

Occupation and Health in New Mexico

Work is a social determinant of health closely linked with other social determinants such as income and education. Work has direct and indirect effects on health through workplace exposures to chemical and physical hazards and psychological stress, as well as protective factors such as employer-sponsored health insurance and providing life purpose. Worksite health initiatives can have profound effects on worker health as well. One measure which attempts to evaluate such initiatives is the Healthy People 2020 Nutrition and Weight Status Objective 7: "Increase the proportion of worksites that offer nutrition or weight management classes or counseling."¹ Recognizing the importance of work in the lives and health of its citizens, the New Mexico Department of Health began collecting the current occupation and industry of respondents to the NM Behavioral Risk Factor Surveillance System (BRFSS) in 2011 through state-added questions. The BRFSS is the nation's premier system of health-related telephone surveys by state regarding participants' health-related risk behaviors, health conditions and their use of preventive services. This report describes selected findings from the first year's data.

Methods

In 2011, NM included industry and occupation (I/O) on the BRFSS as state added questions; respondents were asked to select the single best response from lists of I/O groupings that most closely fit their own current (or most recent, if employed within the last 12 months) job. If respondents chose "other" as their response, surveyors asked for, and recorded a one-to-three word response as text. These text responses were sent to the National Institute for Occupational Safety and Health (NIOSH) for coding to Census Industry (CIC) and Occupation (COC) Codes. Response codes for occupation were integrated into the pick-list categories which were also based on the Census I/O coding structures.²

The statistics presented in this report are the estimated percentages of New Mexico adults, currently em-

Stephanie Moraga-McHaley, MS
Epidemiology and Response Division
New Mexico Department of Health

ployed, or employed in the last 12 months, reporting health behaviors, conditions, and health coverage and status by the occupation in which they are (or recently were) employed.

Results

In 2011, interviews were completed by 9,417 New Mexico residents age 18 years and older. Of these, 4,580 responded that they were currently employed for wages, were self-employed, or had been employed within the last 12 months (indicating recent employment) rendering them eligible to answer the I/O questions. Responses on occupation were collected from 3,777 or 82% of eligible respondents. 4008 industry responses were collected, but are not presented in this report as the number of "other" responses that could not be coded was substantial.

The most frequently reported occupational category of workers was Professional (25.7%) while Production had the fewest workers at 2.6%. Table 1 displays the occupational categories, age-adjusted percentages and example occupation titles.

Occupational groups vary by sex. A higher percentage of women reported working in Professional 58.7% (95% confidence interval (CI)= 54.5 - 62.8), Service 59.9% (55.0 - 64.5) and Office/Admin. 81% (74.4 - 86.2) occupations than did men. Men dominated Farming/Forestry/Fishing 84.6% (73.9 - 91.4), Construction/Extraction 97.6% (95.0-98.9), Production 81.3% (72.8 - 87.6), Installation/Maint./Repair 90.5% (87.0 - 93.1), and Transportation/Material Moving 79.6% (72.1 - 85.5) occupations. There was not a significant difference between sexes for Management/Business or Sales occupations.

Status of select, self-reported health conditions

When asked to describe their health as “excellent, very good, good, fair, or poor” workers in Construction/Extraction (18.9%) and Service (18.0%) occupations were significantly more likely to categorize themselves as having fair or poor health than did those in Office/Admin. (9.2%), Professional (7.5%) or Installation/Maint./Repair occupations (6.0%) (Table 2).

Workers who had ever been told that they had any type of cancer by a health care provider varied significantly by occupation. 14.7% of Office/Admin. workers reported having been told that they had cancer while only 7.3 % of Service, 4.7% of Construction/Extraction, 3.9% of Production and 3.8% of Transportation/Material Moving workers had received this diagnosis.

Workers in Transportation/Material Moving occupations had the highest percentage reporting obesity (44.0%) which was significantly more than all occupations except for Office/Admin. (31.8%), Farming/Fishing/Forestry (28.3%), and Installation/Maint./Repair (24.9%). Professional occupations reported the lowest percentage of obesity (19.1%).

Office/Admin (12.9%) and Professional workers (10.6%) were more likely to report current asthma compared to Construction/Extraction workers (3.9%).

Workers in Service occupations were the most likely to have received a diagnosis of a depressive disorder (19.8%) whereas Construction/Extraction workers were the least likely (7.3%). This was significantly lower than all other occupational groups except for Production (9.7%), Transportation/Material Moving (15.6%) and Farming/Fishing/Forestry (15.8%).

Status of select health behaviors

Workers in Professional occupations (42.8%) were significantly more likely to report having been vaccinated against influenza within the last 12 months than those in Sales (29.2%), Construction (27.1%), Production (23.1%), and Installation/Maint./Repair (21.2%). Workers in Service occupations (36.3%) were also significantly more likely to have been vaccinated than those in Installation/Maint./Repair occupations (21.2%).

