Occupational performance and Lymphedema clients: The Occupational therapist's role in assessment and treatment

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Abstract

Background. Lymphedema is a chronic condition caused by an abnormal accumulation of protein-rich lymphatic fluid in the body that may result in a progressive edema, along with physical, psychosocial, and occupational performance complaints. Complete decongestive therapy is a widely accepted conservative treatment protocol. **Purpose.** This paper reviews research and clinical outpatient assessment outcomes to advocate for occupational therapy involvement. **Key Issues.** Occupational therapists, utilizing their unique training in occupational performance assessment, are vital to effectively identify and address barriers to clients Lymphedema self-management. As such, occupational therapists with further training in complete decongestive therapy have a legitimate role in service delivery and promoting client access to appropriate treatment services. **Implications.** Occupational therapy services are indicated for Lymphedema clients to successfully incorporate self-management strategies into occupational performance to promote effective treatment outcomes.

Introduction:

Lymphedema is a chronic condition caused by an abnormal accumulation of protein-rich lymphatic fluid in the extra-vascular, interstitial space, associated with feelings of discomfort and heaviness, psychological distress, and an elevated risk of recurrent infection for individuals (Ramos, O'Donnell, and Knight, 1999; Woods, Tobin, and Mortimer, 1995; Williams, Franks, and Moffatt, 2002). Lymphedema can be generally classified into two types: primary and secondary. Primary Lymphedema most often develops as a result of lymphatic system hypoplasia, commonly presents in the lower extremities, and is often diagnosed in the pediatric population (Mortimer, 1995).

Secondary Lymphedema occurs when a medical condition, complications, or subsequent treatment interventions, results in chronic impaired lymphatic system function. Secondary Lymphedema may develop as a complication of oncological diagnosis, progressive chronic venous insufficiency, parasitic infection, trauma, and severe infection (Mortimer, 1995).

A literature review suggests Lymphedema prevalence rates are uncertain. Considering the broad scope of medical conditions contributing to the onset of Lymphedema, Moffatt, Franks, Doherty, Williams, Badger, Jeffs, Bosanquet et al. (2003) found a crude prevalence rate of 1.33/1000 individuals from primary or secondary causes in the United Kingdom. Their research also suggests Lymphedema prevalence increases to 5.4/1000 in individuals over 65 years. Morrell, Halyard, Schild, Ali, Gunderson, and Pockaj (2005) suggests secondary

Lymphedema incidence rates associated with breast cancer related axillary lymph node dissection is upwards of 50%. Harris, Hugi, Olivotto, and Levine (2001) report published breast cancer related Lymphedema incidence rates range from 6% to 70%, and suggest one reason for this variability is a lack of a clinically-accepted operational definition of Lymphedema. Cormier, Xing, Zaniletti, Askew, Stewart, and Armer (2009) suggest other variables to consider include: small study sizes, short follow-up times, predominantly retrospective nature of analysis, and psychometric difficulties (reliability) in assessing Lymphedema. Due to the variety of medical conditions and co-morbidities contributing to Lymphedema onset, combined with no widely accepted operational definition of Lymphedema, the prevalence of individuals with Lymphedema remains unclear.

More definitive is the profound shortage of occupational therapists trained in complete decongestive therapy offering services in Canada. Complete decongestive therapy is a widely accepted and utilized conservative Lymphedema treatment approach (Cheville et al. 2003). According to Lymphology Association of North America (LANA) certified therapists list, (2010), the author is the sole licensed occupational therapist and certified Lymphedema therapist practicing in Canada.

The objective of this paper is to define the occupational therapy role working with Lymphedema clients, to encourage routine occupational therapy involvement to help meet the needs of this underserved population.

