Refugee-Centered Medical Home: A New Approach to Care at the University of Louisville Global Health Center

Rahel S. Bosson, MD; Ruth M. Carrico, PhD, APRN, FNP-C;† Anupama Raghuram, MD; Paula Peyrani, MD; William A. Mattingly, PhD; Rebecca A. Ford, MPH; Stephen Furmanek, MS, MPH; Julio A. Ramirez, MD

Abstract

Refugees arrive to the United States with a full spectrum of health conditions, many of which involve intense case management requiring significant financial investments and use of healthcare resources. Kentucky receives more than 3,000 new refugees each year and ranked 10th in the nation for numbers of new arrivals resettled during 2015. These refugees arrive from diverse countries representing different cultures and speaking different languages. In addition, they arrive with diverse health conditions and medical needs. The aims of this paper are to share experiences from the University of Louisville Global Health Center regarding conceptualization, implementation and evaluation of a new care model. This model focuses on the complexities of caring for refugees from diverse populations and backgrounds. The foundation for this model aligns with the patient-centered medical home approach outlined by the Agency for Healthcare Research and Quality. Recognizing the need for a new paradigm for care, a refugee-centered medical home model was designed and implemented as an ideal approach.

Background

The story of human history is replete with individuals or groups being forced to flee their homes, families, and communities due to war, famine, or persecution. Data made available from the United Nations High Commissioner for Refugees (UNHCR) for 2015 showed that each year, 10 to 15 million people seek political asylum or become refugees in various parts of the world, with nearly 34,000 displaced every day (UNHCR 2017). Based on national quotas, these people are offered refuge in many countries such as the United States (US), Canada and Australia (UNHCR 2017). Year after year, the US has resettled refugees in most every state. Since the early 1980’s, Kentucky has been a popular destination for resettling newly-arriving refugees. According to the Kentucky Office for Refugees, over the past ten years, Kentucky has resettled more than 25,000 refugees with more than 3,000 resettling during 2015. This ranks Kentucky 10th in the nation for refugee and other entrants resettlement (ORR 2016).

Louisville, the largest city in the state of Kentucky, becomes the new home annually for approximately 85% of Kentucky’s incoming refugees (ORR 2016).

During resettlement, there are myriad obstacles and issues the refugees must overcome to fully acculturate and integrate into American society and way of life. These include strategies the refugee must take to facilitate self-sufficiency. Accomplishing this requires that the refugee be able to work, and this access to work is often impacted by existing and emerging health conditions. As refugees resettle in their new communities, they bring with them communicable and non-communicable health issues as well as complex chronic medical conditions that require attention and close follow-up (USCRI 2015). Conditions representing risks include latent tuberculosis infection (LTBI), hepatitis and HIV. In addition, emerging global infections such as Zika Virus, demonstrate the importance of risk reduction and health promotion as part of ongoing care. The refugee population also presents with chronic health conditions including diabetes, hypertension, heart disease, hyperlipidemia, dental issues, musculoskeletal complaints, chronic headaches, psychological and mental health disorders (Eckstein 2011). Some of the most common health conditions identified in newly arriving refugees resettling in Kentucky during 2012-2016 have included LTBI, tobacco abuse, hypertension, obesity, hyperlipidemia and mental health.
issues (UofL Division of Infectious Diseases and KOR 2016).

The chronic health conditions identified in the refugee population mirror those present in the general US population and require long-term management, aggressive case management and financial investments by local receiving communities (USCRI 2015). Refugees must also overcome a number of obstacles in order to receive adequate healthcare. These obstacles include language and cultural barriers, confusion about the role of different providers, and lack of knowledge as to how health insurance can be obtained and used. This makes navigating and accessing the US healthcare system some of the greatest challenges refugees face, often becoming obstacles to early self-sufficiency. In addition, the healthcare system in the US has become increasingly episodic, fragmented, costly, and lacking coordination (Epperly 2011) and this fragmentation poses challenges for providers as well as patients (van den Muijsenbergh et al. 2016). If providers lack cultural competence, the end result may push refugees to access care in the most expensive and episodic locations such as hospital emergency rooms. Ultimately, this leads to preventable financial burden on the already strained US healthcare system. There is tremendous potential to reduce these barriers in order to provide effective primary and preventive care and limit the long-term tertiary complications of disease in the refugee population. Addressing the complexities of care that refugees bring with them can be accomplished through provision of care in a patient-centered medical home (PCMH).

