The Changing Face of Occupational Health: Immigrant Workers

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Speaker’s Verbal Disclosure Statement:

Have you (or your spouse/partner) had a personal financial relationship in the last 12 months with the manufacturer of the products or services that will be discussed in this CME activity?

___ Yes

X___ No
Educational objectives for this seminar:

• To describe the major global causes of migration

• To recognize patterns and causes of increased risk of occupational injury and illness among immigrant workers

• To consider new approaches to reducing the health disparities of immigrant workers
Epidemiologic research is often like looking for one’s keys under the lamppost. The light is better there ……..but it isn’t where the keys were lost.

We should be studying illness and injury among our most vulnerable populations, who are the most difficult to study. This is particularly the case for immigrants.
Why Don’t Epidemiologists (and others) See Immigrants

- Live in separate communities
- “Difficult” to study
  - Language, culture, legal status
- Not on standard population lists
- Political barriers
- Prejudice
Outline

- Basic Principles and Causes of Global Migration
- Global migration demographics and economics
- Occupational health of migrant workers
- Summary and future directions
1. Migration has always been and will continue to be a natural phenomena for living species.

One seventh of the global human population is migrant.
Gray Whale Migration
2. The major causes of global migration are likely to increase in the future.

- Environmental Change
Tuvalu: Sea Level Rise and Climate Refugees

When we think of climate change impacts, we think of entire islands like Tuvalu disappearing.

No dry land is more than 5m above high tide line.
Experts predict 50 million environmental refugees by 2020, 200 million by 2050
Figure 1. Numbers and Types of Natural Disasters, 1950–2012.
2. The major causes of global migration are likely to increase in the future.

- Environmental Change
- Political Change (refugees)
Libya, Tunisia

Iraq, Syria

Afghanistan

Burma
The United Nations High Commissioner for Refugees’ estimates there were about 42 million forcibly displaced people worldwide by the end of 2008.
2. The major causes of global migration are likely to increase in the future.

- Environmental Change
- Political Change (refugees)
- Demographic and Economic Disparities
Oaxacan working in agriculture in Oaxaca or Baja California earns (U.S.) $1.50/hr.

Oaxacan harvesting crops in California earns $8.00-$8.50/hr.

1 hr. in CA = 1 day in Mexico
Shortage of Immigrant Workers Alarms Growers in West

By Sonya Geis
Washington Post Staff Writer
Tuesday, November 22, 2005

CALEXICO, Calif. -- Hours before dawn, Chuck Clunn stood on a street corner in this dusty border town and shook his head, dismayed at the small number of men milling in the dark. Workers usually swarm streets near the border crossing in the early morning hours, but today Clunn and other labor contractors looking for farmworkers found a crowd half the size they had been hoping for.

Farmworkers cross back into Mexico after working in San Luis, Ariz. Growers say they could be 32,000 short of those needed this winter. (By Paul Connors -- Associated Press)

Hire Local? Farmers Who Seek US Workers Hit Hard

EVEN WITH HIGH UNEMPLOYMENT, AMERICANS WALK OFF TOO-HARD JOB

By Evann Gastaldo, Newser Staff
Posted Oct 5, 2011 10:04 AM CDT
Global Migration

• 214 million people live outside their country of birth
  • Global dichotomy: countries of origin (developing) and receiving (developed) countries

• 750 million transnational and internal migrants

• **Demographics will make increased migration inevitable**
  • Currently 142 young workers for 100 retirees in developed countries.
  • In 2016 there will be 87 entrants in workforce for 100 retirees.
  • Only immigrants can make up this gap
    • 342 candidates for every 100 jobs in developing countries.
Global Migration

Average annual number of migrants (2000-2005)

- More coming in
- More leaving

Circles are proportional to the number of people.

