GLOBAL PUBLIC HEALTH LEADERSHIP: ADAPTATION OF THE MATERNAL AND CHILD HEALTH PUBLIC HEALTH LEADERSHIP INSTITUTE CURRICULUM FOR INDIA

By

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Abbreviations

AIDS	Acquired immune deficiency syndrome
AMCHP	Association of Maternal and Child Health Programs
BEI	Behavioral Event Interview
CCL	Center for Creative Leadership
CDC	Centers for Disease Control and Prevention
CLS	Continuous Learning System
ELP	Effective Leadership Program
HIV	Human immunodeficiency virus
HR	Human resources
IDP	Individual Development Plan
IIE	Institute of International Education
IIE WCC	Institute of International Education West Coast Center
IIPH	Indian Institute of Public Health
ILI	Indian Leadership Initiative
IOM	Institute of Medicine
JiT	Just-in-Time Training Modules
LBB	Leadership Beyond Boundaries
LDM	Leadership Development for Mobilizing Reproductive Health
LDP	Leadership Development Programme
LMIC	Low and middle-income countries
MCH	Maternal and Child Health
MCHB	Maternal and Child Health Bureau

MCH LC	Maternal and Child Health Leadership Competencies
MCH PHLI	Maternal and Child Health Public Health Leadership Institute
MMR	Maternal Mortality Ratio
NCCC	National Center for Cultural Competence
NGO	Non-governmental organization
PHFI	Public Health Foundation of India
PHLI	Public Health Leadership Institute
PI	Private Investigator
PLP	Personal Leadership Project
UNC	University of North Carolina at Chapel Hill
US	United States
USAID	United States Agency for International Development
WHO	World Health Organization

Map of India


TAJIKISTAN
AFGHANISTAN
PAKISTAN
CHINA
NEPAL
BHUTAN
BANGLADESH
MYANMAR
SRI LANKA
Srinagar
JAMMU & KASHMIR
Jammu
HIMACHAL PRADESH
Shimla
Chandigarh
PUNJAB
Dehradun
UTTARAKHAND
HARYANA
DELHI
Jaipur
RAJASTHAN
UTTAR PRADESH
Lucknow
SIKKIM
Gangtok
Itanagar
ARUNACHAL PRADESH
Dispur
ASOM (ASSAM)
NAGALAND
Kohima
Shillong
MEGHALAYA
Imphal
MANIPUR
Aizawl
MIZORAM
Agartala
TRIPURA
BIHAR
Patna
JHARKHAND
Ranchi
WEST BENGAL
Kolkata
Gandhinagar
GUJARAT
Bhopal
MADHYA PRADESH
DAMAN & DIU
Daman
Silvassa
DADRA & NAGAR HAVELI
Mumbai
MAHARASHTRA
Raipur
CHHATTISGARH
ODISHA (ORISSA)
Bhubaneswar
BAY OF BENGAL
ARABIAN SEA
Hyderabad
ANDHRA PRADESH
Yanam (Puducherry)
Panaji
GOA
KARNATAKA
Bengaluru (Bangalore)
Chennai
PUDUCHERRY (Pondicherry)
Karaikal (Puducherry)
Mahe (Puducherry)
Kavaratti
LAKSHADWEEP (INDIA)
TAMIL NADU
KERALA
Thiruvananthapuram
ANDAMAN & NICOBAR ISLANDS (INDIA)
Port Blair
INDIAN OCEAN

Abstract

Objectives: This study addresses the adaptation of the Maternal and Child Health Public Health Leadership Institute (MCH PHLI) curriculum in an international setting within the context of India.

Methods: A qualitative study design was used consisting of an electronic survey, exploratory and semi-structured interviews with Indian MCH professionals. Field notes were manually coded to look for emerging themes and topics related to the study objectives.

Results: Analysis revealed four emerged themes: leadership attributes; perceived need for MCH leadership training; culturally relevant leadership competencies; and perceived barriers to MCH PHLI adaptation.

Conclusions: There is a perceived need for MCH leadership training in India. The MCH PHLI curriculum will need to be adapted to address program and cultural barriers identified in study analysis.

Keywords: Leadership, India, workforce development, maternal and child health

Research Aims

Although the field of Maternal and Child Health (MCH) in the United States (US) has focused significantly on leadership development, an online search, including variations of the terms maternal and child health, leadership development programs, trainings, and developing, low or middle-income countries revealed there are no existing MCH leadership training curriculums implemented in low and middle-income country (LMIC) settings. However, since the World Health Organization (WHO) defined leadership and governance as one of six key building blocks of any health system, there is an emerging shift towards leadership development in LMICs. [1] In the context of India, this project seeks to answer the following research questions: 1) Is there a perceived need for MCH leadership development? and 2) Can the Maternal and Child Health Public Health Leadership Institute (MCH PHLI) curriculum be adapted for MCH professionals in India? The objectives of this project are:

- To identify the need for leadership training for MCH professionals in India
- To distinguish leadership competencies important to MCH public health professionals in India
- To identify perceived barriers for implementation of the MCH PHLI curriculum.

Public Health Leadership

History

Since the 1980s, developing public health leaders has been a priority in the US. [2] In 1988, the director of the Centers for Disease Control and Prevention (CDC), Dr. William Roper, made an official call for implementing leadership development training for all components of governmental public health. [2] Shortly after, the CDC funded an individual model of public health leadership development by establishing the National Public Health Leadership Institutes (PHLI) in 1992 and the National Public Health Training Network in 1993. [3] Since that time, the field of public health has made significant investments in workforce leadership training, with up to 27 PHLIs in more than 45 states. [4]

Since 1988 when the Institute of Medicine (IOM) released the report, *The Future of Public Health*, outlining the need for increased leadership development training, many categorical leadership institutes have developed at the national level. [2,5] Discipline specific programs have emerged for environmental professionals, state health officials, and those in health education. [2] In April 2004, the Maternal and Child Health Bureau (MCHB) assembled a national working group to develop a framework to guide integrated leadership development. [4,6] This led to the formation of the MCH Competencies Working Group composed of individuals representing MCH training programs, the Association of Maternal and Child Health Programs (AMCHP), and CityMatCH. [6] As a result of this working group, the MCHB released the Maternal and Child Health Leadership Competencies to guide MCH workforce development. [4] Based upon these competencies, an official definition of an MCH leader was released:

> "An MCH leader is one who understands and supports MCH values, mission and goals with a sense of purpose and moral commitment. S/he values interdisciplinary collaboration and diversity, and brings the capacity to think critically about MCH issues at both the population and individual levels, to communicate and work with others, and to utilize self-reflection. The MCH leader demonstrates professionalism in attitudes and working habits, and possesses core knowledge of MCH populations and their needs. S/he continually seeks new knowledge and improvement of abilities and skills central to effective, evidence-based leadership. The MCH leader is also committed to sustaining an infrastructure to recruit, train and mentor future MCH leaders to assure the health and well-being of tomorrow's children and families. Finally, the MCH leader is responsive to the changing political, social, scientific and demographic context, and demonstrates the ability to change quickly and adapt in the face of emerging challenges and opportunities. The MCH leader uses these skills and abilities to maintain and improve the health and well-being of MCH populations."[7]

Leadership vs. Management

Before taking a closer look at the role for public health leadership in the field of MCH, it is important to address what constitutes leadership and what does not. Leadership is often regarded as being synonymous with the word "management", but these terms signify very different functions within an organization. Leadership has been defined as "creativity in action" and "the ability to see the present in terms of the future while maintaining respect for the past."[8, p.4] Leadership is future driven and is about assuring an organization has an appropriate vision to address and manage change.[2] A

leader enables others to approach challenges and overcome obstacles while working together with a shared mission and vision.[9] Good leadership is particularly important in emergency situations as it can empower and align people to move forward in difficult circumstances.[9]

In contrast, management focuses more on the present and on assuring that operations, processes, and procedures needed to accomplish a goal run efficiently and effectively.[2,8] It involves strategic planning and allocating resources efficiently to produce intended results.[9] Neither function takes precedence over the other, but rather it is important for public health leaders to implement both functions on a regular basis.[2]

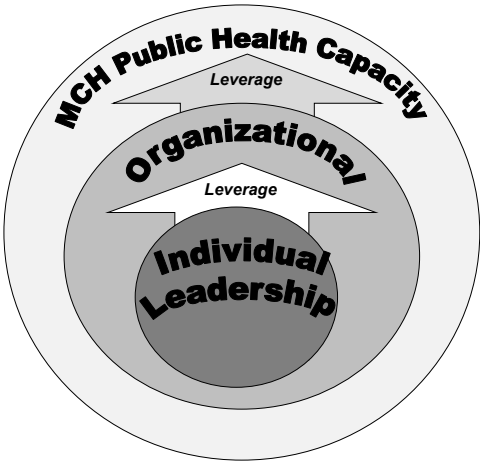
Maternal and Child Health Public Health Leadership Institute

Background

In 2009, the Gillings School of Global Public Health at the University of North Carolina (UNC) was awarded a five-year grant from the MCHB to establish the Maternal and Child Health Public Health Leadership Institute (MCH PHLI).[4] This grant enabled funding for four MCH PHLI cohorts, with up to 30 Fellows each, to develop MCH leaders across the US.[4] The first cohort of MCH PHLI Fellows began their training experience in May of 2010, and the final fourth cohort will commence in May of 2014. Fellows were selected each year through an electronic application process from all US states and territories. Acceptance into the program is extremely competitive, with approximately 20% of applicants accepted into the program each year. Fellows graduate after meeting all program requirements, including an individually selected Personal Leadership Project (PLP), which is presented at the final onsite retreat. At this time, 82 Fellows have graduated from three cohorts.

