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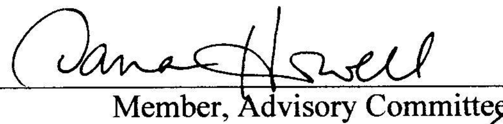
The Experiences of Occupational Therapists Working on Interprofessional Primary Health Care Teams: A Case Study.

By

Emma Blake McClellan, OTS

Thesis Approved:

Chair, Advisory Committee



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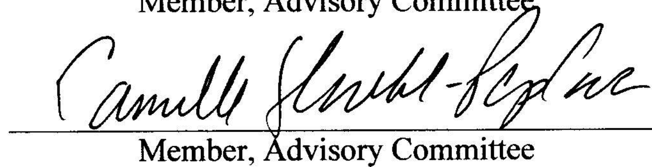

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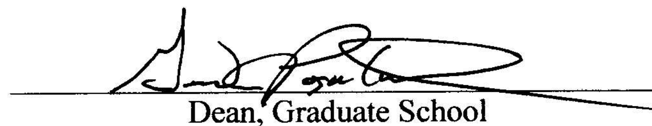

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The Experiences of Occupational Therapists on Interdisciplinary Primary Health Care Teams: A Case Study

By

Emma Blake McClellan

Bachelor of Fine Arts
University of Kentucky
Lexington, Kentucky
2009

Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE
August, 2015

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DEDICATION

This thesis is dedicated to my grandmother, Marion McClellan
for her unconditional and unwavering support.

ACKNOWLEDGMENTS

I would like to thank my advisory committee chair, Dr. Shirley O'Brien, OTR/L, FAOTA, for her expertise, encouragement, and patience. I would also like to thank my advisory committee members, Dr. Dana Howell, OTR/L and Dr. Camille Skubik-Peplaski, OTR/L, for their influence and assistance over the past two years. Dr. Christine Privott, OTR also deserves acknowledgement because it was through her guidance that I developed a passion for advocacy and research.

I would like to express my thanks to Tim Mellin and Lynda Hoff Mellin for their support; they have demonstrated to me the true meaning of generosity and I will be forever grateful. I would also like to thank my two aunts, Sarah McClellan-Welch and Mimi Porter who have served as role models and inspirations throughout my life. I also would like to recognize the support of my close friends who have been understanding and served as my cheerleaders when things were tough and exhausting; thank you Nate, Jen, Marie, Artash, Jim, and Martye.

Most of all my mother and grandmother must be recognized as they have provided me with everything I have ever needed to find my path. Thank you.

Abstract

The aim of this research was to provide evidence on the integration of occupational therapy (OT) intervention in primary care as perceived by occupational therapists (OTs). Typical services provided, experience with team members, and the identified value of OT in primary health care was explored. OT possesses the expertise and skill set to address the most common chronic conditions that primary care providers treat by entry level educational preparation. OT services are based upon a holistic view of individuals creating an affective skill set to participate in and coordinate health care delivery for the client. Currently limited evidence is available to support OT in primary care. A need exists for the development of defined roles for OT in the interprofessional primary care team. The changing reimbursement model for health care delivery and associated funding also adds to the paucity of information available in this emerging practice area.

Qualitative methods were used in this case study. Semi-structured interviews were transcribed, coded, and analyzed for emergent themes. Participants were recruited using a gatekeeper process by contacting key personnel at the American Occupational Therapy Association (AOTA) to identify OTs working in primary care.

Findings of this study include main themes of facility characteristics, assessment and intervention strategies, interprofessional communication, barriers including space and time, and future needs for the education of OTs for success in this new healthcare delivery model. Conclusions from this study suggest integration into primary care will require OTs to advocate for their place in this setting as valued and beneficial members of the primary care team. Implications for future practice are suggested.

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CHAPTER 1

INTRODUCTION

Background & Need

The American Occupational Therapy Association (AOTA) has identified therapy in primary care as a research priority as a result of preventative care, health maintenance, and management of chronic disease being emphasized through the Affordable Care Act (ACA) of 2010 (Public Law 111-148). The ACA's Triple Aim approach intends to meet the objectives of improving "the health of the U.S. population by supporting proven interventions to address behavioral, social, and environmental determinants of health; delivering higher quality care; and delivering affordable care" (U.S. Department of Health and Human Services, 2011). It is proposed by the ACA that these preventative care objectives can be met through the development of patient-centered medical homes (PCMH) and interprofessional primary health care teams (PHCT); OT's holistic, client centered practice offers services that can be an asset to these teams (Donelly, Brenchly, Crawford, & Letts, 2013).

AOTA's Centennial Vision includes the aim that OT embodies a "profession with a globally connected and diverse workforce meeting society's occupational needs" (American Occupational Therapy Association [B], 2014). Through emerging roles in health and wellness promotion, OT practitioners become an effective contributor to health outcomes and society's occupational needs on the level of the individual, the community, and on the global population level. Factors that have become primary healthcare concerns for all health professions in the U.S. include prevention, chronic and co-morbid disease management, and obesity. AOTA supports and identifies that OT is the appropriate profession to provide care for the functional impairments and deficits that result from these conditions (Yamkovenko, 2014). Involvement in primary care through both practice and research is needed to provide evidence to the efficacy of OT in this setting. The educational standards, developed by the Accreditation Council of the American Occupation Therapy Association (ACOTE) offer credibility and support of entry level OTs possessing needed skills for primary care. These include but are not limited to understanding individual and population-based health; conditions and offering;

and neuroscience foundations of occupation (ACOTE, 2013). The scope of OT practice is clearly delineated in the AOTA Occupational Therapy Practice Framework (2014). This document can be used promote an understanding of OT's distinct value in health care and to identify the specific skills and expertise that have the ability to provide value within primary care practice.The supporting literature for the integration of OT into the primary care setting can be organized in to three main themes; support of the patient-centered medical home model, the interprofessional primary health care team, and OT in primary care.

Patient-centered medical home model and primary health care team.

The patient-centered medical home (PCMH) is a model of care which is based on the formation of long-term relationships with patients, offers a wide scope of services, and connects components of the healthcare system with community services. Focus on the whole person and the continuum of care are the defining features of the PCMH (Goldberg & Dugan, 2013, p. 6).

The primary health care team (PHCT) traditionally consists of primary care physicians, nurse practitioners, physician's assistants, nurses, and medical assistants (Goldberg & Dugan, 2013, p. 7). As the delivery of health care becomes increasingly focused on preventative and holistic care additional professions, such as OT, will be integrated into these teams. Unique challenges face these PHCTs that often are not reflected in the existing body of literature on general interprofessional teams. Contextual factors including the patient population and regional cultural values will play a role in the types of professions needed to complete the primary health care team (MacNaughton, Chreim, & Bourgeault, 2010).

Occupational therapy in primary care.

Current literature identifies that evidence does exist of the role OT has in supporting health and wellness and promoting prevention within healthcare, however few practice examples exists for OT in primary care (Donnelly, Brenchley, Crawford, & Letts, 2013, p. 1) Goldberg and Dugan, in their document, *Models of primary care delivery,* presented the need to address the questions of, "How are interprofessional, coordinated primary care delivery systems currently functioning?" and "Where are the

opportunities for OT practitioners to become part of that evolution?" (2013, p. 4). Interviews conducted with current primary care providers found that the majority of providers felt OT would be beneficial to the PHCT and PCMH; however they were unsure of the full scope and application of OT services (Goldberg & Dugan, 2013, p. 7). The most common chronic conditions that primary care providers treat include diabetes, arthritis, hypertension, and depression, all conditions that OT has the expertise and skill set to provide intervention and education services for (Goldberg & Dugan, 2013, p 10). These chronic conditions can be addressed by OT in relation to education and management of conditions, maintenance of health, quality of life, and addressing associated routines, family involvement, contextual influences, and lifestyle choices.

Several OT services have been specifically identified to support OT as a primary care team member. Early intervention consultation services, identification of impairments in function and participation as a result of symptoms of illness or disease, addressing patient concerns that extent beyond symptom management, development of home programs to potentially reduce the need for referral to extended services, and providing training in adaptive equipment and technology are examples (Muir, 2012, p. 507). An integral element of primary care teams is the coordination of care which is an area that OT has the training to support. The holistic, whole person, client-centered view of individuals that OT services are based on create the skill set to unite and coordinate fragmented health care delivery for the client in a primary care setting (Muir, 2012, p. 507). To facilitate this role for OT, there is a need for further research on OT in primary health care particularly related to contributing factors in the development of the interdisciplinary PCHT and PCMH and how it differs from the typical interdisciplinary team building (Brown, Lewis, Ellis, Stewart, & Kasperski, 2011). OT entry-level education prepares practitioners for knowledge and skills in these areas (ACOTE, 2011).

Interprofessional Practice

Interprofessional practice (IP) is recognized as an effective means of improving standard health outcomes while also achieving cost-effectiveness (Bainbridge, Nasmith, Orchard, & Wood, 2010, p. 6). The National Interprofessional Competency Framework provides guidance for the formation and practice of health care teams through 6 domains

of competency: role clarification, client/community/family-centered care, team functioning, collaborative leadership, communication, and conflict (Bainbridge, Nasmith, Orchard, & Wood, 2010, p. 8). This model for IP practice supports the integration of multiple professions into one cohesive, efficient team with in a variety of primary care setting, including primary care.

Statement of Need

There are a limited number of OTs working currently in the emerging practice setting of primary care therefore there is a need for research into the experience of OTs working in primary care to provide evidence on the typical services provided, role overlap, experience with other team members, and the perceived value of OT in primary health care.

Significance of Study

The potential utility of this study is to identify information that will be relevant to OT as the profession transitions into primary care service delivery as a result of the implementation of the ACA. Understanding the need for OT services in these team models, and the perception of OT by members of the interprofessional team will inform OTs what action is required to pursue this role in the healthcare system. Exploring the experiences of OTs working in these setting will provide a foundational understanding for the challenges and expectations of primary care teams.

Research Question

Grand Question: What is the experience of OTs working on interdisciplinary primary health care teams?

Sub-Questions:

- What services can OT provide in the implementation of primary care that is distinct from the other profession?
- How is reimbursement for OT services obtained in the primary care setting?
- How can primary care OTs educate other team members regarding OT's role within the interdisciplinary team and scope of practice?

- How do OTs perceive their role regarding the integration of OT in the interprofessional PHCT?
- What role negotiation exists between OT services and the services provided by other health care professions?
- How can OT as a profession prepare and advocate for their role in interprofessional PHCT?

Definition of Terms

Accountable Care Organizations (ACO):

Groups of providers such as hospitals, primary and specialty care practices and outpatient facilities, who voluntarily come together to be held jointly accountable for improving the health of a defined population of patients (McClellan, McKethan, Lewis, et al., 2010 as cited in Goldberg & Dugan, 2013, p. 6).

Canadian Occupational Performance Measure (COPM):

A client-centered evaluation tool that prioritizes concerns and impairments in their ability to participate in valued daily activities that relate to self-care, leisure, and productivity. Changes in both performance and client's satisfaction with performance are identified and measured with pre and post evaluation (Canadian Occupational Performance Measure, 2014).

Co-Located Care Model:

Model of care in which primary care and other health services such as mental health, dental care, or social services are housed within the same location but may practice independently from each other. In this model traditional referral for service methods are utilized (University of Washington, Psychiatry & Behavioral Sciences Division of Integrated Care & Public Health, 2014).

Concurrent Care Model:

Model of care in which primary care services are provided simultaneously with other identified health care professionals. The physician and health professionals must determine if the patient's condition warrants multiple service providers and if each service is reasonable and necessary (Pohlig, 2010).

Federally Qualified Health Center (FQHC):

All organizations receiving grants under Section 330 of the Public Health Service Act (PHS). FQHCs qualify for enhanced reimbursement from Medicare and Medicaid, as well as other benefits. FQHCs must serve an underserved area or population, offer a sliding fee scale, provide comprehensive services, have an ongoing quality assurance program, and have a governing board of directors (U.S. Department of Health and Human Services, 2014).

Medium Risk Client:

In relation to this research project a medium risk client is identified as an individual who has the potential to benefit from OT interventions to prevent further decline in function or maintain a level of health and wellness, but would not qualify for a referral to traditional outpatient OT. The low risk client is an individual who has no identified functional impairments and OT services would not be reasonable or necessary. The high risk client would qualify for outpatient or inpatient OT services due to injury, disability, or significant decline in functional ability.

Occupational Profile:

This evaluation tool "provides an understanding of the client's occupational history and experiences, patterns of daily living, interests, values, and needs." This process of evaluation through interview and observation identifies the "client's reasons for seeking services, strengths and concerns in relation to performing occupations and daily life activities, areas of potential disruption, supports and barriers, and priorities" (American Occupational Therapy Association [A], 2014, p. S10)

Patient Centered Medical Home (PCMH):

Model of care which is based on the formation of long-term relationships with patients, offers a wide scope of services, and connects components of the healthcare system with community services. Focus on the whole person and the continuum of care is the defining features of the PCMH (Goldberg & Dugan, 2013, p. 6).