- 1 million
- 250,000
Global Migration Money Flow

- World Bank estimates $300 billion sent in remittances annually
  - 3 times the combined global foreign aid budgets
  - 60 countries receive > $1 billion
  - 38 countries remittances are > 10% of GDP
3. Migration has negative impacts on health in the origin, transit and destination locations

- Mental health
- Chronic diseases
- Occupational health
- ..........etc
Challenges for migrants' health

Pre migration experiences, e.g. conflict, disasters, epidemiological profile

Return
Loss of previous ties, exposure to risk factors at place of origin (VFR)

Origin

Transit
Violence, detention

Destination

Linguistic, cultural, legal barriers to access health services, social exclusion, discrimination, isolation, exploitation, dangerous working conditions, no social
4. Social protections in health are reduced for the majority of immigrants

- Less preventive (public) health care
- Migrants have less financial protection for health care
- Migrants may be excluded from health care access
U.S. Labor force participation of men ages 18-64, 2006

Source: U.S. Census Bureau, 2006 Current Population Survey
Mexican immigrant adults have the highest levels of no medical visits in the past two years, U.S.
Mexican Immigrant Adults Emergency Room Visits

- Recent Mexican Immigrants: 7.1%
- Longer-stayed Mexican immigrants: 11.9%
- Mexican-Americans: 16.7%
- U.S.-Born Whites: 15.5%
Health Care for immigrant workers...It Depends on Your Visa!
5. The history of harsh working conditions for immigrants is a global phenomena that goes back thousands of years.
US Occupational Health has also shown this phenomena.

- Chicago stockyard workers
- Garment workers
- Construction workers
- Agricultural workers
Immigration and Occupation
Postville, Iowa
May 12, 2008
The Short Life and Preventable Death of Maria Isabel Vasquez Jimenez

Meet Maria Isabel Vasquez Jimenez.

On May 13, seventeen-year-old Maria was a farmworker, working the grape vineyard of West Coast Grape Farming in Stockton, California alongside her fiancee, Florentino Bautista.

Three days later, Maria was dead -- killed after working nine straight hours in the broiling heat of the California summer, without access to water or shade.
Heat Stress Mortality

During 1992-2006, 423 workers in agricultural and nonagricultural industries died from exposure to environmental heat

- 68 (16%) of these workers were engaged in crop production or support activities for crop production

- The heat-related average annual death rate for these crop workers was 20 times higher than for all U.S. civilian worker

Employed Latinos in U.S. by Industry, 2010 (%)

- Housekeeping/Maintenance: 38.6%
- Crop Agriculture: 30.6%
- Construction/Manufacturing: 19%
- Transportation: 15.4%
- Wholesale & Retail Trade: 13.8%
- Public Service: 10.5%
- Financial Activities: 10.3%
- Information (news/radio): 9.9%
- Professional: 7.1%

Source: Bureau Labor Statistics, Household Data Annual Averages
Number and rate of fatal occupational injuries, by industry sector, 2010*

- Construction: 751 injuries, 9.5 rate
- Transportation and warehousing: 631 injuries, 13.1 rate
- Agriculture, forestry, fishing, and hunting: 596 injuries, 26.8 rate
- Government: 477 injuries, 2.2 rate
- Professional and business services: 356 injuries, 2.5 rate
- Manufacturing: 320 injuries, 2.2 rate
- Retail trade: 301 injuries, 2.2 rate
- Leisure and hospitality: 229 injuries, 2.2 rate
- Other services (excl. public admin.): 186 injuries, 3.0 rate
- Wholesale trade: 185 injuries, 4.8 rate
- Mining: 172 injuries, 19.8 rate
- Educational and health services: 169 injuries, 0.9 rate
- Financial activities: 108 injuries, 1.2 rate
- Information: 42 injuries, 1.5 rate
- Utilities: 24 injuries, 2.5 rate

Total fatal work injuries = 4,547
All-worker fatal injury rate = 3.5

Number of fatal work injuries

Fatal work injury rate (per 100,000 full-time equivalent workers)
Fatality Rates by Major Industry Sectors, 2003-2010.*

Source: Bureau of Labor Statistics Census of Fatal Occupational Injuries (CFOI)
Number of fatal work injuries, 1992–2010*

