Health Implications of the Aging Domestic Crop Worker Population

2022 Midwest Stream Forum for Agricultural Worker Health
March 29, 2022

Susan Gabbard, JBS International
Edith López Estrada, Health Resources and Services Administration
Daniel Carroll, U.S. Department of Labor

Disclaimer: The views are solely those of the presenters.
Outline

Aging of the Farm Labor Force:
• Why does average age of farmworkers keep going up?
• Health status and issues for older farmworkers (Age 45+)
• Demographic and household characteristics of older farmworkers
• Discussion about health centers and older farmworkers
What is the NAWS?
The National Agricultural Workers Survey

- National survey of crop workers, started in Federal Fiscal Year 1989
- Annual random sample survey of 1,500–3,000 workers
- Establishment survey – find workers at work
- Reliable source of information on crop worker demographics, employment and health
- Limited regional coverage and no local numbers
NAWS Sampling Universe

Includes:
• Currently employed – in last 12 months
• Domestic – currently in the US
• Crop workers – NAICS 111, 1151
• Family members of the above groups

Does not include:
• Formerly employed ag workers
• H-2A workers
• Livestock workers NAICS 112, 1152
• Aged or disabled workers who are no longer in the crop labor force
• Family members of the above groups

Percent of 330g Migratory and Seasonal Agricultural Worker Population
(Calculations based on NAWS 2018–2020)

- NAWS Workers 30%
- NAWS Dependents 41%
- Other 30%

Calculations based on NAWS, U.S. Department of State H-2A Visas, and Top-Down Farm Worker Estimates
Literature Review
The literature on older farmworkers as a cohort is sparse, though there are several public health studies that look at age as a factor in health issues; however, none are cohort studies on the older farmworker population. For example:

- “Evidence... suggests that cumulative exposure to low levels of pesticides over many years of agricultural work is associated with neurological impairment as measured by the Selective Attention, Symbol-Digit, Reaction Time tests.” (Rohlman et al., 2007)
- “Farmworkers experience levels of lifetime and residential pesticide exposure that are consistently greater than among non-farmworkers.” (Arcury et al., 2014)
- The cohort of farmworkers aged 50 and older showed, “a crude, non-fatal injury rate of 9.3 injured farmers per 100 per year.” “Chronic bronchitis/emphysema (estimated odds ratio [EOR]=1.57), back problems (EOR=1.37), arthritis (EOR=1.31), 3 to 4 restless nights in the past week (EOR = 2.02), or 5 to 7 restless nights in the past week (EOR = 1.82) were at significantly higher odds of sustaining a farmwork-related injury”. (Marcum, J. L. et al., 2011)

*See citation slide at end
The Aging of the Farmworker Population
Why is the NAWS Farmworker Population Aging

• The US workforce is aging but not as fast as farmworkers are
• Fewer younger workers entering farm work except through the H-2A program, so the domestic farm labor force is getting older
• Workers are staying in farm work longer
Proportion of Older Vs. Younger Farmworkers

(Source: NAWS 2018-2020)

Younger (Age < 45) 62%

Older (Age 45+) 38%
Trends of Average Age of Farmworkers

(Source: NAWS 1989-2020)
Trends of the Proportions of Older Farmworkers

(Source: NAWS 1989-2020)
Estimated Size of Older Workforce¹

(Source: NAWS 1989-2020)

¹ Estimates calculated omitting H-2A workers whose age is unknown.
Age Distribution of Older Respondents, 10-Year Ranges
(Source: NAWS 2018-2020)

- 45-54: 19%
- 55-64: 14%
- 65 & Older: 5%
Demographics of the Aging Farmworker Population
Gender Distribution

Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)
Distribution of Highest Grade Completed
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- **13th Grade or more**
  - Older: 9%
  - Younger: 15%

- **10th-12th Grade**
  - Older: 21%
  - Younger: 32%

- **7th-9th Grade**
  - Older: 16%
  - Younger: 24%

- **K-6th Grade**
  - Older: 48%
  - Younger: 27%

- **No Schooling**
  - Older: 6%
  - Younger: 2%
Ethnicity Distribution
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