Primary Health Care Team (PHCT):

Traditionally consists of primary care physicians, nurse practitioners, physician's assistants, nurses, and medical assistants (Goldberg & Dugan, 2013., p. 7). As the

delivery of health care becomes increasingly focused on preventative and holistic care additional professions will be integrated into these teams.

Standard Health Outcomes:

"Outcomes are the results people care about most when seeking treatment, including functional improvement and the ability to live normal, productive lives" (International Consortium for Health Outcomes, 2014).

Assumptions

Assumptions of this study are that health care policy will continue to allow for OT to deliver services within this practice setting. The rapidly changing health care system under the ACA was a challenge through the duration of the study. An important element of this study is for the investigator to remain well informed about changes in policy that could potentially affect the relevance of the research proposal. Assumptions of the qualitative process are that participants will provide truthful information during interview sessions and not report only favorable experiences.

Biases

The researcher's personal belief that OT has a role in the interprofessional primary care team serves as motivation for the study and therefore contributes to a lack of neutrality on behalf of the primary investigator. Because the researcher is currently obtaining a master's degree in OT a vested interest in OT's expansion into this practice setting is based on the potential for influential growth for the profession of OT. By identifying this bias it is critical to the validity of the research that reflexive processes occur to avoid seeking and reporting only favorable data reinforcing the researcher's personal values.

CHAPTER 2
LITERATURE REVIEW

Introduction

Primary care models are a newly developed mechanism for care in medicine. AOTA' s commissioned report identifies that the necessity for primary care design emerges from healthcare objectives of improved efficiency and effectiveness for prevention, care coordination, and chronic disease management through the implementation of technology and communication (Goldberg & Dugan, 2013, p. 16). Currently the implementation of facilities that follow new models of practice are commonly supported as pilot programs; these commonly are patient centered medical homes (PCMH) that utilize the chronic care model (CCM) (Goldberg & Dugan, 2013, p. 17). This literature review discusses current evidence on primary care models, interprofessional health care teams, and the role of OT in primary care.

Search strategies for the completion of this literature review began with a comprehensive search of the databases Academic Search Complete, Google Scholar, Web of Science, Web of Knowledge, Cochrane Library, CINHAL Complete, Informa Healthcare, PubMed, and AOTA.org. Search terms utilized in various combinations include primary care, team-based care, medical homes, redesign, OT, federally qualified health centers, interdisciplinary health care teams, interprofessional health care teams, and health care reform. Text books were obtained and referenced through recommendations made by the thesis advisory committee.

Primary Care Models

Emerging models of primary care include patient centered medical homes, federally qualified health centers, and accountable care organizations. These models are designed to meet the increased demands for patient care due to the newly insured population under the ACA, and to address health care initiatives focusing on health wellness, prevention, and chronic disease management. A commonality among these models is their inclusion of team-based care through both co-located and concurrent service delivery.

Accountable Care Organizations place an emphasis on accountability for long-term outcomes. These organizations are rewarded for reducing the use of health care services while at the same time improving the quality of care a patient receives (McWilliams, Landon, Chernew, & Zaslavsky, 2014, p. 1716). ACOs that achieve a certain level of cost savings and quality care receive a share of the cost savings, however if cost-quality goals are not met, the organization must pay a penalty to the Center for Medicare and Medicaid Services (CMS) (McWilliams, Landon, Chernew, & Zaslavsky, 2014, p. 1716). This system therefore provides incentive to efficiently and effectively manage chronic conditions, and provide health wellness and prevention services. This new model of care underwent the initial performance period occurring in April of 2012 by the CMS Innovation Center (Goldberg & Dugan, 2013, p. 31). Three versions of the ACO currently exist; the base ACO, the Advance Payment ACO Model, and the Pioneer ACO Model. The Advanced Payment ACO Model supports smaller physician based practices and rural facilities by providing advance payment of the anticipated shared savings to off-set start-up costs. The Pioneer ACO Model is for facility with prior experience in the coordination of patient care and offers a high-risk, high reward system for the provision of shared services (Goldberg & Dugan, 2013, p. 32). ACOs are eligible to be accredited through the National Committee for Quality Assurance (NCQA). The accreditation process is rigorous and ensures an organization includes patient-center primary care. Care management, transition, and coordination, patient rights and responsibilities, and performance reporting and quality improvement (Goldberg & Dugan, 2013, p. 32).

The dominating model in primary care redesign is the patient centered medical home. The proposed benefits of the PCMH are “a personal clinician through ongoing, continuous and comprehensive patient–clinician relationships: a clinician-directed medical practice where clinicians lead teams that collectively take responsibility for patient care; “whole person” care providing for all of the patient’s needs; coordinated care across the healthcare system and community; a focus on safety and quality; enhanced access; and alignment of payment with care quality” (Cronholm, Shea, Werner, Miller-Day, Tufano, Crabtree, & Gabbay, 2013, p. 1195). The historical origins of the

medical home stem from coordinated care facilities for children with special needs in the 1960s (Shi & Singh, 2015, p. 256). Today medical homes have been identified as an effective setting for the long-term management of chronic care with the implementation of the chronic care model (CCM). The CCM relies on interprofessional health care teams interacting with informed and motivated patients (Shi & Singh, 2015, p. 256). Another significant redesign element of the PCMH is the focus on developing a new culture within primary care which incorporates new roles in the provision of services (Cronholm, Shea, Werner, Miller-Day, Tufano, Crabtree, & Gabbay, 2013, p. 1196). A new culture allows consideration for health professions that have not previously been included in primary care to be considered in the formation of the medical home. A defining key to the success of this model is reliant upon "shifts in roles and mental models of members of the practice team" (Cronholm, Shea, Werner, Miller-Day, Tufano, Crabtree, & Gabbay, 2013, p. 1196).

Federally Qualified Health Centers (FQHCs) offer community based care for lower socio-economic status populations and are supported through the ACA as a means to address challenges of "uninsured patients, inadequate reimbursements by commercial health plans, and persistent staffing problems" (Weinkle, Feinstein, & Kanel, 2010, p. 1211). In 2014 FCHCs began the process of transitioning to a prospective payment system that uses a cost-formula to determine the rate of payment for services. A significant element of the FQHC PPS is that the rate of reimbursement from Medicaid increases 34.16% for new patients, and when Initial Preventative Physical Exams (IPPE) or Annual Wellness Visits (AWV) occur (Centers for Medicare & Medicaid Services [A], 2014). All services provided and health professionals visited by a patent during the same visit at a FQHC are billed as a single visit creating an all-inclusive experience from the patient's perspective (Centers for Medicare & Medicaid Services [A], 2014). This model has the potential to result in increased patient access, decreased payer spending, and co-located care.

Interprofessional Teams

A large role of the primary care physician is to advocate for their patient's needs, values, and directives, however additional demands and regulations imposed by the ACA

leave little time for this holistic support (Shi & Singh, 2015, p. 256). Team-based care and interprofessional practice has been identified as a means to cost-effectively meet a patient's or community's needs while utilizing the existing health care workforce (2011, Interprofessional Education Collaborative Expert Panel, 2011, p. 3). The IOM states that "new ways of relating to patients and each other" is necessary, placing a focus on *how* care is delivered and *what* care is delivered (as cited by Interprofessional Education Collaborative Expert Panel, 2011, p. 4). This has led to the development of core competencies that supports interprofessionality which is defined by D'Amour and Oandasan as:

> "The process by which professionals reflect on and develop ways of practicing that provides an integrated and cohesive answer to the needs of the client/family/population… [I]t involves continuous interaction and knowledge sharing between professionals, organized to solve or explore a variety of education and care issues all while seeking to optimize the patient's participation" (2005, p. 9).

In determining appropriate professions to include in the interprofessional team patient demographics and needs can be a critical factor. In a literature review of primary care skill mix, it was identified that elderly clients valued traditional service delivery, while patients in the workforce with full time employment placed more value on access and multiple professions working concurrently, and lower SES populations most frequently sought care from nurse practitioners and non-physician providers (Branson, Badger, & Dobbs, 2003, p. 329). Factors that contributed to patient satisfaction within interprofessional team based care included communication, access to appointments, location of services, therapeutic relationships, the length of consultation, patient education, continuity of care, and competence (Branson, Badger, & Dobbs, 2003, p.331). Because all health care providers working on an interprofessional team have the common goal of patient-centered care common competencies that are trans disciplinary should be identified (Interprofessional Education Collaborative Expert Panel, 2011, p. 14). In a recent monograph, the Interprofessional Education Collaborative Panel has identified four key domains for practice. Values and ethics for interprofessional practice, roles and

responsibilities, interprofessional communication, and teamwork (Interprofessional Education Collaborative Expert Panel, 2011, p. 16). This expert panel's work serves as the foundation for shared roles in the new healthcare teams proposed to fill the needs identified in the ACA.

Literature available on interprofessional teamwork identifies that there are gaps related to theoretical frameworks to guide the process, although theories of social learning have been utilized to facilitate the team building process (Interprofessional Education Collaborative Expert Panel, 2011, p. 33). Interprofessional education has become a key topic in the development of team-based care as it can provide the groundwork for concurrent health care delivery. The development of core competencies for interprofessional practice serves as support for interprofessional education, and stems from national and global literature as collected by the expert panel.

OT's Role in Primary Care

Currently limited resources, evidence, and literature is available on the topic of OT in primary care. The preparation of OTs for entrance into primary care and role identification is a starting point for discussion in the literature. To identify the skill set that OT possesses an examination of the Accreditation Council for Occupational Therapy Education (ACOTE) standards for entry level knowledge can be referenced. Table 1 presents ACOTE standards for entry level master's degree educational programs that are relevant to concepts on primary care models, interprofessional teams, and OT's integration into primary care (Table 1, Appendix F).

ACOTE standards for entry level knowledge demonstrate the appropriateness of OT to deliver service across the lifespan, address quality of life, well-being, prevention, provide health-related education and training, coordinate care, and design processes for quality improvement (2011). The focus on health promotion in individual, community, and population care makes OT diverse and adaptable to meet patient needs, facility needs, and provide program supports. These educational outcomes support the identified objectives of new models in primary care as well as identifying OT as capable of delivering distinct services that support and benefit team-based care.

The Occupational Therapy Practice Framework directs the delivery of OT practice with the identification of the domains of occupation. Included on the OT concept of occupation are activities of daily living which enable basic survival and well-being such as bathing, toileting, hygiene, and functional mobility (American Occupational Therapy Association, 2014, p. S19). More complex activities are classified as instrumental activities of daily living such as child rearing, health management and maintenance, and safety and emergency management (American Occupational Therapy Association, 2014, p. S19). Rest and sleep, education and work, play, leisure, and social participation are also areas of occupation OTs are skilled in addressing (American Occupational Therapy Association, 2014, p. S21). Client factors, performance patterns, and the individual's context represent other domains that OT assesses and provides intervention. The methods for the delivery of OT interventions encompass a wide scope that allows for flexibility and adaptability to meet both the client's needs and facility protocols. Therapists use occupations, preparatory methods, education, training, advocacy, and group treatment as strategies for implementing a plan of care (American Occupational Therapy Association, 2014, p. S29-S31). This diversity in service delivery can be an asset with in the interprofessional team.

Summary

Based on the literature in support of primary care redesign in response to the changing healthcare models as a result of the ACA and interprofessional teams the skill set and educational standards of OT support that OTs have the preparatory skills to practice within this setting, however little is written beyond descriptive materials. Thus a void in the literature exists. This factor serves as support to the necessity for this study. Research is needed to provide evidence for the efficacy of OT as an interprofessional team member in primary care.

CHAPTER 3

JOURNAL ARTICLE MANUSCRIPT

Title

The experiences of occupational therapists working on primary health care teams: A case study.

Author

Emma B. McClellan, OTS

Abstract

The aim of this research was to provide evidence on the integration of occupational therapy (OT) intervention in primary care from the perspective of OTs. Typical services provided, experience with team members, and the identified value of OT in primary health care was explored. OT possesses the expertise and skill set to address the most common chronic conditions that primary care providers treat by entry level educational preparation. OT services are based upon a holistic view of individuals creating an affective skill set to participate in and coordinate health care delivery for the client. Currently limited evidence is available to support OT in primary care. A need exists for the development of defined roles for OT in the interprofessional primary care team. The changing reimbursement model for health care delivery and associated funding also adds to the paucity of information available in this emerging practice area. Qualitative methods were used in this case study research. Semi-structured interviews were transcribed, coded, and analyzed for emergent themes. Findings of this study include main themes of facility characteristics, assessment and intervention strategies, interprofessional communication, barriers including space and time, and future needs for the education of OTs. Conclusions from this study present how integration into primary care will require OTs to advocate for their place in this setting as valued and beneficial members to the primary care team. OTs found that the greatest impact was made through focusing interventions on habits and routines, managing chronic conditions and co-morbidities, and prevention.