Background:

Occupational therapy services are unique in our emphasis on enabling client occupation by holistically addressing occupational performance barriers to maximize function. Lymphedema is a chronic medical condition that requires clients to integrate self-management strategies into their daily living to effectively control the condition over a lifespan. Mayoritz (2009) identified several barriers to Lymphedema client's effective self-management: difficulty with mobility, location of Lymphedema, and the daily time required. Vignes, Porcher, Arrault, and Dupuy (2007) report client's compliance with routine use of a graduated compression sleeve and low stretch self-bandaging was crucial to stabilize Lymphedema volume over time. Effective client self-management requires our client to demonstrate: meticulous skin, nail and wound care, ability to routinely self-bandage their affected limb, ability to don and doff graduated compression garments consistently and independently, ability to regularly maintain and replace graduated compression garments, ability to integrate Lymphedema risk reduction strategies into their daily living activities, capacity to consistently complete a home exercise/activity program, and the ability to integrate recommended activity or task modification to accommodate or adapt to current functional limitations. Clients who effectively integrate self-management strategies between clinical visits may help expedite the rehabilitative process, improve clinical outcomes, and to reduce the frequency and duration of intensive treatment. Clients may also benefit from reduced secondary complications

including the risk of infection requiring emergency department visits or hospitalization (Williams, Franks, and Moffatt, 2005). Dicken, Ko, Lerner, Klose, and Kosimi (1998) found that incidence of infections decreased from 1.10 infections per patient per year to 0.65 infections per patient per year after a course of complete decongestive therapy with consistent client self-management. A client-centered self-management program, customized with occupational therapy assistance, identifies and addresses barriers to enable client's successful performance and integration into daily living.

Evidence suggests Lymphedema clients may report a decline in at least one occupational performance area. McWayne and Heiney (2005) reports Lymphedema clients have noted difficulties in performance of basic self-care activities including dressing. Radina and Armer (2001) suggest modifying routine home management tasks was necessary for clients to reduce risk of flare up of symptoms. Lymphedema may impact client's ability to participate in meaningful social and leisure activities. Ridner (2009) reported that Lymphedema clients reduced their social and leisure activities, including giving up hobbies and activities with friends and family members that they had done for years.

World federation of occupational therapy (WFOT, 2009) defines occupational therapy as the following:

> "Occupational therapy is a profession concerned with promoting health and well-being through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by enabling people to do

things that will enhance their ability to participate or by modifying the environment to better support participation. Occupational therapists have a broad education that equips them with skills and knowledge to work collaboratively with individuals or groups of people who have an impairment of body structure or function due to a health condition, and who experience barriers to participation."

As evidence suggests Lymphedema clients are experiencing difficulties with occupational performance and difficulties of everyday life, and Lymphedema care requires long-term client self-management, occupational therapists are ideally suited to meet the clinical needs of this population.

Complete decongestive therapy training will provide an occupational therapist the opportunity to enhance their traditional practice through acquiring specific assessment and treatment skills that provide an approach that would consider the context in which the therapy is occurring. Complete decongestive therapy training also provides the occupational therapist a working understanding of graduated compression garment classifications, types, measurement and fitting, and the opportunity to learn about adaptive devices and tools to promote client independence with donning and doffing garments. The fundamental importance and value of continuing education cannot be overstated to help guide appropriate clinical care, clinical judgment, and decision-making. Lymphedema clients may present with absolute and relative medical contraindications to active treatment that must be recognized by the clinician. Therapist inability to identify or recognize absolute treatment contraindications may result in serious, and

potentially life threatening medical complications for the client. For instance, an acute deep venous thrombosis is one absolute contraindication to complete decongestive therapy treatment. Clients often present with a medical history and a variety of co-morbidities that warrant careful consideration during assessment and treatment planning. As Lymphedema management is not part of any core occupational therapy academic curriculum in Canada, occupational therapists interested in this field may elect to pursue continuing education training opportunities to develop their clinical knowledge and skills.

The complete decongestive therapy trained occupational therapist will have the education to offer acute care treatment and appropriate long-term follow-up to assist client's integration of self-management strategies into daily living activities. Following is a description of the clinical assessment outcomes from a complete decongestive therapy trained, occupational therapist led outpatient clinic that will support the occupational therapy role in the delivery of Lymphedema rehabilitation services.