MCH PHLI is a yearlong leadership program targeted to mid-to-senior level leaders in government based Title V or family advocacy positions. The program is based at UNC, and was created by the MCH PHLI leadership team in collaboration with representatives from four partner organizations: AMCHP, CityMatCH, Family Voices National, and the National Center for Cultural Competence. [10] The program is based on a conceptual training model that focuses on three cores of skills: individual leadership, organizational leadership, and system level leadership to build MCH public health capacity. (Figure 1)

Figure 1: The progressive and concentric MCH PHLI conceptual model for leadership development



Additionally, MCH PHLI is composed of five goals that address educational and capacity building objectives. Goals 1-3 provide the foundation for the program's focus on individual leadership development. [4] Goals 4-5 are centered on building collaboration with MCH key partners and improving leadership capacity.

Goal 1*:* Develop sophisticated individual leadership skills in an annual cadre of up to 30 professionals in mid-to-senior leadership positions in the field of maternal and child health and public health.

Goal 2*:* Foster the ability of these leaders to leverage those skills to impact the organizational systems of their home programs.

Goal 3*:* Enhance the ability of these leaders to leverage their organizations to create impact in their community and political systems.

Goal 4*:* Develop a strong network of MCH public health workforce professionals nationally through the creation of an MCH PHLI Community of Learners.

Goal 5*:* Build the capacity of MCH Title V and MCH public health and community focused-leadership nationally through a parallel set of activities to address national organizational leadership capacity development in collaboration with key stakeholder groups representing the MCH workforce at the city, county and state level and consumers of MCH services.

Program Structure

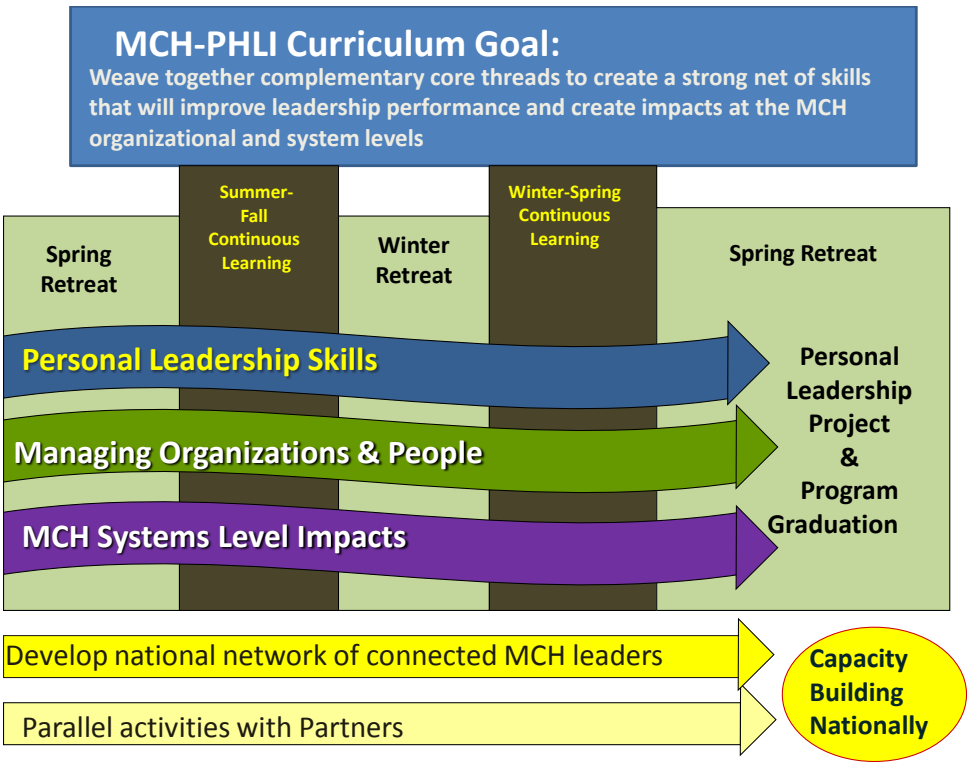
The MCH PHLI curriculum utilizes both retreat-based and distance-based phases with the goals of addressing educational and capacity building objectives.[4] Three residential intensive programs collectively provide approximately 85 hours of continuing education over a 13-day period.[4] The distance-based *Continuous Learning System* (CLS) involves Fellows spending approximately two hours per week on various components of the curriculum over the course of the program.[4] MCH PHLI research indicates that participants significantly improve their skills in the following 20 areas:[10]

Table 1: Leadership Skill Areas[1]	
• Self-Awareness	• Communication
• Negotiation	• Conflict Management
• Visioning	• Innovation
• Emotional Intelligence	• Transformational Leadership
• Reflective Leadership	• Career Management
• Creating/Impacting Organizational Culture	• Systems thinking
• Bench Building and Succession Planning	• Leading Change/Change Mangagement
• Cultural Competence	• Stakeholder Analysis
• Futuring	• Collaboration/Creative Partnerships
• Innovation and Performance Management	• Advocacy

[1] Definitions of Leadership Skills provided in Appendix I

In addition, the distance-based program also includes an individual leadership development plan, a personal leadership project, executive coaching sessions, online leadership modules, internal and external mentoring, webinars, topic specific conference calls, an online leadership diary, and peer coaching. Participants get feedback on eight scientifically valid and reliable leadership and psychological assessment tools most used in leadership development in leading corporations worldwide. Figure 2 below displays an overall structure of the program curriculum.

Figure 2: MCH PHLI Program Structure[4]



Curriculum Components

The residential retreat experience

MCH PHLI Fellows complete 3-5 day residential retreats at UNC during the spring when they matriculate into the program, mid-way through the program at a winter retreat, and again in the spring at the conclusion of the program, which overlaps with the subsequent cohort.[11] Collectively, this provides a total of 13 days of experiential-based learning. During the retreat, Fellows stay onsite and have an opportunity to learn from a multidisciplinary team of faculty and guest speakers. Fellows also complete four simulation-based exercises and practice sessions at the retreats.[4,10]

At the residential retreats, Fellows receive feedback from eight valid and reliable psychological assessment instruments, including a 360-degree assessment designed

specifically for public health leaders. [4] The 360-degree assessment involves a multi-level evaluation focusing on an individual's leadership style and how it relates to the achievement of the mission and goals of an organization. [8] These assessments provide a foundational understanding of personality structures, human motivation, change management, conflict, emotional intelligence, innovation, and organizational behavior. [10] Leadership and MCH topics addressed in the residential retreat component are listed in Table 2.

Table 2: Residential Session Topics[4]

• Leading change	• Innovation and creativity
• Creating organizational cultures	• Cultural competence
• Crisis and media communications	• Creating effective teams
• Demographic trends	• Stress management
• Human motivation	• Making mentoring work
• 360-feedback	• Systems thinking
• Emotional intelligence	• Leadership resillience
• Managing difficult conversations	• Peer Coaching
• Managing conflict	• Setting personal development goals
• Policy and advocacy	• The political landscape affecting MCH practice
• Negotiation skills	
• Communication skills	• Title V Program Challenges
• Project Management	• Program Planning and Evaluation

The distance based program: the CLS experience

While Fellows share the same experiences at residential retreats, the CLS experience allows Fellows to personalize their educational experience through 10 components. Through a diverse array of topics offered in the CLS experience, Fellows are able to tailor the content of the program to best fit their developmental needs and learning styles. [4] The 10 components of the CLS experience are described here:[4,10,11]

1.) Executive Coaching: In the program, Fellows experience two sets of executive coaching. During the first residential retreat, Fellows meet with a professional executive coach who is not a faculty member of the program. Throughout the remainder of the year, Fellows receive ongoing executive coaching from an individually assigned yearlong coach who is a member of the MCH PHLI faculty. All yearlong coaches are experts in the field of leadership and in public health, and certified in MCH PHLI assessments.[4] Ideally, Fellows are matched with a MCH PHLI yearlong (or faculty) coach that shares common interests in their professional discipline.[4] Fellows are required to complete a minimum of four, and up to 10, private confidential sessions with their individual executive coach.[11] With the exception of the first residential retreat, executive coaching occurs via the phone. The purpose of these sessions is for Fellows to gain an understanding and interpretation of leadership assessments and topics of personal interest.[11]

2.) Peer Coaching: During the initial residential retreat, Fellows are trained in peer coaching methodology. After the retreat, Fellows participate in monthly, phone-based peer coaching sessions composed of three to four individuals grouped together based on the topic of their PLPs.[11] The purpose of this component is to provide Fellows with peer support for their PLPs and opportunities to network and bond with other cohort members.[4,10]

3.) Individual Development Plan (IDP): In the first month of the program, Fellows set a minimum of three goals for their leadership development experience focused on the core areas of the program: individual leadership, managing organizations and people, and MCH systems level impacts.[11] Fellows are encouraged to integrate their goals with the

feedback they receive from their first three assessment tools, including the public health 360-degree assessment. There are no restrictions placed upon this requirement; however they are guided to set goals for personal development, managing teams and organization skills, and addressing a systems-level perspective relevant to their area of expertise.[4] The development of strong leadership goals is important as these goals guide the Fellows' executive coaching sessions and peer coaching sessions.[11]