The PCMH is a newer model for primary care that continues to emerge in the US. In this model, care is primarily delivered by an interprofessional team and not by a single healthcare provider. In this team-based approach, the patient is at the center of care and the leader of their care. The medical home concept first arose in the 1960s as a means of improving the care of children with special needs. This concept was then described in 1967 in the American Academy of Pediatrics’ (AAP) Standards of Child Health Care book (AAP 1967). There, the medical home was viewed more as a central source for the child’s medical record with emphasis placed on the need for a centralized medical record as a precursor for organized care. Over time the PCMH concept expanded further to include emphasis on the many social determinants of care including poverty, income, housing, and education. In the twenty-first century, the idea of a PCMH garnered interest outside pediatrics. In 2007, primary care physician societies endorsed the principles of the PCMH and the importance of this concept was recognized as a model of care (Peikes et al. 2012). Today, the medical home model is considered to be a best approach to primary care (NCQA 2014). There have been numerous studies by the specialties of Pediatrics and Family Medicine that demonstrate a PCMH improves outcomes and reduces costs of care (Garg et al. 2012). Studies have also been conducted across the globe in other industrialized countries that demonstrated the benefit for adults whose care occurred within a medical home. These benefits included better coordinated care, fewer medical errors and test duplications, better relationship with their healthcare providers and greater satisfaction with care (Nielsen et al. 2012). Further, several communities have embraced use of the medical home concept in addressing distinct healthcare needs that exist in the refugee population (USCRI 2015). Considering the medical complexity of refugees juxtaposed by their many social determinants of health, a medical home model is an ideal approach to caring for this population. For this reason, in 2015 the journey began to develop a Refugee-Centered Medical Home (RCMH) at the University of Louisville.

Objectives

The aim of this manuscript is to describe processes involved in conceptualizing, designing, and then implementing a RCMH at the University of Louisville. The objectives include: 1) description of the conceptual basis for the RCMH care model; 2) characterization of the RCMH care model design; 3) description of the care model implementation process; and 4) a review of challenges and lessons learned.

Conceptual Basis

Identification of core areas of service

In 2012, faculty at the University of Louisville Health Sciences Center were contacted by the Kentucky Office for Refugees (KOR) to assist with development of a report outlining the state of health among newly arriving refugees into Kentucky. The University of Louisville Global Health Center (UL-GHC) is one of six sites in Kentucky where the initial refugee health assessments (known as the domestic health screening) are provided. The health screening follows recommendations from the Centers for Disease Control and Prevention (CDC) (CDC 2012). Data from all six sites are entered into the Arriving Refugee Informatics Surveillance and Epidemiology (ARIVE) database maintained at the UL-GHC. Using these data, health conditions that would likely require long-term intervention and follow-up were identified and compiled in an annual report. These reports, first made available in 2012, enabled a first glimpse into the existing health conditions of newly arriving refugees resettling in Kentucky (UofL Division of Infectious Diseases 2016). These reports provided the information necessary to identify core areas of service that would form the basis for the RCMH model. The identified core areas clearly demonstrated the need for partnerships across healthcare disciplines as well as the broad social sciences. Truly embracing the concept of an RCMH required that the provision of care be reimagined and broadly inclusive of healthcare and non-healthcare disciplines and partnerships.