Keywords

Interprofessional primary care, occupational therapy, health and wellness, prevention in primary care, federally qualified health centers, patient centered medical homes

Introduction

The American Occupational Therapy Association (AOTA) has identified therapy in primary care as a research priority as a result of preventative care, health maintenance, and management of chronic disease being emphasized through the Affordable Care Act (ACA) of 2010 (Public Law 111-148). The ACA's Triple Aim approach intends to meet the objectives of improving "the health of the U.S. population by supporting proven interventions to address behavioral, social, and environmental determinants of health; delivering higher quality care; and delivering affordable care" (U.S. Department of Health and Human Services, 2011). It is proposed by the ACA that these preventative care objectives can be met through the development of patient-centered medical homes (PCMH) and interprofessional primary health care teams (PHCT); OT's holistic, client centered practice offers services that can be an asset to these teams (Donelly, Brenchly, Crawford, & Letts, 2013). AOTA's Centennial Vision includes the aim that OT embodies a "profession with a globally connected and diverse workforce meeting society's occupational needs" (American Occupational Therapy Association, 2014). Through emerging roles in health and wellness promotion OT practitioners become an effective contributor to health outcomes and society's occupational needs on the level of the individual, the community, and on the global population level. Factors that have become primary healthcare concerns for all health professions in the United States include prevention, chronic and co-morbid disease management, and obesity. AOTA supports and identifies that OT is the appropriate profession to provide care for the functional impairments and deficits that result from these conditions (Yamkovenko, 2014). Involvement in primary care through both practice and research is needed to provide evidence to the efficacy of OT in this setting.

Background

AOTA predicts that models of care incorporating multiple professions will be the future of primary care. In what is referred to as primary care redesign more focus has

been placed on home and community based services, mental health, and population health (Goldberg & Dugan, 2013, p. 7). The World Health Organization identifies additional services that qualify to be delivered under primary care including health education, family planning, disease prevention, nutrition promotion, and public health issues (Goldberg & Dugan, 2013, p. 8). Additionally the primary care models incorporate the "concepts of integrated and accessible health care services, ongoing clinician-patient partnership, and care in the context of family and community" (IOM, 1996 as cited in Goldberg & Dugan, 2013, p. 8). These components of primary care can be served through a variety of emerging models of primary care.

Patient-centered medical home model and primary health care team.

The patient-centered medical home (PCMH) is a model of care which is based on the formation of long-term relationships with patients, offers a wide scope of services, and connects components of the healthcare system with community services. Focus on the whole person and the continuum of care is the defining features of the PCMH (Goldberg & Dugan, 2013, p. 6). This fits well with philosophy, educational preparation and skills of OTs.

The primary health care team (PHCT) traditionally consists of primary care physicians, nurse practitioners, physician's assistants, nurses, and medical assistants (Goldberg & Dugan, 2013, p. 7). As the delivery of health care becomes increasingly focused on preventative and holistic care additional professions will be integrated into these teams. Unique challenges face these PHCTs that often are not reflected in the existing body of literature on general interprofessional teams. Contextual factors including the patient population and regional cultural values will play a role in the types of professions needed to complete the primary health care team (MacNaughton, Chreim, & Bourgeault, 2010).

Occupational therapy in primary care.

In Goldberg & Dugan's document, *Models of primary care delivery* presented the need to address the questions of, "How are interprofessional, coordinated primary care delivery systems currently functioning?" and "Where are the opportunities for OT practitioners to become part of that evolution?" was identified (2013, p. 4). Interviews

conducted with current primary care providers found that the majority of providers felt OT would be beneficial to the PHCT and PCMH; however they were unsure of the full scope and application of OT services (Goldberg & Dugan, 2013, p. 7). The most common chronic conditions that primary care providers treat include diabetes, arthritis, hypertension, and depression, all conditions that OT has the expertise and skill set to provide intervention and education services for (Goldberg & Dugan, 2013, p 10). These chronic conditions can be addressed by OT in relation to education and management of conditions, maintenance of health, quality of life, and addressing associated routines, family involvement, contextual influences, and lifestyle choices. OTs possess the educational knowledge and skills in each of these areas (ACOTE, 2011). Several OT services have been specifically identified to support OT as a primary care team member. Early intervention consultation services, identification of impairments in function and participation as a result of symptoms of illness or disease, addressing patient concerns that extent beyond symptom management, development of home programs to potentially reduce the need for referral to extended services, and providing training in adaptive equipment and technology are examples (Muir, 2012, p. 507). An integral element of primary care teams is the coordination of care which is an area that OT has the training to support. The holistic, whole person, client-centered view of individuals that OT services are based on create the skill set to unite and coordinate fragmented health care delivery for the client in a primary care setting (Muir, 2012, p. 507). To facilitate this role for OT, there is a need for further research on OT in primary health care particularly related to contributing factors in the development of the interdisciplinary PCHT and PCMH and how it differs from the typical interdisciplinary team building (Brown, Lewis, Ellis, Stewart, & Kasperski, 2011).

Statement of Purpose

The purpose of this study is to understand the experience of OTs as members working on interprofessional primary health care teams (PHCT). Typical services provided, role overlap, experience with other team members, and the perceived value of OT in primary health care was explored.

The potential utility of this study was to identify information that is relevant to OT as the profession transitions into primary care service delivery as a result of the implementation of the ACA. Understanding the role of OT services in these team models informs OTs what preparation is required to be successful in this practice setting. Exploring the experiences of OTs working in these setting will provide a foundational understanding for the challenges and expectations of primary care teams.

Methods

A qualitative case study research design allowed for exploration of individual experience and examined the real-life context (Creswell, 2013, p. 97). For the purpose of this study the research was bounded by place; the primary care setting served as the context for the case. Four therapists from multiple sites and facilities were selected as participants resulting in this project being a collective case study. Human subjects review board approval was obtained prior to initiation of the study. All participants signed an acknowledgment of informed consent prior to contributing to the study.

Participation Selection

Participants were obtained by contacting key personnel at AOTA. Potential participants were identified and contacted by the researcher regarding their interest in contributing to the study. The process of snowball sampling occurred and an additional potential participant was identified. A total of four OTs were included in the study; three completed the study with one dropping out before completing the follow-up interview process. Inclusion criteria specified that participants were licensed OTs or OT students in their level II fieldwork with at least 1 month experience working in a primary care setting. There was no specific exclusion criteria or any reason why an individual that met the inclusion criteria was not able to participate in the study. Currently very few OTs are working in this practice setting resulting in participant demographics and primary care facility geographic information not being disclosed for the purpose of maintaining anonymity of the participants. Table 2 provides an overview of each participant's level of experience and facility type.

Table 2. Summary of Participants

Therapist	Facility Type	Level of Experience
A	Medical home, FQHC with medical residency training program, geriatric care clinic	10+ years as a licensed therapist
B	FQHC with medical residency training program	Less than 10 years as a licensed therapist
C	FQHC with medical residency training program	Fieldwork experience as OTS
D	Free clinic for pediatrics, FQHC with medical residency training program	10+ years as a licensed therapist

Data Collection

Data collection occurred over a 4 month period. Two series of semi-structured interviews were employed; a ten question initial and a seven question follow-up interview, with additional inquiry resulting from the participants' individual responses. All interviews occurred via telephone at times individually selected at the convenience of the participants and were audio recorded and transcribed verbatim by the researcher. The process of member checking occurred through asking participants to review their interview transcriptions to ensure the data accurately reflected their responses.

Data Analysis

Data analysis occurred through the use of HyperRESEARCH software. Interview transcriptions were analyzed for key words, terms and phrases. Six primary themes emerged from the transcriptions. Themes were sub-coded for additional clarity and memos were developed to explore how the sub codes supported the primary themes. The use of member checking was used to produce triangulation and contributed to the reliability and validity of the findings. Additionally the researcher's primary faculty mentor provided review of coding to strengthen the trustworthiness of the data.

Findings

Findings that emerged from the data analysis process were categorized into six primary themes which guide a deeper understanding of how OTs experience working in the primary care setting. Facility characteristics, screening, assessment and evaluation strategies, primary care interventions, communication and the interprofessional team,

barriers, and future needs for OT to integrate into primary care were all identified as significant factors by each participant.

Facility Characteristics

Each therapist described characteristics of the primary cares setting which they have worked or were currently working in. Emerging characteristics included the type of health care organization, the methods of billing and receiving reimbursement and payments, the population demographics served, the schedules typically held by OTs and the manner in which interprofessional team based care was implemented and perceived by staff members.

Health Care Organization

The facilities that integrated OT into their interprofessional primary care teams included federally qualified health centers (FQHC), family medicine residency training programs, and primary care practices that specialized in pediatric, geriatric, or internal medicine. One therapist worked at a medical home for privately insured patients and another worked at a free clinic that opened on Saturdays to provided school physicals for children. The primary mechanism that enabled OTs to integrate into these primary care settings were grant funded pilot programs. Affiliation with medical residency sites offered the opportunity for OTs to work alongside medical students who had no prior knowledge of OT. This gave the medical residents opportunity to observe OT's scope of practice, and provided an understanding of when OT services were appropriate. Educational in-services were offered by OTs in these settings that included an introduction to the scope of what OT offers and another session on the fundamentals of sensory integration.

The physical settings of these primary care facilities were described by each OT as a typical physician's office with waiting rooms, exam rooms and a health care team that comprised of multiple professions including physicians, medical assistants, nursing staff, case managers, social workers, psychologists, and in several settings, medical residents. Some facilities also included research personnel, physical therapists, dieticians, and pharmacists. One facility did have access to a pediatric sensory gym space due to its affiliation with the medical residency training program; however it was

more common that OTs reported no access to a gym space or any modalities typically seen in a rehabilitation department. Therapists reported that generally they did not have a designated room or space for OT. Thus, sharing spaces was a commonality in primary care practices.

One therapist noted that an important element of the primary care setting was systems based practice which is the awareness of the health care ecosystem. OT's place in this theory of practice was described as follows:

> "A single intervention that you're going to provide to a patient has an impact on the entire health care ecosystem and the entire health care dollar."

Another consideration to integrating OT into the primary care model is the formation of Accountable Care Organizations (ACOs) and Federally Qualified Health Centers (FQHCs). When these types of organizations are designed a cost formula is created which allows for all preventative and primary care services to be billed at an All-Inclusive Rate (AIR) per visit (Centers for Medicare & Medicaid Services [B], 2014). If OT is included in this cost formula then OT can provide care without the need to bill patients because the cost of OT is included in the flat rate payment. Because this cost formula is not re-negotiated for approximately 5 years it is difficult for OT to become a part of these teams after the facility has been designed.

<u>Billing, Reimbursement, and Payment Methods</u>

Each therapist discussed payment and reimbursement with the most common mechanism for funding OT in primary care being research grants. Many primary care clinics discussed in the study served lower socio-economic populations. One therapist elaborated on the funding design for FQHCs through the prospective payment system and the design of a cost formula. Centers for Medicare & Medicaid Services (CMS) reimburse the facility based on this standard calculated rate. When OT can be included in this calculated rate it becomes a significant factor in the integration of OT onto the interprofessional team. One therapist described that this allows OT to see any patients that come to the FQHC to have access to OT screens, consultations, or interventions without the need to determine if the service is "quote unquote billable because OT is just a part of the team."

In primary care settings that specialize in geriatric care and in the medical home CPT codes were utilized for incident-to billing. In this system OT services can be billed as incident to the physician's appointment; however screenings are not billable and therapists reported that their time was never fully covered with this method of billing; however grant funding allowed the OTs to continue to work at this setting. One concern with this method of receiving payment is high deductibles associated with new insurance plans. Many patients at the primary care clinic refuse OT consultation, evaluation, or intervention because until they have met their deductible, as all ancillary services are paid out of pocket. More support and research is needed to inform both the patient and the payers of the long term consequences of not receiving intervention for chronic or acute conditions so that informed decisions can be made regarding what services are medically beneficial for the patient and can reduce future complex treatment procedures.

Population Demographics

Therapists indicated that the typical patient seen was classified as "medium risk." This is the patient that does not qualify for outpatient OT but has chronic, co-morbid, or acute conditions that will benefit from receiving patient education, consultation, or home programs. Many patients seen in these primary care settings were lower socio-economic status and from underserved areas. Because many of the clinics focused on family medicine all members of the family were seen by the same health care team, and patients ranged from birth to geriatric needs. Clinics frequently saw patients that worked in labor intensive careers such as farming, landscaping, construction and the food service industry. Repetitive work injury, pain, and issues with the lower back were common conditions that OT consulted and provided services for. Often OT was utilized as another option for treatment instead of immediate referral for surgery.

Occupational Therapy Schedules

Therapists' schedules varied from visiting a primary care clinic once a week, PRN, or full-time positions. One therapist had arranged with the clinic to schedule all pediatric appointments on the same day so an OT specializing in pediatric development could come one day a week to address any concerns noted by the physician.

After patients were seen by the therapist a follow-up usually occurred in conjunction with the follow-up appointments with the physicians; anywhere from 2 to 6 weeks from the initial visit. When it was determined that more intervention was needed than could be provided during the follow-up visit a recommendation for outpatient OT was made.

The OTs working through grant funding were able to meet with clients after the physician's appointment and spend up to 2 and 3 hours with them if space was available. No productivity rate was monitored in the pilot programs which allowed therapists more autonomy in determining client needs.

