- Increase treatment for psychiatric disorders
- Reduce outpatient visits
Terminally and chronically ill patients who receive team based care in their homes:
- Are more satisfied with their care
- Report fewer clinic visits
- Present with fewer symptoms
- Report improved overall health
Health systems can benefit from the introduction of collaborative practice which has reduced the cost of:
- Setting up and implementing healthcare teams for elderly patients with chronic illnesses
- Redundant medical testing and the associated costs
- Implementing multidisciplinary strategies for the management of heart failure patients
- Implementing total parental nutrition teams within the hospital setting.

Source: (World Health Organization, 2010, pp. 18-19)

Collaborative practice has been recognised as potentially beneficial for those clients with chronic and complex conditions such as diabetes, asthma, cardiovascular and pulmonary disease, rehabilitation (including stroke), aged care, Indigenous health, and mental health (Stone, 2007). The move towards specialisation within the health care sector has resulted in clients with complex and chronic conditions likely to receive interventions from a range of health care professionals (Vyt, 2008). This raises the potential for service fragmentation as practitioners operate independently of each other and these clients become at risk of 'falling through the cracks', particularly during transitions from one care setting or provider to the next (Coleman, Boulton, & American Geriatrics Society Health Care Systems Committee, 2003). Stroke care and rehabilitation is one such area. Advances in medical interventions, improved quality of care and an increased focus on health promotion have led to a decreased incidence of stroke, and in addition, these medical advances have resulted in improved survival rates and an increased number of elderly stroke survivors (Kim, et al., 1999).

Rehabilitation can be effective in helping the stroke survivor to recover physical function in areas affected by the stroke, however, stroke survivors often continue to rate their health and quality of life as poor once back in the community (Kim, et al., 1999). Rehabilitation that focuses only on recovery of physical function is not satisfactory for stroke survivors once they return to the community. Interventions need to focus on the social and emotional needs of clients and facilitate their return to active participation in community-based leisure activities (Kim, et al., 1999). Indeed participation levels in the community are affected following stroke, and research has identified depressive mood and mobility issues, such as help to get out of the house and access to appropriate transport, as the most common unmet issues and needs in older people following a stroke (Graven, et al., 2011; Valios, 2007). This demonstrates the importance of focusing stroke rehabilitation on the long term goals of the client rather than on the acute and sub-acute stages (Graven, et al., 2011). A functional assessment of the home environment also allows for the rehabilitation program to be tailored to the client's personal context and their social and emotional needs (Brewer & Williams, 2010).

Complex cases, such as stroke rehabilitation, which involve different medical, social and psychological aspects of care are best addressed by a range of health care specialists (Vyt, 2008). However, the use of multiple health care providers in the care of individuals with complex and chronic health conditions may expose the client to the risk of infection,

medication errors, service duplication, and inappropriate care (Coleman, et al., 2003; Graham, Ivey, & Neuhauser, 2009). Optimising care for older people with complex care needs and avoiding these pitfalls is best addressed through professional collaboration (Poltawski et al., 2011). Research has demonstrated clear benefits of interprofessional collaborative teams over individual health care professionals in providing quality integrated care for clients with complex needs (Blewett, Johnson, McCarthy, Lackner, & Brandt, 2010). The American Geriatrics Society now advocates for the delivery of care by interprofessional teams which combine a range of health disciplines including nursing, medicine, social work, nutrition, therapies and pharmacy (Blewett, et al., 2010). A range of potential benefits of interprofessional post-stroke care and orthogeriatric rehabilitation have been identified including the prevention of placement in long-stay residential care, reductions in hospital readmission, improved survival rates and the potential for cost savings for funders (Blewett, et al., 2010; Chattopadhyay & Meara, 2003).

Collaborative teams

Teamwork can be defined as “*a cooperative undertaking by a group of individuals to achieve a common goal*” (Sorbero, Farley, Mattke, & Lovejoy, 2008, p. 2). Within a collaborative team model, the composition of the team is determined by the health care needs and goals of the client (Oandasan et al., 2006). Multiple health professionals work together, maximising each other’s strengths and skills (World Health Organization, 2010). Goal setting, problem solving and coordination of care are undertaken as part of the team process and are collaborative in nature (McCallin & McCallin, 2009). The interprofessional team has been found to be more beneficial than the multidisciplinary team due to the higher quality of the collaboration and team performance (Körner, 2010). These characteristics have a positive impact on minimising service duplication, improving referral patterns, ensuring continuity and coordination of care and also collaborative decision-making with clients (World Health Organization, 2010).

