OCCUPATIONAL THERAPY NOW

OCCUPATIONAL THERAPY NOW VOLUME 14.2

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ISSN: 1481-5532 Canada Post agreement #40034418

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Occupational Therapy Now is published 6 times a year (bimonthly beginning with January) by the Canadian Association of Occupational Therapists (CAOT).

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Everyday Stories . . . profiles of your CAOT colleagues

Thelma Sumsion

Education

My approach to education was very tortoise-like. I graduated from the University of Toronto in 1969 with a diploma in physical and occupational therapy. It then took me 10 years, taking one course a year, to complete the requirements for my BSc(OT) in 1979. I decided to maintain the educational momentum and, again with a course or two a year, obtained my MEd from the University of Western Ontario in 1982. I really thought that was the end of my education, but my career next took me to London, England, and an opportunity to study for a PhD which I obtained in 2002. So, colleagues, the moral of that educational tale is 'never say never'; for me it was okay to be slow and steady like our friend the tortoise.

Career path as an occupational therapist

My career has been quite varied. I started work as a staff therapist in psychiatry in a small Ontario hospital, moved to larger hospitals with more administrative responsibilities, and then to a teaching position in a university. Next I had an opportunity to work as a consultant for therapists throughout northern Ontario. I then decided I did not want to end my career having only worked in Ontario. So I obtained a position at a university in England where I worked and studied for almost six years before returning to Ontario to head an educational program at the University of Western Ontario. I was in that position for five years and then remained at that university as a faculty member until I retired in 2010. The wonderful thing about a career in occupational therapy is that there are always new challenges to be pursued. I enjoyed and was challenged by each of these positions but, if I am being honest, I will admit that it was the volunteer part of my professional life that really brought the most fulfillment. The opportunity to serve on many CAOT committees and ultimately to be President, to be involved in the work of the Ontario Society of Occupational Therapists (OSOT), to work with a dynamite group to develop client-centred guidelines, to receive the Muriel Driver Lectureship, to be named a CAOT Fellow, and, ultimately, to receive a life membership in CAOT — these were the experiences that enriched me the most.

Hobbies and interests

I am not one of those creative occupational therapists who knit, sew and/or quilt. My interests are 17th and 18th century brown and white antique china. I also love to read, walk and attend auctions. In addition, I have a unique hobby of moving house, which I do quite frequently. I love to organize, plan and sort, so moving is the perfect combination of those interests.

Greatest influences on my occupational therapy practice

The clients I had the privilege of working with in various mental health programs had the greatest influence on my career. I will always be impressed by their strength and fortitude to carry on against odds that would have stopped me long ago. They are amazing people who will always have my deepest regard.

About the author

Thelma Sumsion, BSc(OT), MEd, PhD, is a retired professor of occupational therapy, a Past-President of the Canadian Association of Occupational Therapists (CAOT) and a CAOT Fellow.

What's new

Elder abuse

Strategies for occupational therapists to address elder abuse/mistreatment are available as a free download.
Visit www.caot.ca/elderabuse.

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Available as a free download for CAOT members; $75 for non-members at: www.caot.ca > Advocacy > Our Initiatives > Caseload Management Tool Project.

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New/revised position statements are available at: www.caot.ca > Professional Practice > Position Statements.

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- *Spirituality and Occupational Therapy, Second Edition* Mary Ann McColl
- *La Mesure canadienne du rendement occupationnel, quatrième édition*. Mary Law, Sue Baptiste, Anne Carswell, Mary Ann McColl, Helene Polatajko et Nancy Pollock
- *L'Action contre l'inertie : Répondre aux besoins de santé liés à l'activité des personnes présentant un trouble mental grave* Terry Krupa, Megan Edgelow, Shu-ping Chen, Carol Mieras, Andrea Almas, Andrea Perry, Debbie Radloff-Gabriel, Jennifer Jackson, et Marla Bransfield

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Trial Occupational Therapy Manual and Exam

Coming soon, CAOT will be pleased to offer National Exam candidates the opportunity to purchase the *Trial Occupational Therapy Exam Manual (TOTEM)* that includes trial exam questions and answer rationales along with access to the Trial Occupational Therapy Exam (TOTE, a two-hour trial exam, completed online). All questions have been developed using the same process as the National Occupational Therapy Certification Exam questions. Watch for email announcements, posts on the CAOT Facebook/Twitter pages and details on the CAOT online store for more information and availability.

Two new CAOT professional issue forum reports

CAOT professional issue forums on Cancer Survivorship and Occupational Therapy and Pain Management and Occupational Therapy were held on June 16, 2011. Reports are now posted online at: www.caot.ca > Professional Practice > PIF Reports.

COLUMN EDITOR: JOSÉE SÉGUIN AND ROSELLE ADLER

Using technology for neurological rehabilitation of the upper extremity

Carly Bassett

Occupational therapists working with people with upper extremity neurological impairment are often in the position of creating engaging, challenging opportunities for their clientele as part of the rehabilitation process. Advancements in technology can provide occupational therapists with effective tools to enable clients to be involved in meaningful, task-specific activities, which are cognitively engaging and allow for repetitive, intensive practice (Carr & Shepherd, 2003). Such practice is also supported by evidence of neuroplasticity (Kleim, Barbay, & Nudo, 1998) and the motor improvement associated with it (Wolf et al., 2006).

This article will review various forms of technology used in a private outpatient physical rehabilitation clinic as part of a therapeutic program for clients with upper extremity neurological impairment. Benefits and limitations of the technology will be discussed, as well as specific clinical examples where the technology is indicated.

Gaming technology

'Gaming technology' in rehabilitation refers to any interactive computer technology or video game that employs user feedback in response to his/her movement. Whether this movement is achieved through pushing a button, swinging a controller or bending an elbow, the user receives feedback on the success of this movement through the form of a game. Shumway-Cook and Woollacott (2007) suggest that to successfully change function, opportunity for practice and feedback on the success of the movement is required. Gaming technology can provide this opportunity.

Mainstream gaming technology

Recently, there has been an interest within the media and clinical research community on investigating the use of mainstream gaming technology such as the Nintendo Wii™, PlayStation Move™, or Xbox Kinect™ in rehabilitation settings. Although these products can be motivational and useful for clients who need general movement practice, they present a number of limitations for clinical use. These limitations include:

1) Feedback regarding the quality of the user's arm movement is not provided.
2) Parameters such as the speed and range of motion required to operate the games are not adjustable and therefore difficult to make the games appropriately challenging. Halton (2010) found that the Wii™ may be too difficult and requires a certain amount of motor control to use in a challenging way.
3) Custom, task-specific movements cannot be programmed or created to allow for practice of specific joint actions.
4) The technology is neither able to detect a client's small movements nor able to detect muscle activity that is often present before active movement occurs.
5) Games can allow for 'cheating' with compensatory movements.

Rehabilitation-specific gaming technology

Given the limitations with mainstream gaming technology, rehabilitation-specific gaming technology can provide the adjustability and adaptability to meet the range of clients' impairments and rehabilitation goals. This software can allow for targeting range of motion, speed of movement, and detection or sensitivity to small movements, which can provide clients with the meaningful, intensive and task-specific practice needed to create positive change.

The NeuroGym® Trainer is an example of this technology. It is a tool with many different 'controllers' or sensors. These controllers include electromyography (EMG, discussed in further detail below), and can measure rotation, tilt, joint proximity, pressure, speed, and range of motion, and it can be attached to any joint on the arm and hand. For example, if a client has difficulty with speed and range of motion of elbow

About the author

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flexion and extension during a reaching task, a goniometer sensor can be placed on the elbow joint. Then, using a simple electronic ping pong game, the speed and range of motion needed to successfully play the game can be adjusted to challenge the person. To train the client for the functional task of drinking, which requires grasping speed and strength, a pressure sensor can be placed on the side of a glass. The individual is required to grasp the glass and apply enough pressure to the sensor to produce a response from the ping pong game (fig.1).

Figure 1: Pressure to the sensor to produces a response from the game.

To challenge the control of pronation and supination during a pouring task, a tilt sensor (an accelerometer sensitive to orientation in space) can be placed on a saucepan to detect this movement (fig.2). In a private rehabilitation outpatient clinic, a young woman with cerebral palsy was able to increase supination in her right arm by 70 degrees after four months of training with the NeuroGym® Trainer tilt sensor. As a child minder, she is now able to use both her hands to pick up children.

Figure 2: A tilt sensor attached to the saucepan detects movement.

As products continue to evolve, new technologies such as motion capture or virtual reality games that use cameras instead of active sensors to record feedback add other dimensions and capabilities to gaming technology in rehabilitation. A review of the various commercial and rehabilitation-specific gaming technologies has been published by Levac and Missiuna (2009). For a complete comparison of the technologies' clinical strengths and weaknesses, see *Gaming technology: From recreational activity to clinical tool, considerations for the physiotherapist* (Nativ, 2010).

Clinical electromyography (EMG)

EMG is used to measure the amount of electrical activity in microvolts within a muscle or group of muscles. This electrical activity increases when there is an active contraction of a muscle. By placing sensors that measure electrical activity produced by a muscle on or under the skin's surface, EMG signals are transferred to a processing unit that records and modifies the muscle activity into an electronic signal. Often used as a diagnostic and research tool, there is good evidence that EMG can also be an effective training tool when it provides biofeedback (Armagan, Tascioglu, & Oner, 2003; DeBiase, Politti, Palomari, Barros-Filho, & DeCamargo, 2011; Herndon, Decambre, & McKenna, 2001). When using EMG biofeedback, once a muscle contraction has produced a specified level of electrical activity, biofeedback in the form of a 'beep' or a visual signal is produced. With this feedback the client is receiving knowledge about his/her ability to contract and relax muscles independently, even detecting very small levels of muscle activity and targeting very specific muscle groups. For example, a 60-year-old female one year post stroke increased her elbow extension by 70 degrees using EMG to train tricep contraction over the span of a year. With consistent forearm extension, she can don her clothes with increased ease.

EMG technology can detect the smallest of muscle contractions even without any visible movement or feeling of contraction on palpation. This can be useful for initiating rehabilitation in hands that have no visible movement. If, for example, muscle contraction is detected by EMG through sensors placed over the common extensor group and the client is asked to attempt to extend his/her wrist (fig.3), then the wrist extension movement becomes trainable even though there is no visible movement. With this type of training and active movement assistance of the hand, several clients have learned how to produce visible wrist extension movement independently.

Figure 3: Wrist extension movement is trainable even with no visible movement.

EMG can also be useful for improving the contraction of a muscle group or reducing co-contraction during a movement. For example, when a client with weak triceps is performing a reaching task, the client may inappropriately focus on the deltoids, biceps

and trunk movement. With the help of the EMG providing meaningful biofeedback about triceps contraction, the client can better learn how to engage the triceps consistently during this movement. The biofeedback signals can indicate to both the therapist and client if the client is using the muscle correctly. Additionally, if co-contraction is a problem, then during the same task EMG sensors can be placed on the biceps to indicate if over-contraction of the antagonist muscle is occurring.

