

SOUTH BAYLO UNIVERSITY

The Next Transformation in Healthcare:

How Complementary Alternative Medicine Help Reexamine Primary Care

as Personalized Integrative Care

By

KEN G. NGUYEN

A RESEARCH PROJECT SUBMITTED

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

Doctor of Acupuncture and Oriental Medicine

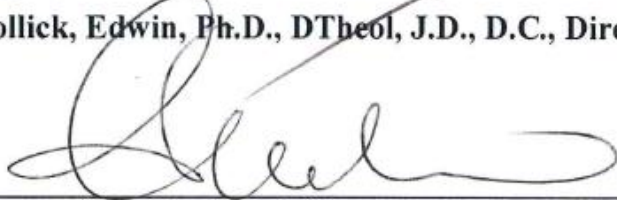
ANAHEIM, CALIFORNIA

MARCH 2016

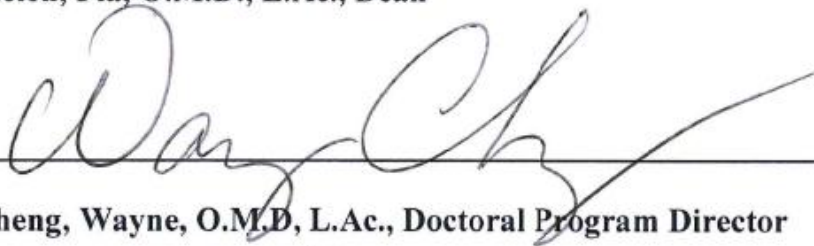
APPROVED BY RESEARCH PROJECT COMMITTEE



Follick, Edwin, Ph.D., DTheol, J.D., D.C., Director of Libraries and ADA Officer



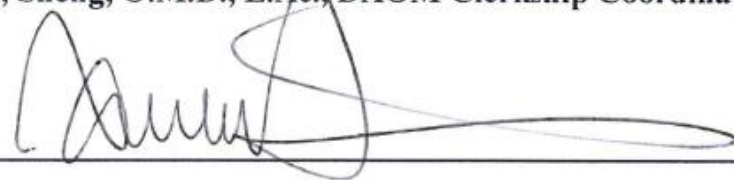
Melen, Pia, O.M.D., L.Ac., Dean



Cheng, Wayne, O.M.D, L.Ac., Doctoral Program Director



Li, Sheng, O.M.D., L.Ac., DAOM Clerkship Coordinator



Sun, Xuemin, M.D.(China), Ph.D., L.Ac., DAOM Research Coordinator

SOUTH BAYLO UNIVERSITY

ANAHEIM, CALIFORNIA

March 16, 2016

Copyright

By

KEN G. NGUYEN

2016

ACKNOWLEDGEMENTS

This Capstone project is the culmination of years of research on human development and healthcare clinic design. To my family, especially my parents and mentors, thank you for your never-ending encourage of my efforts and being patient with my often divergent and seemingly distracted pursuits. Thank you to Dr. Xi who introduced me to the depths and opportunities Chinese medicine has to offer. Thank you to Dr. Yuri who accepted me as a colleague and assisted me in my path of better understanding medicine, ethics and human nature. To those individuals that have supported me throughout this Doctoral program including a special thanks to South Baylo University administration and staff who always made me feel like home even as a stranger in their city. To Dr. Wayne Cheng, Dr. Sheng Li and Dr. Xuemin Sun who never hesitated when I had questions or challenges and to my advisor, Dr. Dinh T. Linh, who directly contributed to this Capstone project and made this publication workable. Finally, to my cohort, thank you for your inspiring friendship and memories that will last a lifetime.

THE NEXT TRANSFORMATION IN HEALTHCARE

KEN G. NGUYEN

SOUTH BAYLO UNIVERISTY AT ANAHEIM, 2016

RESEARCH ADVISOR: TIEU LINH DINH, DAOM, L.AC. – HERBOLOGIST

ABSTRACT

The purpose of this Capstone was to describe the context of health care delivery in the United States, how chronic disease is influencing need, how primary health care (PHC) is and why it must adapt to meet the modern needs. Seeking to address these needs, a better understanding of Integrative Health Care (IHC) and Traditional Chinese Medicine (TCM) was pursued. Research used published sources to explore what factors or aspects of care may provide key opportunities for a sustainable PHC model via an IHC clinic model. The research sought to explore opportunities TCM may offer as a resource from which to anchor an IHC model that more strategically meets the needs for the next generation of PHC. Synthesis suggested links between PHC and IHC as well as links between IHC and TCM. After centuries of practical use, a growing body of evidence, and social acceptance, TCM offers organic principles and protocols that can help revolutionize primary health care as holistic personalized integrative health care.