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Fatal Work Injuries</th>
</tr>
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<tbody>
<tr>
<td>1992</td>
<td>6,217</td>
</tr>
<tr>
<td>1993</td>
<td>6,331</td>
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<tr>
<td>1994</td>
<td>6,632</td>
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<td>1995</td>
<td>6,275</td>
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<td>1996</td>
<td>6,202</td>
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<td>1997</td>
<td>6,238</td>
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<tr>
<td>1998</td>
<td>6,055</td>
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<tr>
<td>1999</td>
<td>6,054</td>
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<tr>
<td>2000</td>
<td>5,920</td>
</tr>
<tr>
<td>2001</td>
<td>5,915</td>
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<tr>
<td>2002</td>
<td>5,534</td>
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<td>2003</td>
<td>5,575</td>
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<td>2004</td>
<td>5,764</td>
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<tr>
<td>2005</td>
<td>5,734</td>
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<tr>
<td>2006</td>
<td>5,840</td>
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<td>2007</td>
<td>5,657</td>
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<tr>
<td>2008</td>
<td>5,214</td>
</tr>
<tr>
<td>2009</td>
<td>4,551</td>
</tr>
<tr>
<td>2010</td>
<td>4,547</td>
</tr>
</tbody>
</table>

* Source: Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII)
At $250B, Costs of Occupational Injury and Illness Exceed Costs of Cancer

- Posted January 3, 2013, by J. Paul Leigh
- Occupational injuries and illnesses are overlooked contributors to the overall national costs of all diseases, injuries, and deaths. My recent study published in the *Milbank Quarterly*, "Economic Burden of Occupational Injury and Illness in the United States," estimates these costs to be roughly $250 billion a year. This amount exceeds the costs of several other diseases, including cancer, diabetes, and chronic obstructive pulmonary disease (COPD) for the same year.
Factors Associated with Increased Injuries Among Immigrants

- More hazardous jobs and tasks
  - Agriculture, construction, transportation, domestic services, garment
- Linguistic and cultural barriers
- Recent arrival
- Lack of safety training and equipment
- Precarious job (= Undocumented status)
  - Unwilling to complain
  - Risk taking
Poor Self-Rated Health in Female Workers by Employment Contract Type, ITSAL (Spain)

% Poor Health

- Spanish-Born
- Foreign-Born (New)
- Foreign-Born (Established)

Employment Contract Type

- Permanent
- Temporary
- None

Sousa, Int J Pub Hlth, 2010
Agriculture
Occupational Health Problems Among Agricultural Workers

“A textbook of occupational disease”

- Injuries; acute and cumulative
- Respiratory disease
- Dermatologic disease
- Infectious disease
- Heat stress
- Cancer
- Adverse reproductive outcomes
- Mental illness
- Pesticide illness (acute, chronic)
- Neurologic disease
- Etc.
The California Agricultural Workers Health Study (CAWHS)
# PMR External Causes, US Farmworkers, 24 States, 1984-1993

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Number</th>
<th>PMR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Causes</td>
<td>3616</td>
<td>133 (129 – 137)</td>
</tr>
<tr>
<td>All Injuries</td>
<td>2465</td>
<td>152 (146 – 158)</td>
</tr>
<tr>
<td>Motor vehicle injuries</td>
<td>1299</td>
<td>149 (141 – 158)</td>
</tr>
<tr>
<td>Other unintentional injury</td>
<td>1091</td>
<td>157 (148 – 157)</td>
</tr>
<tr>
<td>Unintentional poisoning</td>
<td>81</td>
<td>190 (145 – 244)</td>
</tr>
<tr>
<td>Falls</td>
<td>72</td>
<td>117 (92 – 148)</td>
</tr>
<tr>
<td>Suicide</td>
<td>480</td>
<td>80 (73 – 87)</td>
</tr>
<tr>
<td>Homicide</td>
<td>807</td>
<td>142 (131 – 154)</td>
</tr>
<tr>
<td>Firearms</td>
<td>721</td>
<td>99 (92 – 107)</td>
</tr>
</tbody>
</table>

Day Laborers
Occupational Risks and Injuries in Non-Agricultural Immigrant Latino Workers (N=427)

- Door-to-door recruitment
- Industries:
  - Construction 32%
  - Janitor/maintenance 20%
  - Restaurant/hotel 21%
- 20% health insurance
- Injury rate 12.2/100 FTE (US avg. 7.1/100 FTE)
  - 58% did not file workers comp claim

Pransky, AJIM, 2002
Occupational Risks and Injuries in Non-Agricultural Immigrant Latino Workers - 2