Process and Tools:

In 2002, the complete decongestive therapy trained occupational therapist completed a needs analysis and business plan to consider the potential need and viability of a Lymphedema clinic in Calgary, Alberta. The occupational therapist made unsuccessful attempts to secure publically funded services. Consequently, the occupational therapist opened a private pay outpatient clinic in 2003. In 2006, the Alberta cancer board management recognized the work and negotiated a service agreement contract to fund education, assessment and

treatment services initiated in November, 2006. Through this funding, monthly occupational therapist led semi-structured, client education sessions provided an opportunity to discuss Lymphedema assessment, treatment and management. Matthews, Bursey, Park, Hodgson, West and Church (2007) found that public education sessions offered an opportunity to improve both knowledge and attitude of breast cancer clients at risk of developing Lymphedema.

The occupational therapist developed a referral and assessment process to accomplish several objectives. Prospective clients required a physician referral to provide a medical diagnosis and confirm medical appropriateness for treatment services. Occupational therapist would follow-up with referring physician as indicated if possible contraindications or co-morbidities were identified. The occupational therapist also required client's written consent for assessment and treatment services reflecting standard professional practice.

The occupational therapy assessment began with reviewing client's relevant medical history, other relevant co-morbidities, and current physical and psycho-social presentation. The assessment then focused on assessing impact on occupational performance considering clients current performance in self-care, productivity, and leisure. Occupational therapist considered client capabilities, support systems, and potential barriers to pursuing treatment and successful integration of Lymphedema self-management strategies into daily activity. To conclude the assessment, occupational therapist reviewed written education materials, answered client questions, and collaborated with the client on goal

setting and developed a plan of care. A written summary assessment report and recommendations was sent to referring physician for review.

Chronic Lymphedema may contribute to clients developing physical impairments including orthopedic, soft tissue, and mobility restrictions. Impaired client strength, endurance, dexterity, and mobility, may contribute to functional performance complaints (Balzarini, A. et al. (2006); Crane (2009); Helms, Kuhn, Moser, Remmel, and Kreienberg (2009)). The occupational therapist assessment included client interview, physical assessment, and clinical observation to consider the resulting functional impact. An occupational therapy activity analysis provides opportunities to offer treatment recommendations to respect physical restrictions by modifying, adapting, and safely progressing daily living activities. Physical complaints may impede our client's ability to complete Lymphedema self-management strategies including: client's ability to don and doff graduated compression garments, self-bandaging, and skin and nail care. A multi-disciplinary, collaborative effort with other health professionals such as physiotherapists is often indicated. Physiotherapy treatment and modalities may be incorporated to help address the client's physical complaints. Occupational therapy interventions will complement physiotherapy treatment by providing client education and support in attempts to gradually restore activity and enhance occupational performance. For example, a physiotherapist referral is appropriate if a client presents with physical impairments including active range of motion and strength limitations. If these physical impairments have compromised our client's ability to don and doff graduated compression garments, the occupational

therapist may address client's reported difficulties through introducing adaptive strategies, biomechanical education, and incorporating adaptive equipment including use of donning and doffing aids, to promote client independent performance regardless of physical limitations. A complete decongestive therapy trained occupational therapist has the requisite training to problem solve other client specific issues to self-management, including offering alternative strategies and tools for their client to effectively self-bandage their affected limb when faced with temporary or permanent physical limitations. The occupational therapists skill in working with our client to successfully address functional limits may be the difference between our clients succeeding in managing their Lymphedema independently, versus having to rely on daily caregiver assistance. The occupational therapists holistic clinical approach, rooted in academic training, uniquely differentiates occupational therapy service from other health disciplines. As Soran et al. (2006) suggests, infection is one evidence-based factor contributing to Lymphedema onset and progression, therefore, inquiry into our client's history and frequency of infection was incorporated into initial assessment. Clients will benefit from education on the impact of infection on risk of Lymphedema onset and progression, to engage clients on the importance of Lymphedema self-care, prevention, and early medical intervention during an acute episode. Follow-up treatment sessions presented opportunity for occupational therapist to assess client's demonstrated performance in infection prevention and management strategies including: assessing client's abilities with bathing, skin care, wound care if indicated, general hygiene, skin moisturizing

techniques, and donning and doffing graduated compression garments. Occupational therapy intervention would again focus on addressing barriers to successful performance. Treatment strategies may include: providing direct client education on signs and symptoms of infection, review of client's ability to successfully modify activity, case coordination including referral with referring physician for further medical assessment as indicated, and to review client's ability to integrate learned adaptive strategies into activity performance. The occupational therapist may be involved in assessing need for caregiver assistance to ensure these daily living tasks are consistently and competently completed.