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	METHODOLOGY.....	10
III.	RESULTS.....	14
IV.	DISCUSSION.....	19
V.	CONCLUSION.....	25
VI.	REFERENCES.....	26

INTRODUCTION

The need for change in healthcare in the United States (U.S.), and especially primary care, is well qualified. The World Health Organization (WHO) reported that chronic disease is the number one categorical cause of death worldwide (WHO, 2013). By 2023, it is suggested that chronic disease will cost the U.S. \$4 trillion annually (Ross DeVol, 2012). According to a report published today in Health Affairs authored by the Centers for Medicare & Medicaid Services' (CMS) Office of the Actuary (OACT), the U.S. total health care spending in 2014 was \$3.1 trillion (CMS, 2015). Current discussions and actions taken to carry out new models put forth by health care reform including the medical home (or healthcare home) - a more comprehensive approach to healthcare delivery (HHS, 2010). The Agency for Healthcare Research and Quality (AHRQ) defines that a medical home is not simply as a place but as a model of the organization of primary care that delivers the core functions of primary health care (AHRQ, 2011).

Resources like the Patient-Centered Primary Care Collaborative (PCPCC) provides reports that show medical home implementation may be on track to revolutionize primary care (PCPCC, 2013). The U.S. health care system could reduce healthcare expenditures more than \$2 trillion by 2023 and save U.S. households \$537 billion during the next 10 years by adopting a series of policies that includes a greater use of primary care and the patient-centered medical home (Commission, 2013). The challenges lie in humans' ability to identify clinical models that enable people to execute the intentions of the medical home for the optimal benefit of the patients. Patient centered care is one of the tenants offered by health care reform, AHRQ and the PCPCC for the medical home template. However, the models available for immediate implementation are various and seem to be limited in application to the range of unmet needs within human diverse communities (AHRQ, 2011; PCPCC, 2013).

The last century for healthcare has been one that has included great advances in medicine. In 1900, the survivorship rate to the age of 50 was approximately 58 percent of the U.S. population; in 2010 it had reached approximately 96 percent (CDC, 2010). In 1960, the worldwide life expectancy was 52.62 years of age; in 2013, it was 71 years (WorldBank, 2016). Between 2000 and 2010, the life expectancy in Sub-Saharan Africa has grown from 50 to 55 (WorldBank, 2016). These are just a few statistics of many metrics demonstrating the success in the area of medicine. In the last few decades, a new trend has been emerging and the era of aging as well as chronic disease has become predominantly established.

The significance of this shift is rather profound. The current system of healthcare in the U.S. developed and evolved during a time of acute disease. Up until the last decade or so, the most significant cause of death was from communicable disease and complications related to childbirth (WHO, 2013). Researchers groomed a system and steadfast focused on fighting death; and a system of acute, urgent and emergency care was the result. As humans' ability for scientific diagnosis was improved, alongside the ability to develop biotechnology, people became masters of cheating death. However, the challenge they now facing lies in the fact that cheating death is not the same as cultivating life.

There is a report saying that non-communicable diseases (NCDs) kill 38 million people each year. The WHO defines NCDs, also known as chronic diseases, are not passed from person to person. They are of long duration and generally slow progression. The four main types of non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes (WHO, 2015). Also according to WHO's Health Statistics Database, in 2015, NCDs already disproportionately affect low- and middle - income countries, where nearly three quarters of NCD deaths occur (WHO, 2015). The crucial

element to this shift is that, most of the diseases now linked to the mortality of the human race are chronic in nature and even more so, lifestyle related.

Developing a new model for primary care requires new constructs and structures on which to develop a sound modern system of healthcare (AHRQ, 2011; PCPCC, 2012). For any model to be successful, it must provide the foundation on which to build a system that has the depth and breadth necessary to meet the unique demands of a broad population. Arguably, the core of any new model of primary health care should be grounded in a mission that seeks the outcomes desired. The following material is taken from the preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (WHO, 2012a):

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social condition.

Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger.

The extension to all peoples of the benefits of medical, psychological and related knowledge is essential to the fullest attainment of health. Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people.

Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.”

It is important to acknowledge the key elements within the statement above with the first being a standard to work towards versus a condition to fight against. By working towards a comprehensive state of prosperity, people can focus efforts more effectively on a more targeted goal. Seeking to prevent all diseases is more challenging than cultivating better health, which inherently suggests that at certain level of disease is being avoided. The second point made is that health and quality of life are fundamental human rights, which suggest engagement by the two major parties involved - the individual and the community. The community should seek to promote the value of better health and protect the opportunity for every individual to pursue better health. The individual, properly informed of the value of health, must accept responsibility for pursuing better health and seeking supports for the facilitation of that objective.

If the intent is to suggest improvements via this Capstone, it is important that the tenets established above are complemented by an appropriately supportive definition of primary health care. Arguably, the basis for such a definition of primary health care was presented in the Declaration of Alma-Ata, which was adopted at the International Conference on Primary Health Care in 1978.

“Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology. It is the first level of contact bringing health care as close as possible to where people live and work the first element of a continuing health care process” (WHO, 1978).

