### PRACTICE ARTICLES

JAMES KENNEDY, MD MBA ■ DEBORAH J. SEYMOUR, PSYD BARBARA J. HUMMEL, RN CIC

# A Comprehensive Refugee Health Screening Program

SYNOPSIS

Nationally and internationally, there is a struggle to provide adequate health screening and assessment programs for refugees. The Department of Family Medicine at the University of Colorado Health Sciences Center in partnership with the Colorado Refugee Services Program has developed a comprehensive refugee health screening and assessment program. The program was designed to ensure access to screening and to provide better care for this vulnerable population. Key features of the program include a single point of access for all family members, full availability of appropriate interpreting services, comprehensive health assessments that include a thorough mental health screening, data collection and evaluation, and education of health care providers to deliver culturally responsive care. During the first 30 months of this program, comprehensive assessments were provided for more than 1600 refugees. Future directions include improving the efficiency of daily systems, seeking alternative sources of funding, improving follow-up and vaccination rates, expanding mental health services, and tracking health outcomes and refugees' utilization of health care services through longitudinal research.

Address correspondence to: Dr. Kennedy, 5250 Leetsdale #302, Denver CO 80246; tel. 303-388-0965 x113; fax 303-388-1168; e-mail <jim.kennedy@uhcolorado.edu>.

Drs. Kennedy and Seymour are with the

University of Colorado Health Sciences

Center, Denver; Dr. Kennedy is the

Director of Clinical Services, and Dr.

Seymour is the Director of Behavior

Science. Ms. Hummel is a Public Health

Nurse Consultant with the Colorado

Department of Public Health and

Environment, Denver.

Department of Family Medicine,

ar, persecution, and conflict persist throughout the world, and the need for relocation of refugees continues. The United Nations defines a refugee as "a person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group, or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is unwilling to avail himself of the protection of that country."<sup>1</sup> Some estimates indicate that there are more than 14 million refugees worldwide, including those in internal exile.<sup>2</sup> Refugees, unlike immigrants, leave their home countries under immediate threat of persecution.

The Colorado Front Range receives about 900 refugees annually.<sup>3</sup> By federal law, refugees are required to undergo a health screening process.<sup>4</sup>

The A.F. Williams Family Medicine Center of the University of Colorado and the Colorado Refugee Services Program have worked together since January 1997 to develop a comprehensive refugee health assessment and referral program to meet and exceed federal requirements. The Colorado Refugee Services Program is the state agency funded by the US Office of Refugee Resettlement (ORR) to coordinate health screening and evaluation for refugees arriving in Colorado. The A.F. Williams Family Medicine Center, the family medicine residency facility for the University of Colorado, is the clinical practice site that contracts to perform the refugee health evaluations.

Before 1997, the initial health screening of refugees who settled in Colorado was less than comprehensive, a problem not unique to our state. Wide variations in screening procedures exist across US states.<sup>5</sup> Although several recent articles have focused on health screening of new arrivals and the problems encountered in achieving acceptable screening rates, only a few have included descriptions of screening models for current refugee populations.<sup>6–9</sup> This article describes our efforts to develop such a model.

#### REFUGEE HEALTH SCREENING REGULATIONS

Refugee health screening is a two-stage process. Those applying to enter the US are screened in their countries of origin; those who are not excluded for health reasons are rescreened on arrival in this country.

Each person who applies for refugee status in the US is required to have a medical examination in his or her country of origin by one of the "panel physicians" selected by US State Department consular officials.<sup>4</sup> These examinations are designed to identify individuals with certain communicable diseases and other conditions based on criteria established by the Division of Quarantine of the National Center for Infectious Diseases, Centers for Disease Control and Prevention.