Implementation of Interprofessional Team Based Care

The key component of OT in primary care is the redesign of primary care that focuses on the interprofessional health care team. Physicians have addressed team-based care through implementing health coaching and a peer-to-peer modeling. Various personnel hold team meetings such as weekly meetings between case managers and psychology to discuss patient needs and progress. OT was able to play a role by administering screenings that determine a patient's complex needs and therefore determining what professionals are best suited to form the patient's care team. Frequently this was accomplished through utilizing mental health assessments for anxiety, depression, and cognition in conjunction with assessments of function. The interprofessional team can be implemented in two ways. One is concurrent care, which changes the way in which primary care is practiced. Team members work as one unit to provide care to the patient and in this model OT was provided through direct access rather than by physician referral. Because OT was initially seeing the patient alongside the physician it was the therapist that determined if the patient had needs that should be addressed by OT. Co-located care is more related to physical location. Multiple professions are located within the same facility; however each discipline functions autonomously with the benefit being that patients can receive all needed services at the same location. One therapist differentiates between these models of team based care:

"If it would have been more of a co-located model if the physicians wanted to refer to me they could, I would have seen far less patients, but the solution to that is integrating a screening system [concurrent care]."

Regardless of the level of autonomy OTs experienced the physician is ultimately held liable for the care and outcomes of the patient but OTs did feel their recommendations were respected within the primary care setting. One therapist commented that they felt the overall number of referrals to outpatient OT was increased due to the integrated screening process. This allows the therapist the opportunity to determine when a patient would benefit from more in-depth OT services instead of following the wait and see perspective of the physician who frequently prescribed medication and scheduled a 2 or 3 week follow-up without consideration to the value of what outpatient OT can do to reduce impairments from the patient's condition. This also allowed OTs to educate the physicians to the scope of OT and when OT can support positive patient outcomes.

Screenings, Assessments, and Evaluation Strategies

A large part of OTs role in the primary care clinic is screening and evaluating clients to determine their needs. Screenings allow the OT to identify the appropriateness of the patient for OT services, and to assess if primary care intervention is best practice or if recommendation to outpatient services is needed. The use of an occupational interview and development of an occupational profile is a key component to the assessment and evaluation process. The occupational profile is an element of holistic care that OT contributes to the interprofessional team by demonstrating OT's distinct value in the primary care setting (American Occupational Therapy Association [A], 2014). This evaluation is representative of the tools OT utilizes which guide the professions principals and reasoning serving as support for how OT is able to meet the needs of primary care. Other screens and assessments that were commonly utilized included pediatric development and reflex testing, mental health in relation to anxiety and depression, cognition, medication management, and safety. Other factors in the screening and assessment process included each facilities protocol for referral to primary are OT. Several clinics provided direct access, while other clinics adopted a more co-

located model where patients were referred by the physician to the primary care OT following their appointment.

Referral to OT

A critical component of OTs integrating into primary care is addressing the referral process between the physicians and the OT. In one setting therapists found it beneficial to be involved in the decision on whether a patient was appropriate for OT services. An objective method of determining this was to utilize a screening tool that could be administered to an entire population. Examples were the Patient Health Questionairre-9 (PHQ-9) for depression, the Patient Activation Measure, or the Ages and Stages Questionnaire for pediatric development concerns. These types of tools can be used to develop an automatic referral process in the clinic. One therapist describes the clinical reasoning behind identifying clients that will benefit from primary care OT:

> "What happens is you screen an entire population and you identify their risk, they're either low risk, so you know they probably don't need any intervention and if they do it's just a small amount, medium risk, they're at risk for having a developmental delay or you know becoming depressed or obese or something like that, or their high risk and they're already at that point for disability. And so the high risk patients are the ones that usually get referred to [outpatient/inpatient] OT right? The patient has already fallen, the patient has broken their shoulder, the patient has and a stroke, all of those things."

In the primary care setting it is the medium risk patient that can benefit from OT services in this context. This is the individual that benefits from health and wellness interventions that focus on prevention and maintenance; these are the patients with chronic or co-morbid conditions that a focused "one-hit intervention" can prevent surgery or complex complications in the future.

Other considerations in the process of referring patients to the primary care OT is understanding that the physician and other team members are not familiar with the full scope of OT and therefore should not be expected to identify when OT referral is needed. A role that the primary care OT must develop is that of reducing the amount of decisions the physician must make:

> "What we need to be doing is reducing the cognitive work flow of the physician and giving them...putting systems in place that make it so easy and so convenient for them to refer and that when the screen is positive, it's agreeing automatically to a referral to OT. We can't leave it up to the sort of abstract analysis of whether or not a patient should be referred."

The Occupational Profile

The development of the occupational profile (American Occupational Therapy Association [A], 2014) is a distinct portion of the evaluation process that is individual to OT, however the data gathered for the profile impacts the services provided by the entire interprofessional team. The occupational interview and profile can assist in guiding all health care delivery for the patient and allows the team to practice holistic medicine. In the physician centered model which is currently the common model of implementing primary care services the plan of care is discussed with the patient and if the patient does not follow through the patient is considered non-compliant. An OT describes the underlying problem with this model, "there's never an opportunity to evaluate the barriers of support to one's ability to manage, self-manage and manage the treatment plan that they've been given. So that's kind of the overarching work that we do." It is through the occupational interview that the full picture of an individual's supports and hindrances can be gained. A client's habits and routines are significant in the patient's ability to implement a plan of care and the OT has the ability to gather in depth information on routines and if the individual is ready and capable of changing or adapting habits and routines or working with the client to successfully integrate the interprofessional plan of care into their daily life.

Because primary care frequently occurs in a family practice setting OT can use the occupational profile as a tool to provide family-centered care by looking at all aspects if the family interaction. The following case is an example of how a physician recognized the ability of OT and the importance of the occupational profile in the holistic treatment of the patient:

> "A 26 year old mother with a rash all over her body had been in to the clinic a few times with the same condition and she had been treated for eczema…and it didn't

go away. So she was back in the clinic that day and really stressed out that she still had this rash. And the resident again thought it was eczema or something along those lines and then the physician went into the room and saw the patient and was like that's not eczema, this is hives, uticaria, hives.

So he asked her is there anything that's going on in your life that would be causing you any stress and she broke down and said "yeah, actually my 4 year old daughter, I feel like I can't manage her, I can't care for myself because I can't care for her, she's just, her behavior is so wild, you know I just don't know what to do and I'm kinda at my wits end." And so the physician immediately realized that there wasn't much that we could do for her that she needed to see the OT. So we screened her for depression and she was very positive, she had a high score for depression

Although her daughter wasn't there her daughter was a patient of this clinic. So again because it's a family medicine practice I was able to give the mother a screening tool to screen her [child] for any kind of developmental concerns. And so when her (the daughter's) Ages and Stages Questionnaire was positive she was in the medium risk zone and I subsequently provided treatment to [the daughter] and she was very impulsive and poor body awareness, poor motor planning, and we just uncovered so much. So it was really a family centered approach to help the mother understand the child's development and her sensory processing and help them come up with you know a structured approach to having daily habits and routines to support her development. And yeah it's a much longer story than that but when the physician was able to recognize that the only person that could care for, well the best person, I couldn't say the only, the best person to care for their patient and their family is an OT that was, you know taking a huge step."

The OTs in this setting commented on the benefit of participating in the patient's initial visit with the physician. This served two objectives; one was demonstrating to the

physician how beneficial the information gathered in the occupational profile can be in regards to understanding how symptoms impact function, self-care, and occupations and second, the OT is able to assess and screen the patient by building off of the physician's questioning. Common methods of gathering the occupational profile included the Canadian Occupational Performance Measure (COPM) or an informal interview. When priorities are identified one therapist indicated that using a visual analog pain or fatigue scale was beneficial in determining a measurable component to functional impairments.

Pediatric Development

In the family practice setting pediatric clients were frequently seen by the OT for developmental concerns. Children that were at medium risk for developmental delays were identified with screening tools including the Ages and Stages Questionnaire, reflex testing, and the Bayley Scale of Infant and Toddler Development. One therapist had access to a small sensory gym at their primary care facility and was able to use this space to address safety awareness with children that did not qualify for other forms of treatment through either the school system or outpatient services. Observations of play within the office visit were also used to assess a child's risk for delay. Pediatric assessment also guided what content was delivered in parent and family education materials. The impact that OTs in primary care can have was described; "we're identifying kids who might have a developmental delay or some kind of condition much earlier than the school district would you know when they're 5 years old going to school, but being able to identify and treat these kids early I think could reduce cost to society, healthcare."

Cognition, Medication Management, and Safety

A key area screened and assessed was an individual's ability to manage medication. Home safety was also assessed through home visits and evaluating a patient's fall risk. OTs found that physicians prescribed multiple medications without consideration to that patient's ability to integrate a medication schedule into their daily routine. Another area of screening for medication and cognition was the ability for OT to provide alternatives to medication for coping with pain or fatigue. A specific tool that was identified as helpful was the MEDI-Cog. The St. Louis University Mental Status screening tool (SLUMS) was used for basic assessment of cognition, particularly in the

geriatric population because it gives a numerical score which can easily identify cognitive decline across primary care visits.

Mental Health

In family practice settings anxiety and depression screening became a common role of the primary care OT. Therapist found that mental health was often overlooked during the appointment with the physician. Depression was found with chronic and co-morbid conditions and patients can benefit from the expertise from an interprofessional team consisting of the physician, OT, social worker, and psychologist.

Primary Care Interventions

Implementation of OT in the primary care setting is unique from traditional inpatient or inpatient treatment in that it can be described as "one-hit interventions." The opportunity to follow-up with patients may only occur once every 4 to 6 weeks, or a patient may only be seen once by OT. This results in the need for effective home programs and patient education materials. OTs found that the greatest impact was made through focusing interventions on habits and routines, managing chronic conditions and co-morbidities, and prevention.

Intervention for ADLs and IADLs

Providing intervention for ADLs, self-care, and IADLs in the primary care clinic includes the use of patient activation, or an individual's ability to care for themselves. Due to the limited in office follow-up opportunities OT must focus on the client's ability to self-manage daily activities and self-care. A therapist describes her use of occupation in the clinic:

> "I think the beauty is that in the primary care setting an OT is really able to practice the craft of OT because you're not bound to what a prescription says, or what a referral says, what a scrip for OT says, and you're able to decide what the patient's needs are so I think that having a really great understanding of the power of occupation is what will get us the furthest, and then just the confidence to be able to apply it to any clinical situation because you know, you're never, like last week I saw a patient with Morquio Syndrome. I had no idea what that was, but it didn't matter. You know I looked up what I needed, I used Wikipedia to find out

> what I needed to know, but that wasn't what you know, her diagnosis didn't matter, it was what she was functionally able to do that mattered and not able to do."

Interventions with a focus on ADLS and IADLs ranged from addressing carpal tunnel syndrome, shoulder injury, back pain, anxiety, stress and depression in relation to the functional deficits that result from these conditions. Therapists indicated that the use of true occupation based practice was not as applicable in the primary care setting due to barriers of space and time as was the use of client education. Adaptive equipment training was utilized through demonstration with in the clinic. In one clinic the physician's jokingly called the therapists collection of dressing aids, toilet aids, and other adaptive equipment as "OT in a bag." With pediatric patients incorporating occupation into intervention was achieved through the use of play in the clinic. Play allowed for both evaluation and assessment of a child developmentally and as intervention for mild delays. Another area of ADLs that was addressed in the primary care clinic was rest and sleep. Through developing a patient's occupational profile rest and sleep were often found as underlying causes of other medical concerns.

Habits and Routines

Addressing habits and routines supported patient activation, self-managing, and self-monitoring. Patients with chronic pain and multiple conditions often saw the physician for each condition individually, the OT was able to then meet with the patient to integrate multiple treatment plans into their daily life, as well as identify contraindications with client care. In one example a patient with obesity and planter fasciitis was recommended by the physician to join a running/jogging club to help her in losing weight. When meeting the OT it was realized that other weight loss strategies should be explored because running with planter fasciitis was in conflict with the individual's daily routine and was not an appropriate solution to co-manage both conditions.

> "A physician is going to quote unquote counsel them on exercise. They'll give a very general overview. Oh you need to be eating these foods; you need to be exercising 5 times a week. So they kind of layer a lot of that on and then it

> requires the OT to go in and break down what they're...what it actually is they should be doing."

For chronic pain having OT co-located with the pharmacist offered an opportunity to provide alternatives to medication for patient whose routine and habits did not support management of multiple medications. This service could be provided without an additional appointment or office visit; many patients particularly those that lived in rural areas or were lower socio-economic status would not have had access to OT if it had not been provided through the primary care clinic.

OT's perspective towards habits, routines, and patients' plan of care was described:

> "A patient isn't non-compliant, but a patient has been given a wellness plan that is direct conflict with their daily occupational profile."

An important part of looking at habits and routines was accomplished through the family care clinic as it allowed the OT to provide client centered care with consideration to the patient's individual family context.