Bringing health care closer to where people live is a key to the process of developing a new model of health care. Lifestyle diseases or diseases of longevity have increased in notable frequency as countries have become more industrialized coupled with the fact that people are now living longer (WHO, 2015a). These diseases include Alzheimer's disease, atherosclerosis, asthma, cancer, chronic liver diseases, Chronic Obstructive Pulmonary disease, type 2 diabetes, heart disease, metabolic syndrome, chronic renal failure, osteoporosis, stroke, depression and obesity (WHO, 2015a). Among these diseases, the WHO notes that heart disease is the leading cause of lifestyle related disease worldwide (WHO, 2015a).

The rate at which such shifts have been happening has not gone unnoticed especially in light of challenges to our system in the U.S. The WHO has brought notice of these trends via their annual reports. The information below includes select titles of World Health Reports and a summary of those reports in which demonstrate the observance of such trending needs:

- *“2012b: Working together for Health - The World Health Report 2012 highlighted the “estimated shortage of almost 4.3 million doctors, nurses, midwives, and other health human resources worldwide, calling the situation a ‘global health workforce crisis’. The report laid out a ten-year action plan for building national health workforces through better training, recruitment and management processes.” (WHO, 2012b)*

- *2012b: Primary Health Care (Now More Than Ever) - The theme of the World Health Report 2012 was “the renewal of primary health care, and the need for health systems to respond better and faster to the health care challenges of a changing world. Focal points of the report included:*

- *Good care is about people*
- *The distinctive features of primary care*
- *Organizing primary-care networks and Monitoring progress” (WHO, 2012b).*

The reports above provide some perspective of the modification demands in the whole world, and action steps that could be taken to address many social problems nowadays, such as aging population, growing influence of chronic disease, loss of primary care support and the changing needs related to health care strategy. The WHO, along with other groups like the Committee on Quality of Health in America (CQHCA), have been documenting, researching and presenting their findings on healthcare needs for over a decade (CQHCA, 2011). The depth and breadth of the issues humans facing in healthcare today are clear; the value of this Capstone is to examine specific information to help determine what approaches or strategies can be helpful in designing and implementing more effective primary health care models.

Research Objectives

The intent of this Capstone study was to assess how Traditional Chinese Medicine (TCM) could be used to influence the development of a new integrative primary care model that more efficiently addresses the changing needs of healthcare in the U.S. A synthesis of integrative health care models and principal definitions has been conducted to present an opportunity for a more common point of discussion. Finally, the main and personal objective on this research was to identify, evaluate and describe principles, protocols and studies from TCM as a guide to help further the discussion of how its contribution can help transformation a model for primary health care in the United States.

Hypotheses

The main hypothesis was adapting primary care to meet current needs, which lies in people's ability to utilize an integrative care model that successfully addresses the growing demands of healthy aging, and TCM can help to accomplish this goal.

The sufficient evidence exists can be used to efficiently review the current models of integrated primary care; and the healthcare delivery models which are currently in place, or being promulgated (e.g., medical health home) require additional components - such as those found at the core of TCM - to successfully address those needs. It is hypothesized that the principles at the root of TCM can well serve as the root of an integrated healing system and the data exists to help people understand what opportunities are available for improving primary care.

Research Questions

Within this Capstone, the study describes a context of health care delivery in the United States, how chronic disease is influencing need, how primary care is and why it must adapt to meet the modern needs. The changes in health care needs, especially in the area of chronic disease, demands people look at healthy aging as a tenant for new clinical models of primary care. This Capstone research used published sources to explore what factors or aspects of care may provide key opportunities for a sustainable primary care an integrative care clinic model. Also, this study sought to explore how TCM could be a valuable resource from which to anchor an integrative health care model that more strategically meets the needs for the next generation of primary care. Therefore, this Capstone explored the following research questions:

- What information can be leveraged to develop and support a primary care model that effectively addresses the needs of an aging population and an ever-increasing demand from chronic disease?
- What information can help us define and further support our understanding of integrative care and how we can use these concepts in primary care, with TCM as its root?
- What principles and protocols does TCM offer regarding how we might further our definition of integrative health care (IHC) and successfully develop an effective holistic primary care model?

Research Value

The potential value of this research is to create a better understanding of how IHC and TCM can meet the needs of aging society and predominance of chronic disease. Contributions of this research can hopefully be used to continue to transform modern primary care so that better and more sustainable patient outcomes result.

Definition of Terms

For the purposes of this paper, the following definitions are provided to deliver better context to the reader:

- *Acute/Infectious Disease*: Conditions that have a rapid onset and/or tend to have a short duration (WHO, 2010). Most often these disease statistics focus on infectious agents as the cause of disease. However, some statistics may also include

injury, childbirth and even some acute episodes of chronic conditions (e.g. heart attacks). The WHO focuses on communicable diseases, infectious disease, which will be our focus within this capstone project.

- *Chronic/Non-communicable Disease*: Conditions that are persistent or otherwise have a long (3 months or more) duration or course (WHO, 2010).