- Median lost time = 13 days
- 29% had to change jobs because of injury
- Injuries not associated with:
  - Ability to speak English
  - Number of jobs in past year
  - Job tenure
  - Receiving safety training (English or Spanish)

Pransky, AJIM, 2002
Construction Work
Occupational Fatalities of Hispanic Construction Workers

- Data from CFOI and Current Population Survey (CPS)
- Hispanics 16% of construction workforce, 23.5% of fatalities
- Fatal occupational injuries 1.44 - 1.84 x rate of non-Hispanics
- Fatal occupational injury RRs (95% CI)
  - Helper, construction 2.31 (1.41 - 3.80)
  - Roofer 1.77 (1.38 - 2.28)
  - Carpenter 1.39 (1.08 - 1.79)
  - Construction laborers 1.31 (1.08 - 1.79)

Dong, AJIM, 2004
Domestic Cleaning
Migrant domestic workers: 'I was in a prison, a cage, just like a slave'

Migrant domestic workers in the UK are often subjected to meagre wages, violence, sexual abuse and food rationing — usually by their middle-class employers.

New Protections for Migrant Domestic Workers Adopted at the UN

December 6th, 2010
Cleaning work and use of professional and non-professional household cleaners associated with increased incidence of asthma symptoms and medications. 10 countries, n = 3503

<table>
<thead>
<tr>
<th>Outcome</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma symptoms or medication</td>
<td>1.49</td>
<td>1.12 – 1.99</td>
</tr>
<tr>
<td>Wheeze</td>
<td>1.39</td>
<td>1.06 – 1.80</td>
</tr>
<tr>
<td>MD Dx asthma</td>
<td>2.11</td>
<td>1.15 – 3.89</td>
</tr>
</tbody>
</table>

Zock, AJRCCM, 176:735, 2007
### Incident Respiratory Symptoms Associated with Immigration and Occupational Exposure

<table>
<thead>
<tr>
<th>Immigration &amp; Occupational Exposure</th>
<th>Asthma RR (95% CI)</th>
<th>Chr Bronchitis RR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Immigrant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Exposed</td>
<td>1.0 (ref)</td>
<td>1.0 (ref)</td>
</tr>
<tr>
<td>Exposed</td>
<td>1.40 (0.94 – 2.08)</td>
<td>0.71 (0.31 – 1.62)</td>
</tr>
<tr>
<td><strong>Immigrant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Exposed</td>
<td>0.56 (0.14 – 2.26)</td>
<td>2.48 (0.76 – 8.06)</td>
</tr>
<tr>
<td>Exposed</td>
<td>3.77 (1.57 – 9.04)</td>
<td>6.12 (2.00 – 18.70)</td>
</tr>
<tr>
<td>Females</td>
<td>1.81 (1.25 – 2.60)</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted for age and region

Schenker, In preparation
Special case of migrants "in an irregular situation"

- Some 15% (?) of migrants are in an irregular situation
- Fewest entitlements to health and social services
- Exposed to many health risks, exploitation, discrimination
In November of 2008, Albania Deleon, 39, a U.S. citizen/émigré from the Dominican Republic, was convicted of 28 counts of fraud for selling at least 800 fake asbestos-removal training certificates to foreign workers.
Global Consultation on Migrant Health
Madrid, Spain 3-5 March 2010
Challenges for health systems: Paradigm shift

Traditional approach of exclusion:
- Security
- Disease control, quarantine, IHR '51
- National focus

Multi-dimensional approach of inclusion:
- Reduction of inequities
- Social protection in health, health determinants, NCDs
- Multi country & inter-sectoral
New operational frameworks are needed

- Monitor and study migrant health
- Migrant sensitive health systems
- Policy legal frameworks
- Multinational approaches
The Message

Immigrants overrepresent health disparities in the occupational setting. The perfect study (of immigrant health) should not be the enemy of the good study.

*Dans ses écrits, un sâge Italien Dit que le mieux est l'ennemi du bien.*

*Voltaire*
Coming,
August 2014
UC Press

MIGRATION AND HEALTH
A RESEARCH METHODS HANDBOOK
EDITED BY MARC B. SCHENKER
XÖCHTIL CASTAÑEDA
ALFONSO RODRIGUEZ-LAINZ
Thank you!

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