Based on these overseas examinations, refugees with one or more of the following health-related concerns are excluded from entering the United States unless they receive a special waiver: failure to present documentation of having received vaccinations against vaccine-preventable diseases; history of a physical or mental disorder that has or may pose a threat to "the property, safety, or welfare" of the individual or others, and that is likely to recur or lead to harmful behavior<sup>10</sup>; drug abuse or addiction to illegal drugs; and being diagnosed with a communicable disease of public health significance.<sup>11</sup> Currently, the communicable diseases that are grounds for exclusion from the US are tuberculosis, HIV infection, syphilis, chancroid, gonorrhea, granuloma inguinale, lymphogranuloma venereum, and Hansen's disease (leprosy).<sup>12</sup>

Refugees who are not excluded are then categorized into one of three groups before entering the United States. Class A refugees are those who are diagnosed with inadmissible health concerns but who may enter the United States if they obtain a waiver issued by the Immigration and Naturalization Service or the Department of State.<sup>10</sup> One of the waver requirements is identification of a facility that will provide a reassessment within 30 days of arrival. Class B individuals are refugees who have severe medical conditions, such as heart disease or hypertension, that require immediate follow-up but who are not inadmissible.

Most of the screened refugees who do not have inadmissible conditions enter in an unrestricted, or "unclassified," capacity. Some of these "healthy" individuals, however, may have conditions that are not considered inadmissible public health concerns but are unhealthy for the afflicted individuals, including conditions that are uncommon in the United States. Many refugees suffer from undiagnosed illnesses such as heart disease or hypertension, post-traumatic stress disorder (PTSD), diabetes, or malaria.

The Federal Refugee Act requires that each state provide medical screening of all refugees, not just Class A and B refugees, upon arrival in the US.<sup>13</sup> The purpose of this federal requirement is to ensure follow-up of Class A and B conditions found in the overseas medical screening process, to identify people with communicable disease of potential public health importance, and to identify health conditions that adversely impact resettlement. Included in this screening is a review of the overseas documented health evaluation (Form OF-157), completion of a medical history, review of vaccination status, review of overseas testing for sexually transmitted diseases, and a brief mental status examination. Other tests and a physical examination may be completed as indicated by the findings of the health screening. For some individuals, this completes a full health screening. We have found, however, that many refugees need a more complete medical and mental health assessment with follow-up referrals for medical, mental health, or social services as needed—to help them make a successful transition to life in the US.

#### THE NEED FOR A MORE Comprehensive Program

The Division of Quarantine system appears to serve public health interests well for the most part; however, there are some deficiencies in the system as it currently exists. For example, even after going through the screening process, all refugees-even those initially unclassifiedmay still have life-threatening disease or an inadmissible condition. There are two reasons for this. First, host country screening exams are valid for 12 months prior to the refugee's departure, so an individual may develop a medical condition after screening but prior to departure. Second, the criteria for inadmissibility are narrowly defined. Refugees may have serious conditions that do not meet these criteria, including conditions not commonly seen in this country. We have seen cases of cysticercosis and schistosomiasis, and we see many cases of undiagnosed diabetes. Detecting and treating all medical conditions is important from both humanitarian and economic perspectives.

Before we began our program, Colorado did not coordinate follow-up of Class A and B individuals, and unclassified refugees received minimal medical attention. Refugees were screened in multiple locations and by multiple providers. In addition, the required rescreening of Class A and B individuals was not being carried out during the mandated 30-day window.<sup>14,15</sup>

We reviewed the entire process and redesigned the program to make it more user-friendly and to provide more services. Refugees often failed to be screened because the process presented significant barriers. One barrier was the limited availability of interpreters. Another was the need to visit multiple facilities on multiple occasions without easy access to transportation. For example, family members might have to visit one screening site for the adults and one for children, and then schedule second visits for PPD readings, third visits for chest X-rays, and additional visits for vaccinations. This process could take several weeks to complete, which not only affects the refugee family but also puts the program's funding at risk if screening is not completed within the required time frame.

We consider it a deficiency in the traditional system that a very basic mental status exam is the only required mental health screening. Many refugees arrive from wartorn areas, all refugees have experienced some form of persecution and loss, and all must deal with loss of their homes and livelihoods. Symptoms of PTSD, depression, anxiety, and physical injuries resulting from torture are prevalent among refugee populations.<sup>8,16-18</sup> Detecting and providing assistance with these conditions is important in terms of both short-term and long-term adjustment and well-being. We hope to understand the role of psychological functioning better via data collected through our project.