With the use of this tool, tasks can be graded to the appropriate functional level for each client and these movements can be practiced repeatedly, even without any visible movement at the joint.

Dynamic training orthoses

A dynamic training orthosis refers to a brace or splint that enables movement that cannot otherwise be executed. Most of these orthoses assist with finger extension but allow for finger flexion, enabling the grasping motion. The orthotic provides the opportunity for the grasping movement to be performed repetitively even without the therapist present, creating an engaging functional activity with the intensity needed to effect change.

A dynamic finger extension splint, such as the SaeboFlex© (fig.4) uses springs attached to digit caps to pull fingers into extension while the client's own finger flexion strength can partially close the hand to allow for grasping and moving objects. For clients, being able to move their hands in a functional manner can be a motivator to engage in more frequent therapeutic activity. Rather than pushing a ball from one side of a table to the other, the client can pick up the ball and move it in many directions involving more joints at the same time. A dynamic finger extension splint can be purchased custom-made for an individual or can be fabricated out of splinting material, elastics and wire.

Figure 4: User plays computer games with enabled motion.

As is the case with biofeedback, the effectiveness of training depends on the intensity and speed-sensitivity of training (Nativ, 1993). Hence, the effectiveness of dynamic training orthoses can be improved if combined with gaming technology or EMG. For example, a NeuroGym® Trainer flexible finger sensor inserted into the SaeboFlex© splint allows the user to play computer games with the now enabled motion (fig.4). Or, the EMG electrodes can be placed over the finger extensors to detect if finger extension is being done passively by the splint or with some active assistance of the muscles. This type of training was initiated with a 35-year-old male with an incomplete spinal cord injury one year post accident. Using EMG biofeedback and a dynamic orthosis three times a week for 15-minute intervals over a two year period, he improved his finger extension by 50 degrees and was able to open his fingers and grasp with his wrist extended, improving the speed at which he was able to prepare meals and clean the kitchen.

Summary

Gaming technology, EMG and training orthoses have created positive outcomes in upper extremity neurologic rehabilitation as seen in the private outpatient setting outlined in this article. In addition, the application of these enabling tools can extend further than the neurologic setting; gaming technology has been used for balance games with adolescents (Brien & Sveistrup, 2011), while EMG has been used to address facial nerve palsy (Nahai & Brown, 1989). Hopefully, as new technology is created for the rehabilitation field, the availability will improve as well. Such advances could make this technology more accessible to therapists and to clients for independent use. Although there is evidence to support these tools, further exploration of treatment protocols and comparisons between available gaming technologies is necessary.

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Advanced competencies in occupational therapy practice

Claudia von Zweck

The term "advanced practice" is used increasingly by occupational therapists, employers, educators and regulators across Canada. Variability, however, exists in the meaning and use of the term. In an effort to draw greater consensus regarding advanced practice for occupational therapy in Canada, professional issue forums on the topic were hosted by the Canadian Association of Occupational Therapists (CAOT) in 2009 and 2010. Surveys of the CAOT membership were also undertaken to inform the development of these forums.

Findings of CAOT consultations regarding advanced practice

During the CAOT consultations, strong support was received for addressing this issue (Finlayson, 2010). Advantages from the perspectives of many stakeholders were identified. Top benefits for occupational therapists include recognition and acknowledgement of advanced practice, as well as specialization and career-laddering opportunities within the profession. Employers were considered to benefit from a more autonomous and highly trained occupational therapy workforce that can fulfill a broader range of responsibilities. The public benefits from greater access to highly trained occupational therapists for provision of evidence-based occupational therapy services.

Occupational therapists that self-identified in a CAOT survey as an advanced practice practitioner most frequently differed from other members in terms of their primary job responsibility rather than in their overall range of duties (CAOT, 2009a). They were less likely to report a primary job responsibility as direct service provision and more likely to act as a professional leader/coordinator. While it was clearly evident that interpretation of the term "advanced practice" varied greatly, it was possible to identify several core characteristics of advanced practice practitioners (Finlayson, 2010), including:

- Using theory and evidence deliberately to improve the quality of care provided to clients;
- Engaging actively in knowledge translation to change and improve how practice is carried out;
- Contributing to / being involved in research activities;
- Being a leader;
- Having breadth of knowledge (for example, health care environment, policy); and
- Collaborating, communicating, partnering across sectors.

Several profiles were identified from the range of positions described as advanced practice by survey respondents. Specialists focus their work in particular practice areas where they have gained additional credentials or expertise. Global leaders are innovative occupational therapists that contribute to the development of emerging roles. Beyond scope practitioners assume responsibility for authorized acts outside the traditional occupational therapy scope of practice. Scope of practice for occupational therapists in Canada is defined by regulatory legislation and outlines the range of responsibilities that define the boundaries of professional practice.

Consensus could not be reached at the 2009 or 2010 CAOT professional issue forums regarding the definition and use of the term of advanced practice in occupational therapy in Canada. The meaning of advanced practice has become entrenched, albeit differently, among various groups and sectors in the profession and it was not possible to realign perspectives to gain consensus.

The need to move forward

The Profile of Occupational Therapy Practice in Canada (CAOT, 2007) outlines a continuum of knowledge and skills from competent to proficient for the practice of occupational therapists that work within the scope of practice of occupational therapy. The desire of CAOT to address the topic of advanced practice resulted from the wish to describe occupational therapists that exceed the level of responsibility and competency outlined by the *Profile* for proficient practitioners.

Despite a lack of success in defining advanced practice, the consultations conducted by CAOT indicate that support exists among members and other stakeholders to continue discussions to better understand occupational therapists working at a capacity beyond what is considered a proficient practitioner. Professional issue forum participants in both 2009 and 2010 considered occupational therapists well positioned and willing to assume roles that exceed responsibility and competency expectations of proficient practitioners. A lack of progress in describing such practitioners was perceived to place occupational therapy at a disadvantage to other professions such as physiotherapy and nursing that have successfully addressed advanced practice and developed well-defined roles in these areas (Finlayson, 2010).

About the author

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An advanced competencies approach to understanding advanced practice

An alternate approach to understanding "beyond proficient" or advanced practice occupational therapy practitioners is to examine the competencies demonstrated in their work. A common factor among the profiles of self-identified advanced practice occupational therapists surveyed in Canada was the use of competencies that exceeded those expected of the proficient practitioner. The various profiles of advanced practice that emerged from the survey data reflect the clustering of different advanced competencies that had been assumed by occupational therapists in their occupational therapy practice in order to address the individual nature of their role and their work environment. All those who self-identified were considered advanced practice occupational therapists, but their overall knowledge, skills and abilities vary to suit their competency needs. The defining characteristic of advanced practice occupational therapists is their use of advanced competencies to address responsibilities that extend beyond traditional boundaries of occupational therapy.

Advanced competencies are not gained from occupational therapy entry-level education; they are attained through additional educational preparation and experience. Advanced competencies address knowledge, skills and abilities needed for activities performed within the context of occupational therapy practice that are performed traditionally beyond the breadth of responsibilities assumed by occupational therapists.

The profile of the beyond scope occupational therapist describes an advanced practice practitioner that assumes the use of authorized acts to enhance and augment their occupational therapy practice. Examples of authorized acts performed by occupational therapists within the context of occupational therapy service include setting a fracture while constructing a splint. Assuming beyond scope authorized acts usually requires occupational therapists to practice under the authority of another health professional holding authorization for the activity. Advanced competencies do not however always involve performance of activities that must be regulated. The specialist and global leader advanced practice practitioner profiles illustrate performance of responsibilities at levels of complexity beyond that expected of a proficient occupational therapist. As an example, the CAOT position statement on occupational therapy and driver rehabilitation outlines a three tier expertise framework for occupational therapists working in this practice area. The third tier requires occupational therapists to possess additional skills and knowledge in the area of driver rehabilitation that are consistent with the specialist profile in order to provide in-depth pre-driving assessments (CAOT, 2009b).

Occupational therapists frequently assume advanced competencies in non-clinical skills and knowledge. For example, occupational therapists working as researchers may develop advanced competencies required for managing complex projects and analyzing findings. Occupational therapists working as health care administrators may require advanced competencies in areas such as human resources management.

Full-to-scope practice

Advanced competencies for "beyond proficient" practitioners should be differentiated from the knowledge, skills and abilities included in the *Profile* for occupational therapists who are working "full-to-scope". The *Profile* describes a competency continuum where competent occupational therapists meet or exceed minimal performance expectations for safe and effective occupational therapy practice, while proficient practitioners have the same knowledge, skills and abilities but perform with artistry of practice and professional sophistication (CAOT, 2007). Execution of the competencies in the seven roles identified in the *Profile* occurs to a fuller or lesser extent depending upon the practice environment and populations served. Working full-to-scope means engaging in roles to the full extent expected of a competent or proficient occupational therapist.

A lack of opportunity to work full-to-scope represents a significant and growing barrier to the effective delivery of occupational therapy services in Canada. Many factors may impede the ability of occupational therapists to work full-to-scope, including funding, time restrictions and employer policies. Such factors may lead to fragmentation of service delivery, under-utilization of knowledge and skills and less satisfaction of health professionals with their career choice. The promotion of full-to-scope practice has been identified as a key retention strategy for the Canadian health workforce (Oelke et al., 2008).

Recognition of advanced competencies

Recognition of advanced competencies has implications for employers, professional associations, educators and regulators, in addition to occupational therapists. Employers need to consider mechanisms for developing and compensating occupational therapists for roles requiring advanced competencies. Professional associations and educators must be prepared to recognize and assist in the training of occupational therapists moving into advanced practice roles. Regulators are legally obligated to protect the public and ensure competency of occupational therapists. The need for regulation of advanced competencies is dependent upon the degree of risk posed to the public by performance of the activity by an occupational therapist.

The knowledge, skills and abilities needed for competent execution of occupational therapy is evolutionary and reflects the expectations of the practice environment. The last decade has seen significant shifts in such expectations, leading to changes in the labeling of what are considered advanced competencies. The 2002 version of the *Profile of Practice of Occupational Therapy in Canada* (CAOT) introduced enhanced knowledge, skills and abilities required to meet the demands of the practice environment for a more autonomous and evidence-based practitioner. Competencies previously considered as advanced became expectations for entry-level practice. The need for enhanced entry-level knowledge ultimately led to the decision of CAOT to effectively move Canadian occupational therapy education to the Master's level by only accrediting programs leading to a Master's credential.

The practice environment in Canada for occupational therapists continues to evolve today. For example, occupational therapists as inter-professional team members are now frequently expected to assume additional responsibilities for the delivery

of patient-centred and cost-effective health services. Inter-professional practice assumes professions learn with, from and about one another to improve collaboration and the quality of care in a relationship that involves trust, communication, respect and equality (Centre for the Advancement of Interprofessional Education).

