On-farm health screening needs of immigrant dairy workers in the Texas Panhandle and South Plains

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By the end of this presentation, the audience will be able to:

• Recognize sociodemographic and occupational characteristics of dairy workers in the Texas Panhandle and South Plains.

• Review on-farm health risk screening needs of dairy workers in the Texas Panhandle and South Plains.

• Interpret findings for evidence-based practice (EBP) planning for improving health and well-being of dairy workers by addressing known barriers to health when organizing on-farm health risk screenings.
Systemic barriers to health service access

- Cost, lack of health insurance
- Communication, culture, literacy
- Conflicting work schedules (dawn-to-dusk)
- Lack of childcare
- Limited knowledge of health center locations
- Lack of specialty services in rural regions
- Transient lifestyles
- Fear of law and immigration enforcement

Reported needs

Diabetes type 2, hypertension, musculoskeletal (MS) pain, dental hygiene problems, undiagnosed/untreated mental health disorders, social isolation
U.S. Dairy Industry

- Non-seasonal (365 days a year, 7 days a week, 24-hours a day)
- Integrated system with inherent hazards (injury prone)
- 99% family owned & operated
- High dependency on foreign labor (increase in H2A, TN visas)

Dairy Workers

- Immigrant
- Hispanic
- Male
- 30 -35 years of age

- Limited English-proficiency
- Limited literacy
- Living below poverty level
There is a need to characterize occupational profiles, living and economic conditions, and determine specific health needs and feasibility of on-farm health risk screenings among dairy workers in Texas.
Study approach

300 dairy farm workers surveyed (≥18 years of age and employed on dairy) Representing 22 large-herd farms in the Panhandle

20 sociodemographic questions
13 health care needs assessment questions
Adopted by NAWS and NIOSH Well-Being

Data collection

• English and Spanish research personnel
• Qualtrics Mobile Survey Software (offline feature)
• 15-minute survey, $10 Walmart gift card
• April 2020 - July 2021
Sociodemographic characteristics

- Immigrant, Hispanic (88.8%) males (83.0%)
- 5 days to 44 years in the United States
- 34.4 (SD 9.9; Range 18 - 79)
- Elementary/middle school education (39.8%)
- Spanish (87.3%), K'iche' (2.0%)

Occupational profile

- Milkers (22.0%), 7.2 (SD 8.5; Range 0 -56) years of dairy experience
- 6.0 (SD 0.4; Range 3-7) days a week
- 9.9 (SD 1.5; Range 6-13) hours a day
- Paid sick time (31.7%)
Living conditions
• Married (59.1%), 2.7 (SD 1.4) children
• Renting (32.7%), employer housing (10.7%)
• Co-workers (28.3%), multigenerational (12.0%)
  ◦ Household residents 4.4 (Range 1 -12)

Economic status
• Hourly rate: $13.40 (SD $2.8) USD
  ◦ Range $8.10 - $30.00
• Individual annual income < $39,999 (80.0%)

Self-reported health needs assessment
• "Very good" (38.5%), "Good" (33.8%)
• Non-smokers (83.6%)
• 5.8 (Range 1 - 35) alcoholic drinks per week
• 6.9 (Range 3 -12) hours of sleep
• Health insurance (55.7%), PCP (24.0%)
• Attend on-farm screening (93.8%)
Rank top five health care services by importance: 1 being "most important" and 5 being "least important" if offered on the farm for free:
(a) Workplace interventions, (b) nutritional & physical fitness support, (c) preventative care, (d) mental health, (e) laboratory & diagnostic care
Table 4. Top five specific health care services ranked by importance: 1 being “most important” and 5 being “least important” among dairy farm workers in the Texas Panhandle-South Plains region (n = 300).

<table>
<thead>
<tr>
<th>Service Category</th>
<th>Top 5 Specific Services (Mean Rank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventive Care</td>
<td>All</td>
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<tr>
<td></td>
<td>(1) Vision (2.1)</td>
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<tr>
<td></td>
<td>(2) Dental (2.4)</td>
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<tr>
<td></td>
<td>(3) Cardiovascular exam (2.7)</td>
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<td></td>
<td>(4) Chronic disease management (2.7)</td>
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<td></td>
<td>(5) Vaccinations (2.9)</td>
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<tr>
<td>Males</td>
<td></td>
</tr>
<tr>
<td>1. Vision (2.1)</td>
<td>(1) Vision (1.8)</td>
</tr>
<tr>
<td>2. Dental (2.4)</td>
<td>(2) Mammogram (2.2)</td>
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<tr>
<td>3. Cardiovascular exam (2.7)</td>
<td>(3) Dental (2.3)</td>
</tr>
<tr>
<td>4. Chronic disease management (2.8)</td>
<td>(4) Pap smear (2.4)</td>
</tr>
<tr>
<td>5. Vaccinations (2.8)</td>
<td>(5) Chronic disease management (2.5)</td>
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<tr>
<td>Females</td>
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<td></td>
<td>(1) Blood pressure check (1.9)</td>
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<td></td>
<td>(2) Blood glucose check (2.11)</td>
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<td></td>
<td>(3) Cholesterol check (2.8)</td>
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<td></td>
<td>(4) Tuberculosis test (3.1)</td>
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<td></td>
<td>(5) HIV/AIDS status screening (3.6)</td>
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<tr>
<td>Laboratory &amp; Diagnostic Care</td>
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<tr>
<td></td>
<td>(1) Nutrition classes (1.9)</td>
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<td></td>
<td>(2) Weight management (2.7)</td>
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<td></td>
<td>(3) Healthy cooking classes (2.7)</td>
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<td></td>
<td>(4) Gym membership (2.7)</td>
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<td></td>
<td>(5) Workout equipment at work (3.1)</td>
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<tr>
<td>Nutritional &amp; Physical Fitness Support</td>
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<tr>
<td></td>
<td>(1) Anxiety treatment (2.4)</td>
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<td></td>
<td>(2) Depression treatment (2.7)</td>
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<td></td>
<td>(3) Stress management (2.6)</td>
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<td></td>
<td>(4) Controlling anger/emotions therapy (3.0)</td>
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<tr>
<td></td>
<td>(5) Substance abuse therapy (3.8)</td>
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<tr>
<td>Mental Health Care</td>
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<td></td>
<td>(1) Workplace health &amp; safety training (1.6)</td>
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<td></td>
<td>(2) Workplace hazard control (2.2)</td>
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<td></td>
<td>(3) Job stress management (2.9)</td>
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<td></td>
<td>(4) Workplace violence and bullying prevention (3.0)</td>
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<td></td>
<td>(5) Workplace visiting health care nurses (3.3)</td>
</tr>
</tbody>
</table>
Health information resources