Another difficulty for refugees who attempt to access medical systems in this country is the lack of cultural knowledge and competence in some mainstream health care providers. Providers may not have experience or training in working with interpreters, or may not have knowledge about the circumstances from which particular refugee groups come. In addition, it is difficult to give adequate attention to the needs of refugees in the course of typical medical practice because working with interpreters requires more time than standard medical visits. Also, not all health care providers have training in medical recognition of the after-effects of torture or in identification of PTSD.

#### THE PARTNERSHIP TO IMPROVE HEALTH SCREENING OF REFUGEES

In January 1997, the A.F. Williams Family Medicine Center and the Colorado Refugee Services Program formed a partnership to create an accessible and comprehensive system of evaluation, treatment, and referral for all classes of refugees arriving in Colorado.

By Colorado law, the Colorado Refugee Services Program is charged with administration of all programs accessible to the refugee population, including cash grants, social services, medical assistance programs, as well as health screening and assessment. Refugees are eligible for Medicaid for eight months following their resettlement in Colorado. The hope is that this will allow them an adequate amount of time to adjust to the US and to become healthy and contributing members of their new society. Such an adjustment, in so short a time period, requires a network of accessible and culturally appropriate sources of help. As other countries have found, establishing such networks is difficult because of language and cultural barriers and difficulties in coordinating social service, job support, and public assistance programs.<sup>19,20</sup>

Our project is guided by our belief that being attuned to the unique characteristics and experiences of refugees and the physical and mental health conditions refugees may bring with them is the first step in improving the acceptability of care and therefore access to care.

#### A COMPREHENSIVE ASSESSMENT AND REFERRAL PROGRAM

To create a system of care that would be an acceptable and culturally sensitive introduction to the US health care system, we were committed to establishing a program with a single point of access and the fewest possible visits. We were also committed to eliminating transportation barriers and the need to visit multiple sites. A familybased approach allows us to have a single, central, dedicated site at which entire refugee families could have the majority of their health care needs met.

In what follows, we describe how the program addresses each of the goals that we have articulated. These goals emerged from a series of conversations among family medicine, mental health, and public health professionals. Key in the process was the inclusion of experienced professionals who had been working with refugees in Colorado for many years. The group was able to exchange information on successes and failures of the past and incorporate the "wish lists" of those with a great deal of experience.

Goal 1. Establish a multidisciplinary team effective in providing health screening and care for refugees. We established a multidisciplinary team to provide health screenings and care for refugees. The membership of the team, which meets weekly, has evolved over time; the primary change has been a move in the direction of using professionals with higher levels of medical training. The refugee project team currently consists of staff members of voluntary resettlement agencies, interpreters, a Medical Director, an administrative coordinator, a health screening coordinator, a medical assistant who also provides radiology services, a follow-up and referral nurse, and a psychologist. Family medicine faculty and residents perform all health assessment exams. The medical assistant, health screening coordinator, psychologist, and some of the physicians have had supplemental training and experience in working with refugees and interpreters. This training is provided by local experts on refugee mental health and by attending refugee health conferences. Four of the six faculty physicians have worked overseas—in countries such as Ukraine, Ecuador, Haiti, and Belize for extended periods of time.

The volunteer agencies play a critical role. All refugees entering the country must have a sponsoring agency, which provides a volunteer worker who is responsible for all phases of resettlement.<sup>13</sup> Among other things, they work to arrange transportation to appointments, ensure enrollment in and transportation to English as a second language training, assist with Medicaid applications, arrange housing, and help with job searches. Some of these workers are recent immigrants themselves and can provide interpreting when necessary.

When we first started the new program, one person completed the health screening and provided the administrative functions. Due to the increased volume created by the successful expansion of the program, an administrative coordinator and a screening nurse now share these functions. The administrative coordinator's daily work includes oversight of all aspects of the program including scheduling, data collection, and compliance issues. She also functions as a liaison to the state Refugee Services Program. The screening nurse performs the clinical elements of the ORR-mandated screening and coordinates the comprehensive health assessment. The Medical Director and the psychologist provide oversight and clinical expertise in program management and development as well as providing direct clinical services. The most recent addition to the team is a follow-up and referral nurse coordinator.