In Ontario, a review is currently underway to examine advanced competencies outside of traditional occupational therapy practice that may be required by occupational therapists. Several advanced competencies have been identified that are regulated by other health professionals, including the ability to provide wound care (College of Occupational Therapists of Ontario, Occupational Therapy Ontario Collaborative, & Ontario Society of Occupational Therapists, 2011). As previously noted, if occupational therapists wish to practice in such areas where they do not hold authorization, they must practice under the authority of another health professional. Alternatively, occupational therapists may seek legislative changes to broaden the profession's scope of practice to allow authorization of such advanced competencies to lie within the jurisdiction of occupational therapy regulators. This is preferable to retain professional autonomy and accountability of the profession to the public. While such legislative changes are cumbersome and slow to implement, other professions have been successful in expanding their scope of practice. The physiotherapy profession in the province of Ontario was recently granted changes and additions to their scope of practice with four new authorized acts including communicating a diagnosis and treating a wound. Additional changes for physiotherapy in Ontario awaiting regulations for proclamation include the authority to order lab tests and x-rays (Carter & Winn, 2011).

Occupational therapists want career ladders and advanced practice roles are considered important opportunities for workforce retention. Indeed, with career progression, occupational therapists frequently seek additional education and attain experience that assists them to acquire advanced competencies. Experienced occupational therapists in Canada are sought after and often transition into roles within policy, research and health administration that bring new learning and advanced competencies. The characteristics of occupation-based enablement are broad and relevant to occupational therapists working in many different types of roles and environments.

Occupational therapy practice is inclusive of any work toward the enablement of everyday living through occupation with clients of all ages, stages and walks of life, individually or as a group, community or population (Townsend & Polatajko, 2007). A worrisome trend within the profession is the frequent drop in the use of the title 'occupational therapist' by those who acquire advanced competencies and move into work roles not recognized as advanced practice (von Zweck, 2006). As identified in CAOT survey data, advanced practice practitioners represent key leaders within the profession that are in a position of influence regarding the adoption of occupational therapy values and beliefs. A loss of professional identity within these leaders serves as a huge missed opportunity to promote the mandate of the occupational therapy profession for enablement of occupation among the Canadian public.

Conclusions

Stalled discussions regarding advanced practice can move forward by examining advanced competencies used by occupational therapists. Understanding the need for and use of advanced competencies is important for workforce planning for the profession as a whole, as well as for occupational therapists for career development and the public as recipients of occupational therapy services. The issues inherent in the development, use, recognition and regulation of advanced competencies, however, involve a broad range of stakeholder groups that must work in collaboration. Important issues that require consideration include when and if regulation is needed for advanced competencies, as well whether the scope of practice of occupational therapy meets the needs of today's practice environment. In some jurisdictions, work has begun that may serve to lead changes within the profession nationally. Mechanisms to develop and recognize advanced competencies also require examination. The need to develop and retain our leaders within occupational therapy is a vital concern that can have significant influence on the future of the profession.

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Health technology and intervention assessment in health and social services: Parameters and contextualization strategies

Claire Dumont

Occupational therapists are encouraged to adopt an evidence-based practice, and researching scientific evidence can constitute an integral part of clinical or management practices. Research methods and sources of information have evolved significantly over the past few years. Thus, various organizations have made databases of relevant sources for scientific articles available to professionals such as OTSeeker, PubMed or Cochrane Library (Law & MacDermid, 2008). Scientific articles drawn from these databases are evaluated with respect to their value and quality (Pluye, Gagnon, Griffiths, & Johnson-Lafleur, 2009). The number of studies published on health care is growing at an astounding pace, reaching hundreds of thousands per year (Bastian, Glasziou, & Chalmers, 2010), which represents a sizeable challenge if one considers using them to support clinical or administrative decisions. Faced with this situation, systematic reviews have been carried out in order to regroup the information, synthesize it, and thus facilitate decision-making. The number of systematic reviews has also continued to increase and a new type of article has started to appear: reviews of systematic reviews (Smith, Devane, Begley, & Clarke, 2011). The Cochrane Collaboration is the primary generator of systematic reviews in the field of health, with more than 4,200 publications from its beginning until 2011 (The Cochrane Library, 2011).

Another source of information that aggregates scientific evidence from a number of sources that may prove useful to professionals or managers is the health technology assessment (HTA). The purpose of HTA is to provide health care decision-makers with the evidence they need to make informed decisions concerning the introduction, allocation and cost-effective use of health technologies, the interventions or methods of delivering services, including rehabilitation, technical devices, and social services, and so on.

This article presents the HTA process and the resources needed to produce it, so that occupational therapists can be informed consumers and may offer suggestions, advocacy and contributions to the development of relevant issues for an HTA in their area of practice. The article also aims at improving knowledge about the different parameters that could be used when judging the quality of a technology or intervention before adopting it in practice. Also included is a description of participative approaches used in HTA as in other types of research that are essential to insure knowledge transfer between research and practice.

Definition and organizations involved in health technology assessment (HTA)

There are numerous organizations dedicated to HTA on the provincial, regional, national and international levels. Some examples are the Canadian Agency for Drugs and Technologies in Health (CADTH), the National Institute of Health and Clinical Excellence (NICE) in the United Kingdom, the Evidence-based Practice Centers Program founded by the Agency for Healthcare Research and Quality (AHRQ) in the United States, Haute Autorité de Santé (HAS) in France, and the Ontario Health Technology Advisory Committee (OHTAC). In Quebec, the Institut national d'excellence en santé et en services sociaux (INESSS) was created in 2011 as the result of combining the Agence d'évaluation des technologies et des modes d'intervention en santé (AETMIS) and the Conseil du médicament.

The mission of each of these organizations is to promote clinical excellence and efficient utilization of resources in the health and social services sectors. They evaluate technologies or interventions with the aim of improving the quality of services. Some of them, such as INESSS or NICE, also have the additional mission of drawing up practice guidelines on specific problems. Each year, these organizations respond to questions related to professional practices based on concerns in the field and produce

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Evaluated parameters

An HTA seeks to evaluate a specific technology or intervention in relation to parameters relevant to decision-making. As defined by organizations involved in HTA, these include (Battista et al., 2003; AETMIS, 2011; CHUQ, 2007):

- the efficacy of the technology or intervention, (e.g., the efficacy of an assistive device); in the absence of efficacy, it is not necessary to consider other parameters;
- the safety and adverse effects on a clinical level, taking into consideration the physiological, biological and psychological effects (e.g., a technology or intervention may be efficacious but may entail health risks or significant adverse effects that must be considered);
- the costs to the organization involved, as well as to society, during the entire life cycle of the technology evaluated, from its conception to its use, to its final discard (purchase costs, maintenance, training, replacement, etc.);
- the impact of the technology or intervention on the health and social services system (e.g., an expensive technology that would be available only for those who can pay for it);
- the legal, juridical and normative aspects relating to the technology or intervention (e.g., a new assistive device for drivers with impairments could change car transport laws and rules);
- the impact on the organization regarding budgets, productivity, personnel and training, accessibility to services, service trajectories and others (e.g., a new technology might have an effect on waiting lists and service organization);
- technological productivity, including responsible consumption (e.g., electric wheelchairs have components that have to be recycled properly);
- the impact (benefits and risks) on the physical environment, biodiversity, ecosystems, under observance of the principles of sustainable development (e.g., interventions using isotopes produced by nuclear power plants);
- the impact on the social environment (benefits and risks) with respect to laws, social policy, the economic sector, living conditions, social capital, cultural heritage, as well as social support (e.g., an intervention requiring help from proxies);
- the ethical aspects, such as the challenges raised by the technology or intervention that relate to conflict of interest, respect, the right to information, informed consent, the right to refuse, and confidentiality (e.g., two interventions having such different costs that they limit the possibility of choice for the person or the professional);
- social acceptability, i.e., the evaluation of the benefits and risks as they relate to inclusion, equity, social cohesiveness, the rights of the individual, identity and universal access (e.g., the use of dog guides has changed the rules about universal access);
- consideration of the users' point of view and their satisfaction; and
- consideration of the points of view of partners in the health and social services sector and in other related sectors, and their satisfaction.

reports. Questions may arise from governments, institutions, associations, organizations or professionals. INESSS, for example, has produced reports on the subjects of chronic pain, chronic fatigue syndrome, wheelchairs, and guide dogs.

Those institutions in the health and social services sector that are university-affiliated or that have an equivalent status also have a mandate to carry out HTA, and thus have HTA units. One such example is the Centre hospitalier universitaire de Québec (CHUQ), which produces evaluation reports on problems submitted by managers and professionals in the institution.

An HTA practice community exists on the international level. Thus, all the organizations practicing HTA produce reports that are available for the benefit of the whole scientific community. Indeed, an HTA constitutes an in-depth analysis of a problem carried out by a group or an organization that may be useful for various audiences and in various environments. There are also practice communities at various levels, such as the provincial HTA practice community supported by INESSS in Quebec.

Methodological aspects

The method used to evaluate an HTA includes a systematic review combined with contextualization. The methods for carrying out a systematic review are those used by The Cochrane Collaboration and are described in detail in their methodology guide available online (The Cochrane Collaboration, 2011). The HTA Unit of CHUQ has also produced a methodology guide (CHUQ, 2007). While the method associated with systematic reviews is defined, there are several approaches possible to effect contextualization that vary according to the situation. In each HTA situation, the research team has to develop a participative research approach in collaboration with those requiring the information to define the relevant contextualization strategies.

Contextualization is essential because, even if judged to be efficacious from a scientific point of view, the application of a technology or intervention may vary from one environment to another depending on other parameters being considered (i.e., the organization of care, the available resources, the size of the target population, and the training of available personnel). Contextualization strategies may also favor the transfer of knowledge generated by the systematic review on a given subject. When a systematic review results in new scientific knowledge that, in turn, leads to changes in practice, those changes (acceptance or discontinuation of a technology or intervention) may encounter several obstacles; the contextualization process can facilitate the integration of this new knowledge.

Approaches and strategies for contextualization

Numerous textbooks about participative or collaborative research offer many examples of possible strategies for contextualization. The methodology guide of CHUQ (2007) and the reports produced by this HTA unit also present several approaches and strategies used for contextualization (see, for example, Hamel, Dumont, & Rhainds, 2010). The following paragraphs will present a synthesis of various strategies that may be used to contextualize as part of an HTA.

First of all, it is essential to ensure that the needs are met of those requesting clarification in order to make a decision concerning a technology or intervention. Sometimes several stages may be required for complete clarification of the evaluation question. Consultations and verifications are required in particular at the time of developing an evaluation protocol.

The involvement of the requesters in the entire course of the evaluation then becomes an integral part of the evaluation process. This type of evaluative study needs a participative approach that ensures an adequate response to the concerns of the requesters. This approach also helps structure the research protocol to obtain the most relevant information. It further allows for informing the requestors of the results as the work progresses, thus enabling them to take action even before the final report is filed, if necessary. From the time the protocol is drawn up, meetings with groups, committees or other bodies are held to present the interim or preliminary reports, to get their opinions, and to take action, if required. All the representatives of the

groups affected by the technology or intervention being evaluated may take part in such meetings (administrations, committees, professional associations, other professional groups, etc.).