4.) Ongoing Leadership Skills Assessment: During the first month of the program, Fellows complete an online self-assessment of 20 leadership skills (See Figure 1). The 20 skills targeted in this assessment are based on current leadership theory, research, and the MCH Leadership Competencies 3.0.[4] This assessment guides their ongoing executive coaching experience as coaches utilize assessment feedback to direct Fellows to program resources and to areas they may be interested in strengthening. At the conclusion of the program, Fellows complete this assessment again as a pre- and post-test analysis of learning and development through the program.[4]

5.) Online Leadership Diary: Through their own private space at the MCH PHLI website (www.mchphli.org), Fellows practice leadership skills in a written format. This component follows the Behavioral Event Interview (BEI) method, which is a skill for both hiring appropriately and managing individual career progression.[11] Material composed in this space is accessible only to the Fellow and the coaching team, including the MCH PHLI yearlong coaches and peer coach.[4] The peer coach is a member of the MCH PHLI faculty that manages and teaches the peer coaching groups during the fellowship year. All MCH PHLI yearlong coaches are doctoral public health professionals, certified in MCH PHLI assessments, and serve as an individually matched

executive coach for each Fellow. This component allows Fellows to receive feedback from their executive coach on the 20 leadership skills related to senior positions in the field, and prepares each individual to interview competitively. [4]

6.) Conference Calls and Webinars: Throughout the program year, Fellows are able to individually select from a diverse series of conference calls and webinars with the disciplines of leadership and MCH. Approximately 24 sessions are offered during the year, and all sessions are recorded and posted to the secure interface of the MCH PHLI website for interested Fellows who are not able to attend the call. Once a Fellow has listened or attended a session, they develop and submit a learning review to receive credit for their participation. [4] Successful Fellows attend at least four conference calls and three webinars during the year.[11]

7.) Just-in-Time (JiT) Training Modules: During the year, Fellows are required to complete at least four JiT training modules to graduate from the program. [11] A library of 22 web-based programs, ranging in duration from 30-60 minutes, is offered that provide tutorials on practical leadership, management, and other useful topics (Appendix II). [4,11] Fellows have access to all materials during the year, and may review all the modules as often as they choose.

8.) Personal Leadership Project (PLP): As a capstone project, Fellows design and complete an individual leadership project that will impact a system, organizational, or community based issue during the year. [4,11] PLPs include a fiscal analysis and evaluation of process and impact measures. [11] Fellows may choose to utilize this project to develop existing job responsibilities and explore other opportunities of interest. Fellows receive ongoing support for their PLP through monthly calls with their peers through the Peer

Coaching component. [4] Fellows are required to complete their projects in a 15-18 month time frame following the start of the program.[11]

9.) MCH PHLI Book Clubs: Fellows are provided four books on current leadership topics. Three conference calls are offered, in the form of a "book club" experience, so Fellows may receive support in understanding the material. Fellows have the option of participating in each call, where they may select to listen to all or a section of the call.

10.) Mentoring: Incoming Fellows are matched with a graduating Fellow who serves as a mentor to them, enabling Fellows to serve both as a mentor and a mentee during the program. In addition, incoming Fellows are required to find a mentor who is not a part of the program. Fellows receive guidance on finding a mentor and developing this relationship through a small group session at the first residential retreat and an available JiT module on mentoring. Individuals who have been identified as mentors receive a written orientation to the program and direction from the institute director on their mentee's program experience. [4]

These 10 distance-based components allow each Fellow to customize their individual program plan to address their learning style and leadership development experience. As previously noted, Fellows receive ongoing support from their executive coach helping them to capitalize on program resources tailored towards their individual needs. The topics addressed in the CLS experience, through phone calls, JiT modules, and webinars are listed in Table 3. Evaluation of learning outcomes and impact analysis are currently in process for the MCH PHLI program, with published results anticipated in 2015.

Table 3: Distance-Based Session Topics

- Advocacy in the face of power differentials
- Moving from Direct Services to Infrastructure Building in Public Health: Implications for Leadership and Accountability
- Stress management and staying alive in leadership
- Working with boards and advisory councils
- Special issues in women's leadership
- Communication Strategies: team and project management
- Creating constructive work cultures
- Practical steps for workforce development
- Cultural competence
- Critical thinking: applications to the field
- Social marketing theory and application for public health
- Understanding and applying evidence
- Building employee engagement
- Strategies for hiring for fit and skill
- Creating emotionally intelligent workplaces
- What You Need to Know About Social Media
- Understanding the impacts of demographic shifts on the future of the field
- Innovation and design thinking as applied to public health
- Impact of Health Reforms on the field
- Understanding MCH Systems
- Stakeholder analysis and successfully managing external stakeholders
- Applying adaptive leadership
- Creating innovative cultures
- Creating an evaluation plan, logic models
- Leadership theory
- Understanding the basics of MCH systems
- Effective communication & advocacy
- Building a learning organization
- Managing difficult conversations
- Mentoring vs. coaching and making each work
- Leadership success and derailment
- Developing program goals and objectives
- Creating thought diversity
- Peer coaching

Global Leadership Development

Developing leaders across the field of public health has been a priority in the US for over thirty years, and in recent years there has been an increased interest in strengthening health systems and building capacity in developing countries as well. [2,12] As previously mentioned, the WHO identified six building blocks for a well-functioning health system, including leadership and governance. [1] However, at this time there is little empirical evidence for its impact on service delivery and health outcomes as leadership is often difficult to measure. [12] Currently, there have been two studies that have shown an association of leadership development and practices with improved health service delivery outcomes.

Existing Research

A Case Study from Egypt

In 2002, the Egypt Ministry of Health introduced a Leadership Development Programme (LDP) in the Aswan Governorate with funding from the United States Agency for International Development (USAID) and Management Sciences for Health. [13] The program was initially introduced to help reduce the gap in access and quality of maternal and reproductive health services between underdeveloped governorates in Upper Egypt and urban Egypt [Maternal Mortality Ratio (MMR) averaged 89 per 100,000 live births in 2000 vs. 46 per 100,000 live births, respectively]. [13] The LDP was piloted in three districts with ten teams of doctors, nurses, and midwives participating, representing five primary health units.

The LDP provided training on leadership and management practices for identifying and addressing service delivery changes in the form of four one- or two-day

workshops over approximately six months. [12,13] Within the program, teams designed their own projects to increase access to family planning services and prenatal and postpartum visits. Through the program, participants learned how to work together for a common goal; manage their resources; mobilize their teams and stakeholders; and inspire each other.[13]

After participating in the LDP for one year, the teams from the districts of Aswan, Daraw, and Kom Ombo increased the number of new family planning visits by 36%, 68%, and 20% respectively. [12,13] From 2005 to 2007, LDP participants in Aswan Governorate decided to focus their annual goal on reducing the MMR, and they succeeded with an observed reduction from 85.0 per 100,000 live births to 35.5 per 100,000 live births.[13]After US funding ended, the program was scaled up to 184 healthcare facilities, with the program transferring to other Egypt governorates and 35 other developing countries. [13]

LDP Research in Kenya

Since the expansion of the LDP program in Egypt, research funded by USAID was conducted in Kenya to assess if improved leadership practices through participation in the LDP increased health services. This study was conducted in six provinces of Kenya, and utilized a non-randomized design comparing service delivery outcomes of teams that participated in a LDP intervention to matched comparison groups that did not participate in the LDP. The study followed 67 teams that participated in the program from 2008 to 2010. Measurements of health-service indicators were collected from both groups at baseline (before LDP), endline (six months later at the end of the program), and

six months after the program ended for follow-up. [12] Qualitative data was also collected from each LDP team leader through in-person and telephone interviews.

Results from this study showed significant increases in health-service coverage at the district level ($p \leq 0.05$) in the intervention teams compared to the comparison teams. This study also found significant increases in the number of client visits at the facility level in the intervention group compared to the comparison group ($p<0.05$). [12] Qualitative interviews with LDP team leaders revealed that for teams able to sustain coverage after the end of the program (approximately two thirds of the teams) contributing factors included an improved work climate due to renovated staff quarters, training, or supervision.[12]

These results must be interpreted carefully with acknowledgement of several study limitations. First, LDP teams selected their own projects to work on, and therefore measurable indicators varied from team to team. [12] This influenced study results because data analysis could only focus on average coverage or service as opposed to specific indicators across all teams. Despite these limitations, this study supports the use of leadership training programs in developing countries by providing evidence that such interventions positively impact health-service delivery outcomes and can be sustained for at least six months.

India Leadership Programs

An examination of public health leadership programs in India, through an online search of variations of the terms maternal and child health, leadership development programs, and trainings revealed there are no existing public health leadership programs designed specifically for MCH professionals in India. However, there are several

organizations with a leadership development focus that are providing training for diverse professionals across India. This section provides an overview of existing leadership programs working in India.