Goal 2. Establish a comprehensive system for refugee health screening. The assessment process is structured to increase the likelihood that all refugees will receive the required health screening as well the added benefits of our program. Either the voluntary agency worker in charge of resettling the refugee family or a representative of the Colorado Refugee Services Program informs the administrative coordinator of new refugees coming to the area. This notification should occur prior to the arrival of the family, but often is delayed by one or two weeks when the agencies are overwhelmed. The coordinator schedules the two-stage comprehensive health assessment

## Many refugees suffer from undiagnosed illnesses such as heart disease or hypertension, post-traumatic stress disorder, diabetes, or malaria.

through the appropriate voluntary agency. Because we bring the refugees in by family groups at dedicated times, we are able to simultaneously schedule the volunteer agencies, interpreters, and providers. The dedicated blocks of time allow us to evaluate complete family groups, often 8 to 10 individuals, using only one interpreter during one time period. This proved to be a highly efficient use of interpreter time.

At the first visit, the screening nurse and a medical assistant, with the help of the interpreter, review the overseas health documents (Form OF-157), chest X-rays, and vaccination records. They complete the mandated screening by taking a basic medical history, performing a nutritional assessment (by history and anthropomorphic indices), and by asking mental status questions. In addition to this minimal mental health screening requirement, they complete the first phase of our enhanced mental health assessment, described in more detail below. The medical assistant collects vital signs and performs vision and hearing screenings. The intake nurse places a PPD on everyone 6 months of age and older in accordance with Division of Quarantine protocols (which differ from the standard for pediatric tuberculosis testing in the US, which calls for initial testing at age 2-3months for those deemed at risk due to exposure or a high risk family situation or environment). The nurse instructs the refugees in the use of the parasite stool test kit, which they take home. The nurse also draws blood for hepatitis B antigen and antibody tests and does a fingerstick hematocrit.

The refugee family is scheduled to return two days later, at which time we read the PPDs, retake vital signs that were abnormal on first reading, and collect the stool kits. At this second visit, the physician reviews and completes the history, completes the mental health screening, and performs a thorough physical. We also give initial vaccinations to expedite school entry and in accordance with the disease prevention recommendations of the American Academy of Pediatrics, the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, and the American Academy of Family Physicians.<sup>21</sup> Varicella vaccine is given to all eligible children and adults in conformance with the INS permanent status requirements.<sup>22</sup>

We do chest X-rays of refugees with positive PPDs regardless of the results of X-rays done in the host country. This is important due to the poor quality of overseas Xrays and avoids the potential problem of black market films. We order other indicated blood tests based on the refugee's history and results of the physical. Collection of other tests and samples does not require repeated visits, since this is accomplished during the two scheduled visits.

At the second visit, we also attempt to establish follow-up treatment for conditions found to this point, making referrals as necessary. (Follow-up is hampered by several problems. Many refugees do not understand the severity of their conditions or the need for follow-up. Others may not understand how to access care in this country. Many refugees live in surrounding communities, and transportation difficulties limit their ability to return to our facility, where their history and problems are known. Finding other culturally competent care providers who accept Medicaid is often difficult. Also, Medicaid enrollees in Colorado all become members of Medicaid HMOs, and the assigned provider is not always known at the time of the referral.)

By splitting the evaluation into two sessions two days apart, we are able to read the PPDs and complete all necessary follow-ups, including X-rays and isoniazid prophylaxis or referral for supervision of prolonged TB treatment.

The Medical Director is responsible for reviewing all final radiology reports, stool test results, and hepatitis B serologies. The Medical Director discusses the data with the referral nurse, who makes arrangements for further follow-up. Often this involves referral to another medical facility, depending on which Medicaid plan the family is enrolled in.