In addition to the requesters' participation, an interdisciplinary working group is convened at regular intervals. This group is composed of professionals using the technology or involved in the intervention. Representatives of professionals may also be part of such a group. Various methods may be utilized to obtain their opinions: meetings, group interviews, discussion groups and others. The clinical perspective that they present may orient the work and will be taken into account in the recommendations.

Supplementing the work of this group, an investigation by professionals using the technology or providing the intervention allows for a deeper understanding of the clinical and organizational aspects related to the contextualization in the environment in which it is to be applied. For example, representatives of hospitals, health and social service centres, local community service centres, rehabilitation centres, and private clinics that are affected by the decision may thus be asked to respond to a questionnaire. Their expertise helps document contextual aspects that can contribute to the recommendations of the HTA.

Strategies for getting the opinion of users (people receiving services) may also be considered, such as consultation with representatives of user associations, satisfaction questionnaires, group discussions and others. In addition, the process may include consultation with regional, provincial or international experts recognized by their peers for their expertise in the target areas. These experts may be consulted in order to gather additional information necessary to the evaluation process.

The evaluation of the economic aspect, taking into account the situation in which the technology or the intervention is to be integrated, clarifies the decision making in proper context. The parameters for determining costs may be drawn from scientific documentation, consultation with experts and the analysis of medical files. These parameters may include, among others, the duration of the intervention, the salaries of the professionals involved, the costs of purchasing and maintaining the equipment used, and other material resources. Both direct and indirect costs may be considered, depending on the situation.

A literature review that focuses on practice guidelines developed for the technology or intervention being evaluated may also contribute to the formulation of recommendations and may support a decision. In fact, these guidelines are usually written by experts. There may be local, regional, national and international guidelines. As for scientific articles, their quality may be evaluated by means of appropriate grids (Modules InfoCritique, 2011). Nevertheless, a certain degree of vigilance is required because certain guidelines may have been written by groups that may have conflicts of interest, such as those drawn up by companies that produce and sell the technology being evaluated.

Finally, a search of the available documentation concerning the contextually relevant parameters may help in recommendations and decision making. For example, organizational models, and/or the legal and ethical aspects relating to the technology or intervention being evaluated may be documented. The scientific information that focuses on these parameters is most frequently found using search engines or databases that are more oriented toward the social field. In addition to scientific articles, it is possible to consult reference books, documents produced by ministries, organizations and institutions, and the documents that come from what is commonly known as "grey literature".

Conclusion and key message

The HTA may support the quality of professional practice, and occupational therapists may take advantage of this resource. Formulating a substantive recommendation to support a clinical or administrative decision about a technology or intervention demands a certain degree of expertise and may prove to be a relatively long and complex process. This process must be used while taking into account several parameters as well as the context into which the technology or intervention will be integrated. The organizations involved in financing research increasingly favour gearing research to the clinical environments, the decision-makers, the payers and with the needs of users. Efficacious means are also sought for disseminating the results of the research and supporting their adoption in clinical environments. The HTA is part of this orientation.

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Conversations for enablement: Using coaching skills in occupational therapy

Wendy Pentland

Coaching is a specific approach to communication designed to facilitate positive change. Learning to use selected coaching skills in practice offers occupational therapists powerful tools for enabling client pursuit of meaning, adaptation and change. While coaching is a profession with its own specific training and certification programs, occupational therapists don't need to complete coaching certification to introduce aspects of the coaching approach into their practice. Occupational therapists can learn and integrate specific coaching skills into their work, just as they select and apply approaches from professional fields like teaching/education, counseling, architectural design, psychology and community development.

Coaching has been formally adopted as an enablement skill by the Canadian Association of Occupational Therapists (CAOT) (Townsend & Polatajko, 2007) and has been identified by the Australian Association of Occupational Therapists (AAOT) as an emerging area of practice for the profession. The coaching approach to communication is being taught to students in occupational therapy programs around the world, including University of Queensland, Hong Kong and here in Canada at Queen's University.

While the term "coaching" does appear in the occupational therapy literature and professional conversations, very little has been written about it and how to apply coaching in occupational therapy. This article aims to begin to address this gap by explaining what coaching actually is, coaching's theoretical underpinnings, what coaching can offer occupational therapy, how occupational therapists can begin to apply coaching and integrate it in to their practice, and how you can learn more about coaching and add it to your professional skill toolbox.

What is coaching?

Coaching can be defined as a specific conversation-based partnership for facilitating client change from their current state to a more desired future state. The process is highly client-centred, fosters self-directed learning and is grounded in self-awareness, personal values, strengths recognition, possibilities, choice and self-responsibility. A key focus is assisting clients to discover what is important to them, contribute more of their unique self to the world and thus create a greater sense of meaning in their lives. The client is regarded as an expert in their own life and the coach partners with them to bring it out.

Coaching is typified by:	Coaching is not typified by:
Forward focus	Past focus
Partnering relationship	Expert/counsel
Powerful non-judgmental questions	Advising
Action-reflection-learning process	Judge/evaluate/interpret
Appreciative/strengths/possibility focus	Problem-solving/weakness/Fix-heal the past
Curiosity, creation & invention	Prescribing/recommending
Focus/Attention to pace	Driving/achieving
Championing/challenging	"You need my help"
Accountability	Assessments of compliance and co-operation

Adapted from Adler Learning International

What are the origins and theoretical underpinnings of coaching?

Coaching is an emerging profession with a history of citations in the literature dating back to the 1960s. Its origins are grounded in organizational behaviour and the potentiation of human performance in the workplace. In recent years there has been an explosion of interest in the application of coaching in a wide variety of fields for achieving behaviour change, optimal performance, health and fulfillment. The field is in the process of consolidating its theoretical foundations and expanding its empirical evidence base. Like most of the human service professions, coaching borrows for its theoretical foundations from a wide range of fields including human development, psychology, philosophy and education.

At the core of coaching is the recognition of the importance of the dynamic between differentiation and unique self-expression on the one hand, integration and connection on the other and the deep human desire to make a contribution to the betterment of humanity. The challenge for the coach is to work with the client to help them discover what their "optimal resolution" to this dynamic is at this stage of their life.

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What fundamental aspects of coaching are relevant to occupational therapy?

Enabling has been defined as a way of working with people to choose, organize and perform those occupations they find useful and meaningful in their environment (CAOT, 1997). The occupational therapy profession has well-established approaches for enabling clients to organize and perform, but less to draw on when it comes to how to enable occupational choice and meaning. Coaching targets exactly these essential human developmental tasks. Coaching conversations go to the core of who the clients are and excite them with hope and possibility for change. Disability and illness and much of what brings clients to occupational therapy is about transitions, a desire for change, learning, growth and an opportunity for re-invention and re-alignment of living with what really matters to them. Coaching offers occupational therapists a specific conversational approach with clients to identify and get clear about what has meaning for them and to make choices congruent with that.

As a guide for adapting and applying the coaching approach in occupational therapy, a Definition, a Model and Competencies are provided here:

i) Definition of coaching in the context of occupational therapy: *A specific conversational partnership for enabling occupational change that assists clients to clarify what is important to them, access their strengths, resources and creativity, choose goals and design and follow a plan of action to get what they want.*

Coaching as an enablement skill is highly inter-related with the other nine enablement skills (CAOT, 2007) and in its fullest sense incorporates many of them, particularly those the therapist does with the client (engage, collaborate and educate) versus for/to (adapt, advocate, consult, design/build, and specialize). The distinguishing feature of coaching in the context of occupational therapy is its focus on occupation.

ii)The Model of Coaching for Enablement in Occupational Therapy (see Fig. 1) illustrates occupational therapy coaching occurring at the interface between the person and their environment and occupations, based on the Person, Environment and Occupation (PEO) Model (Law, Cooper, Strong, Stewart, Rigby & Letts,1996). Coaching enables by beginning at the level of the person (affective, cognitive and spiritual). As a result of the client's action-reflection-learning cycle throughout the coaching process, changes then occur at all three levels (Person, Environment, Occupation). The occupational therapist coaching in the model is situated in the environment and engaging in coaching is an occupation. The diagram clearly illustrates that the coaching is not done to a person but rather the person and the occupational therapist coaching participate equally in this collaborative, co-created relationship and both are impacted, influenced and changed by the process.

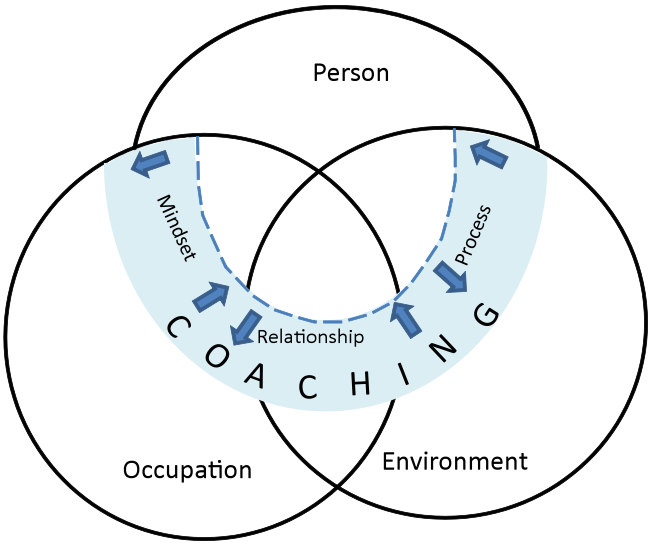

Figure 1. The Model of Coaching for Enablement in Occupational Therapy (based on the Person, Environment and Occupation (PEO) Model by Law, Cooper, Strong, Stewart, Rigby & Letts, 1996).

iii) Occupational Therapy Coaching Competencies. Coaching in occupational therapy is a conversational partnership having three unique features that can be translated into three competency areas: mindset, relationship and process. Each area has six corresponding competencies. These can be viewed in more detail at www.occupationaltherapycoaching.com.

1. Mindset: Recognizes that humans' beliefs and assumptions about themselves, others and the world around them directly influence their occupational behaviour and what they see as possible, and they are amenable to change.

2. Relationship: Co-creates with the client and maintains an occupational therapist-client relationship that is designed to elicit and support what the client wants. This relationship is characterized by trust, openness, honesty, non-judgment, curiosity, spaciousness, and freedom to explore and live into possibilities.

3. Process: Within the co-created occupational therapy coaching relationship, demonstrates competence in selected coaching skills designed to enable the clients' forward movement toward their desired occupational participation for greater health and well-being.

The models of service best suited to occupational therapy coaching for enablement include health promotion, community development, community rehabilitation, independent living, and to some extent inpatient rehabilitation. Selected aspects of coaching can be adapted for use in acute care. Coaching conversations have application beyond clients, to include colleagues, direct reports, families, teams and student supervision.

What are some ways I can begin now to try out the coaching approach to conversations with clients?

