NR
OVIA, 29 Apr 2004 (IRIN) - The head of the United Nations refugees agency (UNHCR) in Liberia, Moses Okello, has urged more than 300,000 Liberian refugees scattered across West Africa not to return home, but wait for a UN-organised repatriation exercise scheduled to begin in October.

Refugees escaping war torn Liberia

Refugees, Readyng for More Hmong

Seeing hard investments for 700 people leaving top in Thailand.

Liberians fleeing fighting say they're now stalked by hunger in camps
Human Migration

BY MICHAEL PARFIT  PHOTOGRAPHS BY KAREN KASMAUSKI

Leaving home to dwell in an unfamiliar world—more than a million rural Bangladeshis have done it, seeking jobs in Dhaka (below). So too have tens of millions of others, whose movements endlessly transform the planet's human face.
Human Migration

• “… the dynamic undertow of population change; everyone’s solution, everyone’s conflict.”
  - Michael Parfit

National Geographic,
Congolese refugees arriving on shore of Lake Tanganyika, 1998
October 1998
photo by Karen Kasmauski
Refugees, IDPs, Immigrants, Temporary Migrants- 1990’s
Estimated Annual International Arrivals, U.S.A.

- Refugees: 70-90,000
- Immigrants: 1,000,000
- International Travelers: Foreign 60 M / U.S. 60 M
- U.S.-Mexico Border Crossings: 400M?
US Mexico Border, San Diego-Tijuana
The U.S. – Mexico Border

Ciudad Juarez, Mexico

El Paso, Texas
U.S.-Mexico Border
El Paso, Texas
Immigrants:
Percent of U.S. Population, 1900-2000

*Camarota SA January 2001. Center for Immigration Studies
Number of Foreign-Born Persons Living in the U.S., 1900-2000

Source: Center for Immigration Studies, 2001
Impact of Immigration on U.S. Population

• Number of foreign-born persons - *unprecedented*
  - Number tripled in last 30 years
  - March 2000: 28.4 M, 10.4% U.S. population
    • 51% Latin America, 25% Asia, 15% Europe, 9% Other
  - Early 20\textsuperscript{th} century peak: 14.2 M

• Immigration strong factor in population growth
  - 70% in past 10 years
    • 11.2 M immigrants
    • 6.4 M children born to immigrants

Source: Center for Immigration Studies, 2000
Number of TB Cases in U.S.-born vs. Foreign-born Persons
United States, 1992-2002
TB Case Rates by Race/Ethnicity
United States, 1992-2002

Cases per 100,000


- Asian/Pacific Islander
- American Indian/Alaska Native
- Black, non-Hispanic
- White, non-Hispanic
- Hispanic
Percentage of TB Cases Among Foreign-born Persons United States

1992 2002

- ≥50%
- 25%-49%
- <25%
Primary MDR TB in U.S.-born vs. Foreign-born Persons, United States, 1993-2002

Note: Based on initial isolates from persons with no prior history of TB. MDR TB defined as resistance to at least isoniazid and rifampin.
Estimates of annual new drug-resistant tuberculosis cases

- Russia: 11,430
- China: 158,813
- South Korea: 1,233
- India: 238,806
- Nepal: 524
- Zimbabwe: 1,508
- Argentina: 1,598
- Brazil: 1,591
- Perú: 2,906
- Dominican Republic: 794
- Romania: 985
- Ivory Coast: 2,190
- Sierra Leone: 586
- *highest

Countries at risk
Annual Estimate Migrants “Entering” U.S.

Visitors without visas
~ 30,000,000

Non-immigrant visas
27,907,139

Immigrants and refugees
411,266

Undocumented migrants
~ 275,000 ?????