Partnerships and Community Participation

The second step in the RCMH concept development involved an assessment of interested partners within the Louisville community. Engaging specialties from both within and outside traditional health sciences was determined to be an essential attribute to the medical home vision (USCRI 2015). The vision of a collaborative foundation for the RCMH competent to address the biopsychosocial and spiritual complexities of care required an open dialogue with community stakeholders. This dialogue centered around an understanding of the existing capabilities, interests, capacities and barriers that existed within the community. This concept development sought to identify critical partners from...
In this care model, there are seven components. Each is described below:

1. Refugee-Centered Care: In the model, the refugee is the center of care and, therefore, a core “member” of the health care team with his/her needs being the driving force. As part of the provision of care, the refugee is educated regarding his/her medical condition and engaged as an active partner in the development and implementation of the care plan with steps taken toward self-management of health. Family members and others who are important to the refugee patient are also incorporated into the healthcare team and included in the treatment plans. This model emphasizes patient and family involvement through shared decision making with the goal of maximizing adherence to treatment, self-management through proper education, and regular follow up. In keeping with the patient as the central focus, the RCMH care model seeks to ensure access to all members of the care team in ways that meet the needs of the refugee.

2. Team Approach: For each refugee, there is an established primary care provider. This provider, who may be a physician, nurse practitioner, or physician assistant, is recognized as a leading partner by the refugee and family. However, this leadership model must be one of collaboration with heavy reliance upon the expertise, roles, and capabilities of other members of the care team. This enables the provision of healthcare that is coordinated, comprehensive, clearly defined, reliable, and agile. Others on the team include nurses, pharmacists, nutritionists, social workers, educators, care coordinators, and specialists who can help steer the provision of comprehensive and culturally-tailored care. Refugees, in particular, may also need intensely specialized care such as that provided by personnel experienced in trauma-informed care. This expertise may be critical for the refugee who has experienced or witnessed torture or has lived in a direct war area. These members must be experienced in working as part of interprofessional teams so they are cognizant of the expertise within the team and capable of using that expertise in a seamless manner to address emerging and emergent needs. Examples of the team approach include onsite care by multidisciplinary team members, use of case conferences, and access to multiple specialties during home/community visits and interactions.

3. Comprehensive Care: The primary care provider and the healthcare team must recognize that care includes the whole person. The goal is to provide holistic comprehensive care that addresses the biopsychosocial, cultural and spiritual components of a person. Foundational to this care approach is development of a network of specialists aware of the unique needs of the refugee. Competent practice includes knowledge concerning refugee-specific social determinants of health and the barriers to care that exist given the nature of resettlement and the circumstances that led to flight. For example, refugees often have chronic medical conditions such as diabetes and hypertension. In addition, many have experienced or witnessed torture so they struggle with depression and post-traumatic stress disorder, making social integration and acculturation challenging. Care for these complex individuals require primary care providers, mental health providers, community health worker/health navigators, social workers, and case managers working in concert to address the needs of the refugees in the clinic, in the home and in the community environment.

4. Coordinated Care: Refugees often have complex needs that require a broad range of medical services. This care can require multiple specialties and healthcare institutions, as well as home and community based services. Coordination of care serves to facilitate acculturation, self-management of chronic disease and independence. Care must be coordinated across all components of the larger complex healthcare system. These include primary care clinics, specialty
clinics, hospitals, extended care facilities, health departments, and a broad array of community and support services. The diversity of services calls for robust care coordination and members of the RCMH care team must be able to communicate, facilitate and coordinate care for both medical and non-medical needs. Using the example of the refugee with diabetes, hypertension, and mental health conditions, a coordinated approach to care ensures that all specialties and support services are actively and directly involved, in real time, during clinic visits as well as community/home visits. In addition, care coordination includes access to interventions relevant to the spectrum of social determinants of care such as access to English as a second language classes, legal services and transportation needs.

5. Access to Care: The goal of the RCMH care model design is to deliver services that are readily accessible to patients. Often refugees work odd hours and may have multiple jobs making access to healthcare during 'routine business hours' a challenge. In current models, healthcare facility hours are often structured in accordance with 'routine business hours,' often resulting in limited availabilities for extended hours and days of operation. When addressing access to care, the care model needs to be structured around the needs and availability of the population served.

6. Quality Care: All members of the RCMH care model must be committed to quality performance and continuous quality improvement. Using a systems-based approach, continuous improvement in the safety and quality of patient care is the goal. This systems-based approach includes evaluation of the physical location of the clinic, hours of operation, organizational design and structure, staffing, and the overall care program. Continuous improvement and adherence with national guidelines and standards are expected.