You might begin by asking clients what it is they want to work on, or take away from the session/occupational therapy. That can become part of the agreement of what you will focus on. Next try using powerful questions with clients. Examples are provided below. Effective coaching questions are short and to the point and are oriented to what the clients want. Ask from a place of genuine curiosity and listen without judgment to the client's answer. Stay curious. Your aim is not to gather information but to enable clients to see themselves through the lens of an astute self-observer. To stay with the client and go deeper, in your next question stay curious and use some of the words he or she just used. For example: Client: "My family is more important to me in this than anything." Therapist: "What about your family in this is so important to you?" You will use all of the communication skills you learned in your occupational therapy professional training, like active listening and being aware of all dimensions of the client's communicating (including tone and inflections of voice, eyes, facial expression and body language, and what they are not saying). Listen with your head as well as your gut and intuition (in coaching this is referred to as Level III listening). Listen for what the client is really saying or wanting. In coaching conversations, paraphrasing and reflecting back are used less; in their place offer the client silence, slow pacing and deep listening to give them a safe space to reflect and do their own work.

Questions to try in conversations for:

- **Meaning & fulfillment**
  What do you really want?
  What is "a good life" for you?
  How do you want the world to be different because you were in it?
  What do you value?/What are your values?
  Where are you living in-line /not in-line with your values?
  What are you tolerating?

- **To expand self-awareness**
  What motivates you?
  When are you unable to laugh at yourself?
  Is what you are doing right now life-affirming or life-numbing?
  Who are you at your best?
  What are your strengths/gifts?
  What are you grateful for ?
  How do you get in your own way?

- **To expand choices**
  If you couldn't fail, what do you want your life to be like in five years?
  What are other possibilities?/What's just one more possibility?
  If you had free choice in this, what would you do?
  Want to brainstorm? ... Let's come up with 20/30/40 possibilities.

- **For making choices and decisions**
  What resources do you need to help you decide?
  What value(s) are most important to you right now?
  How do you think it will all work out?
  What is your body telling you about this?
  How will you know you made the best choice?

- **For action**
  What's the next step for you?
  What needs to happen now?
  How can you make this be easy/fun?
  What are you committing to?

- **For the stuck client**
  What's not clear?
  What are your assumptions?
  What seems to be the main obstacle?
  If you were at your best, what would you do right now?
  Where are you giving away your power?
  Where are you holding back?
  What will free you up?
  What's the first small step you need to make?
  What if you do nothing?

What are some resources for me to learn more about coaching?

If you are interested in learning more, the following are some resources to get you started. Note that lots of coach training organizations offer short introductory courses that will give you sufficient basic skills to begin using in your occupational therapy practice. Coaching is not a regulated profession so if you choose to hire a coach or take any coach training (one course or the whole certification), check that the coach is International Coach Federation (ICF) certified and the training program is accredited by the ICF.

Suggested resources for further learning

- Occupational Therapy Coaching www.occupationaltherapycoaching.com
- Adler International Learning www.adlerlearning.com
- Annual Coaching in Leadership and Healthcare Conference www.instituteofcoaching.org/
- Coaches Training Institute www.thecoaches.com
- Institute for Life Coach Training www.lifecoachtraining.com
- International Coaching Federation www.coachfederation.org/
- Newfield Network www.newfieldnetwork.com
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Low vision in the workplace

Michelle Markowitz

Low vision is often considered to be a condition that affects the elderly. There are however, middle-aged individuals with low vision due to conditions such as myopic degeneration and glaucoma. For this group, their productive role in society is an important factor which is used to define themselves. Key features derived from contributing to the social and/or economic factors of society include fulfilling basic human needs as well as providing meaning, purpose, balance and satisfaction (Canadian Association of Occupational Therapists [CAOT], 1997).

Low vision has a negative impact on quality of life by decreasing functional ability and independence (Anetzberger, 2001). This can be devastating as it can have a negative impact on the type of productive work a person with low vision perceives themselves to be capable of. Furthermore, employers may have a poor perception of the capabilities of an individual with low vision in the work force. The Canadian National Institute for the Blind (CNIB) finds the employment rate among working-age people with vision loss is only 25%, "despite the fact that most of this group is highly educated and qualified, a result of outdated employer attitudes" (CNIB). However, we know that adaptations to the workplace can be implemented in order to enable occupational performance. Assessing the workplace of an individual with low vision is a key role for occupational therapists.

Every individual is interconnected with their environment. "Interactions between persons and their environment are dynamic so that change within any part affects the other parts" (CAOT, 1997). An analysis of key aspects of the environment in a specific setting such as the workplace can be used to determine whether a person's occupational performance is being hindered or enabled. Environmental elements that can be considered include social, physical, cultural and institutional aspects (CAOT, 1997). A workplace assessment can be completed by an occupational therapist to determine which environmental elements either deter or facilitate the worker's performance. Recommendations can then be made to adapt the workplace to enable optimal occupational performance.

Low tech and high tech adaptations

Although each workplace is unique in its set-up as well as what is required of the worker, there are some general principles to be considered. For the working individual with low vision, the physical environment can be adapted to include both low technology (low tech) and high technology (high tech) recommendations. Low tech adaptations should include suggestions for setting up proper lighting. This includes determining whether incandescent or fluorescent lighting is more appropriate as well as using dimmers to increase control over the amount of lighting available. Desk lamps with flexible arms can also be introduced for specific tasks. In addition, glare should be eliminated as much as possible and any available natural light should be incorporated appropriately (Markowitz, Markowitz, & Markowitz, 2011).

Additional low tech adaptations should include recommendations for improving contrast. It is suggested that floor coverings be comprised of solid colours as opposed to patterns. This can help distinguish the border between the wall and the floor more easily. Darker objects should be placed in front of brighter backgrounds or vice versa. Glass doors should have strips of reflections tape on them to prevent collisions. Door knobs or handles and door frames should be brighter in colour in order to increase their visibility. Electrical outlets should also be brighter in colour so that they are more visible. Contrast can also be improved when an individual uses selective transmission photochromic lenses. These are typically prescribed by either an ophthalmologist or an optometrist (Markowitz et al, 2011; Vision Aware).

Low tech adaptations may also include the use of any low vision devices. For example, hand magnifiers, stand magnifiers, telescopes as well as any prescription glasses may be used. The occupational therapist can provide training in the usage of these devices as well as ensure that they are being used appropriately in the workplace.

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There are also high tech adaptations that can be recommended for the workplace. Adaptations may include screen magnification and screen reading software programs. Screen magnification programs not only enlarge what is written on a screen but can also improve contrast on the screen. A screen reading software program narrates what is written on the screen, what is being typed on a keyboard as well as the users' actions as they navigate programs. Additional software programs include optical character recognition which can be used to convert the text from a scanned document into spoken text on the computer. There are also portable note taking devices and large keyboards. Large keyboards are available in different contrast options such as white letters on black or vice versa (Vision Aware; Inclusive Design Research Centre; Petty, 2009). The use and implementation of such devices depends on the requirements of the workplace assessed. Recommendations are best made by professionals who have experience with these devices.

The institutional aspect of a workplace is another element of the environment that can be considered in a workplace assessment. Areas to review include the policies and procedures of the organization where the work is occurring. Questions to consider include whether any policies or procedures are preventing an individual with low vision from reaching their full work potential. Perhaps there are other policies and procedures that can enable an individual with low vision to successfully perform their work duties. Also to be considered are issues of accessibility to the workplace, as well as the availability of employment supports, if any (CAOT, 1997).

Low vision can result from a variety of underlying medical conditions. Home assessments have been commonly used as part of the rehabilitation plan for individuals with low vision. They have been used as a tool to either maintain or restore an individual's independence to increase their function in the community. Similar consideration should be given to individuals of all ages who are active in the workforce and affected by low vision. For these individuals work is a major element that defines their existence. As a result there is a need for workplace assessments to enable occupational performance and ultimately maintain independence. This is a role for occupational therapists that will hopefully become more common in the future.

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KT & OT

COLUMN EDITORS: HEIDI CRAMM AND HEATHER COLQUHUON

Applying knowledge translation theories to occupation

Grace Warner and Elizabeth Townsend

Using knowledge translation theories in knowing occupation

A core question for occupational therapists and occupational scientists is, "What does knowing occupation mean to us and others?" First, knowing occupation means having a very broad knowledge of occupation that can be expressed using an array of concepts such as occupational classification (including jobs and labour), occupational deprivation, occupational outcomes and occupational performance . Second, knowing occupation also means knowing that occupation is essential to human existence and the organization of social structures. A core question for our field is, "What responsibility do occupational therapists and occupational scientists have to translate our broad knowledge of occupation when conducting research and practicing with individuals, communities or other clients?" In response, we can say that we have a social and scientific responsibility to engage others in knowing occupation as we do, so they can share our broad knowledge of occupation. This article profiles two theories for extending our own, and others' knowledge of occupation: the promoting action on research implementation in health services (PARIHS) framework and Greenhalgh's conceptual model which builds on the diffusion of innovations theory.

The call for knowing occupation

The Canadian Society of Occupational Scientist's (CSOS) mission statement is "to promote an understanding of the importance of occupation to a diversity of public and academic audiences" (CSOS, 2011). This mission statement is a call to action that people who know about occupation have a responsibility to promote a broad understanding of occupation with everyone they encounter. The call to occupational therapists and occupational scientists is to raise our own and others' awareness of the growing knowledge of occupation. It is based on the belief that sharing our broad knowledge of occupation will be beneficial to people and societies. To answer the call effectively we need to understand how policies, biomedical procedures, school, home, employment and other social structures affect occupation, and, conversely, how humans affect those structures through our occupations. Armed with this understanding, we can forge new partnerships and allow ourselves to challenge the status quo. Thus, the call requires us to have courage to share our knowledge of occupation with those who have alternate views. When we translate our knowledge of occupation with others, new resources can be generated that improve others' occupational outcomes and reduce occupational injustices related to age, disability, poverty and more.

Engaging in knowledge translation

We can meet the call to raise our own and others' awareness of the growing knowledge of occupation by engaging in the discipline of knowledge translation. One of the roots of knowledge translation is the evidence-based practice movement that looks at ways to increase the use of research evidence by practitioners (Law, 2010). Within knowledge translation several terms are used to convey subtle or not so subtle differences and implications. For example, knowledge exchange and knowledge integration refer to individuals or groups co-creating knowledge and collaborating on its utilization; whereas, knowledge transfer and knowledge dissemination imply a passive approach to informing people without asking for their input (CIHR, 2009). In addition to the language of knowledge translation, several theories inform knowledge translation, such as the PARIHS framework and the diffusion of innovations theory (Colquhoun, Letts, Law, MacDermid, & Missiuna, 2010).