Center for Creative Leadership

The Center for Creative Leadership (CCL) was founded in North Carolina (NC) in 1970, and is considered to be the birthplace of the field of leadership development. [14] CCL is also known for the development of the 360-degree assessment tools specifically for leadership development, and the corporate-focus leadership training format upon which the MCH PHLI program was developed. [14] In 2009, CCL officially opened an office in Pune, India, although research efforts to understand the leadership needs of this region initially began in 2006. [15] CCL India currently offers mid- to senior-level managers the opportunity to attend a three-day leadership-training program, the Effective Leader Program (ELP), which is available in various regions of India throughout the year. [16] The program provides participants the opportunity to learn practical leadership strategies and assess their personal leadership style through in-class education, group coaching, peer coaching, and feedback from a 360-degree assessment [16] Comparable to the MCH PHLI curriculum, participants also have the opportunity to access e-courses and publications after the in-class component to learn more about specific topics.[16]

In addition to the ELP, CCL also operates the Leadership Beyond Boundaries (LBB) initiative in India. LBB's mission is to make low-cost, high quality leadership development more accessible at the grassroots level. [17] At this time, the initiative focuses on six key work areas: educational institutions; youth development; government and social sector leadership; social entrepreneurs; microfinance organizations; and women's

empowerment. [17] Through this initiative, and the ELP, CCL India is working to provide leadership development training for various sectors of the workforce, but there is not a component dedicated to health professionals at this time.

Leadership Development for Mobilizing Reproductive Health

In 2000, the Leadership Development for Mobilizing Reproductive Health (LDM) was founded to support the establishment of leaders who share a vision and commitment to improve family planning and reproductive health services. [18] From 2001 to 2011, the Institute of International Education West Coast Center (IIE WCC) implemented the LDM program in five developing countries, including India. Although this program is focused on improving services within the MCH field, fellows include public health professionals, journalists, Islamic scholars, academics, lawyers, community health workers, medical providers, and government employees. [18] Primary elements of the program include vision building, values, self-knowledge, understanding leadership within the reproductive health context, and skill building. Key leadership skills addressed in the program include communication, teamwork, management, conflict resolution, critical and analytical thinking, and negotiation.

From 2006 to 2011, the program focused on the achievement of three main outcomes: networking, capacity building for individuals and Fellows' teams in organizations, and institutionalization of leadership and reproductive health programs. [19] During the fellowship year, the program centers around three key activities. Fellows are offered leadership trainings throughout the year, networking opportunities, and mini-grants are provided as an incentive to foster collaboration and support in implementing project initiatives. [19] Program initiatives vary from country to country, but generally

included Fellows hosting seminars and workshops for their community, conducting research for health policy, and disseminating information about reproductive health. [19] Networking opportunities throughout the year provided Fellows time to reconnect, share experiences, and provide updates to help support one another in achieving their goals. Additionally, in 2006 when the program shifted to a more country-based approach, LDM country managers were responsible for mentoring and offered context tailored trainings in leadership skills for Fellows.[19]

The LDM program in India decided to work specifically within the states of Bihar and Jharkhand because these states are among the poorest in India, with 85% of the population living in villages. [18] In particular, Bihar has the lowest female literacy rate (31%) and the lowest ratio of girls in school. [20] Throughout the LDM India program, from 2001-2011, Fellows designed collective action plans at the state level and established three Regional Information Resource and Advocacy Centers to facilitate capacity building activities. [18] Additionally, through a partnership with Bihar State Women's Development Corporation, the program was able to implement leadership development training for female community leaders. [18]

Despite the strong achievements at the community and national level from this program, a final program evaluation conducted by the Research Center for Leadership in Action revealed several limitations to the program design. First, the program design experienced modifications in 2006 that affected the selection process of LDM Fellows. Prior to 2006, Fellows were selected based on a competitive application process and interview with LDM stakeholders. In 2006, Fellows were selected based upon their potential to become strong reproductive health and family planning leaders by the

program.[21] The evaluation report revealed Fellows had mixed feelings on the process of selection; with some feeling an application process open to all would be more appropriate.[21] Secondly, the evaluation revealed some participants were frustrated with the lack of tools to ensure equal participation and commitment from Fellows. Unlike the MCH PHLI curriculum, the LDM program did not require a minimum level of participation or attendance for any of the program components. Lastly, LDM meetings and trainings were only offered in classroom settings. The program evaluation revealed this was often a challenge for Fellows' participation as some locations for trainings were difficult to travel to.[19]

National Institute of Health and Family Welfare

The Department of Management Sciences at the National Institute of Health and Family Welfare (NIHFW), funded by the Ministry of Health and Family Welfare, offered a five-day training course on "Leadership Development in the Health Sector" in November 2013. The Institute is located in South Delhi, India, and originally decided to offer this training with the mission to create a vision for health sector leadership in India.[22]

The training is offered to 20-25 recruited participants who were nominated from each state. The course is designed specifically for senior policy makers from Central and State Health & Family Welfare Departments and senior health administrators from hospitals and medical colleges.[18] The course curriculum covers various leadership skills and topics, including visioning; effective coaching and counseling; developing self-awareness and building emotional intelligence; developing leadership styles and skills; organizational and interpersonal communication; building teams; and managing conflict,

stress, and time. [22] Participants engage in active learning through self-analysis of their leadership styles and behavior, case studies, exercises, group discussions, role-play, and presentations.

Public Health Foundation of India

The Public Health Foundation of India (PHFI) is a public-private initiative in New Delhi that was originally founded by the Prime Minister of India, Dr. Manmohan Singh.[23] While PHFI does not currently offer an on-going formal leadership development program, the organization does provide trainings during the year for public health professionals though the Indian Institute of Public Health (IIPH). PHFI established IIPH, with four institutes currently in Gujarat, Andhra Pradesh, Orissa, and Delhi. These institutes offer academic programs and trainings across a diverse spectrum of public health topics for Indian public health professionals.[24]

In April 2014, PHFI will offer a four-day workshop on "Leadership in Health and Development Sectors" at the Indian Institute of Public Health (IIPH) in Delhi. This workshop is designed for health practitioners and researchers, academic professionals, health service providers, public health professionals, and medical, nursing, and public health students. The workshop focuses on addressing characteristics of good leadership; leadership styles; distinction between a leader and manager; the ethics of leadership; and leadership qualities including motivation and team building. [25] Additional courses offered in the past include an "Education and Leadership Course" (Nov. 2012) and "Change Management and Leadership Training Programme" (Feb. and April 2010).[26]

India Leadership Initiative

The India Leadership Initiative (ILI) was founded in 2006 and is a program implemented by the Aspen Institute India. The program is composed of an 18-month curriculum, including four seminars and leadership development activities. Much like the MCH PHLI curriculum, ILI requires a commitment from each Fellow to participate in approximately 23 days of seminar meetings, an individual leadership project, and informal gatherings throughout the fellowship year. Three of the seminars are held residentially in India, and the fourth may be held in India, the US, or another region of the world. [27]

However, unlike MCH PHLI, Fellows are selected from nominations received by recognized business and community leaders in their region. The program targets executives and professionals aged 30-45 from the business, government, and civil society sector. While ILI does not specifically target public health professionals, the program promotes Fellows' engagement in confronting social and health challenges in India, including HIV/AIDS, literacy, and nutrition. At this time, ILI has graduated four cohorts with 78 Fellows, and is currently accepting nominations for Class 5.[27]

Methods

Study Design

A qualitative study design was used to conduct exploratory inductive research to identify a perceived need for leadership training among MCH professionals in India; perceived barriers for the adaptation of the MCH PHLI curriculum in the Indian context; and leadership skills relevant to MCH professionals in India. The investigator utilized a qualitative survey, exploratory and semi-structured interviews to gather data and identify key themes in analysis.

Data collection and analysis

This study consisted of three phases. First, an exploratory interview phase took place in January 2014. A semi-structured interview phase followed in February 2014, and a qualitative survey phase took place from January - February 2014. The investigator, a white American female in her twenties, collected the data through handwritten notes during interviews. She identified herself as a UNC public health graduate student exploring the adaptation of the MCH PHLI model for the Indian context. Any identifying information of informants has been changed to protect their confidentiality. Participants were not offered compensation for their participation in this study.

Phase I: Exploratory interview. An exploratory interview was conducted with an informant who was recommended by a MCH PHLI staff member based upon selection criteria that the participant must be in a current senior level leadership position in the US, with experience conducting leadership training in India. Selection of the candidate did not require experience conducting public health leadership training, but did require a curriculum similar to MCH PHLI with psychological assessments, training modules, and

mentorship components. The principal investigator recruited the informant. The interview was conducted by phone and lasted approximately one hour. The exploratory interview consisted of unstructured discussions focusing on the theme of what the informant felt the investigator should know about attainment of leadership positions in the Indian context. The investigator asked open-ended cultural questions regarding the context of decision-making, interpersonal values, and general structure of a working day. This interview was recorded in written field notes immediately after the session.

Phase II: Semi-structured interviews. Two semi-structured interviews were conducted in February 2014 with informants recommended by two UNC public health students who had previously worked in India in public health. Selection of informants was based upon criteria that the candidate must be in a current mid-to-senior level leadership position in India, capable of reading and speaking English, and works in a current position dedicated to serving MCH populations at the time of the study. UNC students that provided the investigator with their recommendations, based upon previously communicated selection criteria, recruited both informants. Each session in this phase was conducted by Skype™ and lasted one to one and half-hours.