- Obtaining health information from internet searches (32.0%) and social media (17.7%)

On-site health screenings

- 90.0% attend with families
- 93.0% continue working for current farm employer

COVID-19 and vaccines

- 95.7% how to prevent transmission
- 86.4% interested in COVID-19 vaccine

Figure 1. Diverse sources of health information among immigrant dairy farm workers in the Texas Panhandle-South Plains region (n = 300).
There is a need to characterize occupational profiles, living and economic conditions, and determine specific health needs and feasibility of on-farm health risk screenings among dairy workers in Texas.
What did we find?

• Immigration status is a social determinant of health rooted in public health, economic, and political inequities.
• Demographics consistent with previous studies, except for Guatemalan (K'iche' speaking) representation
• New hiring trend of H2A visa workers
• Recruitment strategy for employers: on-farm health screenings (93.0% reason to stay)
• Perceived health better than Texans
• Close to poverty threshold for 2020 ($31,417 for a family of five)
• Insurance coverage 55.7% vs 92.0% (US) in 2019
What about on-farm screenings?

• 93.8% would attend - interest & need
• On-site health screenings can overcome historical barriers to health:
  ◦ Family-based medicine
  ◦ Involve local public health, CBO, academic institutions (leverage grants), industry
  ◦ Include point-of-care testing for diabetes, hypertension, CVD, kidney function, MS
  ◦ Mental health screenings
  ◦ Linguistically, culturally, literacy appropriate
  ◦ Intentional in referring abnormal results
  ◦ Provide health education
• Dismantling systemic barriers should be paramount to organization of screenings
On-Farm Health Screening Needs of Immigrant Dairy Workers in the Texas Panhandle and South Plains

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<table>
<thead>
<tr>
<th>Visión general</th>
<th>Enfermedades Infectivas en el Trabajo</th>
</tr>
</thead>
<tbody>
<tr>
<td>¿Qué son las enfermedades infecciosas? Las enfermedades infecciosas son causadas por gérmenes como bacterias, virus, hongos, y parásitos que afectan la salud de las personas. Estas enfermedades pueden transmitirse de persona a persona directamente (cuando estás cerca de una persona enferma o indirectamente cuando tocas algo que tiene gérmenes). Hay algunas enfermedades en animales que afectan también a los humanos. Por eso los humanos también pueden llegar a enfermar si tienen contacto con animales enfermos.</td>
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<tr>
<td>¿Qué es la influenza? La influenza o mejor conocida como la gripe es una enfermedad respiratoria contagiosa causada por el virus de la influenza que afecta la nariz, la garganta, y los pulmones. Hay dos tipos de influenza: el tipo A y el tipo B.</td>
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<td>¿Qué es ébola? El ébola es una enfermedad producida por un virus que produciría un veneno que provoca dolorosas contracciones musculares.</td>
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<tr>
<td>¿Qué es tuberculosis (TB)? La tuberculosis (TB) es causada por una bacteria llamada Mycobacterium tuberculosis. Esta bacteria usualmente ataca los pulmones, pero también puede atacar cualquier otra parte del cuerpo como los riñones, la columna vertebral o el cerebro. No toda la gente infectada con la bacteria de la TB se enferma o tiene síntomas. Existen dos tipos de TB: la tuberculosis latente (a la cual puede vivir en su cuerpo sin que usted se sienta enfermo) y la tuberculosis activa, la cual puede ser mortal.</td>
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<tr>
<td>¿Qué es la Hepatitis A (VHA)? La hepatitis A es la inflamación del hígado, la cual afecta su funcionamiento normal.</td>
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<tr>
<td>¿Qué es la Hepatitis B (VHB)? La hepatitis B (VHB) es otro virus que puede causar inflamación del hígado.</td>
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<tr>
<td>¿Qué es la varicela del mono? La varicela del mono es una enfermedad infecciosa poco común causada por el virus de la varicela. La varicela del mono no está relacionada con la varicela, es parte de la misma familia de virus que la varicela. Los síntomas de la varicela del mono son muy similares a los de la varicela normal, pero más leves. La varicela del mono es muy raramente fatal.</td>
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<tr>
<td>¿Qué es el Coronavirus COVID-19? El COVID-19 comúnmente causa síntomas respiratorios que son muy parecidos a la gripe o neumonía. COVID-19 puede atacar más a los pulmones y sistema respiratorio.</td>
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SWCOEH Outreach Program

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Gracias
Thank You
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