The PARIHS framework (Kitson, Harvey, & McCormack,

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1998) focuses on how to increase the implementation of new research or knowledge by practitioners, such as occupational therapists. The framework has been refined over the past decade, and identifies three key factors as being important to the successful implementation of evidence in practice: the qualities of the evidence (i.e., research evidence, therapists' experiential knowledge, and client preferences); the context where the evidence will be used (i.e., the practice context or setting where the evidence will be applied); and what can be done to facilitate practitioners' ability to use research evidence in their practices. The PARIHS framework can be used as a diagnostic and action tool to evaluate the quality of the evidence and context to create an appropriate strategy for increasing the use of evidence in practice (Kitson et al., 2008). It can also be used to identify and examine the factors that affect occupational therapists' ability to apply occupation-based theory and use occupation-based tools in their practices. For example, occupational therapists could use the PARIHS framework to develop a facilitation strategy for implementing evidence that supports clients' occupational rights (Nilsson & Townsend, 2010).

Greenhalgh and colleagues' (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004) conceptual model builds on the diffusion of innovations theory. The model is based on an extensive systematic review of the literature from several disciplines to identify the elements that affect the diffusion of innovations in health care organizations. To illustrate, the model could be used by occupational scientists to explore what affects the integration of occupation-based measures, such as the Canadian Occupational Performance Measure (COPM), within a health care organization. Greenhalgh and colleagues identify factors such as the qualities of the innovation, which occupational therapists could use to ask questions such as: "Is the COPM an easy outcome for managers and other health care professionals to understand and appreciate?" Occupational therapists or occupational scientists could also use this knowledge translation model to identify what cultural or institutional barriers affect health care professionals in their adoption of the COPM and knowing occupation broadly. These barriers could be at several levels: macro (i.e., provincial departments of health, education, transportation or other systems); meso (i.e., acute care facility, community service, school-based or other programs); and micro (i.e., occupational therapists' everyday practices to implement programs and assert leadership). Using Greenhalgh and colleagues' model, occupational therapists could also investigate how the outer context (i.e., sociopolitical environmental factors) influences the acceptance of occupation-based outcomes such as the COPM. Once the barriers to adopting the COPM are clearly articulated, occupational therapists and scientists will know how and where to advocate for its adoption. For example, if the COPM is difficult for other health care professionals to comprehend, occupational therapists could lead education sessions on the COPM for those professionals.

Knowledge translation and readiness for change

One factor that affects the ability of others to know occupation broadly is occupational therapists' and others' readiness for change. Readiness for change is represented in both the PARIHS framework and Greenhalgh et al. model when assessing whether the practice context is amenable to change. The transtheoretical model of change (Prochaska & DiClemente, 1983) can add information to the knowledge of occupation translation models by evaluating five stages in readiness: pre-contemplation, contemplation, preparation, action and maintenance. This model could be used self-reflexively by occupational therapists to evaluate how ready they are to incorporate new knowledge of occupation into their practices. In addition to individual readiness, organizational readiness also supports or hinders whether or not the broad knowledge of occupation is integrated in organizational decision making. Organizational readiness means evaluating whether the majority of individuals within an organization are psychologically and behaviourally prepared to initiate change (Weiner, Amick, & Lee, 2008). Greenhalgh and colleagues (2004) found that organizational readiness was an important precursor to making system-level changes, such as implementing best practice recommendations. For example, individual occupational therapists may use the COPM to guide day-to-day practice priorities with clients and to organize occupational therapy documentation. Yet their organization may not be ready to trust COPM data to guide hospital discharge or program funding decisions. To improve organizational readiness, therapists may need to document evidence linking these tools to improved client outcomes to increase that trust.

Implementing knowledge translation through communities of practice

Even when occupational therapists and occupational scientists understand knowledge translation theories, it can be challenging to implement them. One strategy for applying knowledge translation theories and advancing the call for knowing occupation is to create Communities of Practice (COPs).

COPs are "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott, & Snyder, 2002, p. 4). COPs grew from the premise that people do not learn in isolation; rather, they learn by acting and interacting with others (Estabrooks, 2003). COPs have been used in various situations to stimulate evidence-informed practice because they provide individuals with an opportunity to exchange knowledge to improve individual and organizational readiness. For example, COPs that discuss organizational barriers and research evidence for using COPM data in discharge planning could lead to increased individual and organizational readiness for implementing the COPM. Where distance and time are challenges to creating COPs, it is possible to create online COPs. One online COP provides practice guidelines, research evidence, and an opportunity for discussion to find ways to improve evidence-based practice. (White, Basiletti, Carswell, Head, & Lin, 2008).

Conclusion

In conclusion, the call raised here is to view knowledge translation theories as tools that can be used to increase others' understanding of the centrality of occupation in human life and to apply this understanding to use occupation in promoting health, well-being and justice (Wilcock, 2006). The call is to increase readiness within ourselves and others to apply occupation-based theory or to use occupation-based tools. Organizing COPs is offered as a strategy for creating new partnerships and embedding occupational concepts in novel contexts. The implications for occupational therapists and occupational scientists are that knowledge translation theories can enable individuals and societies to know and apply knowledge of occupation broadly.

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Communication and occupation: New avenues for autism

Michèle L.J. Hébert, Eva Kehayia, Patricia Prelock, Sharon Wood-Dauphinee and Laurie Snider

COLUMN EDITOR: LAURA BRADLEY

Communication is humanity's primary means of relating with the world, yet it is a core deficit for children with autism spectrum disorders (ASD) (American Psychiatric Association, 2000). Valid and reliable identification of ASD is reported as young as 12 months of age (Ozonoff et al, 2008). Considering the high plasticity of the human brain in infancy (Dawson & Zanoli, 2003), the earlier a child with ASD receives intervention, the better their communication outcomes may be (National Autism Center, 2009). Occupational therapists are members of clinical teams serving this population; however, little is known about the possible contribution of our profession in helping children with ASD to become better communicators. This paper explores the potential role of our profession in reaching towards this goal. We begin with an overview of communication in ASD, and follow this with a discussion of how communication is relevant to paediatric occupational therapy. Consideration is then given to our specific role to enable communication, with the intent of furthering our practice for this population and their families.

Communication development for children with ASD

Communication in children with ASD is different than in other children. In typically developing infants, non-verbal communication emerges at six months, and verbal communication at 12 months (Hulit & Howard, 1997), whereas in children with ASD, non-verbal and verbal communication develop significantly differently. Most children with ASD use some degree of verbal communication, yet many of these verbal communicators present with echolalia and challenges with reciprocal conversational exchanges (Prelock, 2006). Articulation and basic grammar may be intact, but prosody, semantic language and pragmatic language are problematic, which interfere with their social communication (Prelock, 2006). Young children with ASD have a tendency not to respond to social stimuli such as facial expressions or familiar voices (Dawson & Zanolli, 2003). Differences also exist in the quality or quantity of communicative behaviours such as social play, commenting, and eye gaze toward the communicative partner (Paul, Chawarska, Cicchetti, & Volkmar, 2008). By age two, some toddlers with ASD are predicted to become primarily non-verbal communicators, and of those only 30% will eventually learn to speak (Charman et al., 2005). Challenges in being understood or understanding the world can lead to significant frustration for many children with ASD. In the absence of words, the only means of communicating their needs, wants or intents are often with unwanted behaviours such as tantrums, crying, hitting, or other behaviours (Watling, Deitz, Kanny, & McLaughlin, 1999).

Relevance of communication in occupational therapy

Considering the communication challenges that are characteristic of children with ASD, there is a likely impact on establishing a therapeutic relationship, which requires reciprocal communication. Communication is an essential ingredient for effective occupational therapy to occur (Watling et al., 1999). Moreover, our field plays a central and unique role in enabling occupation. Proficiency in childhood occupational performance depends on purposeful communicative exchanges (Clark, Miller-Kuhaneck, & Watling, 2004). Fluidity with non-verbal and verbal communication modes are key elements to engaging in childhood occupations. Furthermore, there are occupational performance assessments available to occupational therapists, which evaluate components of communication (Clark et al., 2004). There are also guidelines highlighting current evidence-based practices for clinicians who work with this population (National Autism Center, 2009). Additionally, in recent years, the number of controlled research studies investigating

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the effectiveness of communication interventions in ASD has been growing (Case-Smith & Arbesman, 2008). While existing literature suggests the presence of a direct and multi-faceted relationship between communication in ASD and our field, the question remains whether occupational therapists have a formal role in enabling communication in ASD and how this role is defined.

Considerations for occupational therapy and ASD

Occupational therapy's current role with children who have ASD emphasizes reducing unwanted behaviours to increase these children's participation in daily life activities (Watling et al., 1999). A unique contribution of occupational therapists is their expertise in analysing and adapting activities within the environment to help meet children's needs (Law et al, 1996). Occupational therapists indeed adapt barriers and facilitators to enable children's participation (Law et al., 1996). This expertise, together with the use of play as a childhood occupation, brings about the enablement of communication in young children with ASD in the context of occupational opportunities throughout the day. Furthermore, in a complex disability such as ASD, collaboration among different professional disciplines is crucial (CAOT, 2008), and such collaboration can have positive effects on child development (Odegard, 2006). Our field's uniqueness may be instrumental when several professionals are working toward a common goal, such as communication. For example, if speech-language pathologists (SLPs) determine that children are non-verbal, and consider the use of pictograms, gestures or sign language, occupational therapists may contribute to the child's communication program by determining the child's fine motor abilities to utilize one of these modes of communication. SLPs and occupational therapists can then collaboratively recommend the most developmentally appropriate communicative means and the best suited materials for ensuring successful communication. Consequently, in an interprofessional collaborative framework, occupational therapy may provide a natural context for facilitating early communication.

An investigation is underway to address the lack of information on whether occupational therapists engage in enabling communication in these children, in collaboration with SLPs or alone. This investigation will describe our current practices with young children who have ASD to determine the parameters that define early communication practices. Pilot data suggest that paediatric occupational therapists and SLPs underline the importance of initiating occupational therapy with toddlers prior to or in conjunction with SLP (Hébert, Kehayia, Prelock, Wood-Dauphinee, & Snider, 2011). Preliminary findings point to a probable relationship between interprofessional collaboration and our practice, suggesting occupational therapists who regularly collaborate with SLPs may more frequently use communication-focused interventions, compared to those who do not collaborate with SLPs and who may not consider communication-focused interventions. Indeed, there may exist a belief in our field that facilitating communication is solely the role of SLPs, leading to a barrier to enabling communication in children with ASD (Hébert et al., 2011).

Given that communication is directly related to occupation, and that behaviour is communication, it is relevant to consider a broader, more comprehensive approach to our practice when serving children with ASD. Occupational therapists have unique opportunities to foster communication in children with ASD within a collaborative context with other professionals and families.

Acknowledgements

This study phase was possible thanks to practitioners in Quebec and Vermont, the Jewish Rehabilitation Hospital and the Centre for Interdisciplinary Research in Rehabilitation (CRIR), McGill University, University of Vermont, Eleanor Côté Foundation, Judith-Kornbluth Gelfand Paediatric Fellowship, Mental Lexicon Project, and the Canadian Occupational Therapy Foundation. Underlined is the valuable support of family, friends, students, and faculty members.