Binge drinking (defined as 5 or more drinks for men or 4 for women on an occasion within the past 30 days) varied significantly by occupation. 35.9% of workers in Construction/Extraction occupations reported binge drinking, which was significantly more often than reported by respondents in Sales (20.9%), Service (20.3%), Management/Business (18.9%), Office/Admin. (15.5%), and Professional (15.0%). Installation/Maint./Repair (30.5%) and Production (30.8%) occupations also reported more binge drinking.

At 10.4%, respondents in Professional occupations reported current smoking significantly less often than did all other occupations. Occupations with the highest percentage of current smokers were Production (34.4%), Installation/Maint./Repair (31.1%), Sales (30.3%) and Construction/Extraction (28.0%).

Healthcare Insurance and Access

Lack of health care coverage varied significantly by occupation. Respondents in Professional (11.3%), Management/Business (15.0%) and Office/Admin. (15.4%) occupations were least likely to not have coverage while those in Construction/Extraction (41.0%), Farming/Fishing/Forestry (36.2%), Installation/Maint./Repair (36.0%) and Service (29.4%) occupations were significantly more likely to report being uninsured.

Respondents were asked if there had been any time in the past 12 months that they needed to see a doctor but did not because of the cost. Those in Management/Business (10.1%) and Professional (10.8%) occupations were significantly less likely to answer affirmatively than those in Service (26.7%), Farming/Fishing/Forestry (24.9%), Installation/Maint./Repair (22.1%), Sales (20.6%) and Office/Admin. (18.9%).

Limitations

In 2011, data were collected by asking participants to select a best fit from industry and occupation categories. Since 2012, NMDOH has adopted the data collection method recommended by NIOSH in which industry and occupation are asked as open-ended questions which are coded by experts at NIOSH. Therefore, 2011 data cannot be combined with other years. Fortunately, subsequent years of data are collected in a manner which allows data aggregation across years. There are 270 industry categories arranged into 20 sectors and 509 separate occupation categories arranged into the 23 major groups.² Groups can be collapsed further for

analysis purposes. Another limitation is that only the current occupation and industry of a respondent are recorded making associations between latent diseases and previous employment impossible.

Discussion

The inclusion of industry and occupation in the BRFSS provides a new tool for public health in New Mexico. BRFSS industry and occupation questions have been used by states to answer questions on the prevalence of current depression and frequent mental distress by occupation³, the distribution of influenza-like illness by occupation⁴, binge drinking and occupation⁵ and most recently, obesity and occupation using BRFSS data in Washington State.⁶ The data variables discussed in this report provide an opportunity to measure changes in coverage by industry and occupational groups and to observe health status changes experienced under the Affordable Care Act among the employed in our state. The share of Americans aged 65 and under with employment-based health coverage has fallen steadily from 68.3% in 2000 to 58.9% in 2009.⁷

References

1. Healthy People 2020. www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=29
2. NIOCCS www.cdc.gov/niosh/topics/coding/pdfs/landOCodingManual2002.pdf
3. Fan ZJ, Bonauto DK, Foley MP, Anderson NJ, Yragui NL, Silverstein BA. Occupation and the prevalence of current depression and frequent mental distress, WA BRFSS 2006 and 2008. *Am J Ind Med.* 2012 Oct;55(10):893-903.
4. Anderson NJ, Bonauto DK, Fan ZJ, Spector JT. Distribution of influenza-like illness (ILI) by occupation in Washington State, September 2009-August 2010. *PLoSOne.* 2012;7(11):e48806.
5. Jarman DW, Naimi TS, Pickard SP, Daley WR, De AK. Binge drinking and occupation, North Dakota, 2004-2005. *Prev Chronic Dis.* 2007 Oct;4(4):A94.
6. Bonauto D, Lu D, Fan Z. Obesity Prevalence by Occupation in Washington State, Behavioral Risk Factor Surveillance System. *Prev Chronic Dis* 2014;11
7. Economic Policy Institute, 2010. www.epi.org/publication/decline_in_employer-sponsored_health_coverage_accelerated/

This publication was supported by Cooperative Agreement 5U60OH008486 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC. I would like to acknowledge Wayne Honey, NMDOH for providing data, support, and expertise.

**Table 1. Age-adjusted Percent by Occupation
New Mexico, 2011**

Occupation group	% (95% CI)	Examples
Professional and Related	25.7% (23.7-27.7)	Physician, teacher, engineer
Service	20.1% (18.3-22.0)	Security guard, nursing aide
Management, Business and Financial Operations	14.7% (13.1-16.4)	Claims adjuster, marketing manager
Sales and Related	8.6% (7.4-10.0)	Cashier, counter clerk
Construction and Extraction	8.1% (7.0-9.4)	Plumber, carpenter, miner
Office and Administrative Support	7.7% (6.7-8.9)	Police dispatcher, secretary
Installation, Maintenance and Repair	4.6% (3.7-5.7)	Auto mechanic, locksmith, alarm installer
Transportation and Material Moving	3.7% (3.0-4.6)	Bus driver, crane operator
Farming, Fishing and Forestry	3.5% (2.5-4.9)	Chile picker, timber cutter
Production	2.6% (1.9-3.5)	Assembler, welder
Uncodable refused	**	**
TOTAL	100.0%	