Prior to the interview, informants were electronically provided with a summary of the MCH PHLI curriculum to review. The semi-structured interviews followed an open-ended protocol developed by the investigator, with input and approval from the Private Investigator (PI) and Director of MCH PHLI, to elicit the MCH professionals' personal experience with leadership training, interest in MCH PHLI curriculum components, and cultural perspective of how to adapt this curriculum for the Indian context. Interviews

were recorded in written field notes immediately following the session, and then coded in weekly analytic sessions. The interview guide is included in Appendix III.

Phase III: Survey. An electronic survey was distributed to 33 participants in January 2014. Survey participants were selected from a convenience sample of candidates recommended by two UNC public health faculty members and three graduate students who had previously worked in India as a native or foreign resident. Selection of participants was based upon criteria that the candidate must be in a current mid-to-senior level leadership position, English literate, presently or previously worked in a MCH position with at least one-year duration in the field, and currently resides and works in India. UNC recommender recruited participants, and introduced candidates to investigator via email. The investigator then sent a summary of the MCH PHLI curriculum to each candidate and remained in communication with participants throughout the data collection period.

The survey questions were developed by the investigator, with input and approval from the PI and Director of MCH PHLI, and designed and translated using Qualtrics software, in both English and Hindi. Survey questions consisted of demographic and qualitative questions designed to gather information on the participant's perceived need for leadership training for MCH professionals in India, leadership topics relevant to MCH professionals, and perceived barriers in the implementation of the MCH PHLI curriculum in the Indian context (Appendix IV). MCH professionals were defined as individuals working in positions that serve maternal, infant, child, and adolescent health populations in diverse areas, including breastfeeding, family planning, health disparities, and gender-

based topic areas. The survey was disseminated via email from the investigator, and was open to receive responses from January through February 2014.

Data analysis. Concepts in field notes from interviews and survey responses were identified and coded manually. A content analysis was performed to identify emerging themes and topics. Similar concepts were then grouped into categories based on quasi-statistical analysis used to observe counts of mentioned key themes. Analysis was performed using Atlas.ti statistical software.

Results

Demographic Characteristics

Overall, 36 individuals were recruited for this study. An exploratory interview was conducted with one male presently based in the District of Columbia, US. Two females based in Delhi were recruited for the semi-structured interview phase. There were 33 public health professionals recruited for the survey phase. Among those eligible to participate, 15 completed the survey, yielding a 45% response rate. Descriptive statistics for the survey population are presented in Table 4.

The survey population included eight males and seven females. Respondents were primarily middle-aged (30-49 years), MCH professionals (93%), and presently working in non-governmental organizations (NGO) (80%). All participants had received a masters, medical, or doctoral level degree. Participants represented geographical diversity with individuals working in states in the Central, North, South, and West regions. However, all participants worked in urban areas. The most common position titles for respondents included those serving as consultants (20%), in academia (13%), as program managers (13%), and as senior advisors (13%).

Table 4: Characteristics of Survey Participants (n=15)		
	Population	
	n	%
Gender		
Male	8	53%
Female	7	47%
Age (years)		
20-29	1	7%
30-39	8	53%
40-49	5	33%
50-59	1	7%
Highest Educational Attainment		
Master's degree[1]	8	53%
Medical degree	2	13%
Earned doctorate[2]	5	33%
Region of Occupation[3]		
Central	3	20%
North	6	40%
South	5	33%
West	1	7%
MCH[4] Professional		
No	1	7%
Yes	14	93%
Position Title		
Academic Instructor	2	13%
Consultant	3	20%
Director	1	7%
Medical Officer	1	7%
Program Manager	2	13%
Research and Training Assistant	1	7%
Senior Advisor	2	13%
Senior Research Associate	1	7%
Senior Scientist	1	7%
Technical Assistance Team Leader	1	7%
Organizational Setting		
Public	1	7%
Private	2	13%
NGO[5]	11	73%
Government agency	1	7%

[1] Includes participants with Master of Public Health (MPH), Master of Science (MS), and Master of Philosophy (MPhil)
[2] Includes participants with doctor of philosophy (PhD).
[3] Central region includes participants in Uttar Pradesh; North region includes participants in Delhi; South region includes participants in Andhra Pradesh, Tamil Nadu, Karnataka; West region includes participants in Maharashtra.
[4] MCH, maternal and child health: defined as individuals working in positions that serve maternal, infant, child, and adolescent health populations in diverse areas, including breastfeeding, family planning, health disparities, and gender-based topic areas.
[5] NGO, non-governmental organization.

Content Analysis

Four main themes emerged in an analysis of responses from interview and survey phases: leadership attributes; perceived need for MCH leadership training; culturally relevant leadership competencies; and perceived barriers to MCH PHLI adaptation.

Leadership Attributes

In the survey and semi-structured interview phases, participants were asked to describe characteristics of a good leader. Skills reported in participants' responses were coded by topic and then categorized as either a hard skill or soft skill. These categories were selected based on supporting evidence that generally healthcare leaders need both hard and soft skills to succeed.[28] Hard skills include technical skills traditionally taught in educational training, while soft skills include interpersonal, communication, and professionalism skills.[28] Reported attributes of a model leader included a person with both soft and hard skills, as described by two participants:

> *A good leader is someone who can motivate individuals to believe in and come together and work towards a common goal, while inspiring them to achieve high quality outputs.* (Survey respondent, male research and training associate)

> *A good leader is able to understand the soft and hard issues related to his organisation. The soft issues related to people and their relationships and dynamics within and between teams, while the hard issues deal with the infrastructure, HR, the processes and the outputs.* (Survey respondent, male professor)

Quasi-statistical analysis revealed there was a 2:1 ratio of topics categorized as soft skills compared to hard skills. The most frequently reported soft skills included motivating and visioning skills (Figure 4). The highest reported hard skills included team management skills and strong technical knowledge (Figure 5).

Figure 4: Reported Leadership Soft Skills

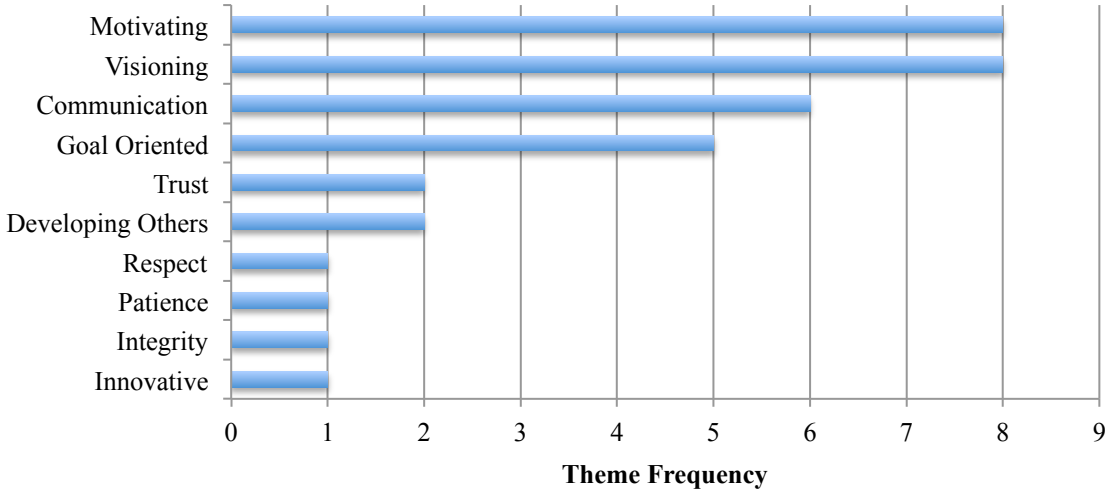
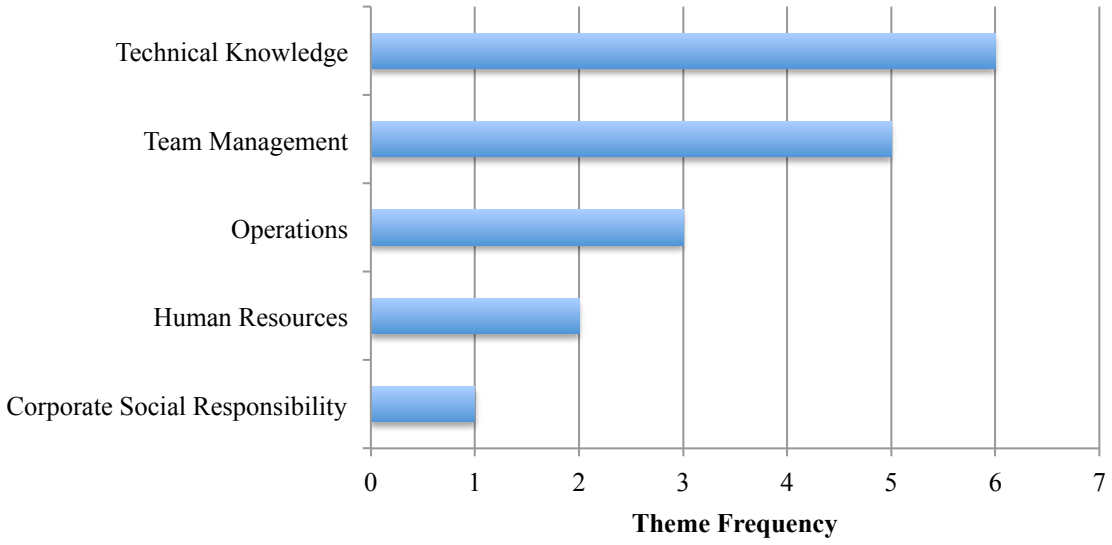