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COLUMN: STUDENT PERSPECTIVES

COLUMN EDITOR: TOM GRANT

Global health issues fostering interprofessional collaboration at Queen's University

Charlene Cooper

Health in the Global Context is a student-run series that was initiated by two medical students at Queen's University in 2005 in response to an interest in global health issues amongst health care students and a lack of formal learning in global health. In 2006, three occupational therapy students joined with one nursing student to further develop this initiative and explore its effectiveness as a method to foster interprofessional learning (Cooper, MacMillan, Beck, & Paterson, 2009). I jumped at the opportunity to be involved in this initiative when I entered the Queen's University Master's program in occupational therapy in 2007. I had the privilege of being on an organizing team with a medical and a nursing student to further develop and implement this series on campus. We were fortunate to receive a stipend as a Queen's University Inter-Professional Patient-Centred Education Direction (QUIPPED) project. The purposes of the series were to promote interaction and communication among students in the health profession disciplines while developing an understanding of how various disciplines can work to improve these situations, and to educate and inform students about relevant health issues in the global context.

The first series of sessions

By email, we recruited 41 students from medicine, nursing and rehabilitation for the series. They gathered on Monday nights on campus from January to March 2008 for an eight-week series to learn about and discuss various global health issues and case studies in assigned interprofessional teams. The main objectives were: (1) to promote interaction and communication between students in different health disciplines; (2) to educate students about relevant health issues in the global context; and (3) to promote an awareness of how various disciplines can work to improve these complex situations. Speakers shared their experiences and knowledge in five of the eight sessions after which the students split into assigned interprofessional teams to discuss a case study and questions that related to the presentation. The other sessions were more didactic and included time for a group question period. Some of the latter sessions were open to any student who was interested in learning about the specific topic.

Throughout this first series, we had the opportunity to learn from a wide variety of presenters. Debbie Docherty, a social worker, shared about her experiences in Sri Lanka. Eartha, an Aboriginal Community Health worker, discussed the health concerns of the Aboriginal peoples in Canada and taught us the medicine circle, the foundation model of the Indigenous people of Turtle Island. We had the privilege of hearing the president of the Registered Nurses Association of Ontario, Joan Lesmond, as she inspired us to consider our global obligations and the role and responsibilities of each profession in making a difference in developing countries. Dr. Beverley Chalmers spoke to us about the prevalence and cultural history of female genital mutilation. Doctors Karen Yeates and Jennifer Carpenter shared about the Canada Africa Community Health Alliance (CACHA) and their involvement with travelling medical clinics and the development of a women's centre in Moshi, Tanzania. We were also honoured to have Doctor Rachel Thibeault, recipient of the CAOT 2002 Muriel Driver Memorial Lectureship Award, share her expertise in community rehabilitation and social justice in health care. She encouraged us to challenge the status quo, and she discussed the importance of sustainability in international development, social inclusion and service integration.

Throughout the sessions, we learned not only about global health issues but also about our future careers as health care professionals. We learned to listen to others' perspectives that often stem from different theoretical frameworks. We were encouraged to look at our own ideals and values and how that influences our personal judgements and decisions.

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We discovered the important role that each profession plays in providing holistic client-centred care. And finally, we also realized that we had been oblivious of many issues around the world.

The participants were asked to complete a speaker evaluation after each session and an overall feedback form. Results were presented in an unpublished manuscript in 2008 (Austin, Cooper, & Eamer) in which students shared the following comments:

- "All presentations have been insightful and interesting" - occupational therapy student
- "The topic and information are very relevant to the global health and the presenters show the impact of their work on global health, which is very amazing." - physiotherapy student
- "Good format; lecture + small groups" - medical student
- "I thoroughly enjoyed all the lectures. These all helped keep me interested in learning when the semester turned dull. All the speakers were inspiring. I also enjoyed leaving the Queen's bubble for an hour every week. Thanks!" - nursing student
- "Fabulous—Inspirational and very relevant to my aspired practice" - nursing student

Some students suggested that it would be helpful to email a brief synopsis of the global health topic prior to each presentation, while others suggested that it may be beneficial to change interprofessional discussion groups during the series in order to interact with a greater variety of students (Austin et al., 2008).

The second series of sessions

In the fall of 2008, I began recruiting volunteers to help me organize the series for the second consecutive year with hopes of improving the series based on feedback received from the previous participants. I was fortunate to be joined by a team of first year students, one from medicine, one from nursing, and two Masters students in physiotherapy. With a larger planning team than the previous year, we were faced with more scheduling challenges; however, we benefited from a broader range of input. I looked forward to working with first year student organizers to promote sustainability for future years.

The format of the second series remained relatively similar; however, we increased the amount and frequency of small group discussions and encouraged open dialogue during the sessions. In previous years, only the medical students received formal recognition for participation from their faculties. Following this session, we were able to offer recognition from all faculties for students who attended seven out of the eight sessions. In contrast to the previous year, we also invited students from clinical psychology and X-ray technology. We also received funding from the School of Rehabilitation to provide thank you gifts to the speakers and to cover their travel and accommodation expenses.

We had 26 participants in the second series, including students from occupational therapy, medicine, nursing and x-ray technology. We invited some speakers back from the previous year and were able to recruit some new speakers for the series. John Patterson, who has a Master's in Rehabilitation Science, spoke to us about community based rehabilitation in Central America and its relation to peace-keeping. We learned about child soldiers from Alyson Rowe from War Child Canada, and Doctor Heather Onyett challenged us to confront the challenging issues presented in newborn and maternal health in countries where heath care resources are limited. We were fortunate to have Doctor Rachel Thilbeault visit us again from Ottawa University to educate us on issues involved with fair trade and community development with people living with leprosy. When asked for feedback about her involvement with the series, Doctor Thibeault shared the following words with me in personal communication, "I think it is remarkable that students recognize so soon in their career the inescapable interdisciplinary nature of all health major health care issues, locally or globally." (March 4, 2009).

Evaluation

I did a formal evaluation of the second series, including pre- and post-series evaluations and a focus group, as part of my occupational therapy coursework. An extensive amount of feedback was collected through the questionnaires administered before and after the series, in addition to the focus group (Cooper, 2009). One occupational therapy student shared her thoughts on how to effectively create an interprofessional learning environment:

I think that in order to have a true interdisciplinary session, it should be half and half. You should learn about it, but you don't need to learn about it ... really extensively. We would have gotten a lot more out of it if we had... a good 45 minutes to sit down and chat because when we did chat ... there were never lulls in the conversation.

Interestingly, aside from the organizers, there were no student participants from physiotherapy. Some students mentioned that there were conflicts with student placements and it was noted that the most effective recruitment was either through word of mouth or through repeated email invitations/ reminders. A nursing student mentioned that even following the series, she didn't *"really know the difference"* between occupational therapy and physiotherapy (Cooper, 2009). The feedback collected suggests that it is important to provide students with opportunities to learn in an interprofessional setting; however, it is also necessary for the students to be sufficiently supported in their learning so that they are able to effectively communicate their scopes of practice to ensure they gain a basic understanding of each other's professions.

While I could go on for pages to discuss my research results (I am quite passionate about this topic), I will summarize my findings in the following list to present the many challenges, but also the many rewards.

- Challenges:
  - o Difficulty recruiting participants
  - o High attrition rate of participants
  - o Lack of interprofessional education
  - o Lack of global health expert input
  - o Limited funding
  - o Limited faculty involvement
  - o Conflicting time schedules

- Successes
  - o Provided first interprofessional learning opportunity for many students
  - o Increased interest in pursuing future interprofessional initiatives
  - o Gained knowledge in global health issues
  - o Greater knowledge of scope of different health disciplines
  - o Appreciation for different perspectives
  - o Recognition for participation from the health faculties

A personal journal entry from March 17, 2008 summarizes my overall experience:

One of my greatest joys of this series was hearing other occupational therapy students explain what their profession actually means to other students. There is such a lack of communication amongst the faculties . . . students often graduate, work in interdisciplinary settings and don't understand and appreciate the value of other's professions!

I would love to be a part of this initiative again next year and I really hope that faculties at Queen's will consider implementing more interdisciplinary learning opportunities into our classrooms in addition to discussing more global health issues. I believe that both of these areas are essential and crucial in the development and training of effective Canadian health care workers.

In the words of Doctor Rachel Thilbeault, "Long live the initiative!" (personal communication, March 4, 2009).

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Evidence-based practice in occupational therapy: Context and resources

Mary Glasgow Brown

Moving from a small regional hospital to a provincially-mandated teaching hospital has highlighted for me the impact of context on evidence-based practice (EBP). My experience of grand round presentations live, research posters lining the halls, discussions with experts in the field and the company of colleagues to participate in tele-health conferences has been like having a smorgasbord of EBP compared to the literature searches that were my prior main source of evidence.

This is not to say that my EBP skills are stronger in one hospital than another, but the opportunity to engage in available evidence is different in each one. This is only one example of how EBP in occupational therapy is affected by available resources and environments.

Clinicians, professional associations such as the Canadian Association of Occupational Therapists (CAOT), funding bodies of research, health care policy makers and administrators as well as the academic community all share responsibility for and influence occupational therapists' application of EBP (Lin, Murphy, & Robinson, 2010). This article takes a closer look at various contexts and players who influence the clinical use of EBP in occupational therapy.

Historical context of evidence-based practice

Historical roots for evidence-based practice in health care began with evidence-based medicine researched by David Sackett at McMasters University in the early 1990's (Law & MacDermid, 2002). By the late 1990's, EBP in Canada, the United Kingdom, and Australia began to gain attention as a means of improving clinical care in health care (Bailey, Bornstein, & Ryan, 2007). Within occupational therapy, Karen Whalley Hammel has used the profession's scientific identity to challenge our community regarding our underlying professional assumptions, which she suggests are more strongly linked to tradition than to evidence (2009). In recent years, entry-level education has transitioned to graduate level with a greater emphasis on research (Allen, Strong, and Polatajko, 2001) and critical appraisal of available evidence has gained attention within our profession (Bannigan & Moores, 2009; Glegg & Holsti, 2010). With this ongoing emphasis on EBP in occupational therapy it is valuable to consider factors affecting its use.

Professional context and resources

The occupational therapy profession provides great support to EBP and continues to find ways of improving EBP through professional associations, academic programs and regulatory bodies. In a joint position statement on EBP, the CAOT with the Association of Canadian Occupational Therapy University Programs, the Association of Canadian Occupational Therapy Regulatory Organizations, and the Presidents' Advisory Committee declares its own responsibility "for facilitating evidence-based continuing education [programs]"(1999) and assisting occupational therapists through " the promotion of research, publication of evidence, and the sponsorship of easy-to-read reviews of evidence in common practice areas." (2009).

Professional organizations

CAOT provides access to occupation-focused peer-reviewed journals, national conferences, webinars, and workshops serving as a venue for communication for occupational therapy research. Information on EBP and related resource links can be found on the association's EBP-based website with practice guidelines (Law & Bennet, 2010).