Mickan and Rodger (2005) identify some important characteristics found in effective teams:

- A *common purpose* shared among the group that is well-defined and relevant to the client population it serves. It is important that this purpose is developed collectively and regularly reviewed to ensure it reflects mutual interests and instills a sense of ownership within the group.

- *Goals* that are developed in consultation with clients (and their families) and which define a team's activities towards agreed outcomes. To be most effective teams' goals need to be SMART: **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**imely (Stroud 2009).
- A model of *leadership* where it is recognised that no individual can provide all the solutions and so all team members are active leaders in the care process (McCallin & McCallin, 2009). Leadership responsibilities are shared and allocated according to what is most appropriate for each individual case. Mickan and Rodger (2005) also found that the most effective team leaders have clear processes for making decisions and managing conflict, are open in sharing ideas and information with the team, coordinate tasks equally, provide timely feedback on team activities and listen to, support and trust team members.
- High levels of *mutual respect* where individuals recognise and value the talents, skills and beliefs of each member of the care team. A collaborative health care team consists of professionals who complement each other's discipline and take up complementary roles in the team, providing a more robust foundation for decision making (Interprofessional Education Collaborative Expert Panel, 2011; Vyt, 2008). Role understanding and role clarification are therefore important for different health professionals to effectively work as a team and to avoid service duplication, 'turf wars' and to assist in dispelling stereotypes (Sargeant, Loney, & Murphy, 2008; Suter et al., 2009). Mickan and Rodger (2005) found that as team members accept diverse opinions a respect develops for each member's expertise.
- Regular, open and effective *communication* where all members of the team are able to share ideas and information to best achieve the agreed client-centred goals. Given the complexity of care for many clients with chronic conditions, efficient communication and information management can be a major issue (Vyt, 2008). In a collaborative interprofessional model of care, team members bring their assessments and therapy interactions to meetings where a holistic biopsychosocial picture of the client is able to be developed that better informs treatment plans and goal setting (American Psychological Association, 2008). This collaborative process requires clear communication, incorporation of divergent information, knowledge transfer, critical reflection, mutual respect, and consensus development (American Psychological Association, 2008).

A final critical component of effective teams in interprofessional care is the active participation of care recipients and their families (Oandasan, et al., 2006). To effectively participate in their own care, clients must have the skills and knowledge to participate in the care team, must understand their condition (or know how to get information about it) and understand the role of each health professional in their care (Oandasan, et al., 2006). Health literacy is most commonly defined as "the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Center for Disease Control and Prevention, 2009, p. 1). Health literacy goes beyond the simple ability to read; it encompasses the ability to follow health care information on medications, referrals, educational materials, consent forms, as well as the capacity to navigate through the entire process of health care. A range of skills including reading, listening, analytical and decision making skills are all required. Health literacy has been found to have a significant impact on a client's health status, particularly those with complex and chronic conditions. Individuals with low health literacy have poorer general health knowledge, receive less preventive care, exhibit poorer chronic disease self-management, and have a greater number of hospitalisations, including visits to the emergency department (American Psychological Association, 2008).

Health literacy tends to be lower among older people and is further exacerbated for those with poor English language proficiency (American Psychological Association, 2008). Such individuals may feel embarrassed about their illiteracy and be less likely to ask questions or clarify areas of uncertainty. Given that stroke is an age-related disease, it is especially important that appointments with older adults, especially those with English as a second language, limited formal schooling, and lower socioeconomic status, receive educational interventions to assist in helping clients to better participate in their own health care (American Psychological Association, 2008). Strategies may include provision of medical information in alternative formats (audio/videotaped instructions, translated materials or use of visual cues), encouraging the inclusion of a trusted friend or family member in the appointment, encouragement to ask questions, and reviewing and clarifying any health recommendations (American Psychological Association, 2008).