Lymphedema clients may experience pain or discomfort negatively impacting occupational performance. Subjective reports of pain may be a predictive indicator of Lymphedema onset for healthcare professionals. Armer, Radina, Porock, and Culbertson (2003) reported that subjective pain reports of "heaviness in the past year" and "swelling now" were predictive of absolute maximal circumferential limb difference (i.e. ≥ 2 cm). Occupational therapist assessment included administering a subjective 1-10 point pain rating scale, therapist interview to explore client's subjective pain experience, and observing client's demonstrated pain behaviors during activity performance. Clients presenting with unexplained pain is one absolute treatment contraindication and may require further medical follow-up. The complete decongestive therapy trained occupational therapist may utilize changes in subjectively reported pain levels or pain behaviors during occupational performance as an outcome

measure during acute treatment interventions. Research suggests Lymphedema onset poses a significant risk of psychological and emotional morbidity with clients' ability to engage in meaningful, purposeful, activities of daily living. McWayne and Heiney (2005) noted that onset of Lymphedema contributes to frustration, distress, depression and anxiety, subsequently contributing to decreased quality of life for many individuals. The study notes clients also reported becoming angry with perceived loss of independence with leisure and vocational pursuits. Woods, Tobin and Mortimer (1995) suggest upwards of 80% of breast cancer Secondary Lymphedema clients will report psycho-social concerns including: body-image, social activity, and leisure activity levels. Occupational therapy assessment subsequently included a review of client's emotional and psychosocial concerns, treatment services, and support systems in place. The occupational therapist has a role to provide education, treatment and support, to assist clients with improving emotional and psychological status concurrent with improved occupational performance. Providing client-centered assessment and treatment services may be helpful in improving psychological morbidity. The occupational therapist may further assist client care in coordinating appropriate referrals to other healthcare disciplines including medical, psychological, and social work services as indicated. Addressing our client's affect and mood will help overcome a potential barrier to our client's incorporating Lymphedema management strategies into daily living, or to return to regular daily living activities that have been negatively impacted by medical and healthcare circumstances.

Lymphedema onset and client's work activities and job demands needs to be considered by assessing occupational therapist. Soran et al. (2006) found that the level of hand use based on vocational requirements was a statistically significant risk factor in Lymphedema development. Therefore, return to work and workplace durability is an important occupational performance issue to address with our clients still engaged in the workforce or planning a return to work. A complete decongestive therapy trained occupational therapist will be able to concurrently merge Lymphedema management techniques into return to work planning. Soran et al. (2006) noted reducing repetitive stressors on the affected limb while completing vocational requirements may subsequently reduce risk of Lymphedema onset or flare up. Therefore, occupational therapy completion of a worksite ergonomic and job demands analysis provides opportunity to address positioning, workplace set up, and behaviors to reduce repetitive stress for client. An occupational therapist may assist in measurement, fitting, or obtaining graduated compression garments and equipment, to promote Lymphedema management at work. A complete decongestive therapy trained occupational therapist has the opportunity to monitor client response to Lymphedema treatment and to provide the referring physician recommendations and information to assist the physician to prescribe appropriate garments for their client.

The occupational therapist needs to consider family and social support systems in assessing and treating Lymphedema. Radina and Armer (2001) considered how families responded to women developing Lymphedema. Their findings

suggested that families who are more flexible in modifying daily tasks and who have pre-existing resources for coping with stressors have more positive outcomes. Identifying client roles and responsibilities within the family, social, or support systems is an important consideration when setting goals and providing treatment recommendations. Roles and responsibilities within a family or social unit may be relatively fixed, or flexible, depending on client's life experience, expectations, values and belief systems. The occupational therapist needs to be sensitive to these dynamics when setting treatment goals to promote successful management of Lymphedema within the context of our client's everyday life. The end result of the assessment is a client-centered treatment and management program that is uniquely tailored to the individual. The strength of combining complete decongestive therapy training with occupational therapy frame of reference will be demonstrated through a case study and data collected at this lymphedema clinic.