One strategy in which OT was able to provide interventions on routines was through creating health and wellness groups that met at the clinic. Seven sessions were developed on topics including nutrition and meal planning, medication management and budgeting, all areas identified in the AOTA Practice Framework. Patients of the clinic were invited to attend the sessions as they were able.

Patient Education

In the primary care clinic there was a strong emphasis on patient education and home programs. For the medium risk client these materials can prevent further complications including surgery or additional medications. For pediatric clients parent education can lessen the impact of a developmental delay, and reduce the need for specialized intervention when the child reaches school-age. Educating parents on age appropriate milestones also worked to alleviate parental anxiety or supported parents to advocate for more specialized services. Home programs were provided for patients and upon the follow-up appointment OT and the physician assessed whether referral for outpatient therapy was needed.

> "In my view of primary care it's really great at treating those people who may not need outpatient intervention if you provide them with a good home program first. So like a new shoulder injury, if you give them a good home exercise program of stretching, rest, gentle exercise, it may not progress to a full out chronic shoulder injury. So you can alleviate or ameliorate some of those conditions that would have progressed and needed outpatient therapy."

When OTs were able to provide client education with the physician it lead to the physician identifying other patients that could benefit from OT client education, home programs, or adaptive equipment training.

> "I also have made a conscious effort to demonstrate the adaptive equipment with the physician in the room; a reacher, sock-aid, you know elastic shoe laces, a toilet hygiene aid, no one know about that tool and so you know I will explain those and educate patients with those tools in hand and demonstrate their use and then the physician's like oh my God I know someone else so then they'll come in and say I have a patient that needs that sock thing."

Education material used in the primary care clinic was concise, included by visual images and accompanied by detailed demonstration within the clinic. Patients were also asked to practice home programs in the clinic to ensure they understood and were able to complete the program. Common topics utilized were body mechanics and low back pain, positioning for infants, developmental checklists, calming and behavior management for patients, task modification, chronic pain management, carpal tunnel syndrome, edema reduction, joint protection, energy conservation and work simplification.

Prevention

Prevention is a key element of OT treatment in the primary care clinic. One therapist elaborated on the impact OT can have in this setting:

> "What I believe the role OT is in primary care setting should be is to focus on the medium risk patients, so the patients that probably wouldn't ever get to an OT other than in a primary care setting because we still, a system of waiting until something happens until an OT sees a patient. So it's a preventative piece so we really focus on preventative OT."

The medium risk client is not eligible for outpatient services because significant decline in function is not present but functional concerns such as decreased safety awareness, particularly in pediatric and geriatric populations are occurring with the patient . Addressing these concerns can serve to prevent future falls and musculoskeletal injury.

> "So many of our patients were like starting to develop pain like carpal tunnel or back pain or cubital tunnel and so seeing them early on and talking to them about positioning or gentle stretches that they could do or strengthening that they could do I think really helps get them on the track of conservative treatments versus going in for the surgery so that would have happened over time."

<u>Intervention Timeframes</u>

Several therapists described that in the primary care setting timeframes for intervention are not scheduled or as regulated as in traditional rehabilitation environments. Service delivery is not predetermined; therefore it is the responsibility of the primary care OT to negotiate their schedule to meet both the needs of the client and the space and time requirements of the physician and other interprofessional team members. One therapist indicated they could meet with clients for up to 3 hours following the physician's appointment, while another OT spent an average 20 minutes with patients in the clinic. Follows-up visits were in conjunction with follow-up with the physician. Patients were often seen only once, however one OT who worked alongside the pharmacist for pain management saw patients on an average of 6 visits.

Communication and the Interprofessional Team

Through the formation of interprofessional primary care teams OT has the ability to provide intervention for prevention, health maintenance and wellness. The primary care team has distinct factors that relate to the use of common terminology, role negotiation, interprofessional relationships, education of team members on the scope of OT, and the differentiation of concurrent and co-located care. It becomes critical that OTs become supportive, necessary, and beneficial team members who are capable of demonstrative value through quality patient care and positive team interactions.

Use of Common Language and Terminology

OTs are trained to use function based language and terminology from AOTA's Occupational Therapy Practice Framework (American Occupational Therapy Association [A], 2014). Though this language aligns with the ICF physicians do not have time to decipher "OT jargon" or acronyms. For this reason OTs must use assessment and intervention tools that are valued by the entire team. Documentation and tools must also link occupational performance measures to standard health outcomes. As OT integrates into the primary care model which has historically been physician-centric it is the responsibility of OTs to expand their knowledge and understanding of medical language and terminology. In several instances OTs did create "cheat sheets" for the physicians to educate them on the language of OT. The occupational profile was commonly explained to the team so that all members could utilize the patient data gained from this evaluation. Verbal communication is an important piece of this process in order to explain unclear terms or process used by the therapist. When documentation notes were completed OTs made sure they were concise but thorough so that team members could understand what occurred between the patient and the OT and how this impacted the patient outcomes.

Role Negotiation

Part of the interprofessional team is negotiating roles, boundaries, and role release. One part of role negotiation was determining which patients were appropriate for receiving OT services. All patients coming to the clinic saw the physician, but not all clients were appropriate for OT. Overall clinics were so busy that rather than looking at OT as overlapping roles with various professions, the team was grateful for the additional expertise and skill the OT was able to bring to the clinic. The symbiotic relationship related to determining the role of OT is described:

> "I think that the beauty of true interprofessional care is that we can learn from each other and we can practice what we learn from other professions in our own practice. And so I really think that that's what we need to be moving towards and not making sure that we're protecting our ground because in OT who is a true OT and is a real craftsman is going to be able to practice in a way that is clear to the team that their work is very unique."

Educating team members also plays a large part in role negotiations. This occurs on a case by case basis by determining what professions can offer the most support to the patient. One OT discussed how the personality of professionals can also determine who is best suited to work with a patient, particularly when it comes to education regarding a plan of care. In the primary care setting there is most likely only one OT on staff knowing ones own limitations and competencies is important; it is the ethical responsibility of the therapist to know when outside referrals are needed.

<u>Interprofessional Relationships</u>

Interprofessional team relationships occurred through both positive and negative interactions in the primary care clinic. Differing medical opinions on client needs were cited as the most frequent negative experience impacting the team. OTs found that some physicians and social workers did not believe in sensory integration or the value of finding strategies for children to meet sensory needs. Self-advocacy was necessary for OTs to feel as though their clinical input was valued. Becoming part of the team means learning how to practice symbiotically with the physician especially when the physician does not understand what is functionally or not functionally achievable by the patient. OTs working in medical residency sites expressed frustration with a lack of consistency in team members because of the nature of the training site. This factor made it difficult for therapists to develop a cohesive relationship which hindered the positive relationships that could be developed through educating the team.

> "I think there are so many examples of when the physicians have been grateful or have been very impressed because they don't realize that anyone does what we do. They didn't know anyone did that kind of intervention so they are frequently very, very grateful and then that also leads them to think of other patients that we could be helpful with so it's sort of a really positive self-fulfilling process kind of thing."

A well-functioning team has the ability to increase job satisfaction for over extended physicians who have not previously been able to deliver holistic care due to time constraints. One therapist commented, "I've had multiple physicians tell me is that when they work with the OT they feel like they really treat the whole patient. So they're not

just doing symptom management but rather they're really treating the whole patient with their team." An understanding of the interprofessional team is that the physician is ultimately responsible for the patient's care and therefore had the final decision of the patient's plan of care. Part of the team relationship however is negotiation. It is the right of the OT to respectfully discuss what they feel is in the best interest of the patient. "I think it's a negotiation often initiated by the primary care OT and then in my experience the physicians almost always follow our recommendation."

Education of Team Members on the Scope of OT

A challenge to educating the interprofessional team on OT's scope of practice is that OTs themselves "disregard the breadth and depth of their training." It is difficult to verbalize the scope of OT so many therapists found that seeing all of the patients along with the physician was the most effective strategy for educating the physician on what OT is able to provide for a wide variety of patients.

> "They [the physicians] do their evaluation…and then they always turn to me and say, "Do you have any questions?" And then I always ask questions that are function based. You know, how is this impacting your ability to do your self-care? How is it impacting your ability to do your job? And so then when I ask questions about function additional information always comes out and then I will say, "Oh I could help you with that." And the doctors almost universally say, "Oh my God, I had no idea someone does that. You can actually help with that thing?" Yes that's what OTs do and so…after you see a multitude of patients with the physician and they really begin to understand the broad, depth and breadth of our knowledge and our focus on function and keeping people engaged in occupation."

OTs also conducted in-service presentations on topics related to OT's role on the interprofessional team and sensory integration because OT's frequently utilized sensory strategies with pediatric patients. After physicians became more familiar with OT's abilities within the primary care clinic, therapists saw an increase in patients referred to the primary care OT after the physician's appointment.

Concurrent Versus Co-located Care Models.

In the co-located model for primary care referral to OT from the physician is still necessary, however the convenience of having an OT onsite allows for patients to access OT services without making additional appointments. The co-located model also provides preventative interventions for medium risk clients that would otherwise not see OT until conditions worsened and multiple outpatient or inpatient care was necessary. Benefits of the co-located model are described:

> “The benefit of being in that setting is that they didn't have to go another place, make another appointment you know and a lot of these chronic pain patients are low income and being in a rural area where it’s harder to get to those appointments for them, so our accessibility of being right there and then having not to go anywhere else not pay another co-pay, having us there for free was really helpful for them.”

An important aspect of the co-located model is communication. When the physician believes a patient would be appropriate for OT they must be able to quickly find the therapist. The physician is not going to search through the facility for a team member.

Concurrent care utilized interprofessional relationships to deliver team-based care. In this model of care, the way in which primary health care is delivered changes to incorporate multiple professions in the decision making process. OTs working with in concurrent models accompanied physicians on initial appointments and the therapist determined if a patient would benefit from OT; it was not a physician driven decision. This also allowed OTs to demonstrate their scope of practice with in the primary care team and while working to educate physician and other team members on the OT’s contribution within this setting. The expertise of OT was seen in the ability to treat infants through elderly patients and offer distinct services such as reflex testing and balance assessments/fall prevention. This concurrent relationship was initiated by several methods:

> “Say to the physician, "Hey do you mind if I shadow you this morning to learn about what you do and I hopefully show you a little bit about what OT does" and the physicians usually were ok with that so we would go into the appointment

with them that we would come out of the appointment and you know the patient may be complaining of lower back pain and the physician would be recommending medication so then we would leave the appointment and I would say you know instead of down the road we'd be having to recommend and order to go see a therapist or the lower back pain getting worse this might be a good opportunity for me to teach the patient how to use proper body mechanics when they are doing gardening. And so the physician typically would say oh that's a great idea after my appointment you can meet with the patient."

Barriers

OTs that are working to integrate the profession into the primary care setting are faced with multiple barriers that are both universal to all health care systems as well as unique to interprofessional primary care. Time and space constraints consistently serve as underlying factors for other concerns or complications for therapists. Participants also described how a lack of understanding OT in other professions, the demanding scope of practice, the absence of peer mentors and resources for the primary care OT, and funding reimbursement, and payment issues posed challenges to moving into this emerging practice area.

Time Constraints

Time and space constraints were closely related in challenges that therapists experienced. It was these systems interactions that resulted in the greatest barriers rather than interprofessional relationships. OTs were limited in the amount of time they could spend with patients because the exams rooms were needed by the physicians. One therapist discussed how they could have done so much more for their patients, but were unable to due to time factors. Negotiation and prioritization became effective management strategies for managing this. OTs were required to make the best use of the available time with patients by selecting only the most urgent need to address. They also negotiated with the physician for additional time in an exam room when absolutely necessary; this required OTs to develop the ability to advocate for patients' needs and verbalize why the OT using the exam room with a patient was valuable and justifiable.

> "There are other patients who are in such dire need of your care; they are so dysfunctional at this time that they need a lot of your time. If you save that battle, or that time you're going to take up a physician's room, then for those high need patients you have more authority to ask for that space at that time and you need to be able to quickly articulate why this person needs your time more than the physician needs the room for the next patient. So I think it's a matter of prioritizing, of always being conscious of the schedule so that you appear to be keeping pace with everything until you have a particular patient who have very high need and then that's when you sort of draw a line in the sand and say I really need to spend some extra time. If you're chronically running behind and making everyone run behind you lose respect and you lose the authority to make those decisions."

A therapist who worked through a free clinic facility explained how patients had often waited in a long line to see the physician, and therefore being aware of time was critical; patients were fatigued by the time they reached the therapist, and unnecessary time in an exam room resulted in other patients having to wait in line longer.

Space Constraints

The majority of therapists did not have a space specifically designated for OTwhich led to frustrations with negotiating the use of exam rooms in the clinic. OTs were limited to using whatever space was open which also correlated with times at which space was available. Another consideration in space constraints at the medical residency sites was the number of healthcare professionals in the exam room at one time with the patient. One therapist described meeting a patient with 2 medical students, a pediatrician and the OT in a typical exam room which is already a small space. Without a regular space OTs also experienced complications with obtaining referrals from physicians after the patient had met with their doctor.