Conclusion

Rehabilitation following stroke is a chronic and complex process that requires multiple, long-term interventions from a range of providers. Interprofessional working and collaborative

teamwork have been identified as advantageous in providing high-quality, effective and efficient health care for complex conditions such as stroke (Dubouloz, Savard, Burnett, & Guitard, 2010). Interprofessional collaboration shifts the focus to the delivery of care and how best to meet the needs of the client (Interprofessional Education Collaborative Expert Panel, 2011). The benefits of interprofessional practice have been found to include better overall client health outcomes, reduced hospitalisations and improved coordination of care for clients, whilst health professionals report greater role clarity and increased job satisfaction (Mickan, 2005; Stone, 2007).

Medical glossary and acronyms

Ambulatory care	Health services provided on an outpatient basis to those who can visit a health care facility and return home the same day.
Aphasia	The inability to understand or create speech, writing, or language in general due to damage to the speech centres of the brain. The impairment may affect receptive or expressive language or both.
Apraxia	A movement disorder characterized by the inability to perform skilled or purposeful voluntary movements, generally caused by damage to the areas of the brain responsible for voluntary movement.
Aspirin	A salicylate drug often used as an analgesic to relieve minor aches and pains, as an antipyretic to reduce fever, and as an anti-inflammatory medication. Aspirin also inhibits the production of thromboxane as such is used at low doses long-term to help prevent heart attacks, strokes, and blood clot formation.
Basal ganglia	A group of clusters of neurons of varied origin in the brain of vertebrates. They are situated at the base of the forebrain and are strongly connected with a variety of brain areas. The basal ganglia are associated with a range of functions, including voluntary motor control; procedural learning relating to routine behaviors or habits; eye movements; and cognitive and emotional functions.
DASH diet	Based on DASH Study results published in 1997 and stands for Dietary Approaches to Stop Hypertension. The study showed that a diet rich in fruits, vegetables and low fat dairy foods, with reduced saturated and total fat could substantially lower blood pressure.

Dysgraphia	A neurological disorder characterised by difficulty in expressing thoughts in writing and graphing. It generally refers to extremely poor handwriting but can also include wrong or odd spelling, and production of words that are not correct (e.g. using 'boy' for 'girl').
Dyslexia	A learning disorder marked by impairment of the ability to recognise and comprehend written words.
Haemianopia	Loss of vision in either the right or left sides of both eyes causing serious problems with mobility, bumping into objects, increased incidence of falls and accidents and reading problems. It is a common side effect of brain injury.
Health literacy	The capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.
Hypertension	Also known as High blood pressure . Where blood pumps at a higher pressure than normal through the arteries.
Interdisciplinary teams	A team that is collaboration-oriented. The team meets regularly to discuss and collaboratively set treatment goals and carry out treatment plans. There is a high level of communication and cooperation among team members (Korner, 2008, p. 2).
Karvea	A medication used to control blood pressure through a combination of vasodilation, reduction of the secretion of vasopressin, and reduction of production and secretion of aldosterone, amongst other actions.
Lipitor	A medication of the drug class known as statins, used for lowering blood cholesterol. It also stabilises plaque and prevents strokes through anti-inflammatory and other

mechanisms.

Multidisciplinary teams	A team that is discipline-oriented. Each professional works in parallel, with clear role definitions, specified tasks and hierarchical lines of authority (Korner, 2008, p. 2).
Rehabilitation	A treatment/s designed to facilitate the process of recovery from injury, illness or disease to as normal a condition as possible.
Stroke	Previously known as a Cerebrovascular Accident (CVA) . Occurs when the blood supply to part of the brain is disrupted causing brain cells to die.

Further information

Brain Injury Australia:

<http://braininjuryaustralia.org.au/>

or 1800 BRAIN1

Brain Injury Australia provides information and support for people and families affected by acquired brain injury.

Carelink:

<http://www9.health.gov.au/ccsd/>

or 1800 052 222

Commonwealth Respite and Carelink Centres are information centres for older people, people with disabilities and those who provide care and services. The centres provide free and confidential information on community aged care, disability and other support services available locally or anywhere within Australia.

HealthInsite:

<http://healthinsite.gov.au/topics/Stroke>

or 1800 022 222

A *healthdirect Australia* health information service providing easy access to quality information about human health.

National Stroke Foundation:

<http://strokefoundation.com.au/>

or 1800 787 653

The National Stroke Foundation is a not-for-profit organisation that works with the public, government, health professionals, patients, carers and stroke survivors to reduce the impact of stroke on the Australian community.

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