7. Safe Care: Refugees, families, and health care workers must interact in a protected and secure environment. Safe care extends beyond the physical environment to one that includes safeguarding of confidential information. Therefore, a safe care environment protects the refugee and the healthcare team. To accomplish this, care providers must be educated and competent in care delivery models that promote safety, continuous improvement, and trust among the populations served. Trust between healthcare providers and their refugee patient has been recognized as critical when seeking to engage and address healthcare needs in both the short term and long term relationships (Lazar et al. 2013).

Implementation of the RCMH Care Model

Partnerships and Community Participation

During the initial concept phase, then during design and development of the RCMH care model, meetings were held with a broad array of community partners and stakeholders. These included those in the broad Louisville community as well as those within the University of Louisville. These meetings were designed to share the vision, identify areas of shared interest, and catalogue areas of expertise important to implementation of the RCMH care model. This led to development of a think tank with an emphasis on recognizing and resolving the new health and societal challenges brought to our community by an increasingly interconnected world population. This partnership strategy enabled engagement and involvement among faculty, staff and students across the University of Louisville as well as the broader Louisville community (Figure 2).
Defining Financial and Operational Metrics

Results from the financial and operational assessment demonstrated that a toolkit was necessary to better prioritize and sustain areas of growth. An operational process and a business model were developed that could help ensure adequate reimbursements and appropriate payment systems recognizing the added values of patient-centered care. Financial stewardship and appropriate use of limited resources are responsibilities that are critical in day-to-day operations as well as future planning. Economic modeling was done that outlined activities relevant to refugee care.

Spreadsheets were developed to address fixed and variable costs and were shared with members of the clinic to identify opportunities for improvement. Improvements were made in multiple areas including selection and use of supplies, laboratory testing, medication, personnel staffing and scheduling, and patient throughput. Emphasis was placed on understanding payment issues and barriers present within the Medicaid system, such as referral processes and coverage lapses, and how a lack of understanding of the system by the refugee and clinic personnel can be managed and mitigated. This enabled development of projections for future income and expenses based on prior years’ growth. Financial and operational modeling were also critical in engaging external partners, including payers of care, identifying cost effective interventions and efficient changes in the way care is provided. Modeling also helped identify errors and gaps in existing billing processes so corrections could be made.

Seven Core Components of RCMH Care Model

1. Refugee-Centered Care: This component maintains the patient at the center, and the driving force, of all care. At implementation, processes for care evolved to include an emphasis in care provided within the clinic as well as in the home and community of the individual refugee. Pivotal to success of this community component was development and introduction of new care team members. These individuals, the Global Health Navigators (GHN), were hired to serve as a vital link between the patient and the healthcare system, serving as advocates for the refugees. The GHN serve as trusted members of the refugee communities fluent in the respective languages and are familiar with the cultural aspects of the individual groups. The ideal GHNs are former refugees with expertise in health education and outreach. Their responsibilities include health education and active communication with the entire healthcare team and the community important to the refugee.

2. Team Approach: At present, the team providing care for the refugees includes a full array of healthcare providers with the support of care coordination and the GHN described previously. Key to a team approach is how well aspects of care are linked and how all members of the team can be involved in care of the refugee at the earliest point in time. In the RCMH, the time of first contact is during the domestic health screening or the immunization clinic. During this first contact, needs of the individual refugee can be assessed and prioritized in order to link them with team members most appropriate for their needs. Examples include earliest access to mental health professionals, treatment for LTBI, and women’s health.

3. Comprehensive Care: In the RCMH, primary care is provided as well as direct access to the many supporting services necessary to address disease self-management. This includes access to a broad array of services that address the biopsychosocial and spiritual elements of the whole person. One example of comprehensive care includes provision of a full spectrum of mental health services on-site, including those provided by psychiatrists, psychiatric and mental health nurse practitioners, and clinical psychologists experienced in trauma-informed care. This approach enables interaction and multidisciplinary conferencing among varied providers in order to address the needs of the refugee in a holistic manner. This service has been particularly important given the number of refugees with chronic medical conditions who have also witnessed or experienced torture. Through the RCMH, language, cultural, legal, and social aspects of care can also be addressed with the assistance of the GHN serving as the cultural broker and advocate. Another example of coordinated care has involved Cuban refugees whose resettlement journey includes extensive time, perhaps months, in Zika Virus endemic areas prior to entry into the US. Upon arrival, these refugees need information regarding the risks of Zika Virus infection and its impact on pregnancy and the local community. Offering access to birth control for both men and women, educating them on the virus and pregnancy outcomes, facilitating rapid referral for specialty healthcare services, addressing gaps in healthcare coverage, and preventing virus transmission into the local mosquito population are elements of a comprehensive approach that can be managed in the RCMH.