> "When we talked to the physicians they all noted that they felt like it was helpful that we stayed in the same place, and it's so hard to find an open room in a hospital, but if you can find one place that you're always going to be I think that's

really helpful for physicians because they're not going to be running around a hospital looking for you."

Therapists managed this complication by ensuring their phone number was accessible to the physician to enhance communication and reduce any additional time the physician would have to spend locating the therapist.

To manage this challenge therapist underwent a change in mind set. Instead of attempting to recreate traditional OT, spaces intervention and practice was adapted to utilize the available space. One therapist negotiated with the physicians to schedule appointments with patients that had already been identified as needing follow-ups with OT during specific time periods. This allowed the OT to book a space without conflicting with other professionals on the team; for example all pediatric clients with developmental concerns would be scheduled on Wednesdays between 1-5 so that the OT could pre-plan for their space needs. Other therapists discussed using unconventional spaces within the clinic such as hallways, the nursing office, and stairwells, which could also provide opportunity for integrating more elements of occupation based practice.

Lack of Understanding of OT by the Interprofessional Team

Strategies for educating the interprofessional team on when OT was appropriate and OTs scope of practice was completing documentation to reflect how OT contributed to a patient's case and using language that was clear and free from acronyms specific to OT. Sensory integration interventions were not always accepted as best practices by physicians. OTs conducted in-service programs to educate team members on OT's focus in relation to patient outcomes. Another challenge to educating the primary care team members is with the continuous rotation of medical residents at the facilities located in medical training sites. Therapists felt as though they were continuously starting over with the process of fostering the understanding of OTs role.

> "The physician's not understanding what is functionally and functionally achievable for the patient and so I think that is the biggest challenge to negotiate, how to practice symbiotically with physicians."

Funding and Reimbursement

The current method for funding OT in the primary care clinic is through grant funding. One OT commented that through the use of CPT codes for billing incident-to the physician her time has never been covered financially by the clinic, rather it was the grant that allowed her to continue providing services. A therapist who had worked on a grant that expired commented that they would go back in a "heartbeat" if funding allowed.

Insurance and Client's Ability to Pay for Services

One therapist discussed how the reform of insurance policies, as a result of the ACA has led to higher deductibles which pose a barrier to clients' ability and willingness to pay for OT services in primary care if billing occurs by incident-to billing rather than as included in the facilities cost-formula. This challenge is not exclusive to primary care, but also impacts access to outpatient and inpatient services. This financial hardship for many individuals results in minor injuries not being addressed through basic home programs, client education, or one-hit interventions and developing into chronic conditions or complex conditions requiring surgery. These long term consequences affect overall healthcare spending and patient outcomes.

Limited number of OTs Working in Primary Care

During the formation of ACOs, FQHCs, and medical homes a major challenge to the integration of OT into these primary care facilities is the lack of OTs involved in decision making. Without representation acting on behalf of the profession it is likely OT will be excluded in these organizations' cost-formulas and not considered in the development of the team. It is during the formation and development phases of these health care organizations that OTs can have the most impact in facilitating the inclusion of the profession in primary care. Currently there is a limited number of OTs working in this setting which has implications for OTs attempting to transition into primary care. The lack of OTs results in scare mentorship or fieldwork opportunities to train and prepare therapists. "There aren't enough of us or enough people aren't confident to be pushing into those places."

Future Needs

Research, education, and advocacy are needed for the growth of OT in the primary care setting. AOTA has identified primary care as a research priority. OT educational programs across the U.S are beginning to integrate primary care modules into health and wellness education. The future needs for supporting this emerging niche include the involvement of OTs in policy making, research, education, and advocacy. On an individual level therapists can prepare for becoming a primary care OT by assessing if they have the personality traits to be successful in primary care and an understanding of working within an interprofessional team. These traits were identified by the study participants as assertiveness, confidence, and possessing an entrepreneurial spirit.

OT in Health Policy & Advocacy Efforts

To facilitate OT's integration in to primary care therapist must be able to articulate to both physicians and policy makers the value of OT on the interprofessional team and how OT can increase and contribute to positive health outcomes. FQHCs, ACOs and medical homes do not re-write or re-negotiate their cost formula for 3 to 5 years. The most effective way in which OTs can be included in the cost formulas is to be involved in the facility development clearly crafting a role within site policy and procedures.

Research

Cost, practice, and efficiency are the underlying themes for research inquiry. Future research needs are abundant and broad. A paucity in the literature exists to guide and support primary care practice. From a policy perspective, research in cost outcomes is valuable to provide evidence to the payers. From the insurer's point of view beneficial research looks at how an OT plan of care improves the health of the insured individual. Lines of inquiry suggested looked at decreased hospital admissions for individuals with chronic pain or depression. Assessing programs to manage medications or chronic, co-morbid conditions with randomized control trials was also recommended. The importance of longitudinal and retrospective research was discussed by study participants

From the perspective of the interprofessional team research needs look at job satisfaction of the physician when OT is integrated into the primary care setting, or the efficiency of the team as a whole with the inclusion of OT. A motivator for facilities to

include OT as a primary care service is in the ability to provide both quantitative and qualitative data on how OT impacts team functions and patient experiences. This could occur through self-report methods to standardized outcome measures. Research directed towards family practice and physicians has a wider influence than research specifically aimed and written for OT.

> “My goal is to really get the physicians to start talking about this and saying you know "What is this OT in primary care? What is that?”… I think it’s really important, we're really good at saying, "Aren't we awesome, we know we're awesome,” but we don't let other people know we are awesome. Right?”

<u>Education</u>

Educational needs of the primary care OT rely heavily on remaining a generalist. Therapists discussed how after graduation, most therapists identify a specialty such as pediatrics, hand therapy, geriatrics, or school system therapists. In the primary care setting therapists must be competent to work with the full spectrum of demographics and conditions.

> “I'm a believer in an OT being able to care for any individual across the lifespan and that the focus isn't so much on understanding the disease or the elements and it's not so much about rehab, but about helping any individual with any condition to be able to live a more health promoting life and doing more of a functional and cognitive evaluation of an individual's ability to care for themselves, something that traditionally just does not go on in primary care practices.”

There is a concern that the lack of OTs in primary care limits the access to mentors and educators in this practice setting. Students and clinicians need to have a better understanding of system-based population health approaches and would benefit from strengthening their knowledge on medical conditions, language, and practices, specifically “diabetes, hypertension, obesity and the medical and physiological mechanisms that contribute to those conditions.” A better understanding of the medical system will help therapists identify screening tools that are valued to all primary care professionals.

Mental health and behavioral health has become a large need in primary care. A strong background in these areas will benefit OTs working in this setting. Educational programs with an increased focus on these areas of intervention will serve to better prepare OTs for the demands of primary care practice. Mental health and behavioral health is a critical area of need in primary care. Healthy People 2020 and the AOTA Centennial Vision both identify this area as critical in society. OT education should be strengthened at all levels to respond to the societal need. Another need for the future of OT in primary care is the ability to learn from other professions. To become fully prepared for interprofessional practice, interprofessional education is needed, with shared courses, classroom experiences, etc. Use of educational techniques such as problem-based learning, with various disciplines would add to entry level education about team roles.

Therapists held differing views on what experience is needed to prepare a therapist for primary care practice. Support for the therapist with many years of experience is based on the ability for these practitioners to draw from a wide variety of intervention strategies, home programs, client education, and clinical reasoning to make effective and timely intervention choices. Support for the therapist who has recently graduated from their program of study is based on the wide range of knowledge that is still familiar; new graduates have not "specialized" and therefore maintains a general knowledge of the scope of OT. Some therapists felt formal education beyond that master's level was necessary, while other therapists felt that personality traits including assertiveness and confidence and an understanding of working on interprofessional health care team was the most important need for the primary care OT.

Discussion

Pioneering OTs have begun the process of integrating OT into the interprofessional healthcare team. Their experiences can serve as guidelines, supports, and an understanding of challenges in this setting as an increasing number of therapists seek information on providing services through primary care. Figure 1 provides a general overview of study findings related to these guidelines, supports, and challenges. As AOTA and the profession in general develops an understanding on how to enter FQHCs

and medical homes at the ground level it is clear that initiative is time sensitive. To be successful in this emerging practice niche OTs must take responsibility for their role in policy making; without clinicians advocating for their place on the primary care team OT will not be included in the organizational cost-formulas.

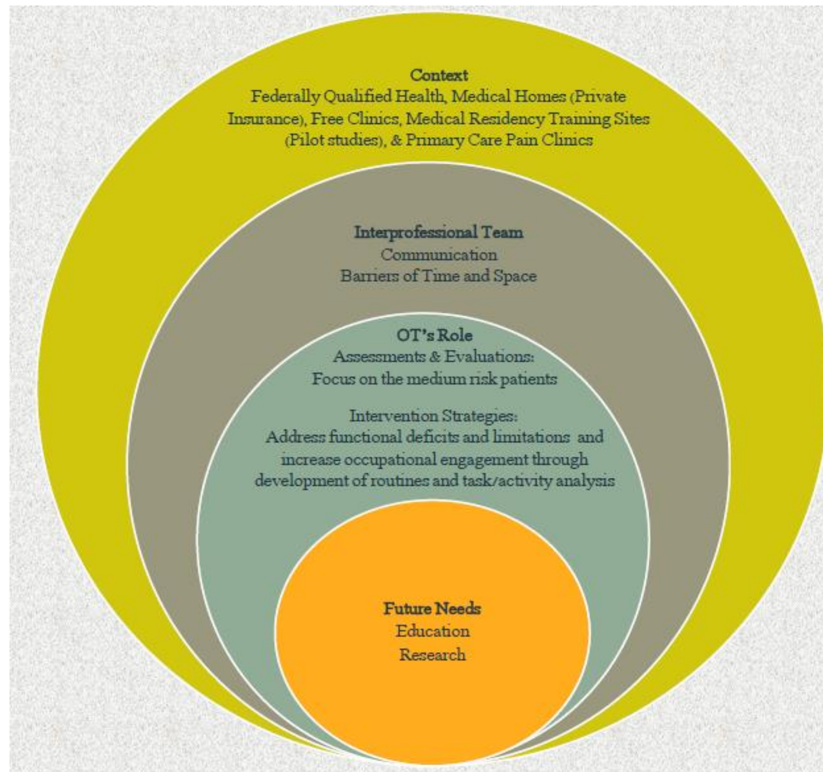

Figure 1. Components of Occupational Therapy in Primary Care

Therapists who are merging into these settings will benefit from identifying screening and evaluation tools that can provide valuable patient data to all team members and from educating other professions on the importance of the occupational profile. Interventions focusing on functional ability are the component to OT practice that makes the profession a distinct contributor to the primary care team. Patient education, home programs, and task analysis and modification are "one-hit interventions" that can be the difference between conservative treatment and surgical procedures. These interventions can also serve to provide health maintenance and prevention. Addressing habits and routines can also provide patients with the tools for medication management and chronic disease management. Areas of health and wellness care that are becoming mainstays of

primary care included mental and behavioral health and the care of co-morbid conditions. OT has the expertise and skill set to provide intervention in the form of patient self-management and activation through education.

It is through the interprofessional team that OT can become a provider of primary care services. Communication within the team is crucial to developing efficient and effective working relationships. OTs have the responsibility to educating themselves on medical terminology for the purpose of communicating with physicians. Using a common language facilitates interprofessional care and allows OTs to contribute their expertise to all team members. Within the team therapists have a responsibility to educate others on the scope of OT and to advocate for their role within primary care. Identifying barriers guides therapists on how to manage the multiple challenges that present in this setting including the time and space constraints unique to primary care, the lack of mentorship opportunities, and limitations in funding and reimbursement for OT in primary care.

Limitations

Limitations include the inclusion of only OT practitioners. Due to the qualitative design of this study the experiences and opinions of health care professionals other than OTs would be a significant contribution to develop a multi-perspective understanding of the integration of OT into primary care. The duration of the study did not allow for longitudinal follow-up data to support findings over time and 3/4ths of the participants had worked either within the same facility or in close communication with each other resulting in a lack of demographic generalizability regarding distinct experiences in primary care. One participant was unable to complete the follow-up interview which creates a limitation in comparing all interview responses to develop the collective case study.

Conclusion

OTs working in primary care must embody the role of a practitioner, educator, and advocate while working in collaboration with a team of primary care providers. By supporting clients with intervention and education to address functional performance in their daily life OTs can demonstrate a clear and distinct role in primary care.

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Declaration of Interests

The author declares there are no completing interests.

CHAPTER 4

DISCUSSION

Introduction

The purpose of this chapter is to present a more in-depth discussion of the findings of the research project. Findings are elaborated upon by the research queries presented in Chapter 1, along with implications for OT and suggestions for future research.

Research Question: The Experience of OTs in Primary Care Models

Pioneering OTs have begun the process of integrating OT into the interprofessional healthcare team. Their experiences can serve as guidelines, supports, and an understanding of challenges in this setting as an increasing number of therapists seek information on providing services through primary care. As AOTA and the profession in general develops an understanding on how to enter FQHCs and medical homes at the ground level it is clear that initiative is time sensitive. To be successful in this emerging practice niche OTs must take responsibility for their role in policy making; without clinicians advocating for their place on the primary care team OT will not be included in the organizational cost-formulas.