Case Study: A 54 year-old right-handed woman was referred from her medical oncologist with a diagnosis of breast cancer related Secondary Lymphedema. Client reported a surgical history of right sided partial mastectomy, followed by 25 radiation therapy treatments. Client reported that she was diagnosed with a cellulitis infection in her affected arm 3 months prior, which was reportedly treated with prescription antibiotics. Client reported first noting complaints of swelling in her arm 2 months prior, complaining that she noticed her shirt sleeves were becoming "tight." On physical examination, client presented with a pitting edema in her forearm and upper arm, with palpable secondary fibrotic tissue

changes. Her hand was uninvolved at time of assessment. Circumferential measurements suggest her affected extremity was 22.4% greater in volume than her unaffected arm. Client subjectively reported her affected arm active mobility was 85% of her contra lateral limb complaining of decreased shoulder and elbow active range of motion at end range. Client reported pain as “achiness,”, “heaviness,” and “tightness” in her forearm, which increased during daytime functional activities. Client complained of increased pain symptoms at work with constant computer use, negatively impacting productivity. Client initially reported being independent with basic activities of daily living. Occupational therapist provided client written and verbal instruction on Lymphedema risk reduction and long-term self-management strategies with emphasis on infection prevention strategies. Client was treated for 7 sessions of complete decongestive therapy following assessment. Occupational therapist made a recommendation for graduated compression garment to referring physician, and fitted client with a physician prescribed Juzo graduated compression arm sleeve. Client demonstrated a stable 37% volume reduction from the initial assessment, demonstrated good self-bandaging skills for nighttime, and reported consistent daily use of graduated compression sleeve. Occupational therapist also reviewed and made recommendations to improve ergonomic set-up of clients work station. Client reported effective pain management and durability with computer based work activities with this complement of interventions.

Client returned to clinic for follow-up 4 months later complaining of a 6 week history of antero-medial elbow pain and distal referred paresthesia symptoms.

Client presented with significantly decreased shoulder mobility including 75 degrees of active shoulder abduction. Occupational therapist followed up with referring physician to schedule a consult. As medical oncologist recommended continued rehabilitation services, client was referred to clinic physiotherapist who provided mobilization and exercise to help encourage and preserve arm mobility, while client focused on Lymphedema self-management. Client demonstrated ability to continue to independently don a graduated compression garment through modified activity. Client denied further infection episodes in her affected arm since starting Lymphedema treatment and implementing Lymphedema self-management strategies. Client demonstrated ability to maintain her Lymphedema arm volume despite reduced active arm movement and need for further acute medical care to address progressive disease diagnosed by her oncologist.

Methods

Participants:

A purposive, retrospective file review was conducted of clients referred to an occupational therapist at a Calgary, Alberta outpatient rehabilitation clinic in 2008. All clients were referred with a diagnosis of breast cancer related secondary Lymphedema by an oncologist affiliated with Alberta Cancer Board. Clients provided written consent for assessment, treatment, and to gather information for research and publication purposes. Breast cancer related secondary Lymphedema was selected for review as this population comprised

117/146, or 80.1% of all oncology-based referrals to the clinic, offering a large sample size and the single largest referral diagnosis classification seen in clinic.

Data Collection:

Data was collected from file review including review of occupational therapy assessment documentation and reports submitted to referring physician. Data collected from assessment included a combination of subjective and objective reporting. Clients reported pain using subjective 10 point pain analogue scale. Physical assessment included observed functional performance, measuring range of motion, and gross physical strength testing. Client's psychosocial morbidity was assessed by client subjective report on occupational therapist inquiry. Lymphedema volume was measured using circumferential measurements at 4 cm intervals comparing affected to unaffected limbs using circumferential tape measurement (Szuba, Strauss, Sirsikar, and Rockson, 2002). Volumes were calculated both before and after intensive treatment to monitor change using truncated cone measurements. Client's occupational performance was assessed and documented through a combination of client and family member interview and demonstrated functional performance.