4. Coordinated Care: Care that can address complex health conditions requires access to a variety of specialists. In a process designed to coordinate specialty care, a multidisciplinary group of providers having particular interests and expertise in refugee health was convened. The group known as KARMA (Kentucky Area Refugee Medical Awareness) is composed of specialists board certified in areas such as internal medicine, psychiatry, cardiology, nephrology, endocrinology, pediatrics, pulmonary medicine, women’s health, public health, and infectious diseases. The coordinated care approach within the RCMH has been particularly successful in addressing LTBI among the refugee population, a major public health concern (LoBue and Mermin 2017). Collaboration between public health, local pharmacies, health insurers and use of GHNs has resulted in innovative approaches to successful provision of LTBI treatment.

5. Access to Care: For the refugee, access to care involves more than being able to find a provider when needed. It includes attributes of the provider, the care setting, support services, and payers of care as integral parts of efforts aimed at re-
ducing episodic and fragmented care. The provider must be accessible and competent to address refugee-specific needs and be knowledgeable and competent to provide culturally tailored care. The clinic care setting must be accessible and able to provide care during the days and times needed. As refugees seek to understand the US healthcare system, it is important that rigidity inherent in care delivery be removed. For example, the concept of a specific appointment time for a healthcare visit may be unfamiliar and difficult for the refugee to immediately understand. Therefore, flexibility must exist with staffing and scheduling to accommodate the patient who arrives late, or early, to their appointments and those who just show up without an appointment time. Accomplishing this approach requires support services staffed by individuals with the same knowledge and levels of competence and capability in addressing refugee healthcare needs. Linking primary care with specialty care and preventive services should be as seamless as possible and with a referral process that does not depend upon the refugee for appointment scheduling and system navigation. To that end, the RCMH has made initial adjustments to scheduling as well as hours and days of operation.

6. Quality Care: Members of the RCMH must be committed to quality performance and quality improvement. As the RCMH was conceptualized, an evaluation plan was constructed and a quality model developed that served to outline guiding principles used by providers and staff as the RCMH was implemented. Measurement of process and outcome have become usual practice with steady feedback of results to providers, support staff, and internal and external partners. Specific and measurable quality goals have been established following assessment of existing practices and gaps. A quality dashboard has been developed and tested as a means of engaging providers and staff in the quality improvement process. This has enabled development of a clearly articulated vision with measurable goals that have been discussed and vetted among providers and staff. The evaluation plan continues to be used as a practice and service guide for quality measurement and improvement.

7. Safe Care: Lastly, an emphasis on safe care has been woven into the actions of providers and staff. It is a goal of the RCMH that all interactions occur in a protected and secure environment. Safety involves protection of the patient, their families and communities, the healthcare team, and the health information. This is done by looking at safety in terms of the larger context of the health care system. Identification of safety challenges related to disease or health condition, open communication among team members, inclusion of external partners in safety assessments and response, collecting data regarding safety, identification of error-prone processes and development and implementation of error-proofing interventions are essential components of safe practice. Using resource strengths from the broad Louisville community has enabled incorporation of best practices across multiple industries in support of safety in the care environ-

ment and safety during the provision of care. One example involves the impact faculty and students from the University of Louisville Speed School of Engineering had on the processes used in implementation and evaluation of the refugee immunization clinic. During these clinics, held at the resettlement agency sites, immunization may be provided for 150 or more refugees during a single session. Up to five vaccines for each individual may be administered in a mass immunization setting (Carrico et al. 2015). Ensuring provision of these vaccines in a safe manner with emphasis on an error-proof system was critical. Feedback from industrial engineers allowed implementation, evaluation, and expansion of a mass immunization process that has been used to provide more than 50,000 doses of vaccine to the refugee population since 2012.