In 1996, 90% of refugees arriving in the Colorado Front Range area received required health screenings but only 9.3% of refugees received more complete health assessments.<sup>15</sup> In 1997, 93% of arriving refugees received required screening and 87% had full health assessments.<sup>23</sup> We have reached the goals of providing comprehensive health assessments to more than 65% of all arrivals within a 90-day window.<sup>23,24</sup>

During the first quarter of operation, January 1–March 31, 1997, the proportion of refugees who received treatment for parasites increased to 77% from 0% during the previous quarter.<sup>23</sup> The number of significant health conditions identified increased from 19 among a total of 250 refugees screened during the last quarter of 1996 to 134 among a total of 189 refugees screened during the first quarter of 1997.<sup>15,23</sup>

Goal 3. Enhance services to include a full health assessment in all refugees. Instead of deciding whether to provide the entire expanded health assessment on a case by case basis or by country of origin, we have chosen to provide the entire comprehensive health assessment to all refugees.<sup>25,26</sup> For example, all refugees receive a physical exam and vaccination updates—which more closely approximates a standard well-person exam in the United States than the minimally required health screening—as well as the stool tests, TB tests, and hepatitis B testing.

See the shaded box on page 475 for an overview of the tests and procedures that are included in our comprehensive screening and assessment protocol.

A key improvement in our process is the addition of mental health screening procedures in every adult refugee health assessment. The intake nurse through an interpreter asks a set of questions about history of imprisonment, trauma, or torture. They then ask each adult to complete a 25-item, self-administered symptom checklist that surveys for symptoms of depression, anxiety, and PTSD; if the individual is unable to read, the interpreter reads each item and records the response. The checklist was developed by Dawn Noggle, PhD, of the International Rescue Committee in Arizona. In addition, parents are asked standard questions about their children's adjustment and symptoms of stress or depression. An onsite mental health clinician becomes involved if the children seem to be at risk.

These lines of inquiry are re-addressed by physicians during the second visit. The physician asks about each of the symptoms reported on the checklist, observes the individual for physical signs of torture, asks about head trauma, and offers a referral for mental health services if appropriate and desired. Physicians are also trained to provide reassurance and help refugees understand certain symptoms as normal reactions to the traumas they have experienced.

Developing approaches and tools for this mental health assessment was challenging. Primarily, the goal has been to detect histories of trauma and treatable psychological symptoms and to provide refugees with appropriate reassurance, information, and resources. We did not seek to develop a diagnostic tool because diagnosis at this phase of resettlement is most often inappropriate. We sought instead to use a single, standardized set of questions that would have, at least, face validity for refugees from all parts of the world. Initially, we asked six questions about sleep, appetite, mood, and history of trauma for each adult and child. Later, we expanded the questions and implemented the self-administered symptom checklist. Primary challenges were determining the scope and cultural appropriateness of questions while managing time constraints.

Adding the mental health screening appears to have been justified. During a sample quarter (July–September 1998), we detected 54 significant mental health concerns among the 384 refugees who were screened.<sup>24</sup> The most common problems we identified were symptoms related to a history of torture. More recently, from April 7, 1999, through June 24, 1999, 115 refugees from 11 different countries were screened, and 51 (43%) reported having psychological symptoms on the self-administered symptom checklist. When there is a suggestion of psychological pain, we refer refugees for further evaluation, support, or therapy.

Some refugees request mental health support. Others may report symptoms of depression or PTSD but do not wish to obtain services. Some individuals are best served by providing them with education about the course and nature of PTSD and reassuring them that their reactions are normal responses to abnormal life circumstances. Future research will be geared toward understanding what type of education or support is most appropriate for newly arrived refugees suffering the effects of trauma. In addition, we hope to be able to track the extent to which refugees who are referred follow through on these referrals and the effect that mental health treatment has on their well-being and adjustment to the United States.

Goal 4. Create a system of data collection and entry. The ORR has recommended that screening sites develop better systems for data collection. Availability of more detailed health data will provide the basis for the development of evidenced-based resettlement programs better suited to various populations. The Colorado Refugee Services Program currently tracks the Colorado data. In the future, we will revise the data collection forms to obtain

#### Screening tests and procedures provided by the A.F. Williams Family Medicine Center Comprehensive Refugee Screening Program

**Tests and procedures required by federal law**<sup>13</sup>**:** Review of health history (Form OF-157) Review of vaccination history Hepatitis B serology Analysis of stool sample Review of chest X-ray STD follow-up PPD Vision and hearing screening Dental screening

Additional tests and procedures provided to all refugees: Physical exam Mental health screening Vaccinations as needed Initial treatment of medical conditions and referral for further treatment Pap smear Hematocrit Chest X-ray for positive PPD results Nutritional assessment Tests provided as indicated: CBC Stool hemoccult testing Thyroid testing Urinalysis VDRL Liver function testing Hemoglobin electrophoresis Pregnancy testing Urine culture and sensitivity

more detailed information and expect that more sophisticated software will improve our ability to analyze our findings.