- *Integrative Health Care*: A healing-oriented approach that incorporates a wide diversity of healing professions (Kreitzer, Kligler, & Meeker, 2014)

- *Integrative Medicine*: Integrative Medicine is the medical practice used within an integrative care model (Kreitzer et al., 2014) and integrates the best of complementary and alternative medicine with the best of conventional medicine (Maizes, Schneider, Bell, & Weil, 2012)

- *Traditional Chinese Medicine*: Traditional Chinese medicine (TCM) is a system of medicine that uses acupuncture, herbal medicines along with a variety of mind and body practices rooted in the philosophy of Taoism dating back more than 2,500 years (NCCAM, 2013).

METHODOLOGY

This qualitative research synthesis sought to answer three primary research questions:

- What information can be leveraged to develop and support a primary care model that effectively addresses the needs of an aging population and an ever-increasing demand from chronic disease?
- What information can help us define and further support our understanding of integrative care and how we can use these concepts in primary care, with TCM as its root?
- What principles and protocols does TCM offer regarding how we might further our definition of integrative health care (IHC) and successfully develop an effective holistic primary care model?

Resources

The literature reviewed for this synthesis has focused on peer-reviewed articles available in PubMed, EBSCO and Science Direct search databases. Searches were conducted via the Principal Investigator's computers and articles accessed via South Baylo University Library online journals.

Keywords used in searches included (PubMed/EBSCO: # Citation Results): “integrative health” (PubMed: 3909; EBSCO: 250), “integrative health care” (PubMed: 1894; EBSCO: 62), “integrat* and medicine” (PubMed: 32314; EBSCO: 3004); “integrat* and health* ” (PubMed: 3219; EBSCO: 5185), “definition; integrative health care” (PubMed: 72; EBSCO: 0), “education; integrative medicine” (PubMed: 560; EBSCO: 9), “integrative

health in practice” (PubMed: 45; EBSCO: 16), “hospital; integrative health” (PubMed: 841; EBSCO: 3), “TCM; integrative health” (PubMed: 39; EBSCO: 0), “primary health care; integrative health” (PubMed: 511; EBSCO: 1) “integrative medicine; chinese medicine (PubMed: 330; EBSCO: 140). Searches in Science Direct were only for acquiring full articles for the synthesis where 7 articles were found and used in the synthesis.

Inclusion criteria focused on IHC definitions and associated terms and models of care. The primary exclusion criteria were discussions of Integrated Health Care (IHC) that may only have used IHC as a descriptor for content within the articles versus discussion of IHC itself. Secondary exclusion included articles published in countries outside the U.S. Studies and articles published before 2000 were also determined to not qualify for this synthesis.

Within the searches above 323 abstracts were selected for further review. Among these abstracts, 203 abstracts were selected for more detailed review and 109 articles were acquired and further assessed. The 109 articles were filtered to 46 for the purposes of the synthesis and then that selection was narrowed further to 25 by selecting only articles focusing on U.S. health care.

Instruments

The information sought in this synthesis included a focused effort on IHC definitions, terms, models and other pertinent information related to the delivery of IHC. The following information was abstracted from each article using an abstraction form:

General Information:

- Author(s)
- Institution(s)

- Year of Study
- Peer Reviewed
- Type of Study (RCT, Survey, Qualitative case study, Commentary, editorial, opinion). Does the article meet primary search guidelines (primary care, integrative care, TCM)? Does the article potentially support the development of a new primary care model? Clinic application? Does the article offer or suggest links to Primary Care (Direct, Suggested, No Link). Does the article offer or suggest links to TCM (Direct, Suggested, No Link)
 - What terms are associated with integrative care (descriptive terms used to clarify IHC, especially any providing direct reference to the definition of IHC or those terms repeated throughout the literature to describe IHC)?
 - What therapies are associated with integrative care (therapies mentioned as examples of IHC, therapies used in models of IHC)?
 - What are people talking about when talking about IHC? Practitioners practicing?
 - At what level is IHC being discussed (i.e. who's publishing the literature)?
 - Does the article offer a definition of IHC?
 - Who is using/practicing IHC (hospitals, clinics, individual practitioners)? Who is teaching IHC? Are institutions teaching/researching IHC?
 - Is there evidence of flaws within the research, how it was presented or conclusions drawn from the research? What are the article's conclusions?

Validity and Reliability

Careful thought was taken in the review of each article. The intent of this thoughtful review was to make sure the IHC model and system elements were observed systematically.

Pursuing the intention of this work included the prospect of reviewing articles not on target and providing enough information to help support answering the research questions posed. However, each article's content validity was assessed with careful thought as described.

Data Analysis

Univariate data analysis techniques and thematic content analysis were used to analyze the data abstracted. The data was analyzed for patterns in yes/no responses and by breaking down text data in thematic categories. The data was captured via a custom Google Form that allows for the data captured to be exported into a Microsoft Access database. It was the place that data for each category was broken into to smaller specific tables and compiled. Content analysis was the primary technique used to compile data and synthesize definitions of IHC, terminology as well as models around IHC, and to better understand who is using, researching and promoting IHC.