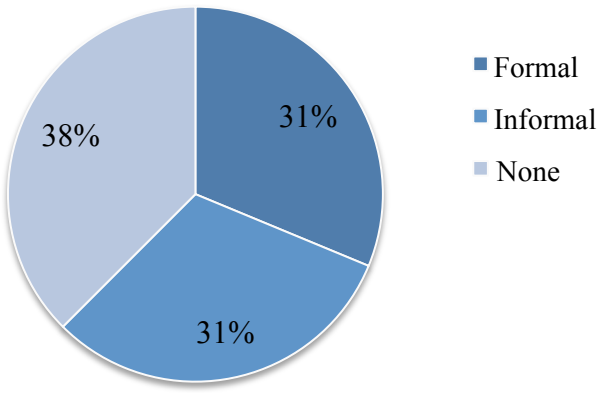
Figure 5: Reported Leadership Hard Skills



Perceived Need for Leadership Training

During the study, participants were asked to report their experience with leadership development training, either formal or informal. Formal leadership training was defined as leadership skills taught by an educational institution or by a formal instructor. Participants with informal training included individuals with experience in delivering instruction on leadership development, but had not received formal training prior to the study. Among survey and interview participants (n=16; 1 non-response), only 31% reported having ever received formal leadership training. Among those who had not received any formal leadership training, 31% reported receiving informal training through personal instruction of leadership skills in their past or current occupation. (Figure 6)

Figure 6: Participant Leadership Training Experience



Participants unanimously reported that there is a present need for leadership training for MCH professionals in India, with 38% of respondents specifying a need at all levels of public health, including national, state, district, block and village levels. One

reported reason there is a current need for MCH leadership training in India is because the country's health sector is growing, and with a decreasing reliance on foreign aid funding, there is a need to strengthen India public health leaders (2 participants report).

> *Given the growth of the health sector in India and the diversity of issues that exist in MCH, there is a dire need for good leaders at each and every level, i.e., policy and planning, implementation, monitoring and evaluation.* (Survey respondent, female program manager)

Additional explanations for this need include a present capacity deficit in this area (2 participants), with others reporting that individuals who are technical experts or specialize in management are often placed in authoritative or high official positions without leadership training. Often participants elaborated on how leadership training in MCH could positively affect strengthening health programs or systems (44%), as one participant describes:

> *Good leadership can make a big difference to how programs are envisioned, designed, implemented and monitored. A leadership training can lead to more effective, productive and efficient programs.* (Survey respondent, male senior maternal and newborn health advisor)

Leadership Competencies

In the survey phase, participants were asked to select their sense of importance for the 20 leadership skills addressed in the MCH PHLI curriculum for MCH professionals in India. Respondents ranked each skill as either unimportant, moderately important, important, or very important in order to identify those skills that are culturally relevant to the Indian context. Survey results are provided in Table 5.

Results show that the most important skill to participants is communication, as this is the only skill that 100% of respondents reported as very important. The second most popular leadership skills among participants included self-awareness and advocacy,

with 100% of respondents reporting these as either important or very important. Other skills reported as important include collaboration and creative partnerships, creating organizational culture, and systems thinking. These skills were reported by 100% of participants as moderately to very important, and higher percentages reflecting very important level (80%, 60%, and 60%, respectively). Leadership skills that were ranked with lower importance levels include transformational and reflective leadership, career and change management, and innovation and performance management. 80% or fewer participants reported these leadership skills as important or very important.

Table 5: Percentage of perceived level of importance of 20 MCH PHLI[1] leadership skills for Maternal and Child Health professionals in India (n=15)

	Unimportant (%)	Moderately Important (%)	Important (%)	Very Important (%)
Self-awareness	0.0	0.0	66.7	33.3
Communication	0.0	0.0	0.0	100.0
Negotiation	0.0	13.3	33.3	53.3
Conflict management	0.0	6.7	46.7	46.7
Creating a compelling vision	6.7	6.7	26.7	60.0
Innovation	0.0	6.7	53.3	40.0
Emotional intelligence	0.0	6.7	46.7	46.7
Transformational leadership	0.0	20.0	26.7	53.3
Reflective leadership	6.7	13.3	26.7	53.3
Career management	6.7	13.3	53.3	26.7
Creating organizational culture	0.0	6.7	33.3	60.0
Systems thinking	0.0	6.7	33.3	60.0
Building team skills and succession planning	0.0	6.7	46.7	46.7
Change management	0.0	20.0	40.0	40.0
Cultural competence	0.0	6.7	53.3	40.0
Stakeholder analysis	0.0	6.7	53.3	40.0
Understanding the impacts of future trends and changes	6.7	6.7	26.7	60.0
Collaboration and creative partnerships	0.0	6.7	13.3	80.0
Innovation and performance management	0.0	20.0	40.0	40.0
Advocacy	0.0	0.0	33.3	66.7

[1] MCH PHLI, Maternal and Child Health Public Health Leadership Institute

Identified Perceived Barriers

In the survey phase, participants were asked to rank the potential degree of difficulty to complete the components of the MCH PHLI distance-based curriculum. Available responses included a serious problem, a moderate problem, a small problem, and not a problem (Table 6). The most significant problem identified was attending on-site retreats, with only 20% of participants reporting this as not a problem. Another potential barrier identified was finding a mentor in public health that is not a part of the program, as this component had the highest ranking of a serious problem (20%). Curriculum components, which involved application of technology, either the phone or the Internet, were also reported as potential problems in India. Attending 1 hour web-based training sessions, completing 30-minute web-based tutorials, and engaging in phone based executive coaching sessions were reported by 26.7% of participants as serious or moderate problems.

In addition, study and interview participants were asked to offer their input of potential barriers to the adaptation of the MCH PHLI curriculum for the Indian context, aside from attainment of financial resources. Among the study population, 12 participants responded to this question or suggested potential barriers when asked about the need for leadership training for MCH professionals in India. A content analysis of all responses revealed multiple emerging topics, which were then categorized as cultural barriers and program barriers.

Program barriers included topics related to technological barriers, as seen similarly in the survey results, particularly at the village level and in resource-poor settings.

> *Most of the people are not that well versed in managing conference calls or Internet as a medium of training. The country is still in the habit of in class personal training or on site training.* (Survey respondent, male professor)

Cultural barriers included responses that referred to existence of a hierarchical culture within India as described by two participants:

> *Many of the materials I have seen do not take into account the specifics of the professional work culture here. This a very hierarchical culture that does not encourage horizontal problem solving, or inputs from a broad range of people.* (Survey respondent, female consultant)

> *Training programs to build leadership need to take into account poor decision-spaces* [decision-making] *and an organisational culture that prevents emergence of leaders at these levels.* (Survey respondent, male professor)

Other identified cultural barriers include the lack of a felt need for leadership skills in public health, particularly within the field of MCH, and a preference for face-to-face interaction.

> *Leadership courses though very much required in India, may not be a need understood or perceived by the Indian MCH community. This is especially true for individuals working for many years since they usually feel that they know everything and don't require further development.* (Survey respondent, female program manager)

> *Culturally, Indians like face-to-face interactions. They like to see people, especially with sharing experiences.* (Interview participant, female research fellow)

Table 6: Percentage of perceived potential degree of difficulty in completing MCH PHLI[1] components in India (n=15)				
	A serious problem (%)	A moderate problem (%)	A small problem (%)	Not a problem (%)
Attending on-site retreats	0.0	46.7	33.3	20.0
Creating individual leadership development goals	0.0	20.0	26.7	53.3
Completing a Personal Leadership Project to impact an organization or community	6.7	26.7	33.3	33.3
Engaging in phone based executive coaching sessions	13.3	13.3	33.3	33.3
Completing 30 minute web-based tutorials	6.7	20.0	20.0	53.3
Working with an in-program mentor	0.0	0.0	33.3	66.7
Finding a mentor in public health who is not a part of the program	20.0	6.7	33.3	40.0
Attending 1 hour web-based training sessions (Webinars)	0.0	26.7	20.0	53.3
Attending 1 hour conference calls on public health or leadership topics	0.0	20.0	26.7	53.3
Completing an online leadership diary	6.7	0.0	40.0	53.3
Engaging in phone based "peer coaching" with small teams to solve problems and share best practices	13.3	6.7	26.7	53.3

[1] MCH PHLI, Maternal and Child Health Public Health Leadership Institute

Conclusions

This study shows there is an existing need for leadership development training for public health professionals, and particularly MCH professionals, in India based on consistent acknowledgement of this need from all participants. Identification of both soft and hard skills as model leadership attributes verifies the cross-cultural application of leadership skills from prior studies, and supports the adaptation of culturally relevant leadership competencies included in the MCH PHLI curriculum. [13,29] Leadership skills identified as important for MCH professionals in India include communication, advocacy, self-awareness, systems thinking, creating organizational culture, collaboration and creative partnerships.

This study also identified potential program and cultural barriers to the implementation of MCH PHLI in India. Program barriers include technological limitations, such as telephone and Internet access, particularly in rural and limited resource settings. Additional program barriers include the ability to attend on-site retreats and finding a mentor not in the MCH PHLI program. Cultural barriers include the existence of a hierarchical culture, where individuals are often placed in leadership positions based on their technical expertise or by mandatory assignment without any formal leadership training. This form of organizational culture likely contributes to the identified barrier that there is a lack of a general felt need for leadership development culturally. In order for a program like MCH PHLI to be implemented successfully, the professional benefits of leadership development training will need to be communicated to public health stakeholders at all levels.