Graduate entry-level education

Entry-level graduate education enhances EBP as students build on prior undergraduate knowledge of scholarly evidence and become better equipped to conduct clinical research when practicing (Allen et al., 2001). Additionally, students produce research which may be published or presented at conferences adding to the available body of literature. However, the link between research productivity and education level cannot be directly assumed (Lall, Klein, & Brown, 2003). Thus further research is needed to clarify the effects of Masters' trained entry-level programs on clinicians' EBP skills.

Regulatory bodies

Core competencies outlined by regulatory bodies such as the College of Occupational Therapists of British Columbia (COTBC) mandate that occupational therapists engage in professional development and demonstrate practice knowledge for safe, ethical, and effective practice (COTBC, 2011, p. 11 and 12) thus endorsing the value of EBP within occupational therapy. The role of regulatory bodies and the means by which they ensure EBP (through competency exams, proof of professional development, self-evaluation, etc.) is a topic generating ongoing debate within the occupational therapy profession.

Environmental context and resources

Practice Environment

Therapists' practice environments may contribute specific challenges to EBP including lack of time, lack of accessibility or knowledge, as well as lack of organizational support (Salls, Dolhi, Silverman, & Hansen, 2009; Humphris, Littlejohns, Victor, O'Halloran, & Peacock, 2000). In addition to time constraints, therapists in private practice may also face isolation, heightened accountability, administrative demands and money pressures creating additional challenges to EBP (Barrett & Paterson, 2009). While research has yet to outline the varying opportunities and challenges of urban versus rural practice, the initial example in this article outlines potential recourses and challenges for EBP in different practice settings.

Political influences

Politically, health authorities and the government have a responsibility to support EBP in occupational therapy through financial support, practice guidelines and research initiatives. Clinical practice guidelines are increasingly used within organizations to communicate standards of practice based on research (CAOT, 2007; Stergiou-Kita, 2010).

The federal Task Force on Preventative Health Care and other such initiatives develop and disseminate independent evidence-based recommendations for preventative care; however, they are oriented more towards doctors and nurses (Public Health Agency of Canada, 2010) and consequently only indirectly benefit occupational therapists.

Provincial governments have the funding power to affect EBP. Program and research seat numbers along with research grants with bodies such as the Canadian Institutes of Health Research affect quantity of research available. Local health authorities' budgets for professional development and client caseloads (impacting available time to update practice knowledge) also have significant impact on therapists' access and ability to use EBP.

Conclusion

EBP in occupational therapy is affected both positively and negatively by the complexities of historical, professional, political and practice contexts. As therapists increase quality of care provided, we must continue taking initiatives to stay abreast in relevant evidence. When we engage with colleagues we put knowledge to work by "interacting with policy and practice community to develop or offer evidence when [needed] for decision-making" (Watson, 2009). The responsibility to further EBP is the role of the occupational therapist working with those in varying environments, contexts and levels of power to ensure the best available care.

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Occupational Therapist Assistant and Physiotherapist Assistant Education Accreditation program: Development and update

Dawn Burnett

The Occupational Therapist Assistant and Physiotherapist Assistant Education Accreditation program (OTA & PTA EAP) is a collaborative initiative among the Canadian Association of Occupational Therapists (CAOT), the Canadian Occupational and Physical Therapy Educators Council (COPEC) and Physiotherapy Education Accreditation Canada (PEAC, formerly Accreditation Council for Canadian Physiotherapy Academic Programs). CAOT and PEAC are the Accreditation agencies for Canadian occupational therapist and physiotherapist education programs respectively, while COPEC is the organization of educators of Canadian OTA and PTA programs. Development of the accreditation program began in August 2010 with the hiring of a program manager. Over the past two years, program development has been steadily and consistently moving towards two pilot accreditation reviews scheduled for winter 2012. The purpose of this report is to outline the roles and responsibilities of the three participating parties and to provide an overview of activities to date.

Roles and responsibilities of stakeholder groups

CAOT, COPEC and PEAC have all been involved in the OTA & PTA EAP since its inception. Each organization has a unique role contributing to the development and ongoing evolution of this accreditation program. The roles of each stakeholder group are as follows:

COPEC:

- Requested initiation of the accreditation program,
- Is the recipient of the accreditation process,
- Funds the program through annual fees, and
- Contributed to the development of the initial Accreditation Standards.

CAOT and PEAC jointly (ACCPAP & CAOT, 2009):

- Have developed and are managing the OTA & PTA EAP, collaborating with COPEC and other stakeholders as required,
- Recruited Steering Committee members (OTA & PTA EAP, 2011),
- Facilitated development of the initial Accreditation Standards, and
- Developed the Policies and Procedures for the operation of the OTA & PTA EAP.

CAOT, PEAC and COPEC jointly:

- Provide membership to the Steering Committee,
- Provide membership to the Peer Review Teams for accreditation reviews, and
- Provide membership to the Joint Accreditation Committee (OTA & PTA EAP, 2011) and collaborate through this Committee to:
    - establish and review Accreditation Standards,
    - review accreditation reports and make accreditation award recommendations/ decisions, and
    - consider policies and procedures related to the OTA & PTA EAP.

PEAC:

- Is responsible for leading the development process and administering the accreditation program, once established.

Activity update

Accreditation Standards

In 2009, 19 education programs signed on with the OTA & PTA EAP, providing funding to initial developmental activities. The framework for the program accreditation reviews is provided by the OTA & PTA EAP accreditation standards. These were developed through an iterative process consisting of multi-stakeholder input using focus groups and an electronic survey, and guided by the Standards Development Working Group. The standards are based on a 5+1 framework (Gelmon, O'Neil, & Kimmey, 1999); they include aspects of the CAOT and PEAC education accreditation standards and incorporate the OTA and PTA competency profiles. Draft 3 of the OTA & PTA EAP Accreditation Standards was finalized in December 2010 and will be used for the pilot accreditation reviews. The Standards will then be reviewed and finalized for

About the author

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use in subsequent ongoing reviews. Draft 3 of the Standards has been translated into French and validated by a group of Francophone OTA and PTA educators.

Policies and Procedures

The second cornerstone document of the OTA & PTA EAP, the Policies and Procedures, outlines the accreditation review processes, award procedures and mechanisms. The draft Policies and Procedures document, for use with the pilot reviews, was approved by the OTA & PTA EAP Steering Committee and presented to the Boards of CAOT and PEAC for approval/ratification in May 2011. The Policies and Procedures have been circulated to the members of COPEC and were discussed with this group at its annual meeting in Saskatoon in June 2011. Upon completion of the pilots, the Policies and Procedures will be reviewed according to the feedback received during their use and finalized for application with the programs during the accreditation review schedule.

Candidacy Status

The first step in the accreditation review process is the program's application for Candidacy Status. To be eligible for Candidacy Status the program must provide evidence of the following:

- The program is authorized to provide post-secondary education,
- A diploma is granted to students successfully completing the program,
- The program head is a registered occupational therapist or physiotherapist, and
- There is an articulated curriculum framework, a designated program budget and identifiable program space.

By December 2011, it is anticipated that the 19 programs affiliated with the OTA & PTA EAP will have successfully attained Candidacy Status. A list of these programs will be available on OTA & PTA EAP section of the PEAC website (www.peac-aepc.ca/OTA-PTA.html).

Accreditation Reviews

As mentioned previously, two pilot accreditation reviews are scheduled for early 2012; an evaluative framework has been developed to review documents and processes associated with the pilots. A preliminary schedule of on-site accreditation reviews has been developed with implementation to begin in the fall of 2012, once evaluation of the pilots is complete.

A Peer Review Team (PRT) training session was held for COPEC members at their annual meeting in Saskatoon in June 2011. Surveyor recruitment and training is ongoing with applications requested from CAOT, COPEC and PEAC for individuals willing to serve as PRT members. Information and application forms can be found on the OTA & PTA EAP section of the PEAC website (see above).

Committees

Steering Committee

The OTA & PTA EAP is guided by a steering committee which consists of representatives from CAOT, COPEC, PEAC and the program manager. The Steering Committee meets on a monthly basis and is responsible for overseeing and guiding activities related to the development and implementation of the OTA & PTA EAP, establishing sub-committees as required and facilitating communication with stakeholder groups.

Joint Accreditation Committee

The Joint Accreditation Committee (JAC) is responsible for determining accreditation awards and reviewing accreditation standards, policies and procedures on an ongoing basis. JAC members include representatives from CAOT, COPEC, PEAC and the public, and they will be appointed in the early 2012.The first meeting of the JAC is scheduled for spring 2012.

Communication

Information related to the OTA & PTA EAP is posted on the PEAC website (see above) and is linked directly from the support personnel page of the CAOT website (www.caot.ca/default.asp?pageid=1013). Plans are in place to create a bilingual OTA & PTA EAP website, modeled after the PEAC website, where relevant documents and information will be posted as they are finalized after the pilots.

For more information on the OTA & PTA EAP, to apply for application to the program accreditation process and/or to submit an application to be a PRT member please contact Dawn Burnett, Program Manager OTA & PTA EAP at dawnlburnett@sympatico.ca.

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Update from the COTF

Giving Pages:

In celebration of Claire-Jehanne Dubouloz-Wilner's 60th birthday, she asked colleagues at the University to Ottawa to donate to COTF in her name through a Giving Page which was created for her. Thank you to Claire-Jehanne on this thoughtful initiative that raised funds for research and scholarship in occupational therapy.

A Giving Page is a great donation tool that can be easily shared with others to support COTF. COTF has used Giving Pages in the past for National Occupational Therapy Month and for the Giving Season. If you would like COTF to create a Giving Page for you that would benefit research and scholarship in occupational therapy that you want to share with your network, please contact Anne McDonald at: amcdonald@cotfcanada.org. A Giving Page can be created for special occasions such as birthdays, anniversaries, in honour of or in memoriam, retirement, weddings, and the Giving Season. Giving Pages are perfect to use when individuals prefer to receive a donation in their names rather than a gift. At the same time, the donation supports a great cause such as COTF.

2011 scholarship competition winners:

- Marie-Hélène Raymond (Community Rehab Occupational Therapy - $5,000) – first-time COTF award recipient
- Noémi Dahan-Oliel (COTF Doctoral Scholarship - $3,000) – first-time COTF award recipient
- Marie Grandisson (COTF Doctoral Scholarship - $3,000) – first-time COTF award recipient
- Cindy Malachowski (Goldwin Howland Scholarship - $2,000)
- Kristy Spears (COTF/Invacare Master's Scholarship - $2,000) – first-time COTF award recipient
- Nadine Larivière (Marita Dyrbye Mental Health Award - $1,000)

Congratulations to the award recipients and thank you to the Review Committee for their work and time.

Update Your COTF Contact Information

Please inform COTF of any contact information changes. In particular, if you have an e-mail address, please share it with COTF. COTF is using e-mail when possible to communicate with donors in order to be respectful of the environment. Updates can be made by contacting Anne McDonald at: amcdonald@cotfcanada.org or 1-800-434-2268 x226.