Goal 5. Enhance the cultural competency of our providers. Medical providers may often use only western allopathic concepts to define the health and mental health of new arrivals. Developing providers' ability to understand different cultural systems of beliefs about health gives them a broader capacity to provide health care that works.<sup>27</sup> The difficulties in providing culturally appropriate medical care for refugee and other cross-cultural populations have been documented.<sup>28</sup>

As a family medicine residency training program based in a large academic medical school, we exist in an environment that values and requires education and acquisition of new knowledge. Working with refugees, our faculty, staff, and residents are exposed to new cultures, unique populations, and health conditions rare in the US while acquiring a global view of medicine and health. Several of our residents have reported that their experience with refugees has increased their interest in providing care for culturally unique populations. Followup data will show whether our graduates are more likely to provide care for foreign-born individuals and other underserved groups than graduates who do not work with refugee populations during training.

Goal 6. Establish a comprehensive and effective system of referral and follow-up for refugees. Prior to the development of this program, there was no comprehensive system in place for providing, tracking, and assessing the follow-up care of refugees. For example, one of the most glaring gaps in Colorado is the lack of available dental care for newly arrived low-income refugees. Dental problems are diagnosed in up to one-quarter of refugees in Colorado, and in as many as 70% of those in some population groups.<sup>23,24,26</sup> Medicaid does not cover dental care in Colorado, and therefore refugees without insurance have had limited access. We have begun discussions with the University of Colorado School of Dentistry about making our program a dental training site. Also, one of the local schools of dental hygiene has agreed to provide discounted care for two refugees per week.

Our highest priority is further improvement in the tracking of and follow-up care for TB, hepatitis B, parasites, and mental health conditions. TB follow-up poses an especially difficult problem. Although we identify many refugees with positive PPDs, we are not always able to attain compliance with isoniazid therapy. Voluntary agency workers suggest that this is due to difficulties with transportation as well as due to the reluctance of refugees to receive treatment for asymptomatic conditions. There is also a reluctance to receive treatment based on the perception that treatment stigmatizes the individual.<sup>29,30</sup> For example, many in the Bosnian community, most of whom have received TB vaccinations, believe they are not at risk and prefer to follow the advice of the doctors from their country. In the United States, treatment of PPD-positive populations is recommended despite previous vaccination.

Treatment needs to be developed in a culturally acceptable manner in order to ensure follow-through. For example, we have learned that it is important to treat the diagnosis of tuberculosis with the same sensitivity and confidentiality as in treating sexually transmitted diseases. We take the time to explain to the individual that an effective cure is available and the social and family risks of not following through on treatment.

Goal 7. Ensure competent, accessible interpreting capability. Too often interpreting has been performed by untrained personnel or, worse, by family members including children. We have found that the presence of trained, professional, and experienced medical interpreters is mandatory in caring for refugees. The administrative coordinator has established strong working relationships with a pool of interpreters who have been specifically trained to work with refugee populations. This included training in interpreting of psychologically sensitive material. We find that working with the same group of interpreters provides the best opportunity for good communication and awareness of cultural differences in concepts of disease. They have become key collaborators in the success of the program.

#### FUTURE OPPORTUNITIES

Now in our third year, we are able to look toward future opportunities for program development. This includes improving current systems as well as creating new initiatives.

We hope to improve the efficiency of daily systems. To do so, we are revising our data collection forms, improving the efficiency of our scheduling procedures, working to enlarge our interpreter pool, creating templates to make documentation easier, streamlining clinical procedures for the administration of vaccinations, and improving TB detection and treatment. We are also attempting to arrange for an onsite Medicaid worker to expedite signup for benefits. We believe that this will improve compliance with vaccination requirements and improve completion and tracking of TB treatment.

The ORR supports changing refugee programs to public-private partnerships and the use of all available sources of funds. With this in mind, we are moving toward billing Medicaid for all allowable pediatric exams and vaccinations.<sup>26</sup> This should allow us to use funds from our budget for expansion of the program.