Data Analysis:

Occupational therapist completed file review and summarized assessment findings by reviewing initial assessment report and clinical notes to consider reported deficits in: physical limitations, infection history, pain complaints,

psychosocial complaints, and deficits in occupational performance. Treatment provided was summarized in 4 general themes: Lymphedema education materials provided, graduated compression garment recommendations, complete decongestive therapy treatment with follow-up volume measurements, and interventions to address deficits in occupational performance. Self-management education and strategies was provided with all assessments.

Findings:

In 2008, the occupational therapist completed 117 client assessments referred with breast cancer related secondary Lymphedema. Table 1 summarizes assessment findings.

<Insert Table 1 here>

Clients reported a variety of occupational performance issues. Return to work concerns included: decreased workplace durability, an increase in Lymphedema-related pain symptoms including “heaviness” and “achiness” with completing workplace activities, and perceived volume increases in their limb while completing work related activities. Clients also reported complaints of Lymphedema flare-up while proceeding with a return to active leisure pursuits, such as: returning to gym workouts, golfing, playing with children/grandchildren, knitting, crochet, or utilizing a computer for leisure pursuits. Clients often reported basic self-care issues including dressing and bathing activities. One commonly cited complaint was difficulty fitting clothes due to volume change of their affected limb.

Follow-up treatment and intervention included providing client education, compression garment recommendations when indicated, and follow-up complete decongestive therapy treatment. Results of treatment are summarized in enclosed table 2.

<Insert Table 2 here>

One outcome of assessment was all clients were provided written and verbal information on Lymphedema risk factors associated with onset and progression. Written handouts were offered to all clients who elected to attend one of the Lymphedema education sessions and all clients received written information as part of assessment. Occupational therapist provided a detailed recommendation for physician's consideration including: appropriate graduated compression level, garment knitting style, fabrics, and custom needs where indicated in 94% of clients seen. The occupational therapy role also included providing adaptive equipment, supplies, and training/education, to promote client independence with donning and doffing garments.

Treatment included education and training of clients and care givers where applicable, including hands-on training on self-bandaging strategies of their affected limb under direct supervision of the occupational therapist. Clients were provided education and encouraged to demonstrate independence and effective skin care management through cleaning, drying, and moisturizing the affected extremity during treatment sessions. Clients were provided modified activities and an independent exercise program to encourage improved arm mobility and function with daily living tasks.

Discussion:

Lymphedema is a chronic, incurable condition which can have a significant impact on an individual's physical, emotional and functional status. Occupational therapy treatment outcomes from volume reduction standpoint compare favorably to literature (Dicken, Ko, Lerner, Klose, & Cosimi, 1998; Yamamoto and Yamamoto, 2007) suggesting that occupational therapists trained in complete decongestive therapy can deliver consistent acute care volume reduction outcomes in comparison to other healthcare professionals. Occupational therapists focus and expertise on assessing and treating our client deficits in functional performance offers a distinct, comprehensive service. As Lymphedema is a chronic condition, our client's ability to integrate self management strategies while returning to their daily living activities is crucial to minimizing the progression and secondary complications of Lymphedema, while optimizing our client's quality of life. Occupational therapy initial assessment results identified functional performance issues in 70/117, or 60% of referrals. The frequency of functional performance issues identified during assessment suggests that occupational therapists have an important role to play as part of the healthcare team in treating this population. Occupational therapists focus on client functional performance complements widely accepted conservative Lymphedema treatment. The second phase of conventional complete decongestive therapy treatment recognizes the importance of client self-care including skin care, exercise, and regular use of graduated compression garments. The occupational therapist excels in assessing and addressing