The Institute of Medicine (IOM) has placed increasing attention on the process of measuring value within the healthcare system. Multiple variables are considered when assessing a profession's value including the point of views of the insurers, policy makers, providers, employers, manufacturers, and consumers (Lamb & Metzler, 2014, p. 9). Value connects with the 3 components of the ACA'a Triple Aim; improving the individual's experience with care, improving the health of populations, and reducing the per capita cost of care for populations (Lamb & Metzler, 2014, p. 9). This provides a guide for OT in communicating the vale OT has within primary care models.

Current research exists looking at OT's impact on readmission to acute care facilities. Evidence presented proves OT's efficacy in cost-savings related to acute care readmissions (Roberts & Robinson, 2014, p. 255). A key element in the research findings was OT's role in care coordination, which includes home health services and addressing a patient's functional status (Roberts & Robinson, 2014, p. 257). Utilizing

findings that support OT as a profession that has the skill set and expertise to meet the objectives of ACA's Triple Aim is crucial to the integration of OT into the primary health care setting.

Therapists who are merging into these settings will benefit from identifying screening and evaluation tools that can provide valuable patient data to all team members and from educating other professions on the importance of the occupational profile. Interventions focusing on functional ability are the component to OT practice that makes the profession a distinct contributor to the primary care team. Use of evidence-base practice is paramount to the OTs success in this health delivery service (reference). Evidence based practice has value to the interprofessional team by meeting standard health outcomes in a cost-effective manner thereby fulfilling the goal of the ACA's Triple Aim (Arbesman, Lieberman, Metzler, 2014, p. 384).

Patient education, home programs, and task analysis and modification are "one-hit interventions" that can be the difference between conservative treatment and surgical procedures. Identified models of primary care include the Care Coordinator Model with emphasis on population health management, patient transition in care, and chronic care coaching (Goldberg & Dugan, 2013, p. 28). OT interventions and patient education supports health maintenance and prevention models through addressing habits and routines and provide patients with the tools for medication management and chronic disease management. Areas of health and wellness care that are becoming mainstays of primary care include mental and behavioral health and the care of co-morbid conditions. OT has the expertise and skill set to provide intervention in the form of patient self-management and activation through education. The value of these skills is validated through current research which proves the effectiveness of the therapeutic use of valued occupations in functional improvements (Muir, 2012, p. 509)

It is through the interprofessional team that OT can become a provider of primary care services. Communication within the team is crucial to developing efficient and effective working relationships. OTs have the responsibility to educate themselves on medical terminology for the purpose of communicating with physicians. Using a common language facilitates interprofessional care and allows OTs to contribute their

expertise to all team members. Within the team therapists have a responsibility to educate others on the scope of OT and to advocate for their role within primary care. Identifying barriers guide therapists on how to manage the multiple challenges that present in this setting including the time and space constraints unique to primary care, the lack of mentorship opportunities, and limitations in funding and reimbursement for OT in primary care. OTs working in primary care must embody the role of a practitioner, educator, and advocate while working in collaboration with a team of primary care providers. By supporting clients with intervention and education to address functional performance in their daily life OT demonstrates a clear role in primary care.

Implications for Practice

OTs role as a valued member of the interprofessional team was demonstrated in this research study through case examples from participants where OT was able to connect the physician's health outcomes to the client's increased functional performance and satisfaction. All participants emphasized the importance of increasing occupational engagement and function. It is through these two factors that OT has a place in primary care. A participant explains how an OT brings their unique expertise to the primary care setting:

> *"A patient isn't non-compliant, but a patient has been given a wellness plan that is in direct conflict with their daily occupational profile."*

Primary care places unique demands on OTs particularly in the areas of space and time for the provision of interventions. As noted in the descriptions of the various models for service (e.g. concurrent care model) spaces are shared, and not specific to a discipline (Polig, 2012). A participant described service delivery as "One-*hit interventions."* It is the responsibility of the therapist to demonstrate why it is beneficial to the physician to provide OT with access to exam rooms in the clinic. Collaboration and effective communication abilities are necessary for managing time constraints. A significant contributor to OT defining their role and advocating for their share of time and space is through facilitating an understanding of OT. Three components of this process include educating the team, engaging the physicians, and enhancing the understanding of OT through teaching and research (Donelly, Brenchly, Crawford, & Letts, 2013, p. 5). In the

preparation of entry level OTs, ACOTE Standards provide a clear expectation for educational curricula. These standards provide and reinforce the value of such basic communication skills. Thus, if one graduates from an accredited educational program, they should possess the foundational skills needed in today's health care arena.

Future Research

As a result of the lack of available research for OT in primary care all methods and topics of research is needed. Outcome measures that address cost, practice efficiency, interprofessional team satisfaction, and longitudinal impact were identified as most needed. Value-based care is the concept of providing evidence to support the reliability and validity of health care services. By utilizing evidence that supports the efficacy of OT within the interprofessional team OT's distinct contribution in primary care can be identified. The link between OT as an independent profession and a health care team member can be understood and validated through evidence based practice (Leland, Crum, Phipps, Roberts, & Gage, 2014, p. 3) It is important that the profession of OT can provide evidence to insurers and payers on the impact that OT treatment plans can have on the rate of hospital admissions, repeat services, or the overall health dollar. Research that can support increased physicians satisfaction through increasing their abilities to administer and practice holistic care can serve as a support for integrating OT into interprofessional primary care. By producing research that demonstrates the value of the profession to other disciplines there is likely to be more support from other team members to hire on OT into the team. Through this research study, therapists emphasized the idea that research cannot be aimed solely to other OTs; evidence must be presented to other primary care contributors to link the value of OT with improved health outcomes and patient satisfaction within the primary care setting.

Limitations

Due to the qualitative design of this study the experiences and opinions of health care professionals other than OTs would be a significant contribution to develop a multi-perspective understanding of the integration of OT into primary care. The duration of the study did not allow for longitudinal follow-up data to support findings over time and 3/4ths of the participants had worked either within the same facility or in close

communication with each other resulting in a lack of demographic generalizability regarding distinct experiences in primary care.

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APPENDIX A:

IRB Approval

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Graduate Education and Research
Division of Sponsored Programs
Institutional Review Board

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Richmond, Kentucky 40475-3102
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NOTICE OF IRB APPROVAL
Protocol Number: 14-193
Institutional Review Board IRB00002836, DHHS FWA00003332

Review Type: ☐Full ☒Expedited

Approval Type: ☒New ☐Extension of Time ☐Revision ☐Continuing Review

Principal Investigator: **Emma McClellan** Faculty Advisor: **Dr. Shirley O'Brien**

Project Title: **The Experiences of Occupational Therapists Working on Primary Health Care Teams: A Case Study**

Approval Date: **4/25/14** Expiration Date: **4/28/15**

Approved by: **Dr. Charles Hausman, IRB Member**

This document confirms that the Institutional Review Board (IRB) has approved the above referenced research project as outlined in the application submitted for IRB review with an immediate effective date.

Principal Investigator Responsibilities: It is the responsibility of the principal investigator to ensure that all investigators and staff associated with this study meet the training requirements for conducting research involving human subjects, follow the approved protocol, use only the approved forms, keep appropriate research records, and comply with applicable University policies and state and federal regulations.

Consent Forms: All subjects must receive a copy of the consent form as approved with the EKU IRB approval stamp. Copies of the signed consent forms must be kept on file unless a waiver has been granted by the IRB.

Adverse Events: Any adverse or unexpected events that occur in conjunction with this study must be reported to the IRB within ten calendar days of the occurrence.

Research Records: Accurate and detailed research records must be maintained for a minimum of three years following the completion of the research and are subject to audit.

Changes to Approved Research Protocol: If changes to the approved research protocol become necessary, a description of those changes must be submitted for IRB review and approval prior to implementation. Some changes may be approved by expedited review while others may require full IRB review. Changes include, but are not limited to, those involving study personnel, consent forms, subjects, and procedures.

Annual IRB Continuing Review: This approval is valid through the expiration date noted above and is subject to continuing IRB review on an annual basis for as long as the study is active. It is the responsibility of the principal investigator to submit the annual continuing review request and receive approval prior to the anniversary date of the approval. Continuing reviews may be used to continue a project for up to three years from the original approval date, after which time a new application must be filed for IRB review and approval.

Final Report: Within 30 days from the expiration of the project, a final report must be filed with the IRB. A copy of the research results or an abstract from a resulting publication or presentation must be attached. If copies of significant new findings are provided to the research subjects, a copy must be also be provided to the IRB with the final report.

Other Provisions of Approval, if applicable: None

Please contact Sponsored Programs at 859-622-3636 or send email to tiffany.hamblin@eku.edu or lisa.royalty@eku.edu with questions about this approval or reporting requirements.

Eastern Kentucky University is an Equal Opportunity/Affirmative Action Employer and Educational Institution

APPENDIX B:

Informed Consent Form

Consent to Participate in a Research Study

The experiences of occupational therapists working on interdisciplinary primary health care teams: A case study.

Why am I being asked to participate in this research?

You are being invited to take part in a research study about the experience of occupational therapists working on primary health care teams. You are being invited to participate in this research study because of your professional role as an occupational therapist or occupational therapy student that has worked with primary care teams or medical home teams. If you take part in this study, you will be one of about 5 people to do so.

Who is doing the study?

The person in charge of this study is Emma McClellan, OTS at Eastern Kentucky University, Department of Occupational Therapy. She is being guided in this research by Dr. Shirley O'Brien, OTR/L, FAOTA. There may be other people on the research team assisting at different times during the study.

What is the purpose of the study?

This qualitative study aims to explore the attitudes, perceptions, and experiences of occupational therapists working in primary care. By doing this study, we also hope to learn what role occupational therapist can play in medical homes and primary health care teams and to better understand the types of occupational therapy services that best serve these teams.

Where is the study going to take place and how long will it last?

The research procedures will be conducted at Eastern Kentucky University or via conference phone, video phone, in-person, or e-mail to accommodate each participant. You will need to participate in an interview session 2 times during the study. The interviews will take about 30 minutes to 1 hour to complete.

What will I be asked to do?

You will be asked to participate in an initial semi-structured interview to discuss your experiences working on a primary health care team. A follow up interview will be conducted approximately one month later to further discuss specific topics as identified by the researcher from your initial interview. Interviews will be conducted over the phone, video phone, e-mail, or in person at a time selected for your convenience. The interviews will be audio recorded so that at a later time they can be transcribed verbatim. During the interviews you are encouraged to share any additional information you feel is important.

Are there reasons why I should not take part in this study?

There are no identified reasons that would exclude you from volunteering for this study.

What are the possible risks and discomforts?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

You may, however, experience a previously unknown risk or side effect.

Will I benefit from taking part in this study?
You will not get any personal benefit from taking part in this study.

Do I have to take part in this study?
If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

If I don't take part in this study, are there other choices?
If you do not want to be in the study, there are no other choices except to not take part in the study.

What will it cost me to participate?
There are no costs associated with taking part in this study.

Will I receive any payment or rewards for taking part in the study?
You will not receive any payment or reward for taking part in this study.

Who will see the information I give?
Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about this combined information. You will not be identified in these written materials.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. For example, your name will be kept separate from the information you give, and these two things will be stored in different places under lock and key.

However, there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court. Also, we may be required to show information that identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as Eastern Kentucky University.

Can my taking part in the study end early?
If you decide to take part in the study, you still have the right to decide at any time that you no longer want to participate. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to end your participation in the study. They may do this if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the agency funding the study decides to stop the study early for a variety of scientific reasons.

What happens if I get hurt or sick during the study?
If you believe you are hurt or if you get sick because of something that is done during the study, you should call Emma McClellan, OTS at 859-321-2592 immediately. It is important for you to understand that Eastern Kentucky University will not pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. That cost will be your responsibility. Also, Eastern Kentucky University will not pay for any wages you may lose if you are harmed by this study.

What if I have questions?
Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions about the study, you can contact the investigator, Emma McClellan, OTS at 859-321-2592 or by e-mail at Emma_mcclellan@mymail.eku.edu. If you have any questions about your rights as a research volunteer, contact the staff in the Division of Sponsored Programs at Eastern Kentucky University at 859-622-3636. We will give you a copy of this consent form to take with you.

You will be told if any new information is learned which may affect your condition or influence your willingness to continue taking part in this study.

I have thoroughly read this document, understand its contents, have been given an opportunity to have my questions answered, and agree to participate in this research project.