Hispanic: 81% Older, 77% Younger
Not Hispanic: 19% Older, 23% Younger
Birthplace of Respondents
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Mexico: 74% Older, 58% Younger
- US/Puerto Rico: 23% Older, 34% Younger
- Central America: 2% Older, 6% Younger
- South America: 1% Older, 6% Younger

Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
Primary Language
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Spanish
  - Older: 75%
  - Younger: 56%

- English
  - Older: 21%
  - Younger: 28%

- Bilingual Spanish/English
  - Older: 2%
  - Younger: 8%

- Other Multilingual
  - Older: 1%
  - Younger: 6%

- Indigenous
  - Older: 1%
  - Younger: 1%

* Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
* Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
Farmworkers’ Ability to Speak English
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

<table>
<thead>
<tr>
<th>Ability Level</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>A little</td>
<td>33%</td>
<td>24%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Well</td>
<td>24%</td>
<td>39%</td>
</tr>
</tbody>
</table>
Farmworkers’ Ability to Read English
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

Older: 41% Not at all, 24% A little, 12% Somewhat, 23% Well
Younger: 34% Not at all, 17% A little, 10% Somewhat, 38% Well

<table>
<thead>
<tr>
<th>Ability</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>41%</td>
<td>34%</td>
</tr>
<tr>
<td>A little</td>
<td>24%</td>
<td>17%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Well</td>
<td>23%</td>
<td>38%</td>
</tr>
</tbody>
</table>
Migrant Status

Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

- Settled:
  - Older: 87%
  - Younger: 85%

- Migrant:
  - Older: 13%
  - Younger: 15%
Household Composition of Farmworkers
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

Lives with Children
- Older: 38%
- Younger: 56%

Spouse, No kids
- Older: 38%
- Younger: 7%

Other
- Older: 25%
- Younger: 36%
Distribution of Total Annual Household Income
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)
Poverty Status
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

Poverty, 10% | Not in Poverty, 90%
---|---
Poverty, 26% | Not in Poverty, 74%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Social Services Used by Farmworkers
Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

At Least 1 Needs-Based Benefit
- Older: 25%
- Younger: 11%
- Total: 59%
- Total: 63%

At Least 1 Contribution-Based Benefit
- Older: 10%
- Younger: 20%
- Total: 25%
- Total: 30%
Employment
Crop When Interviewed
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits and Nuts</td>
<td>42%</td>
<td>41%</td>
</tr>
<tr>
<td>Horticulture</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Field Crops</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Misc</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Task When Interviewed
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)
Average Days & Weeks of Farm Work
Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

Average Time Working in Last 12 Months

- Older: 40 Weeks, 232 Days
- Younger: 36 Weeks, 209 Days
Average Hours Worked
Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

46.0
46.2

Older  Younger
Distance from Place of Work

Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

I'm located at the job

- Older: 10%
- Younger: 12%

Within 9 miles

- Older: 36%
- Younger: 32%

10-24 miles

- Older: 40%
- Younger: 37%

25-49 miles

- Older: 12%
- Younger: 16%

50+ miles

- Older: 3%
- Younger: 3%
Type of Transportation to Work
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

<table>
<thead>
<tr>
<th>Mode of Transportation</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive car</td>
<td>73%</td>
<td>72%</td>
</tr>
<tr>
<td>Ride with others</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Raitero</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Walk</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Labor bus, truck, van</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Public transportation, other</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

* Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
Basis of Pay
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

By the hour
- Older: 83%
- Younger: 82%

Salary or other
- Older: 8%
- Younger: 6%

By the piece
- Older: 7%
- Younger: 10%

Combination Hourly and Piece
- Older: 2%
- Younger: 2%

* Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
**Number of Farm Employers**

**Older vs. Younger Farmworkers**

(Source: NAWS 2018-2020)

---

**Average Number of Farm Employers**

- Older: 1.2
- Younger: 1.3

**Distribution of Number of Farm Employers**

- 1 farm employer: 81% (Older) / 87% (Younger)
- 2 farm employers: 11% (Older) / 12% (Younger)
- 3 or more farm employers: 2% (Older) / 7% (Younger)
Average Number of Years with Current Employer and in the Farm Labor Force
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

