



Massachusetts Department of Public Health

Collection of Occupation and Industry Data in MAVEN

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Learning Objectives



Describe work as a social determinant of health



Identify the questions to ask cases to obtain usable occupation and industry demographic information



Understand how occupation and industry data is used in public health surveillance

Work as a Social Determinant of Health



Work directly and indirectly influences people's health



Working conditions, culture and organizational factors influence health



Work provides income and other economic benefits which can impact health



Effective January 2026, all electronic health records will be required to include variables for industry and occupation



CSTE recommends including industry and occupation as core elements in the case notifications to CDC

Collecting Occupation and Industry

Occupation (job title)

- Ask “What is your **current** job title?”
- Examples: sales person, personal care attendant, custodian, civil engineer, waiter

Industry (type of business)

- Ask “What kind of **business** do you work in?”
- Examples: department store, home health care, elementary school, construction, restaurant

Why is it Important to Collect Occupation AND Industry?

OCCUPATION

Identify groups at higher risk of:

- exposure to a hazard
- a particular health outcome

Prevention measures and messages can be tailored by occupation

INDUSTRY

Identify groups at higher risk of:

- exposure to a hazard
- a particular health outcome

Prevention measures and messages can be tailored by industry

Occupation AND Industry

- Describes burden of various health conditions among worker groups
- Useful for developing specific, focused prevention strategies
- Helps in understanding health disparities and health inequities

When completing occupation fields:



Be descriptive:

Record the word or words that most clearly describe the kind of work or type of duties performed by the individual

- inadequate: teacher
- adequate: preschool teacher, high school teacher



Be specific:

General or vague terms do not provide enough information to categorize the information

- inadequate: laborer
- adequate: residential bricklayer



Be complete:

Occupation information that gives only the department or place of work is not useable

- inadequate: worked in a warehouse
- adequate: warehouse forklift operator

Occupation descriptors

General Occupation (not usable)

Specific Occupation (usable)

Research assistant

Research biologist, assistant research chemist,
associate research physicist

Clerk

Stock clerk, shipping clerk, sales clerk, account clerk

Administrative

Receptionist, administrative assistant, file clerk

Caretaker

Janitor, gardener, personal care aide

Consultant

Management consultant, statistical consultant

Doctor

Dentist, physician, veterinarian, psychiatrist

Public health worker

Epidemiologist, health inspector, health education specialist

Technician

Medical laboratory technician, dental laboratory technician, x-ray
technician

Healthcare worker

Nurse practitioner, pediatrician, pharmacist

When completing industry fields:



Be descriptive:

Record the primary activity carried out by the industry at the location where the individual works

- inadequate: automobile industry
- adequate: automobile manufacturing



Be specific:

Indicate both the general and specific function of the employer to provide enough information to categorize the information

- inadequate: retail
- adequate: retail bookstore, retail hardware store



Be complete:

Provide as much information as possible, avoid abbreviations and acronyms

- inadequate: LTC
- adequate: long term care skilled nursing

Industry descriptors

General Industry (not usable)

Specific Industry (usable)

School

Elementary school, private kindergarten, private college, state university

Office

Dentist's office, physician's office, lawyer's office

Factory

Aircraft factory, paper mill, seafood processing factory

Agency

Collection agency, advertising agency, travel agency, insurance agency

Wholesale

Wholesale grocery, wholesale furniture

Automobile industry

Automobile parts manufacturing, wholesale auto parts

Repair shop

Shoe repair shop, radio repair shop, auto repair shop,
machine repair shop

Government

City Board of Health, State Education department, Mayor's office

Healthcare

Hospital, Rehabilitation Facility, Home Health Care Service

Special Cases

Child

Occupation: “child”
Industry: “child”

Student

Occupation: “student”
Industry: type of school (e.g., “high school”, “elementary school”)

Retired

Occupation: “retired”
Industry: “retired”

Military

Occupation: “military”
Industry: “military”

Never Worked

Occupation: “never worked”
Industry: “none”

Retirees

- If someone is **currently retired and not working a paid job**, their occupation and industry information should only refer to them as retired.
- If someone is **retired from their career job but is now working a different paid job**, please only report their paid job.
- Many cases in MAVEN are listed as “Retired” plus another occupation or industry (ex. “Retired Teacher” or “Retired from Hospital”).
- NIOCCS, the coding software we use to categorize this data, can’t handle these records consistently. It doesn’t know which term to use— the “Retired” or the additional occupation/industry.



Students

- For students who also work, their job should be entered into MAVEN separately from their student information.
- A student's paid job should be listed as their primary occupation and industry.



Example: The case we're following up with is a high school student with a part-time job working as a barista at a coffee shop.

Primary Occupation: Barista
Primary Industry: Coffee shop

Secondary Occupation: Student
Secondary Industry: High School

Health care workers

- Health care is not a usable occupation or industry. Be detailed.
- For occupation ask, “what type of health care work do you do?”. Examples: registered nurse, medical secretary, scheduling coordinator, physician assistant.
- For physicians, please record the field or specialty (ex. Family Medicine Physician, Dermatologist).
- For industry ask, “where do you work?”. Examples: nursing home, hospital, fertility clinic, private home care.