____ ______________________
Signature of person agreeing to take part in the study Date

____
Printed name of person taking part in the study

Emma McClellan, OTS
____
Name of person providing information to subject

APPENDIX C:

Semi-Structured Interview Protocol: Initial Interview

EKU Graduate Thesis Interview Protocol- The experiences of occupational therapists working on primary health care teams: A case study

Time of Interview:
Date of Interview:
Location of Interview:
Interviewer/Subject of Interview: Emma McClellan interviewing
____

- The purpose of this interview is to examine experience of occupational therapists who have worked in primary health care teams including Medical Homes. Key concepts will include role boundaries, your personal perspective and experience, OT's role in education and advocacy in relation to primary health care teams, reimbursement issues, and service delivery.
- The interview results will be analyzed and used to develop a case study which will integrate several interviews obtained from yourself and other OTs participating in this study. The interviews will be used as data for the completion of a graduate thesis. I will not be using your real name or identifying information, your responses and participation will remain anonymous.
- I would like to audio record and take notes during this interview to ensure I am accurately interpreting your responses. Is that alright with you?
- Some questions may be difficult to answer, or may not apply to your experience, this is ok and will not affect the data collected from your interview.
- If at any time you would like clarification on a concept or question, please feel free to ask me.
- The total interview time should take approximately 30 minutes to 1 hour, and is semi-structured. Please feel free to add any additional information or thoughts during the course of the interview.

Guiding Questions:
1. Describe the facility environment in which you work including patient populations served, the various professions that make up the team you are working with, and the day to day operations of the team?

2. What are the typical services that you provide? How does this service delivery differ from your experiences as an OT prior to working in primary health care?

3. Can you briefly describe how you receive reimbursement/payment for your services?

4. How did you educate your team on when OT services are appropriate or needed? (Do you feel other professions understand what you do?)

5. Tell me about an experience where you felt valued as on OT in the primary health care team. Who made you feel valued and why?

6. Tell me about an experience when you did not feel valued and an OT in the primary health care team. Who made you feel as though you were not valuable and why?

7. Can you describe the hierarchy, if any, which occur between the professions on your team?

8. What role overlap have you experienced as an OT working in primary health care? Please use specific examples.
9. How do you address patients that require referrals for outpatient rehab? In-patient rehab? (Do physicians make the referral; is the patient treated in the office, or does that primary care OT refer the patient to a rehabilitation facility?)

10. In your opinion, what education is needed in addition to the MSOT for practice in primary care? (OTD, specialty certification, experience/shadowing similar to Certified Hand Therapists?)

APPENDIX D:

Semi-Structured Interview Protocol: Follow-Up Interview

EKU Graduate Thesis Interview Protocol Follow-up - The experiences of occupational therapists working on primary health care teams: A case study

Time of Interview:
Date of Interview:
Location of Interview:
Interviewer/Subject of Interview: Emma McClellan interviewing
____

- The purpose of this interview is to follow-up on our previous interview.
- As was the case in our prior interview I would like to audio record our conversation. I will not be using your real name or identifying information, your responses and participation will remain anonymous.
- If at any time you would like clarification on a concept or question, please feel free to ask me.
- The total interview time should take approximately 30 minutes to 1 hour, and is semi-structured. Please feel free to add any additional information or thoughts during the course of the interview.

Guiding Questions:
1. A reoccurring topic during these interviews was assessments, evaluations, and screening tools. Can you discuss 2 to 3 of these tools that you feel students, new grads, or OTs with an interest in developing a primary care practice should absolutely have in their "toolbox?" Please discuss why you named these 2 or 3 tools.

2. Another reoccurring topic during these interviews was home programs and client education. Can you discuss 2 to 3 of these tools that you feel students, new grads, or OTs with an interest in developing a primary care practice should absolutely have in their "toolbox?" Please discuss why you named these.

3. Can you please describe examples of Occupation Based Practice (OBP) you have employed in a primary care setting.

4. How do you feel OTs need to approach the use of a common language in the primary care setting, in particular to the communication with physician and other health care team members?

5. What recommendations do you have for future OTs in primary care teams regarding barriers of space and time? What have you done to manage these constraints?

6. What do you see as the greatest impact OT can have with clients in the areas of heath & wellness and prevention in the primary care setting?

7. Where do you feel future research in OT in primary care would be most beneficial: participatory action research, grounded theory, or outcome measures? What topic do you feel is most important to address through research at this time?

APPENDIX E:

Authorship Guidelines

Title page

The title page should:

- provide the title of the article
- list the full names, institutional addresses and email addresses for all authors
- indicate the corresponding author

Please note:

- the title should include the study design, for example "A versus B in the treatment of C: a randomized controlled trial X is a risk factor for Y: a case control study"
- abbreviations within the title should be avoided

Abstract

The Abstract of the manuscript should not exceed 350 words and must be structured into separate sections: **Background,** the context and purpose of the study; **Methods**, how the study was performed and statistical tests used; **Results**, the main findings; **Conclusions**, brief summary and potential implications. Please minimize the use of abbreviations and do not cite references in the abstract. **Trial registration**, if your research article reports the results of a controlled health care intervention, please list your trial registry, along with the unique identifying number (e.g. **Trial registration**: Current Controlled Trials ISRCTN73824458). Please note that there should be no space between the letters and numbers of your trial registration number. We recommend manuscripts that report randomized controlled trials follow the CONSORT extension for abstracts.

Keywords

Three to ten keywords representing the main content of the article.

Background

The Background section should be written in a way that is accessible to researchers without specialist knowledge in that area and must clearly state - and, if helpful, illustrate - the background to the research and its aims. Reports of clinical research should, where appropriate, include a summary of a search of the literature to indicate why this study was necessary and what it aimed to contribute to the field. The section should end with a brief statement of what is being reported in the article.

Methods

The methods section should include the design of the study, the setting, the type of participants or materials involved, a clear description of all interventions and comparisons, and the type of analysis used, including a power calculation if appropriate. Generic drug names should generally be used. When proprietary brands are used in research, include the brand names in parentheses in the Methods section.

For studies involving human participants a statement detailing ethical approval and consent should be included in the methods section. For further details of the journal's editorial policies and ethical guidelines see 'About this journal'.

For further details of the journal's data-release policy, see the policy section in 'About this journal'.

Results and discussion

The Results and discussion may be combined into a single section or presented separately. Results of statistical analysis should include, where appropriate, relative and absolute risks or risk reductions, and confidence intervals. The Results and discussion sections may also be broken into subsections with short, informative headings.

Conclusions

This should state clearly the main conclusions of the research and give a clear explanation of their importance and relevance. Summary illustrations may be included.

List of abbreviations

If abbreviations are used in the text they should be defined in the text at first use, and a list of abbreviations can be provided, which should precede the competing interests and authors' contributions.

Competing interests

A competing interest exists when your interpretation of data or presentation of information may be influenced by your personal or financial relationship with other people or organizations. Authors must disclose any financial competing interests; they should also reveal any non-financial competing interests that may cause them embarrassment were they to become public after the publication of the manuscript.

Authors are required to complete a declaration of competing interests. All competing interests that are declared will be listed at the end of published articles. Where an author gives no competing interests, the listing will read 'The author(s) declare that they have no competing interests'.

When completing your declaration, please consider the following questions:

Financial competing interests

- In the past three years have you received reimbursements, fees, funding, or salary from an organization that may in any way gain or lose financially from the publication of this manuscript, either now or in the future? Is such an organization financing this manuscript (including the article-processing charge)? If so, please specify.
- Do you hold any stocks or shares in an organization that may in any way gain or lose financially from the publication of this manuscript, either now or in the future? If so, please specify.
- Do you hold or are you currently applying for any patents relating to the content of the manuscript? Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript? If so, please specify.
- Do you have any other financial competing interests? If so, please specify.

Non-financial competing interests

Are there any non-financial competing interests (political, personal, religious, ideological, academic, intellectual, commercial or any other) to declare in relation to this manuscript? If so, please specify.

If you are unsure as to whether you, or one your co-authors, has a competing interest please discuss it with the editorial office.

Authors' contributions

In order to give appropriate credit to each author of a paper, the individual contributions of authors to the manuscript should be specified in this section.

According to ICMJE guidelines, An 'author' is generally considered to be someone who has made substantive intellectual contributions to a published study. To qualify as an author one should 1) have made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) have been involved in

drafting the manuscript or revising it critically for important intellectual content; 3) have given final approval of the version to be published; and 4) agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.

We suggest the following kind of format (please use initials to refer to each author's contribution): AB carried out the molecular genetic studies, participated in the sequence alignment and drafted the manuscript. JY carried out the immunoassays. MT participated in the sequence alignment. ES participated in the design of the study and performed the statistical analysis. FG conceived of the study, and participated in its design and coordination and helped to draft the manuscript. All authors read and approved the final manuscript.

All contributors who do not meet the criteria for authorship should be listed in an acknowledgements section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chair who provided only general support.

Authors' information

You may choose to use this section to include any relevant information about the author(s) that may aid the reader's interpretation of the article, and understand the standpoint of the author(s). This may include details about the authors' qualifications, current positions they hold at institutions or societies, or any other relevant background information. Please refer to authors using their initials. Note this section should not be used to describe any competing interests.

Acknowledgements

Please acknowledge anyone who contributed towards the article by making substantial contributions to conception, design, acquisition of data, or analysis and interpretation of data, or who was involved in drafting the manuscript or revising it critically for important intellectual content, but who does not meet the criteria for authorship. Please also include the source(s) of funding for each author, and for the manuscript preparation. Authors must describe the role of the funding body, if any, in design, in the collection, analysis, and interpretation of data; in the writing of the manuscript; and in the decision to submit the manuscript for publication. Please also acknowledge anyone who contributed materials essential for the study. If a language editor has made significant revision of the manuscript, we recommend that you acknowledge the editor by name, where possible.

The role of a scientific (medical) writer must be included in the acknowledgements section, including their source(s) of funding. We suggest wording such as 'We thank Jane Doe who provided medical writing services on behalf of XYZ Pharmaceuticals Ltd.'

Authors should obtain permission to acknowledge from all those mentioned in the Acknowledgements section.

Endnotes

Endnotes should be designated within the text using a superscript lowercase letter and all notes (along with their corresponding letter) should be included in the Endnotes section. Please format this section in a paragraph rather than a list.

References

All references, including URLs, must be numbered consecutively, in square brackets, in the order in which they are cited in the text, followed by any in tables or legends. Each reference must have an individual reference number. Please avoid excessive referencing. If automatic numbering systems are used, the reference numbers must be finalized and the bibliography must be fully formatted before submission.

Only articles, datasets, clinical trial registration records and abstracts that have been published or are in press, or are available through public e-print/preprint servers, may be cited; unpublished abstracts, unpublished data and personal communications should not be included in the reference list, but may be included in the text and referred to as "unpublished observations" or "personal communications" giving the names of the involved researchers. Obtaining permission to quote personal communications and unpublished data from the cited colleagues is the responsibility of the author. Footnotes are not allowed, but endnotes are permitted. Journal abbreviations follow Index Medicus/MEDLINE. Citations in the reference list should include all named authors, up to the first 30 before adding '*et al.*'..

Any *in press* articles cited within the references and necessary for the reviewers' assessment of the manuscript should be made available if requested by the editorial office.

APPENDIX F:

Tables

Table 1. ACOTE Standards for a Master's-Degree-Level Educational Program for the Occupational Therapist (ACOTE, 2011)

Standard Number	Accreditation Standard
B.1.2	Demonstrate knowledge and understanding of human development throughout the lifespan
B.1.4	Demonstrate knowledge and appreciation of the role of sociocultural, socioeconomic, and diversity factors and lifestyle choices in contemporary society.
B.2.6	Analyze the effects of heritable diseases, genetic conditions, disability, trauma, and injury to the physical and mental health and occupational performance of the individual.
B.2.9	Express support for the quality of life, well-being, and occupation of the individual, group, or population to promote physical and mental health and prevention of injury and disease considering the context (e.g., cultural, personal, temporal, virtual) and environment.
B.4.1	Use standardized and nonstandardized screening and assessment tools to determine the need for occupational therapy intervention. These tools include, but are not limited to, specified screening tools; assessments; skilled observations; occupational histories; consultations with other professionals; and interviews with the client, family, significant others, and community.
B.4.9	Evaluate appropriateness and discuss mechanisms for referring clients for additional evaluation to specialists who are internal and external to the profession.
B.5.2	Select and provide direct occupational therapy interventions and procedures to enhance safety, health and wellness, and performance in ADLs, IADLs, education, work, play, rest, sleep, leisure, and social participation.
B.5.5	Provide training in self-care, self-management, health management and maintenance, home management, and community and work integration.
B.5.18	Demonstrate an understanding of health literacy and the ability to educate and train the client, caregiver, family and significant others, and communities to facilitate skills in areas of occupation as well as prevention, health maintenance, health promotion, and safety.
B.5.21	Effectively communicate and work interprofessionally with those who provide services to individuals, organizations, and/or populations in order to clarify each member's responsibility in executing an intervention plan.
B.5.27	Describe the role of the occupational therapist in care coordination, case management, and transition services in traditional and emerging practice environments.
B.7.6	Demonstrate the ability to design ongoing processes for quality improvement (e.g., outcome studies analysis) and develop program changes as needed to ensure quality of services and to direct administrative changes.

Source: Accreditation Council for Occupational Therapy Education. (2011). *ACOTE standards and interpretive guide.* Retrieved from http://www.aota.org/-/media/Corporate/Files/EducationCareers/Accredit/Standards/2011-Standards-and-Interpretive-Guide-August-2013.pdf