

# "Where the Dangerous Jobs Are: Migrant Workers in the 21<sup>st</sup> Century"

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Occupational Health  
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## 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.



## 2. The major causes of global migration are likely to increase in the future.

- Environmental Change



Indonesia, 12/26/2004



Japan, 3/11/2011



Haiti, 1/13/2010



Dhaka, Bangladesh

## Experts Predict 50 Million Environmental Refugees by 2020



Huffington Post, 2/22/2011

## 2. The major causes of global migration are likely to increase in the future.

- Environmental Change
- Political Change (refugees)



Libya, Tunisia



Afghanistan



Iraq, Syria



Burma

- The United Nations High Commissioner for Refugees' estimates there were about 42 million forcibly displaced people worldwide by the end of 2008.



Liberians providing shelter to Ivory Coast refugees

## 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.

1 hr. in CA = 1 day in Mexico

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



### Shortage of Immigrant Workers Alarms Growers in West

By Sylvia Gels  
Washington Post Staff Writer  
Tuesday, November 22, 2005

CALEXICO, Calif. — Hours before dawn, Chuck Chum 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 Chum and other labor contractors looking for farmworkers found a crowd half the size they had been hoping for.



Farmworkers cruise back into buses after working in San Luis. A.D. Growers say they could be 50,000 short of those needed this week. (By Paul Constant - Associated Press)

### Hire Local? Farmers Who Seek US Workers Hit Hard

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

By Evann Gestakio, News Staff  
Posted Oct 5, 2011 10:04 AM CDT



• >1 million crossings per day of entire US-Mexico border

## 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



## 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

## Global Migration

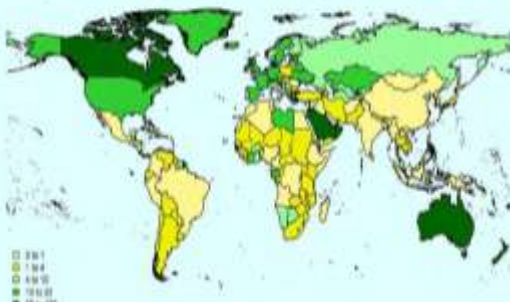
- 214 million people live outside their country of birth
  - Global dichotomy: countries of origin (developing) and receiving (developed) countries
- 750 million transnational and internal migrants
- **Demographics will make increased migration inevitable**
  - Currently 142 young workers for 100 retirees 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



## Migration dynamics

Migrant stock as percentage of total population, 2010



## 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



## Immigration and Occupation



The history of harsh working conditions for immigrants is a global phenomena that goes back thousands of years



Immigrant slaves in Egypt



Chicago Stockyards



Triangle Shirtwaist Factory Fire

## 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 fiancée, 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



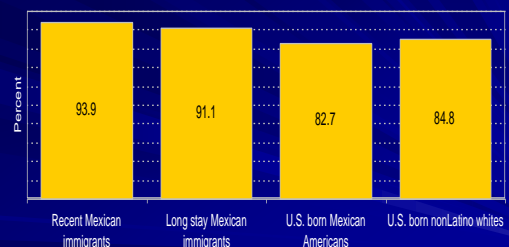
Source: CDC, *MMWR*, 2008 Vol. 57, No. 24.

## Immigrant Populations, Work and Health Research

- Systematic review of immigrant occupational health research articles
- 48 articles, 1990 - 2005
  - Consistent finding of increased fatal and non-fatal injuries among immigrant populations
  - Little and inconsistent data on etiologic factors

Ahonen, SJWEH, 2007

## U.S. Labor force participation of men ages 18-64, 2006



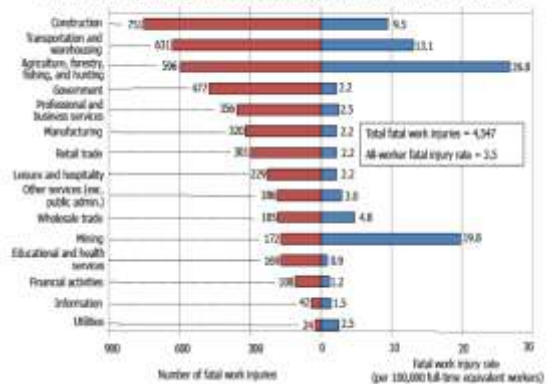
Source: U.S. Census Bureau, 2006 Current Population Survey

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

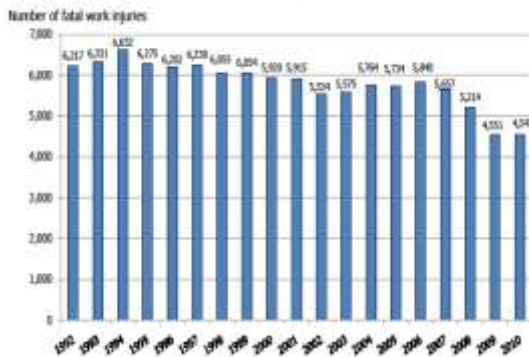


Source: Bureau Labor Statistics, Household Data Annual Averages

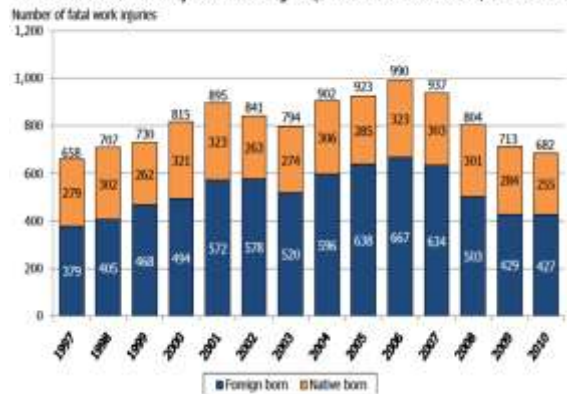
## Number and rate of fatal occupational injuries, by industry sector, 2010\*