There are several limitations to this study. The use of a small, convenience sample size limits the power of the study findings and presents the possibility of potential selection bias. If the study is to continue, participants without a connection to UNC should be randomly recruited to alleviate possible presence of this bias. An added limitation is that all participants worked in one of the wealthiest states of India, which limits the study's generalizability to professionals in lower-income states.[30] This study also relied heavily on survey data rather than observation or in-person interviews. Further data collection should include additional interviews and other methods, such as focus groups.

Recommendations

Based on study findings, there is a need to provide educational materials and increase awareness of the impact strong leadership can have on improving organizational and health outcomes at all levels. Prior to program implementation, all content in the MCH PHLI curriculum components would need to be adapted for Indian culture and offered in Hindi, the native language. Furthermore, because there is a cultural preference for interpersonal communication, more components of the program may need to facilitate this form of interaction as opposed to online or phone-based communications. A potential alteration could include matching Fellows and mentors who live in close proximity where they can meet regularly as opposed to connecting over the phone. The program's online training modules could be offered in printed material as well to accommodate Fellows without access to the Internet and distributed at the beginning of the program.

Initially, the investigator recommends that the program target stakeholders in the public sector within state governments by establishing partnerships with organizations that are currently implementing leadership trainings, such as PHFI. Working with a reputable public health organization that values leadership development will assist in generating buy-in from government leaders, identifying local instructors for the program, establishing infrastructure to facilitate the program, and recruiting Fellows within partner organizations.

In order to maintain program fidelity, MCH PHLI in India would be targeted for mid-to-senior level MCH professionals for whom the curriculum is developed. Also, MCH PHLI will continue to provide transportation and training costs for Fellows by securing grant funding through global health donor procurement systems prior to program implementation. The India program will be evaluated using methodology consistent with the US program based on data collected on Fellows' knowledge of leadership competencies at baseline and endline. Data will also be collected from Fellows by required survey and feedback forms provided at the conclusion of each program component, and from program staff on the number of coaching sessions, conference calls, and webinars attended to monitor Fellows participation and evaluate the effectiveness of the program.[10]

Policy Implications

This study highlights the need for public health policies at the national and state level that require individuals in leadership positions to receive formal leadership training prior to assuming their appointed positions. Participants from this study reported there is a capacity deficit in leadership skills among public health officials, and the implementation of required leadership training could help increase strategic decision-making and foster stronger Indian leadership in the health sector.

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Appendices

Appendix I: Definition of MCH PHLI Leadership Skills

Leadership Skill	Definition
Self-Awareness	Assessing and understanding your personal leadership strengths and development areas (weaknesses), being aware of how your preferences and leadership style differ from others; understanding what you still need to learn, the ability to "own" mistakes.
Communication	Effectively communicate to individuals and groups representing diverse stakeholders both within and without the organization, able to speak in a clear and concise manner.
Negotiation	Engage in productive dialogue to resolve disputes between either people or organizations, represent/defend the interests of your organization/self when crafting agreements with other parties while creating new opportunities for partnerships and collaboration.
Conflict Management	Use dialogue to solve critical problems, implement alternative dispute resolution strategies, successfully manage conflict between people or groups.
Visioning	Create a compelling, engaging vision that embraces a holistic perspective of MCH systems and integrates it with the mission of the larger organization; inspire others to work towards achieving that vision as well.
Innovation	Create an environment that promotes the development of new ideas, processes, programs, and creative partnerships which enrich the organization's ability to plan an integral role in the MCH systems of the future.
Emotional Intelligence	Ability to assess and understand the emotions of one's self, others and groups, the ability to relate to others beyond technical concerns, the ability to implement soft skills in interpersonal or organizational settings.
Transformational Leadership	Implement processes to facilitate the transformation of your organization's mission/vision, culture, technology, thus positioning it to play an important role in MCH systems now and in the future.
Reflective Leadership	Use self-examination and reflection to create a life-long leadership learning plan, orient self to continuous personal learning and interpersonal growth, ability to learn from past experiences and apply those insights to current and future situations.
Career Management	Align career aspirations with personal life vision and mission, create a viable plan to achieve career goals by focusing on development areas, capitalizing on personal strengths, and implementing successful networking strategies.
Creating/Impacting Organizational Culture	Create an organizational culture that embraces varying skills and perspectives to capitalize on the contributions of various members, impact culture of groups such that members are engaged and mission-focused, create a work environment where group member satisfaction is high.

Systems Thinking	Analyze your organization for the impact of systemic relationships on innovation, culture, partnerships, and ability to achieve vision and mission and to create sustainable programs; implement systems theories to address organizational change and transformation; build organizational capacity to envision and select strategies to address acute problems.
Bench Building & Succession Planning	Empower others; Develop and mentor others to create a strong team with diverse skills and perspectives; align team to achieve broad and holistic MCH systems goals; strengthen the overall organization by promoting the development and skills of team members.
Leading Change/Change Management	Identify the need for organizational change, implement processes to bring necessary changes about in order to achieve organizational sustainability, new strategic partnerships, technology development, etc.
Cultural Competence	Assess organization and strengthen its ability to sustain cultural and linguistic competence in order to impact health disparities in MCH public health.
Stakeholder Analysis	Assess and analyze important players/factors that contribute to or impede individual, team, or organizational success; develop and implement strategies to align stakeholders to organizational mission and vision.
Futuring	Assess current trends for potential future developments in MCH systems programs, concerns, political agendas, or concepts; contribute to creating the MCH systems of the future through technology, innovation, partnerships, and political influence; embrace a holistic, family/community-based concept of future MCH systems.
Collaboration/Creative Partnerships	Recognize and reconcile emotional and rational elements in collaboration-building and strategic planning, create opportunities for individual, team, and organizational success through the development of creative partnerships internal to and external to the organization. Link partnership development with positive revenue streams.
Innovation and Performance Management	Implement systems to promote innovation, develop and/or implement performance standards and measures of performance improvements; use performance measures and standards (accountability) to facilitate innovation and entrepreneurship at your home organization; link performance measures and standards to a potential strategic plan for your organization.
Advocacy	Influencing policy, public policy, and resource allocation decisions within the political, economic and social systems and institutions, creating persuasive dialogue to support one's issue or goal.

Appendix II: Just-in-Time (JiT) Training Modules

Module	Description
The Behavioral Event Interview	This session addresses interviewing done right - and wrong - in organizations. This program discusses how to use Behavioral Event Interviewing when you are hiring a new employee and helps you prepare for your success when you are the candidate answering the questions.
Developing Others	Great leaders build great organizations by building a great team. They develop people. They build competency in an organization by building a deep bench of talented people who are skilled, resilient, innovative, and capable of assuming leadership on projects, with teams, and with external stakeholders. All these things promote the Concepts, or ideas, the Competence, or the people, and Connections, or the relationships that make for competitive advantage.
Employee Engagement	What is employee engagement? Is it the same as employee satisfaction? How does it relate to productivity, retention, and loyalty? Find out what the data say you can do as a leader to engage those on your team in this short session.
Emotional Intelligence in the Workplace	Traditional public health training does a very good job at preparing professionals with the requisite "hard" technical skills they need to have in order to protect the public's health. But most traditional training programs don't excel at teaching that other critical ingredient, the *soft skills*. Yet problems with soft skills are one of the major factors behind career derailment today. These include an array of emotional and social capabilities, competencies and skills that influence one's ability to succeed in coping with the demands and pressures of life. This session addresses the most commonly identified soft skills and explores those most closely related to success at work.
Maximizing Leadership Success while Avoiding Derailment	This session discusses several factors that impact a leader's success - or the 7 factors that can derail either their success or their careers. It explores competitive advantage as well as the critical success factors that underlie organizational change. The module presents the select skills in which great leaders shine - and relates these to life long learning and your leadership development.
Group Think and How to Create Thought Diversity in Organizations	Groupthink is a crippling organizational phenomena that occurs when one or two people or personality styles dominate a group's culture so completely that there is no room for those with other styles, perspectives, needs, or beliefs to get their ideas on the table. It has strong links to cultural incompetence as well. This program identifies the characteristics of group think and presents several tools for inculcating thought diversity into organizations.
Managing Difficult Conversations: Strategies and Tools to Influence Others in High Tension Situations	As a leader, it is crucial that you have the skills to artfully manage difficult conversations and bring about the best outcomes possible. This session presents eleven of the most powerful tools to negotiation and alternative dispute resolution that you can apply to managing the difficult conversations you face.