Years Since First Did Farmwork
- Older: 28 years
- Younger: 11 years

Years with Current Employer
- Older: 13 years
- Younger: 5 years
Distribution of Number of Years In Farm Work of Older Workers
(Source: NAWS 2018-2020)

- 31+ years: 47%
- 21-30 years: 25%
- 11-20 years: 17%
- 5-10 years: 5%
- 2-4 years: 3%
- Less than 2 years: 2%

* Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
Trends of Number of Years In Farm Labor Force
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)
In the Last 12 months, Pesticide Use\(^1\)
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

\(^1\) Pesticide use included whether the respondent mixed, loaded, or applied pesticides.
Type of Safety Training Received
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- **Pesticides**: 73% Older, 70% Younger
- **Heat**: 72% Older, 69% Younger
- **Injuries**: 68% Older, 68% Younger
Proportion That Took at Least One Non-Safety Education or Training Course

Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

Younger: 31%
Older: 29%
Type of Non-Safety Education or Training Received
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Other Work Training: Older 17%, Younger 18%
- ESL Classes: Older 11%, Younger 10%
- Any Other Training in Any Country: Older 5%, Younger 5%
- GED Classes: Older 2%, Younger 5%
- Basic Skills: Older 1%, Younger 2%

*a Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.*
Proportion that Completed Non-Safety Education & Training

Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

- **Other Work Training:**
  - Older: 100%
  - Younger: 98%

- **ESL Classes:**
  - Older: 29%
  - Younger: 30%

- **Any Other Training in Any Country:**
  - Older: 91%
  - Younger: 98%

- **GED Classes:**
  - Older: 79%
  - Younger: 32%

- **Basic Skills:**
  - Older: 55%
  - Younger: 47%

*Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.*
Confidence in Obtaining a Better Job
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Took Non-Safety Course:
  - Older: 55%
  - Younger: 63%

- Did not take Non-Safety Course:
  - Older: 27%
  - Younger: 34%
Barriers in Attending Education Classes & Training
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Other Reasons
  - Older: 56%
  - Younger: 75%
- Too Old to Study
  - Older: 37%
  - Younger: 7%
- Did (Will) not learn
  - Older: 14%
  - Younger: 14%
- Too far or No Transportation
  - Older: 3%
  - Younger: 6%

a Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
Health and Healthcare Trends
Chronic Conditions

Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

- **High Blood Pressure**: 32%
- **High Cholesterol**: 24%
- **Diabetes**: 16%
- **Other**: 8%
- **Heart Disease**: 6%
- **Tuberculosis**: 5%
- **Asthma**: 5%
- **Diabetes**: 3%
- **High Cholesterol**: 2%
- **High Blood Pressure**: 1%

- **Cancer**: 1%

*Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.*
Prevalence of Chronic Diseases
Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)
Health Insurance Coverage
Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

48% 59%

Older Younger
### Utilization of Health Care
#### Older vs. Younger Workers
(Source: NAWS 2018-2020)

<table>
<thead>
<tr>
<th>Health Care Domain</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used Health Care in the Last Year</td>
<td>66%</td>
<td>63%</td>
</tr>
<tr>
<td>Routine or Preventative Care</td>
<td>62%</td>
<td>55%</td>
</tr>
<tr>
<td>Dental Treatment or Preventative Care</td>
<td>28%</td>
<td>37%</td>
</tr>
<tr>
<td>Illness</td>
<td>18%</td>
<td>14%</td>
</tr>
<tr>
<td>Injury</td>
<td>5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Note:** Percentages for younger workers are lower than for older workers for all categories. The chart shows the utilization rates of health care services among older and younger workers, with older workers using these services more frequently than younger workers.
Location of Last Preventative or Routine Health Care Visit
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Private Clinic or Doctor's Office
  - Older: 55%
  - Younger: 51%
- Community/Migrant Health Center
  - Older: 40%
  - Younger: 46%
- Hospital
  - Older: 4%
  - Younger: 2%
- Emergency Room
  - Older: 0%
  - Younger: 0%
- Dentist
  - Older: 0%
  - Younger: 0%
- Other
  - Older: 1%
  - Younger: 1%

* Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
* Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
Location of Last Illness Health Care Visit
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Private Clinic or Doctor's Office: Older 44%, Younger 35%
- Community/Migrant Health Center: Older 34%, Younger 30%
- Hospital: Older 14%, Younger 21%
- Emergency Room: Older 6%, Younger 13%
- Dentist: Older 0%, Younger 13%
- Other: Older 2%, Younger 13%

* Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
* Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
Location of Last Injury Health Care Visit
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

<table>
<thead>
<tr>
<th>Location</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Clinic or Doctor's Office</td>
<td>35%</td>
<td>49%</td>
</tr>
<tr>
<td>Community/ Migrant Health Center</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td>Hospital</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>Emergency Room</td>
<td>12%</td>
<td>27%</td>
</tr>
<tr>
<td>Dentist</td>
<td>0%</td>
<td>b</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>b</td>
</tr>
</tbody>
</table>

a Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
b Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
Location of Last Dental Care Visit
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- Private Clinic or Doctor’s Office: 20% (Older), 16% (Younger)
- Community/Migrant Health Center: 4% (Older), 9% (Younger)
- Hospital: 0% (Older), 0% (Younger)
- Emergency Room: 0% (Older), 0% (Younger)
- Dentist: 72% (Older), 73% (Younger)
- Other: No data

a Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.
b Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
Trends of Health Insurance Coverage
Older vs. Younger Farmworkers

(Source: NAWS 1989-2020)
Trends in Utilization of Health Care
Older vs. Younger Farmworkers
(Source: NAWS 1989-2020)

The utilization of health care variable was analyzed for fiscal years 1996-2017 and analysis on a similar variable was analyzed for fiscal years 2018-2020.
Having Any Digital Device
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

91% Older
98% Younger
Using Digital Devices to Seek Information
Older vs. Younger Farmworkers
(Source: NAWS 2018-2020)

- **Health Insurance**
  - Older: 14%
  - Younger: 18%

- **Benefits**
  - Older: 10%
  - Younger: 12%
Type of Digital Access Among Older vs. Younger Farmworkers

(Source: NAWS 2018-2020)

Worker Having a Cell Phone with Text
- Older: 97%
- Younger: 95%

Worker Having a Cell Phone with Internet
- Older: 85%
- Younger: 96%

Worker Having a Computer
- Older: 31%
- Younger: 47%

Worker Having a Tablet
- Older: 20%
- Younger: 30%

Worker Having Other Devices
- Older: 1%

---

\[ a \] Estimates have relative standard errors between 31% and 50% and should be interpreted with caution.

\[ b \] Estimates are suppressed because number of responses is less than 4 or relative standard errors for the estimates are greater than 50%.
The farm labor force has aged over the last 20 years as the average age of a domestic crop worker increased from 31 to 41 years. Currently, there are an estimated 500,000 farmworkers age 45 or older working in farm work.

Older farmworkers averaged 28 years in farm work and 13 with their current employer. Older workers were more likely to be in technical jobs (40%) such as irrigator or tractor driver and less likely to be a harvester.

Most older farmworkers are Mexican born (74%) and male (73%). Three quarters of older workers lived with family while one in four older workers was single. More than half of older workers had 6 or fewer years of formal education and most were educated in Mexico.

Older crop workers are more likely to be monolingual Spanish speakers (75%) with three in ten saying they speak English a little (33%) and four in ten saying they are not able to read English (41%). Nine out of ten older farmworkers use a digital device, usually a smart phone. Older workers lagged behind younger farmworkers in access to computers or tablets.

More than half of the older workforce (56%) reported at least 1 age-related chronic health condition. Six in ten have health insurance (59%) and two-thirds (66%) had a primary health care visit in the past year. Only three in ten older workers had a dental visit in the prior year (28%).
Sources Cited


The End

For more information on the NAWS:
Website
https://www.doleta.gov/naws/

Daniel Carroll
carroll.daniel.j@dol.gov
Edith López Estrada
ELopezEstrada@hrsa.gov
Susan Gabbard
sgabbard@jbsinternational.com