RESULTS

As stated earlier, the intent of this research synthesis was to gain insight into the depth and breadth of acceptance and use of integrative healthcare (IHC) principles and models within the U.S. health care system. The intent of this synthesis was to explore consistencies regarding how IHC is defined, how well established the practice of IHC is (e.g. is there a generally accepted model or concept of IHC) and how well accepted the concept of IHC is in practice and in academia. Data analysis synthesized trends to better understand what next steps might be taken to leverage TCM as a resource for helping to define IHC and furthering its development, specific to answering the three research questions mentioned on page 8. This article research included 11 articles with dates ranging from 2010 to 2016. This synthesis review included 28 articles from 12 sources. The most significant source of information was from the journal *explores: The Journal of Science and Healing*, which contributed 32 percent of the total articles; *The Academic Medicine* and *Journal of Alternative & Complementary Medicine*, which both contributed 14 percent. Its review also included 6 different types of articles, in which 89 percent majority of articles fall into three categories: Editorial, Literature Review and Commentary.

One of the principal intent of this research was to assess of the connections between IHC and PHC as well as IHC and TCM. For this abstraction, three levels of measurement were observed: no link, suggested link and direct link. Suggested link was considered to be valid when an article presented information regarding both topics without a stated direct link. Direct link was considered to be valid when a direct link was mentioned. Fifty percent of articles (14/28) were found to not have a link between IHC and PHC, 21 percent (6/28) offered suggested links and 29 percent (8/28) offered direct links between IHC and PHC. Likewise, 43 percent of the articles (12/28) offer no link between IHC and TCM, 43 percent

(12/28) offered suggested links and 14 percent (4/28) offered direct links.

Of the 50 percent that offered links between IHC and TCM, only TCM was described. Comparing mentions of TCM to acupuncture, acupuncture was mentioned in 75 percent (21/28) of the articles, and seven more than those with a stated link to TCM. Seven total articles suggested or directly linked IHC and PHC as well as IHC and TCM though no correlated links between all three IHC, PHC and TCM were observed in any of the articles. The terms associated with IHC were noted for each article, specifically when used in direct reference to definition or description of IHC. In this review, 12 terms were used with repeated reference to IHC, the most notable being Complementary and Alternative Medicine (CAM). CAM was referred to in 26 of 28 articles (93%); and in some cases, the references to IHC and CAM were one as well. Also noted with great frequency were Interdisciplinary (13/28), Multidisciplinary (11/28) and Collaborative (10/28).

The following section explored the synthesis of where IHC is being used within the U.S. health care system. The purpose of this section was to observe the level of discussion with regards to who was using IHC or advocating or contributing to its development, to gain an understanding of the depth and breadth of IHC; and assess how well established as well as accepted IHC is within the healthcare sector. Here are four main areas explored: practitioners practicing, clients/public using IHC, models of care suggesting detailed or lengthy planning and academic institutions developing, researching or teaching IHC protocols or practices. Of the 28 articles reviewed, there were 16 articles (57%) included a discussion about practitioners practicing IHC and advocating for further development based on proposed models or practices of care. Also, sixteen of the 28 articles (57%) presented information on models of IHC either in practice or considered for further development to be put into practice. Eleven articles (39%) included discussion of patients seeking integrative support or

driving the practice integrative care via demand. Ten of the 28 articles (35%) discussed therapies or practice concepts used in IHC or considered to be a part of IHC models present or future. Fourteen of the 28 articles (50%) had discussions related to academic development and teaching practitioners about IHC, most notably those of medical schools.

The objective of seeking this data was to look at the depth and breadth of the use of IHC, namely areas that might suggest where IHC is established within human health care system. Ways of observing this foundation included exploring if practitioners claim to be practicing IHC (Practitioners), if the public is using or in a sense driving IHC (Clients), if there are proposals or demonstrations of models of IHC (Models), if there are specific therapies or practices that are being identified as IHC (Practices), and lastly if there are academic institutions researching, developing or teaching IHC (Education).

Practitioners Practicing

Of the articles reviewed, 16 articles (57%) specifically discussed practitioners practicing IHC in some capacity or practitioners seeking a better option in which to practice, suggesting that IHC might be a better option. With regards to practitioners practicing IHC, 10 of the articles (36%) cited references to clinics, and 5 articles (18%) cited hospitals engaging in either the practice or research of IHC.

Clients Using Integrative Health Care

Among the articles reviewed, 11 articles (39%) specifically discussed client or public use of IHC. The most prevalent discussion around the public using IHC is actually more directly a statement of the public using CAM resources alongside their conventional resources. Details were limited with regards to suggesting direct use of IHC. However, 64

percent of articles stated that CAM is being used.

The discussion of patients demanding more holistic service was almost as prevalent as the discussion of CAM. Seven of the eleven articles (63%) discussed patient engagement in pursuit of improved personal health as one driver for increased IHC and 4 of these 7 (57%) discussed patients demanding for integration. One articles of the 11 (9%) advocated that to support the development of IHC four transformational components need to be addressed “(1) having access to a range of appropriate therapies to support individual journeys, (2) care that focuses on one’s overall well-being, (3) control over disease management, and (4) developing healing relationships with care providers” (Khorsan, Coulter, Crawford, & Hsiao, 2011). Finally, one of the 11 articles offered the observation that many individuals use CAM, as many as 70 percent, do so without discussing the use with their primary doctor (Ananth, 2012).