N= ~ 60 million / Yr

Status adjusters in U.S.
679,305

Opportunities for Disease Prevention in Foreign-born Persons

**Immigrants and Refugees**
- Panel Physicians
  - 650 MDs, 1000 Labs
- BCP
- Quarantine Stations
- Travelers

**Status Adjusters**
- Civil Surgeons
  - 3,000 MDs
- Health Departments

**Panel Physicians**
- 650 MDs, 1000 Labs

**BCP**

**Quarantine Stations**

**Travelers**

**Immigrants and Refugees**

**Civil Surgeons**
- 3,000 MDs

**Health Departments**
CDC Role in Overseas Migrant Health Evaluation

Immigration and Nationality Act

- Required health evaluation
- Inadmissible conditions
- Diseases of public health significance
- Prevent importation and spread
- Waivers

Refugee Act

- Prevent importation and spread
- Monitor quality of health screening
- Meet at ports of entry
- Notify state/local health dept

42 CFR

- Prevent importation and spread
- Monitor quality of health screening
- Meet at ports of entry
- Notify state/local health dept
Overseas Medical Evaluation
Unique Opportunity

• Provide centralized health interventions tailored to population needs

• Decrease morbidity and mortality

• Prevent introduction of infectious diseases into the U.S.
Hungry children receive porridge in Congolese refugee camp

National Geographic Oct 1998

Safer • Healthier • People™
Beyond Crisis Response: New Directions for the Enhanced Refugee Health Program

Immigrant, Refugee and Migrant Health Branch
Division of Global Migration and Quarantine
U.S. Refugee Admissions, 1997-2004

Source: DOS

- **9%**
- **35%**
- **25,000 Africans**

<table>
<thead>
<tr>
<th>Year</th>
<th>Unmet ceiling</th>
<th>Unallocated</th>
<th>Latin America/Caribbean</th>
<th>Africa</th>
<th>Asia</th>
<th>Europe &amp; Central Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>9%</td>
<td></td>
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<tr>
<td>1998</td>
<td>35%</td>
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<tr>
<td>1999</td>
<td>25,000 Africans</td>
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<td>2000</td>
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<td>2004</td>
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</tbody>
</table>

Source: DOS
DGMQ Refugee Health Responses

- Barawan Somalis, 1997
- Kosovars, 1999-2000
- Montagnards, 2002
- Burmese, 2001
- 8,000 Liberians, 2003-2004
- 3,000 Burmese, 2004
- 15,000 Somali Bantus, 2003-2004
- 15,000 Laotian Hmong, 2004
DGMQ Strategy
Enhanced Refugee Health Response

- Required components **plus**
- Expanded components
  - Tailored to specific population needs
  - Targets diseases of public health importance
    - Based on available population health data
    - When possible, sample current group
- Augmented stateside component
  - Timely transmission of data to health departments
  - Standardized stateside follow-up and treatment
Enhanced Health Response for Liberian Refugees in Ivory Coast, 2003

• **Required components**
  - **Augmented features to address estimated high TB and HIV rates**

• **Expanded components**
  - **Pre-departure treatment for malaria**
    • Fansidar
    • Artesunate
  - **Pre-departure treatment for intestinal parasitosis**
Enhanced Refugee Health Assessment: Evolution

- **Barawan Somali refugees, Kenya, 1997**
  - Sample screened for malaria, schistosomiasis, intestinal parasites
  - Mass pre-departure Fansidar and albendazole
- **Kosovar refugees, Ft. Dix, NJ, 1999**
  - Population-based screening and interventions
  - Focus on chronic diseases including dental
- **Burmese asylees, Guam, 2001**
- **Montagnard refugees, Cambodia and North Carolina, 2002**
  - Screening and treatment for malaria and intestinal parasites
  - Vaccinations
Liberian Refugees
Ivory Coast, 2003-2004

- Fled from civil strife
- 8,000 encamped in three border camps and 19 transit centers
- Political instability and violence
- Urgent movement
- Resettled to 40 US states
Liberian Refugee Resettlement, 2003-2004