Challenges and Lessons Learned
There have been a number of challenges identified and lessons learned on the RCMH journey, primarily in operational and financial domains.

Operational
The tremendous language and cultural diversity present among the refugee population at large represents the greatest challenge to the provision of patient-centered care. Coordinating staff so there are always GHNs present, addressing missed appointments due to social or work-related needs, comingling of social needs and health needs during a single patient visit, and cultural biases between refugee groups are examples of other common challenges. Lessons learned included development of staffing models, clear job responsibilities and individual accountability for all team members. Active, open and continuous communication with resettlement agencies remains critical to link the refugee with services that enable and facilitate medical and treatment interventions. In addition, the need to aggressively plan, implement and evaluate extensive outreach components enabling full use of the GHNs in linking in-clinic with in-home/in-community care is key to enabling the refugee to develop disease self-management techniques and skills.

Financial
Current fee for service payment policies are inadequate to fully achieve maximum capability in the RCMH. As a majority of refugees are covered by Medicaid, reimbursement is inadequate especially when additional service costs, such as interpretation, are standard. In addition, refugees begin work soon after resettlement and health insurance may be offered but not affordable. This may result in lapses in Medicaid or other insurance coverage, and the inability to provide services that can be reimbursed for care provided in the RCMH. Use of the GHNs can be used to positively impact the efficiencies of care within the RCMH. Examples of this include their abilities to assist with establishing the link between the patient and their insurer prior to healthcare visits, ensuring that insurance is active, and contacting refugee patients to reduce no-show rates. Building this into the clinic
routine allows providers to maximize time spent with the refugee patient. Without this coordinated plan, options for needed care may be limited to emergency departments or urgent care facilities effectively reinforcing episodic and fragmented care. Availability of insurance does not necessarily mean that the plan will cover and pay for services provided in the RCMH. Therefore, the greatest challenge to the RCMH success is adequate payment for co-ordinated and comprehensive care provided in a medical home. Lessons learned revolve around maintaining close monitoring of clinic finances recognizing that recruiting and maintaining qualified staff can be resource intensive. Sustaining financial viability of the RCMH includes activities such as negotiating performance based payment systems and continual development and nurturing of partnerships and collaboration with Medicaid program and insurance payers. Further, providing services in a space that is inadequate for the provision of care in collaboration with associated disciplines results in an increase in time spent during an individual health visit. Having space that is located close to ancillary services (e.g., laboratory services) and adequate in size to bring support services together (e.g., engaging mental health services during primary care visits, obtaining chest x-ray at the time of an initial visit so LTBI treatment can begin that same day), facilitates efficient and effective care and promotes the synergy that occurs during interprofessional practice.

Conclusion

Refugees resettled into the United States face many challenges as part of rebuilding their lives in a new country. Some of the challenges they face include learning a new culture, language, the health care system and the overall adjustment to a new way of life. A majority of these refugees also arrive with multiple medical conditions and mental health problems that add to the challenge of resettlement and self-sufficiency. This makes provision of refugee healthcare challenging and necessitates an organized approach that addresses existing barriers and longstanding traditions that are trademarks of US healthcare. A medical home is needed to address not only the medical needs of the refugees but the many social determinants that often support fragmented and gap-laden care.

To continue the success that has been found with this new RCMH approach, it is critical to have a clear and shared vision among providers and partners. Input must be regularly sought from those who are the focus of our care as well as those who support and pay for it. Inconsistent and inadequate funding will likely continue, but strides can be made through strong networks of partners, efficient operations, and a devotion to high quality service at every level. As this new RCMH model matures, we expect it will continue to garner attention creating stronger collaboration among other groups and sites providing refugee care. This approach may lead to translation of this model into care provided for other vulnerable populations. Further, this approach may enable opportunities to share experiences that change the way we think about our approaches to care, thereby facilitating a paradigm shift in how care is provided and delivered. This shift may ultimately transform the US healthcare system resulting in better care and better outcomes for all.

References