barriers to occupational performance to facilitate client's ability to complete this second phase of treatment. In addition, research supports that Lymphedema may impact client's ability to complete other activities of daily living. Further research into the long-term impact and outcome of occupational therapy intervention on client's occupational performance would be helpful to identify opportunities to improve clinical services. Greater interdisciplinary collaboration between healthcare professionals will offer Lymphedema clients appropriate services, at the right time with the right professional, to help address clients Lymphedema and issues that arise from a lifespan perspective. The Lymphedema client may benefit from healthcare services and professionals aligned to support a chronic disease management program, to parallel the long term management needs. Prior to receiving Alberta Cancer Board funding, many clients did not access outpatient occupational therapy services citing extended insurance health plans not covering occupational therapy. These clients elected to access massage therapy and physiotherapy services as insurance covered these services. This systemic barrier could be addressed by increasing occupational therapy coverage for services through major insurance companies extended healthcare plans, combined with increased public funding for occupational therapy services with this population. The issue of ultimately addressing occupational performance and function is where occupational therapists excel in clinical care delivery. This clinical evidence suggests the majority of Lymphedema clients are experiencing a negative impact on their occupational performance. If untreated or not effectively managed, Lymphedema

may progress over time and result in declining functional performance. As a consequence, unmanaged Lymphedema may result in potential long term negative impact on client's successful return to productive daily living activities such as a durable return to work. This is an unacceptable outcome when effective treatment protocols are available, yet Canada has inadequate programs or trained health professionals to provide comprehensive treatment. Alberta Cancer Board's management approach has evolved to offer a funded internal assessment and treatment service for oncology clients in Calgary since early 2009. Alberta Cancer Board currently does not offer treatment services for non-oncology related Lymphedema clients. Although this current service model demonstrates a dramatic shift in awareness and a more progressive approach for oncology related secondary Lymphedema clients, other Lymphedema clients are left without a funded service and face an obvious inequity in treatment services available. Occupational therapy has the potential to play a pivotal role to develop and provide treatment programs and services for Lymphedema clients across Canada.

Conclusion:

Lymphedema is a chronic medical condition that may impact clients in areas of occupational performance. As occupational therapists specialize in assessing and treating deficits in occupational performance, they have an important role as part of a healthcare team in treating this population. Occupational therapists can advance their clinical practice with this population by pursuing post-graduate training opportunities available in complete decongestive therapy, to learn

technical skills, and to gain a greater theoretical understanding of assessment and treatment options. Complete decongestive therapy trained occupational therapists may effectively assist their client in decongesting the affected extremities. Occupational therapists unique clinical approach may be most helpful to assist our clients to merge Lymphedema self management strategies into daily occupational performance, to improve long term management, and enhance quality of life. Occupational therapy services should therefore become an integral part of interdisciplinary teams and healthcare programs to serve this population.

Key messages:

- Due to the chronic and complex nature of Lymphedema (cause, co-morbidities, reliance upon self-management), occupational therapists occupational performance view point ensures appropriate treatment with a greater chance of client compliance.
- Occupational therapists have opportunity to offer a more comprehensive clinical service by completing advanced training in complete decongestive therapy.
- Occupational therapists need to advocate for a greater clinical role with the Lymphedema population.

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Table 1: Assessment findings

Issue identified	Number of clients	Description
Physical limitations/Mobility concerns	44	Clients demonstrated with soft tissue/mobility concerns including: decreased fine motor coordination, decreased shoulder active range of motion, lymphatic cording
Infection	8	Client subjectively report recent physician diagnosis of infection with subsequent flare up of Lymphedema symptoms.
Pain complaints	73	Client subjective complaints including “heaviness,” “fullness”, ”achiness”, in their affected limb with functional use or arm, resulting in client restricting or avoiding specific daily living activities
Psychosocial complaints	54	Clients reported psychosocial and/or emotional concerns. Common reported symptoms include: “sadness”, “frustration”, “anxiety”, and “anger”
Deficits in occupational performance	70	Occupational performance issues identified in at least one area: self-care, productivity, leisure.

Table 2: Treatment provided and outcomes

Intervention	Number of clients	Description/summary
Lymphedema education materials provided	117	Written and/or verbal information and instruction on Lymphedema diagnosis, treatment, and risk reduction provided.
Compression garment recommendations	110	Occupational therapist provided detailed recommendation to client and physician.
Complete decongestive therapy treatment with volume measurement outcomes available	35	Clients seen for mean of 7.2 visits, resulting in measured mean volume reduction of 53.8% (median 47%).
Occupational performance deficits addressed	70	Client provided education, instruction to address functional performance issues including incorporating adaptive equipment as indicated.