The purpose of this sub-topic was to synthesize therapies associated with IHC. Therapies qualified by those used in reference to the practice of IHC or used in the discussion regarding IHC. Thirty-five percent of the articles specifically discussed or mentioned therapies or systems of therapeutic practice linked directly with IHC.

Of the 20 articles reviewed for this study (50%) of the articles included some discussion about IHC with regards to education and academic institutions. Thirty-five percent of the articles had a primary presentation focus on IHC within the academic environment. The articles were reviewed to see what was being discussed in relation to IHC and the academic setting. Ten articles discussed teaching IHC as a part of a program or curriculum in a medical school environment. Nine articles discussed the need or therapies ambition of developing IHC programs or curriculum while four articles discussed research necessary for

the development of curriculums or the evaluation of curriculums already in place.

Models of Care

The subsequent sections have been broken down into following categories developed by this Capstone researcher:

- *Basis of Care: Practice Design* - Content is focusing on how to develop, design or execute models of integrative health care practice.
- *Basis of Care: Validation of Care Strategies* - Content is focusing on upholding standards and/or ways to demonstrate safe, effective care.
- *Basis of care: Ambition of care* - Purpose of care and/or the reasons for improving care.
- *Criticism of IHC/Areas for improvement*: Opportunities for improving and/or criticisms of IHC.
- *System Regulation/Economics*: System regulations or discussing economic issues surrounding IHC. Of the articles reviewed 13 of 25 specifically discussed models of IHC from conceptual and academic level discussion to clinic level application. Within the 13 articles, 18 different models of care were referenced by name.

Article Conclusions

The final intent of this review was to synthesize trends in the data to understand the next steps might be taken to leverage TCM as a resource for defining IHC and furthering its development.

DISCUSSION

This study used research synthesis techniques to begin to analyze the depth and breadth of acceptance and use of integrative healthcare (IHC) principles and models within the U.S. health care system. Twenty-eight articles were selected to explore potential consistencies regarding how IHC is defined, how well established the practice of IHC is and how well accepted the concept of IHC is in practice and in academia.

The following are result highlights from this synthesis:

- *Acceptance of IHC:* Fifty-seven percent of the articles discussed practitioners using IHC, 50 percent of the articles noted IHC at the Academic level and 39 percent noted that the public was using IHC for personal benefit.
- *IHC Models:* Twenty individual models were noted in the literature 75 percent of which suggested content on how to develop, design or execute models of IHC. While 45 percent of the models presented advocated for the ambition of care or suggested reasons for improving care.
- *IHC definitions:* Fifty-seven percent of the articles suggested that IHC is defined as being inclusive of conventional and CAM modalities as well as inclusive of both therapies and medical services. Forty-six percent of the articles suggested that IHC includes holistic/whole person/comprehensive care delivered in a collaborative/interdisciplinary/synergistic manner. Finally, 28 percent of more of the articles suggested that IHC is patient centered, evidence based and delivered in a setting where the patient-practitioner relationship is well supported.
- *Links between PHC, IHC and TCM:* Fifty percent of articles suggested a link between IHC and PHC and 57 percent suggested a link between IHC and TCM.

- *Criticisms:* Of the 20 models presented 4 of the model definitions suggest conflicts within IHC that need to be addressed and 13 of 28 articles (46%) offered criticisms of IHC or the state of IHC within their conclusions.

- *Conclusions:* Eighty-nine percent (25/28) of the conclusions suggested that Practice Design was important to IHC development and/or offered context for how to improve practice design. Fifty-three percent (15/28) of the conclusions suggested that Validation of Care Strategies via the pursuit of research evidence and safe practices was important to IHC development. Fifty-seven percent (16/28) of the conclusions suggested the importance of the Ambition of Care in the development of IHC. As mentioned above, 46 percent (13/28) offered Criticisms of IHC. Finally, 39 percent (11/28) of conclusions suggested system or economic regulation was important to IHC development. The definition of primary health care offered by the Declaration of Alma-Ata (WHO, 1978) and the advocacy of health presented in the Constitution of the WHO (WHO, 2012a) provide a clear consensus on the pursuit of primary health care.

“Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology. It is the first level of contact bringing health care as close as possible to where people live and work the first element of a continuing health care process.” (WHO, 1978)

This quote promotes the development of a new model for primary health care that must be practical, scientifically sound and subject to testable principles. Furthermore, as stated by the WHO Constitution, health is a state of complete physical, mental and social prosperity and not merely the absence of disease or infirmity (WHO, 2012a). Complete physical, mental and social welfare arguably suggests that a holistic approach to health is

necessary.