Border camp

19 Transit centers

Commercial flights
Refugee Border Camp, Ivory Coast
Refugee Border Camp, Ivory Coast
Refugee Transit Center, Abidjan, Ivory Coast
Refugee Transit Center, Abidjan, Ivory Coast
<table>
<thead>
<tr>
<th>Date</th>
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</tr>
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</table>
| Jun  | Processing begins | Enhanced refugee program  
–TB, HIV, parasites |
| Oct  | IOM reports “measles” | Expanded measles vaccination  
↑ surveillance |
| Nov  | Diagnostic testing  
–Abidjan: negative for measles & rubella | Movement halted  
CDC testing |
### Liberian Refugee Resettlement, Ivory Coast, 2003-2004

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<tr>
<td>Nov</td>
<td>• ONN outbreak</td>
<td>• Bednets, spraying</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pre-departure/post-arrival screening</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Movement re-started</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Expanded measles vaccination stopped</td>
</tr>
</tbody>
</table>

**O’Nyong Nyong Fever (ONN)**

- Transmitted by *Anopheles* mosquitoes
- Found only in Africa
- Potential introduction of disease into US and impact on non-immune population
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<tr>
<td>Nov</td>
<td>ONN outbreak</td>
<td>Bednets, spraying; movement restricted</td>
</tr>
<tr>
<td>Dec-Mar</td>
<td>Varicella outbreak</td>
<td>Movement restricted&lt;br&gt; Epi-X Refugee Health Forum notification</td>
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<tr>
<td></td>
<td></td>
<td>100 cases by March 2004</td>
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<tr>
<td></td>
<td></td>
<td>Ages 4 mos – 46 yrs</td>
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<tr>
<td></td>
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<td>16 refugees with varicella in US</td>
</tr>
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Liberian Refugee Resettlement, Ivory Coast, 2003-2004

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<td>• Movement restricted; notification</td>
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<tr>
<td>Jan-Mar</td>
<td>• Measles outbreak:</td>
<td>• Movement restricted</td>
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<tr>
<td></td>
<td>25 cases</td>
<td>• US notification</td>
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<tr>
<td></td>
<td>ages 5 mos – 11 yrs,</td>
<td>• Epi-Aid</td>
</tr>
<tr>
<td></td>
<td>1 death</td>
<td>– Vaccine donations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Merck varicella vaccine:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,000 doses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• UNICEF measles vaccine:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10,000 doses</td>
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<tr>
<td></td>
<td></td>
<td>– Vaccinated: &gt; 4000 for varicella, ~2000 for measles</td>
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<td>Movement restricted; notification</td>
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<tr>
<td>Jan-Mar</td>
<td>Measles outbreak</td>
<td>Movement restricted; Vaccination program; notification</td>
</tr>
<tr>
<td>Mar-May</td>
<td>Rubella outbreak</td>
<td>Movement restricted; US notification</td>
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<tr>
<td></td>
<td></td>
<td>MMR vaccination</td>
</tr>
</tbody>
</table>

- 36 cases to date; 2-4 pregnant women
- MMR vaccine: 3,000 doses
- Vaccination complete
What are the consequences of failing to achieve an optimal balance between refugee health and migration needs?

- 4 disease outbreaks
  - 3 vaccine-preventable
  - 1 potential US introduction
- Major resettlement delays
  - ↑ danger in host country
- Dollars spent
  - cancelled flights, refugee maintenance, etc
- Hours of staff time
  - multiple domestic and international agencies for surveillance and response activities
- Cost-benefit analysis in process
The Enhanced Refugee Health Program: Post-Liberian Resettlement

1. Expanded population-specific activities
   - Malaria, intestinal parasite Rx

2. Improved evaluation, treatment and follow-up for inadmissible conditions
   - TB: diagnosis and DOT
   - HIV: links with GAP

3. Outbreak response
   - Detection
   - Interventions (vaccinations, bednets)

4. Electronic US Notification
Acknowledgments

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- Whitney Reiss
- Taiya Smith

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- Jean-Louis Kouakou

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- Jennie Monroe

UNICEF
- Erik Detiger

DHHS
- ORR/OGHA
- Heather Colvin

CDC
- NIP
- GAP, Côte d’Ivoire
- NCID