One current problem is that hepatitis B and parasite test results are not available to us by the second visit. We inform the voluntary agencies of these test findings when we receive them, and agency workers are responsible for bringing the refugees in for treatment. Due to communication and transportation difficulties, it is often impossible to ensure that individuals are evaluated for positive hepatitis B antigen status or treated for parasites. One option for ensuring the completion of parasite treatment would be to presumptively treat everyone. A recent article points to the cost-effectiveness of this idea, but as yet the ORR does not fund this strategy.<sup>31</sup> Another option would be to treat those who are at greatest risk because of their country of origin.

Another way we are hoping to remedy incomplete follow-ups is by working with the University of Colorado School of Nursing to design and institute follow-up systems. Through grant funding or other sources, we hope to develop "clinical pathways" for tracking and treating individuals using community resources, the volunteer agencies, and Medicaid providers. Clinical pathways are interdisciplinary algorithms that allow a structured approach to solving a clinical problem. In this case, these protocols would allow advanced practice nurses to find and follow up on positive screening results.

We also hope to improve our vaccination rates. Initial vaccinations for children are always provided at the time of screening. Access to early vaccination allows children to enter school in a more timely fashion. Leaving the full series of hepatitis B and DTP vaccinations to providers other than those involved in the screening process creates uncertainty that all refugees will receive these vaccines. The introduction of varicella vaccination requirements for naturalization of adults and children in 1997 has created some confusion among providers because the requirements differ from those for US-born citizens.<sup>22</sup>

Due to the large number of mental health issues we are detecting, we are establishing a co-located cross-cultural mental health center that will allow us to provide a range of mental health services in a single setting. A psychiatrist and a psychology intern will be on staff parttime and will provide on-site consultation as well as direct services to the refugees. Services will include screening, assessment, crisis intervention, support and acculturation groups, psychotherapy, family therapy, and pharmacotherapy.

Perhaps most important, we hope to understand the extent to which providing all refugees with our program's expanded services is useful, improves screening rates, and is cost-effective. We hope to track the longitudinal health care utilization patterns of refugees in Colorado. We would like to better understand the role that acceptance of and access to health care plays in successful resettlement; other outcome measures will include a full inventory of health conditions.

#### A COMPREHENSIVE PROGRAM BENEFITS REFUGEES AND PROVIDERS

Rarely do people have the opportunity to participate in work that creates benefit for as many parties as in the case of this project. First, the refugees benefit from a

References-

- Protocol Relating to the Stature of Refugees: message from the President of the United States transmitting the Protocol Relating to the Stature of Refugees, done at New York on January 31, 1967. Washington: Government Printing Office; 1968.
- 2. InterAction. Where they are [cited 1999 Jul 28]. Available from: URL: http://www.interaction.org/refugees/where.html
- Department of Health and Human Services (US), Administration for Children and Families, Office of Refugee Resettlement. Fiscal year 1997 annual report to Congress. Washington: ORR; 1997.
- Centers for Disease Control and Prevention (US). Medical examination of aliens (refugee and immigrant) [cited 1999 Jun 25]. Available from: URL: http://www.cdc.gov/ncidod/dq/health.htm
- 5. Pickwell SM. Providing health care to refugees. Advance Practice Nurs Q 1996;2(2):39-44.
- Ackerrman LK. Health problems of refugees. J Am Board Fam Pract 1997;10:337-48.
- Gavagan T, Brodyaga L. Medical care for indigents and refugees. Am Fam Physician 1998;57:1061-8.
- Nelson K, Bui H, Samet J. Screening in special populations: a "case study" of recent Vietnamese immigrants. Am J Med 1997;102:435-40.
- 9. Baughn D, White-Baughn J, Pickwell S, Bartlone J, Wong S. Primary care needs of Cambodian refugees. J Fam Pract 1990;30:565-8.
- Centers for Disease Control and Prevention (US), National Center for Infectious Diseases, Division of Quarantine. Health related waivers [cited 1999 Jun 25]. Available from: URL: http://www.cdc.gov/ ncidod/dq/waiver.htm
- Immigration and Nationality Act, Pub. L. No. 96-212, Sect. 212(a)(1)(A) [cited 1999 Jul 26]. Available from: URL: http://www.cdc.gov/ ncidod/dq/212a1a.htm
- Centers for Disease Control and Prevention (US), National Center for Infectious Diseases, Division of Quarantine. Communicable diseases of public health significance [cited 1999 Jul 26]. Available from: URL: http://www.cdc.gov/ncidod/dq/communic.htm
- Centers for Disease Control Prevention (US), National Center for Infectious Diseases, Division of Quarantine. Technical instructions for medical examination of aliens in the United States. Atlanta (GA): Department of Health and Human Services; 1997.
- Hummel B. Annual review of refugee screening reports. Denver: Colorado Department of Public Health and Environment; 1995 Dec.
- Hummel B. Annual review of refugee screening reports. Denver: Colorado Department of Public Health and Environment; 1996 Dec.
- 16. Shrestha NM, Sharma B, Van Ommeren M, Regmi S, Makaju R, Kom-