The New Mexico Epidemiology Report

Michael G. Landen, M.D., M.P.H.
State Epidemiologist & Editor

The New Mexico Epidemiology Report
(ISSN No. 87504642) is published monthly
by the
Epidemiology and Response Division
New Mexico Department of Health
1190 St. Francis Dr.
P.O. Box 26110, Santa Fe, NM 87502

24-Hour Emergency Number:
(505) 827-0006
www.health.state.nm.us

Presorted
Standard
US Postage
PAID # 390
Santa Fe, NM

Table 2. Age-standardized , Weighted Percentage of Workers by Occupation with Selected Health Conditions, Behaviors and Health Care Access Factors New Mexico, 2011

	Fair or poor health % (95% CI)	Any cancer	Current asthma	Depressive disorder	BMI 30+ (Obesity)
Construction/Extraction	18.9% (13.9, 25.2)	4.7% (2.2, 9.9)	3.9% (2.1, 7.3)	7.3% (4.6, 11.4)	28.2% (23.3, 33.6)
Farming/Fishing/Forestry	15.4% (8.6, 26.0)	9.5% (5.1, 17.2)	4.4% (1.2, 15.1)	15.8% (8.1, 28.5)	28.3% (17.3, 42.6)
Install/Maintenance/Repair	6.0% (3.2%, 10.9)	9.9% (5.4, 17.5)	6.7% (3.3, 13.2)	19.1% (12.6, 28.0)	24.9% (17.5, 34.1)
Management/Business	12.1% (8.5, 17.1)	11.3% (8.4, 15.1)	10.3% (7.1, 14.6)	15.7% (11.7, 20.8)	27.5% (22.5, 33.0)
Office/Administrative	9.2% (6.2, 13.4)	14.7% (11.2, 19.0)	12.9% (8.7, 18.8)	18.4% (13.5, 24.6)	31.8% (25.8, 38.5)
Production	14.7% (7.6, 26.4)	3.9% (1.8, 8.3)	5.0% (1.7, 14.0)	9.7% (5.6, 16.3)	20.2% (12.4, 31.0)
Professional	7.5% (5.5, 10.0)	11.0% (8.9, 13.5)	10.6% (8.4, 13.4)	18.8% (15.6, 22.6)	19.1% (16.4, 22.2)
Sales	11.6% (7.8, 17.1)	9.0% (5.4, 14.4)	10.6% (6.5, 17.0)	17.7% (12.9, 23.8)	26.2% (20.1, 33.5)
Service	18.0% (14.6, 22.0)	7.3% (5.2, 10.1)	9.5% (6.9, 12.8)	19.8% (16.5, 23.7)	27.7% (23.8, 32.0)
Transportation/Material	11.4% (5.9, 20.8)	3.8% (1.8, 7.6)	13.4% (6.8, 24.4)	15.6% (8.7, 26.5)	44.0% (33.8, 54.7)
	Flu vaccination	Binge drinking	Current smoker	No health insurance	Could not afford care
Construction/Extraction	27.1% (21.6, 33.4)	35.9% (28.2, 44.3)	28.0% (22.3, 34.4)	41.0% (34.6, 47.8)	15.7% (11.5, 21.1)
Farming/Fishing/Forestry	30.4% (20.6, 42.3)	20.3% (11.4, 33.6)	22.6% (13.1, 36.2)	36.2% (25.0, 49.1)	24.9% (14.9, 38.6)
Install/Maintenance/Repair	21.2% (14.4, 30.0)	30.5% (22.4, 39.9)	31.1% (23.1, 40.4)	36.0% (27.9, 45.1)	22.1% (15.5, 30.6)
Management/Business	34.4% (29.2, 40.1)	18.9% (14.4, 24.5)	20.1% (15.8, 25.3)	15.0% (10.7, 20.5)	10.1% (7.2, 13.9)
Office/Administrative	32.9% (26.8, 39.6)	15.5% (10.9, 21.6)	19.4% (14.3, 25.9)	15.4% (10.5, 21.8)	18.9% (14.2, 24.7)
Production	23.1% (15.6, 32.8)	30.8% (21.0, 42.8)	34.4% (23.6, 47.1)	22.6% (13.9, 34.6)	11.6% (6.4, 20.1)
Professional	42.8% (38.8, 47.0)	15.0% (12.1, 18.4)	10.4% (8.3, 13.0)	11.3% (8.3, 15.2)	10.8% (8.7, 13.3)
Sales	29.2% (23.1, 36.1)	20.9% (15.3, 27.9)	30.3% (23.8, 37.6)	25.3% (19.8, 31.8)	20.6% (15.3, 27.2)
Service	36.3% (31.9, 40.9)	20.3% (16.5, 24.6)	23.9% (20.0, 28.3)	29.4% (25.3, 33.9)	26.7% (22.7, 31.2)
Transportation/Material	36.0% (26.4, 47.0)	24.7% (15.1, 37.6)	25.0% (16.5, 35.9)	19.8% (12.1, 30.6)	21.3% (13.2, 32.6)

CI = Confidence Interval