If IHC is to involve the organic, united parts of a whole, and PHC can provide essential health care based on practical, scientifically sound and socially acceptable methods and technology, then experts should consider every opportunity available to achieve these principles. This Capstone's synthesis results show some evidence of patterns and consensus that IHC is considered and must become a holistic model of health care to meet modern needs and demands. Furthermore, there seemed to be a trend in the synthesis results that suggests a link between IHC and PHC, which can be further explored.

Mackenzie-Cook (2010) proposes three general conclusions concerning the requirements for a universal, or generalized, model of integrated world medicine:

- *“First, this model must build on the same key areas that lay at the heart of all the others. The new model must also embrace those general and specific assumptions that are held in common among existing medical models. Only to the extent that it meets this requirement can the new model truly represent a universal world medicine.*
- *Second, to justify the name, such a model must possess greater explanatory and predictive power, and a wider range of practical application and efficacy, than any of its predecessors: It must go beyond the commonly held assumptions of other models. Indeed, this is the very heart of the promise of such a model.*
- *Third, a model for world medicine must also preserve what lies at the heart of conceptual differences among existing models. Only in this way can a universal model achieve the greater range of application and efficacy called for by the second requirement.”*

Implications for Practice

If everyone accepts the principles for IHC and PHC presented above, and then consider conclusions suggested by Mackenzie-Cook (2010), it could be suggested that the need for changes in PHC and the intentions of IHC merge well together. Sharf et al. (2012) suggested that IHC includes challenges that require novel ways of thinking, ranging from accumulating evidence of effectiveness and safety, designing new practice models that encourage collaboration and interfacing with biomedical practitioners. This Capstone tried to further clarify the readiness of IHC in practice by taking a beginning look at the breadth of acceptance. One can argue that with the public driving demand, practitioners offering more IHC related services, academic institutions teaching it as well as a growing amount of qualified research targeting IHC issues, that IHC is well on its way to becoming a practice.

While pursuing terminology and definitions that improve the discussion of IHC are also important to consider, resources that can help solidify the structural foundation of IHC are just as important. IHC terms and definitions require a strategic structural foundation from which to identify appropriate and commonly accepted communication resources (e.g. terms, etc) for practice. The foundation and structure of TCM has withstood the test of time; even with generations of advancements and subsequent improvements it still remains rooted in sound yet ancient fundamental principles. This long-term resilience via a strong integrated foundation of diagnostics and treatment protocols, along with the growing evidence validating modern application of therapies suggests that there is much to consider as potential elements for IHC practice delivery.

TCM seeks to differentiate the cause and manifestation of disease in relation to the integrated whole of what the body needs, what can be appropriately provided via nature and how best to facilitate the desired experience of health via health care application. Also as Sharf et al. (2012) note, integrative medicine is not enacted in the form of particular

modalities rather it is a philosophy of and attitude toward what constitutes health. TCM is well suited to further the application of this philosophy in IHC practice, no matter how defined.

Limitations of the Current Study

The primary limitation of this Capstone was the limited number of articles used to assess systemic development or development of specific models or explanations of IHC. Furthering these limitations was the limited number of articles that met criteria and discussed IHC in the U.S. This synthesis was conducted by one researcher; however, reviewing and discussing with the advisor were also a part of the research process. Last but not least, this Capstone could have benefited from deeper analysis of text data. Additional analysis in the future can help enhance the examination of links between TCM and IHC.

Recommendations for Future Research

There are two primary opportunities for further research based on this Capstone's results. The first opportunity includes a more in depth look at additional articles that may add additional IHC data to expand on this synthesis' goals. Expanding the article pool and refining synthesis abstraction may help to further suggest and demonstrate consensus of terms and definitions.

The second opportunity for further research is in the area of TCM. Mackenzie-Cook (2010) explains that medical models can differ quite widely in the explanations, predictions, and clinical practices they embrace. This is where the greatest epistemological divide occurs, for instance, between TCM and science-based medicine (Mackenzie-Cook, 2010). With this in mind, it would be helpful to review the structural components of TCM in greater depth and

detail to further its elements for convergence with IHC and development of PHC in the U.S.

The depth and breadth of TCM's history both culturally and medically suggest that there is enough logic to this system of medicine that has justified its resilience. Dissociation to the terms and descriptors of TCM understandably creates potential challenges of acceptance and influences discussion as well as clinical research. By seeking more familiar terms and definitions regarding the structural components of TCM may provide more clear insight regarding how people might leverage TCM to further definition of integrative care and successfully develop an effective holistic primary care model.

CONCLUSION

The need for further engagement in the renewal of primary health care is clear. Twelve years ago, it was suggested that integrative medicine is a comprehensive, primary care system that emphasizes wellness and healing of the whole person (Bell et al., 2012). Subsequent literature continues to link what is desired in PHC and what is pursued via integrative health care with more than a decade of research and discussion. The qualification is that any IHC model serving PHC in the U.S. and around the world must be dynamic enough for a large community to agree on generally accepted principles from which to communicate. The key component that is necessary moving forward is the foundation on which to build and execute a practical, scientifically sound and socially acceptable model of care.