comprehensive system for disease detection and help in accessing follow-up care. More important, they experience a more culturally sensitive introduction to the US medical system. Second, the exposure to and the honor of working with refugees enriches the health care providers with opportunities for meeting unique people and obtaining rare knowledge and experience. Third, society gains short-term benefit because the programs increase the likelihood that public health concerns will be identified and treated. Finally, refugees, taxpayers, and society as a whole will gain long-term benefits if our program proves to be helpful in providing the refugees with a smoother transition into life in the United States.

proe I, et al. Impact of torture on refugees displaced within the developing world: symptomatology among Bhutanese refugees in Nepal. JAMA 1998;280:443-8.

- Gong-Guy E, Cravens RB, Patterson TE. Clinical issues in mental health service delivery to refugees. Am Psychol 1991;46:642-8.
- Barudy J. A program of mental health for political refugees: dealing with the invisible pain of political exile. Soc Sci Med 1989;28:715-27.
- Fowler, N. Providing primary health care to immigrants and refugees: the North Hamilton Experience. Can Med Assoc J 1998;159:388-91.
- Jones D, Gill PS. Refugees and primary care: tackling the inequalities. BMJ 1998;317:1444-6.
- American Academy of Pediatrics, Committee on Infectious Diseases. Recommended childhood immunization schedule—United States, January-December 1999 (RE9901): July 1999 notice [cited 1999 Aug 5]. Available from: URL: http://www.aap.org/policy/re9901.html
- 22. Centers for Disease Control Prevention (US), National Center for Infectious Diseases, Division of Quarantine. Addendum to the technical instruction for medical examination of aliens in the United States: vaccination requirements for refugees. Atlanta: CDC; 1997.
- 23. Hummel B. Annual review of refugee screening reports. Denver: Colorado Department of Public Health and Environment; 1997 Dec.
- 24. Hummel B. Annual review of refugee screening reports. Denver: Colorado Department of Public Health and Environment; 1998 Dec.
- Department of Health and Human Services (US), Administration for Children and Families, Office of Refugee Resettlement. Medical screening protocol for newly arriving refugees. Washington: ORR; 1995 Nov 21. Pub. No.: 95-37.
- 26. Colorado Refugee Services Program. Colorado refugee services plan, 1999. Denver: Colorado Department of Human Services; 1998.
- Like R, Steiner P, Rubel RJ. Recommended core curriculum guidelines on culturally sensitive and competent health care. Fam Med 1996;28:291-7.
- Fadiman A. The spirit catches you and you fall down. New York: Farrar, Straus and Giroux; 1997.
- Carey JW, Oxtoby MJ, Nguyen LP, Huynh V, Morgan M, Jeffery M. Tuberculosis beliefs among recent Vietnamese refugees in New York State. Public Health Rep 1997;112:66-72.
- Sumartojo E. When tuberculosis treatment fails: a social behavioral account of patient adherence. Am Rev Respir Dis 1993;147-1311-20.
- Muennig P, Pallin D, Sell R, Chan M. The cost effectiveness of strategies for the treatment of intestinal parasites in immigrants. NEJM 1999;340:773-8.