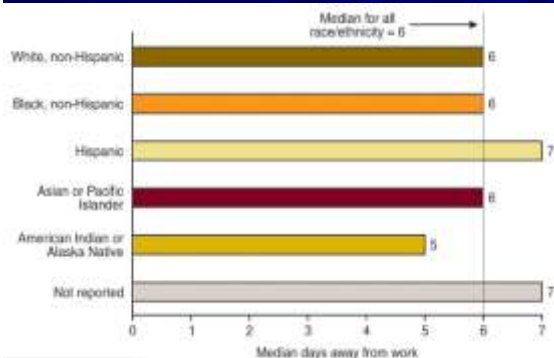
## Number of fatal work injuries, 1992-2010\*



## Number of fatal work injuries involving Hispanic or Latino workers, 1997-2010\*



## Days of Disability from Occupational Injuries

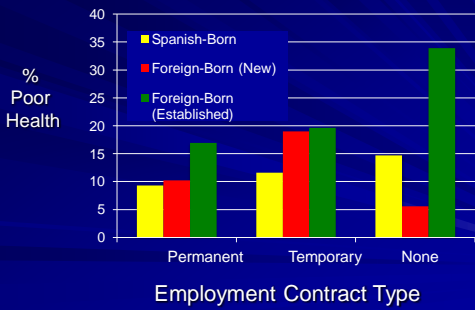


NIOSH, Worker Health Chartbook, 2004

## 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)



Sousa, Int J Pub Hlth, 2010

### Agriculture



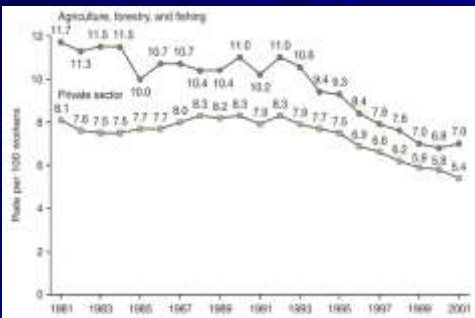
### Occupational Health Problems Among Agricultural Workers "A textbook of occupational disease"

- 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)



### Non-Fatal Injury Rates in Agriculture (Forestry & Fishing) vs. Private Sector, 1981 - 2001



Note: Excludes farms with <11 employees

### PMR External Causes, US Farmworkers, 24 States, 1984-1993

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

Source: Colt, J.S. Stallones, L. (2001) Am J of Ind Med, 40, 604-611.

## 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





From The Times  
January 21, 2010

## 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

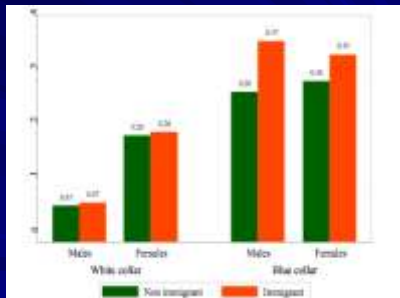
## Household Cleaners and Adult Asthma in the ECRHS

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

Outcome	OR	95% CI
Asthma symptoms or medication	1.49	1.12 – 1.99
Wheeze	1.39	1.06 – 1.80
MD Dx asthma	2.11	1.15 – 3.89

Zock, AJRCCM, 176:735, 2007

## European Immigration and High Risk Respiratory Toxin Exposure



Schenker, In preparation

## Incident Respiratory Symptoms Associated with Immigration and Occupational Exposure

Immigration & Occupational Exposure	Asthma RR (95% CI)	Chr Bronchitis RR (95% CI)
Non-Immigrant		
Non-Exposed	1.0 (ref)	1.0 (ref)
Exposed	1.40 (0.94 – 2.08)	0.71 (0.31 – 1.62)
Immigrant		
Non-Exposed	0.56 (0.14 – 2.26)	2.48 (0.76 – 8.06)
Exposed	3.77 (1.57 – 9.04)	6.12 (2.00 – 18.70)
Females	1.81 (1.25 – 2.60)	

Adjusted for age and region

Schenker, In preparation

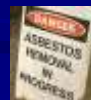
## Special case of migrants "in an irregular situation"

- Some 15% (?) of migrants are in an irregular situation
- Fewest entitlements to health and social services
- Exposed to many health risks, exploitation, discrimination



## Immigrant Workers Exposed to Asbestos During Removal

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.





## New operational frameworks are needed

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- Monitor migrant health
- Migrant sensitive health systems
- Policy legal frameworks
- Multinational approaches

## The Net Sum of Global Migration

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*“ We now understand better than ever that migration is not a zero-sum game. In the best cases, it benefits the receiving country, the country of origin and migrants themselves.”*

Kofi Anan, 2006

### UC Davis Online Program in Migration and Health

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## Thank you!

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