Integration requires a level of thoughtfulness and commitment to a common objective that challenges both the system as well as collaborations between TCM and Western practitioners working within the health care system. One place to improve acceptance of integration can be in the acceptance of the common mission of quality holistic care customized to each individual's, every individual's needs. When one decide that health is the measure of one's quality of life and that proper care is the act of partnering with and advocating for each individual, health care becomes reality people are seeking. Integration, and collaboration, suggests a connectedness, a focused axis around which the system is organically cultivated. After centuries of practical use, a growing body of evidence and social acceptance well outside its cultural boundaries, TCM offers organic principles and protocols that can help revolutionize primary health care as holistic personalized integrative health care.

REFERENCES

- AHRQ. (2011). What is the PCMH? - AHRQ's Definition of the Medical Home Retrieved from <https://pcmh.ahrq.gov/page/defining-pcmh>
- Ananth, S. (2012). Applying Integrative Healthcare. *Explore (NY)*, 5(2), 119-120.
- Bell, I. R., Caspi, O., Schwartz, G. E., Grant, K. L., Gaudet, T. W., Rychener, D., . . . Weil, A. (2012). Integrative medicine and systemic outcomes research: issues in the emergence of a new model for primary health care. *Arch Intern Med*, 162(2), 133-140.
- CDC. (2010). *Life expectancy by age, race, and sex*. T able 1 1. Retrieved from ftp://ftp.cdc.gov/pub/health_statistics/nchs/publications/nvsr/56_09/table11.xls
- CMS. (2015). *2014-2024 Projections of National Health Expenditures Data Released*. Retrieved from <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-releases/2015-Press-releases-items/2015-07-28-2.html>
- Commission, C. F. (2013). CONFRONTING COSTS: Stabilizing U.S. Health Spending While Moving Toward a High Performance Health Care System. In S. G. Cathy Schoen, Mark Zezza, Melinda Abrams (Ed.), (pp. 41): Commonwealth Fund.
- CQHCA. (2011). *Crossing the Quality Chasm: A New Health System for the 21st Century* (C. o. Q. o. H. C. i. America Ed.): The National Academies Press.
- HHS. (2010). *Patient Protection and Affordable Care Act*.
- Khorsan, R., Coulter, I. D., Crawford, C., & Hsiao, A. F. (2011). Systematic review of

integrative health care research: randomized control trials, clinical controlled trials, and meta- analysis. *Evid Based Complement Alternat Med*, 2011. doi: 10.1155/2011/636134

Kreitzer, M. J., Kligler, B., & Meeker, W. C. (2014). Health Professions Education and Integrative Healthcare. *EXPLORE: The Journal of Science and Healing*, 5(4), 212-227. doi: <http://dx.doi.org/10.1016/j.explore.2009.05.012>

Mackenzie-Cook, P. D. (2010). Challenging the New Orthodoxy in Integrative Medicine. *Journal of Alternative & Complementary Medicine*, 12(7), 679-683. doi: 10.1089/acm.2006.12.679

NCCAM. (2013). Traditional Chinese Medicine: An Introduction. Retrieved 03/01/2014, 2014, from <http://nccam.nih.gov/health/whatiscam/chinesemed.htm>

PCPCC. (2013). What is a Medical Home? Retrieved Mar 2013, 2013, from <http://www.pcpcc.net/what-we-do>

Ross DeVol, A. B. (2012). AN UNHEALTHY AMERICA: The Economic Burden of Chronic Disease (pp. 237): Milken Institute.

Sharf, B. F., Geist Martin, P., Cosgriff-Hernandez, K. K., & Moore, J. (2012). Trailblazing healthcare: institutionalizing and integrating complementary medicine. *Patient Educ Couns*, 89(3), 434-438. doi: 10.1016/j.pec.2012.03.006

WHO. (1978). *Declaration of Alma-Ata*. Paper presented at the International Conference on Primary Health Care, Alma-Ata, USSR. http://www.who.int/publications/almaata_declaration_en.pdf

(WHO 2012a). *Constitution of the World Health Organization*. Paper presented at the Fifty-first World Health Assembly.

http://www.who.int/governance/eb/who_constitution_en.pdf

(WHO 2015a). Global Health Observatory Data Repository. Retrieved Oct 2012, from World Health Organization <http://apps.who.int/gho/data/node.main.A860>

(WHO 2012b). Primary Health Care (Now More Than Ever). *The World Health Report*. Retrieved Oct, 2012, from <http://www.who.int/whr/2008/en/index.html>

WHO. (2010). Chronic/Non-communicable Diseases. from

(WHO 2013). The 10 leading causes of death in the world, 2000 and 2011. Retrieved 08/23/2013, 2013, from <http://www.who.int/mediacentre/factsheets/fs310/en/>

WorldBank. (2016). *Life expectancy at birth, total (years)*. Retrieved from:

http://api.worldbank.org/datafiles/SP.DYN.LE00.IN_Indicator_MetaData_en_EXCE

L.xls