The Power of Positive Personal Regard	In organizations, there are several tools to motivate and engage employees. This program discusses the factors that make up positive personal regard and how they play a role in motivating and influencing others.
Mentoring and Coaching	This session describes mentoring, coaching, and peer coaching and presents strategies for making each successful in the workplace. It also gives you the tools to be a good mentor or a good mentee.
Building a Learning Organization	Leaders today can't just build organizations that produce: they need to build organizations that *think*. Certainly, an organization needs to produce to survive in the short run, but it needs to *learn* if it is to survive in the long run. How do *you* as a leader create this learning organization? This session addresses balancing efficiency against effectiveness, how learning occurs in individuals, teams, and across organizations, and what leaders need to do to transform their enterprise into a learning organization. It presents many practical strategies to create a learning organization wherever your team happens to be.
Leadership Theory	Theories abound about what makes one a great leader. The purpose of this session is to acquaint you with the theories, arguments, and perspectives of leadership to help guide your personal perspective on leadership.
Effective Communication and Advocacy	This program addresses effective communications with audiences during stressful situations and particularly when the message is a complicated one. Strategies presented are helpful for working with the press or during tense group conversations. The advocacy materials in the program are presented on behalf of Dr. Vivian Dickerson, who served as President of The American College of Obstetricians and Gynecologists. In her role as President, she testified before Congress and had to advocate for the interests of women's health.
Developing Program Goals and Objectives	This session defines the terms "goals", "objectives", and "strategies" and will help you learn the tools to develop each for a program plan.
Introduction to Logic Models	This session defines a program planning logic model and identifies the purpose and benefits of a logic model. It also lists several logic model approaches, describing the components of each. After viewing this program you should be able to utilize a basic logic model template to develop a logic model for your program plan.
Creating an Evaluation Plan, Part 1: Using a Logic Model and Developing Evaluation Questions	This session describes how to use a project logic model in developing evaluation questions. It also addresses how one determines implementation and outcome evaluation questions and describes how to use project objectives in developing evaluation questions.

Social Marketing	This module describes social marketing, how it is different from other marketing tactics, social marketing's place in public health, and looks at case studies of public health social marketing. This program presents a comprehensive view of the topic.
Cultural Competence and Global Leadership	The topic of global leadership and cultural competence becomes more important as work increasingly becomes global. This program is targeted to a public health audience and covers some key definitions and concepts included in the Cultural Competence Continuum. It looks at changes in demographics and what it means in terms of health disparities for racial and ethnic minority populations. The program discusses the rationale for cultural competence and reviews research conducted during the last 30 years on cultural differences and global leadership. The session addresses communication styles from different cultures as well as intercultural conflict styles and some strategies to effectively resolve conflict. In the program you will find a relatively new way of looking at the ability of individuals to work well in different cultures, called their cultural intelligence (CQ) and discusses how you can increase your level
Adaptive Leadership	Leaders today face many types of challenges: technical ones, which can be answered by experts using currently existing knowledge, and adaptive ones, which can be difficult to understand and have no ready solution. When leaders are faced with the most complex challenges they need to bring the tools of adaptive leadership to bear. This module introduces the topic, the basic tools, and what leaders need to know in order to survive in leadership when leading crisis and change efforts.
Peer Coaching	This session describes the process of peer coaching in detail. It differentiates "curbside consultation" (telling people what to do) from using the peer coaching skills of reflective questioning to help a colleague come to their own understanding of the situation they face.
Creating Innovative Cultures	Innovation is a critical key to success - but how do you help your culture become an innovative one? This session addresses the four components of innovation and gives specific strategies of how to promote each. While it links with the "FourSight Innovation Tool" having taken that instrument is not required for learning practical skills from this program.
MCH Primer: An Angle on MCH Systems	The world of Maternal and Child Health consists of many interconnected parts. This session will help you understand how MCH systems are linked in the US. This program is hosted by Dr. Lewis Margolis of the University of North Carolina at Chapel Hill.
Increasing Meaningful Partnerships between Families and MCH Partnerships	In this module, nationally recognized family leader and speaker, Ms. Eileen Forlenza, addresses four critical strategies for increasing meaningful partnerships between Families and MCH Professionals. Anyone interested in issues around Children with Special Health Care Needs (CSHCN) will find this 30-minute leadership lesson incredibly insightful and helpful.

Appendix III: Informant Interview Field Guide

- Please tell me about your experience with leadership training, either formal or informal?
- What do you think constitutes a good leader?
- Who has served as a mentor or image of a leader for you, and how has this person impacted your life?
- What are the most common challenges you face as a leader?
- What leadership areas or skills would you like to grow in and why?
- In the field of MCH, do you feel there is a need for leadership training for workforce development and why?
- How do you feel the MCH PHLI curriculum could impact the field of MCH in India?
- Of the 20 leadership competencies previously sent to you, which do you feel are the most important for MCH professionals in India and why?
- In your opinion, excluding financial resources, what are potential barriers to the implementation of this curriculum in India?
- Are there any skills or areas of interest not presented in the present curriculum you feel are important for Indian public health professionals?

Appendix IV: Survey (English)

Thank you for participating in this study. This survey should take approximately 15-20 minutes to complete.

You will be presented with 6 questions that relate to your experience with leadership development and the adaptation of the Maternal and Child Health Public Health Leadership Institute (MCH PHLI) curriculum in India. Please take a moment to review a summary of the curriculum here:

The MCH PHLI model focuses on three cores of skills including individual leadership, organizational leadership, and system level leadership in the MCH field. The curriculum components include:

- Three on-site retreats
- Individual leadership development plan
- Personal leadership project
- Executive coaching sessions
- Online leadership tutorials
- In-program and Out-of-program mentoring
- Webinars
- Topic specific conference calls
- Online leadership diary
- Peer coaching

Participants get feedback on 8 scientifically valid and reliable leadership and psychological assessment tools most used in leadership development in leading corporations worldwide. The program runs over 13 months. During this time, 13 days are spent in onsite training, the rest occurs via phone calls and web-based learning.

All data submitted in this survey will remain confidential, and responses will not be shared with any third party. I will use this data in aggregate for research purposes only. If you have any difficulty completing the survey, please contact me at sarahbradford@unc.edu.

Thank you!

What is your gender?

- ❍ Male
- ❍ Female

What is your age?

- ❍ 20-29
- ❍ 30-39
- ❍ 40-49
- ❍ 50-59
- ❍ 60-69
- ❍ 70 or older

What state do you work in?

- ❍ Andhra Pradesh
- ❍ Arunachal Pradesh
- ❍ Assam
- ❍ Bihar
- ❍ Chhattisgarh
- ❍ Delhi
- ❍ Goa
- ❍ Gujarat
- ❍ Haryana
- ❍ Himachal Pradesh
- ❍ Jammu and Kashmir
- ❍ Jharkhand
- ❍ Karnataka
- ❍ Kerala
- ❍ Madhya Pradesh
- ❍ Maharashtra
- ❍ Manipur
- ❍ Meghalaya
- ❍ Mizoram
- ❍ Nagaland
- ❍ Odisha
- ❍ Punjab
- ❍ Rajasthan
- ❍ Sikkim
- ❍ Tamil Nadu
- ❍ Tripura
- ❍ Uttar Pradesh
- ❍ Uttarakhand
- ❍ West Bengal

Do you work in a position related to the field of Maternal and Child Health? ❍ Yes ❍ No
The organization you currently work in may best be described as (check all that apply): ❑ Public ❑ Private ❑ Non-governmental organization ❑ Government agency
What is your experience with leadership training, either formal or informal?
How would you define a good leader?
In your opinion, is there a need for leadership training for Maternal and Child Health professionals in India? Please elaborate and tell us why yes or no.

For each topic below, how important is this skill for public health professionals in your field?

	Unimportant	Moderately Important	Important	Very Important
Self-awareness	❍	❍	❍	❍
Communication	❍	❍	❍	❍
Negotiation	❍	❍	❍	❍
Conflict management	❍	❍	❍	❍
Creating a compelling vision	❍	❍	❍	❍
Innovation	❍	❍	❍	❍
Emotional intelligence	❍	❍	❍	❍
Transformational leadership	❍	❍	❍	❍
Reflective leadership	❍	❍	❍	❍
Career management	❍	❍	❍	❍
Creating organizational culture	❍	❍	❍	❍
Systems thinking	❍	❍	❍	❍
Building team skills and succession planning	❍	❍	❍	❍
Change management	❍	❍	❍	❍
Cultural competence	❍	❍	❍	❍
Stakeholder analysis	❍	❍	❍	❍
Understanding the impacts of future trends and changes	❍	❍	❍	❍
Collaboration and creative partnerships	❍	❍	❍	❍
Innovation and performance management	❍	❍	❍	❍
Advocacy	❍	❍	❍	❍

Your answer to this question is very important for understanding how the MCH PHLI curriculum may be adapted for Maternal and Child Health professionals in India. Select the potential degree of difficulty in completing each of the following components for you:

	A serious problem	A moderate problem	A small problem	Not a problem
Attending on-site retreats	❍	❍	❍	❍
Creating individual leadership development goals	❍	❍	❍	❍
Completing a Personal Leadership Project to impact an organization or community	❍	❍	❍	❍
Engaging in phone based executive coaching sessions	❍	❍	❍	❍
Completing 30 minute web-based tutorials	❍	❍	❍	❍
Working with an in-program mentor	❍	❍	❍	❍
Finding a mentor in public health who is not a part of the program	❍	❍	❍	❍
Attending 1 hour web-based training sessions (Webinars)	❍	❍	❍	❍
Attending 1 hour conference calls on public health or leadership topics	❍	❍	❍	❍
Completing an online leadership diary	❍	❍	❍	❍
Engaging in phone based "peer coaching" with small teams to solve problems and share best practices	❍	❍	❍	❍

Excluding financial resources, please describe any other potential barriers for the implementation of the MCH PHLI curriculum in India and why.