App Workers

App workers make their income through a mobile application.

For example:

- DoorDash/Uber Eats/Grubhub: responds to customers' request to deliver food from various restaurants in the area. The driver does not work for the restaurant and is performing a separate delivery service.
 - Occupation: Driver/Sales Workers
 - Industry: Couriers and Messengers
- Instacart: Instacart is providing a personal service. The Instacart worker shops for the customer.
 - Occupation: Sales and Related Workers, All Other
 - Industry: Other Personal Services



Tips for Data Collection

Collect the **current** occupation and industry information

An individual's **primary** occupation is the one where they work the **most** hours

If someone doesn't want to answer, write "**refused**" rather than "unknown"

Ask follow-up questions about the kind of work they do

- Instead of "Works from home" and "Self-employed" provide details about the kind of work they do

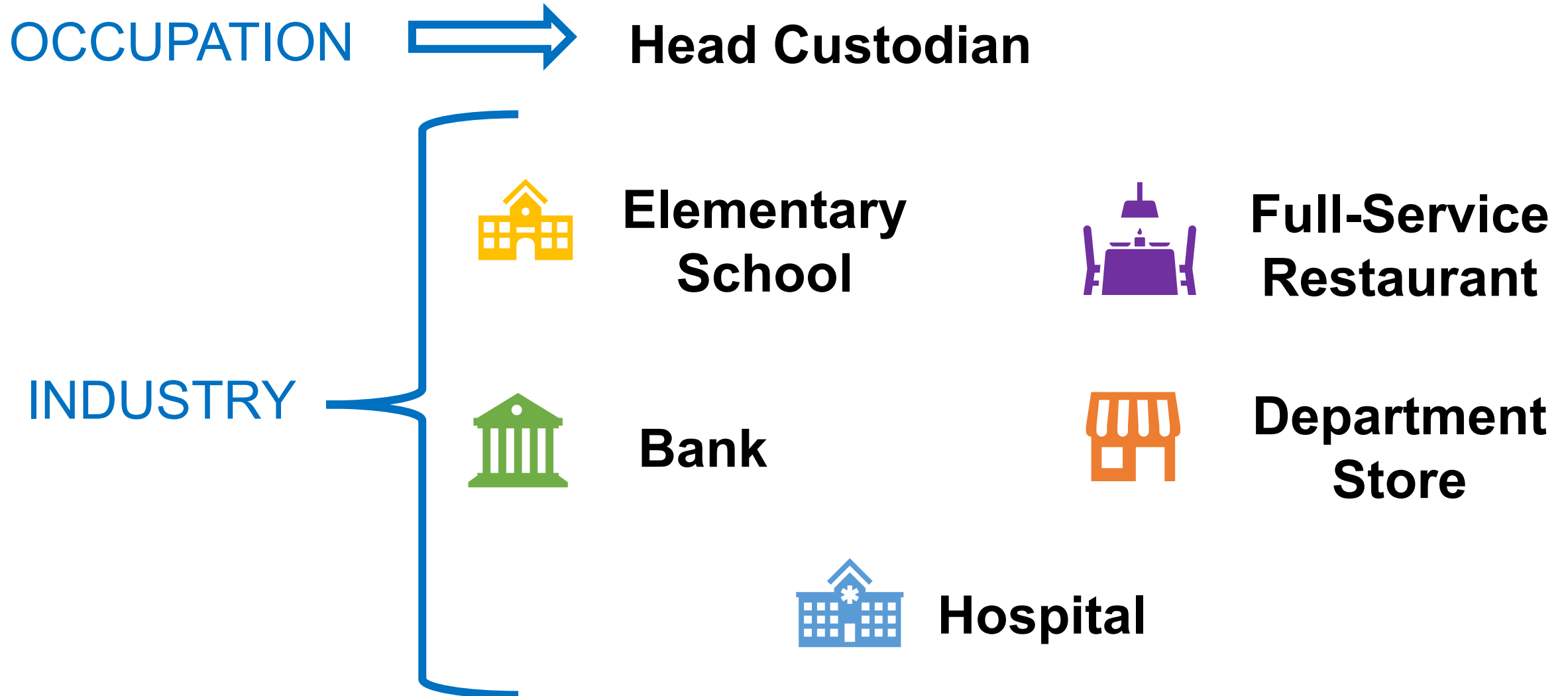
Be specific

- Occupation: Registered nurse, doctor, registration clerk
- Industry: hospital, nursing home, clinic

Avoid abbreviations or acronyms

- Vet could be misinterpreted as a veteran or a veterinarian

Collect BOTH Occupation and Industry



How are data used?

To identify which occupations and industries are at the highest risk for various health issues and illnesses

To design & implement prevention strategies aimed at those with the greatest risk

To identify who is most vulnerable to public health matters... whether viral or otherwise

Example: Hepatitis A

- Identifying cases among food service workers is critical to controlling the spread of cases.
- Share prevention information with relevant occupation and industry groups
- Contact relevant employers to share prevention information

Why is quality data important?



To accurately identify links between a disease and an occupation or industry



To accurately describe the demographics of a population with a given disease



To accurately identify populations that may be at risk in order to provide prevention messages



To inform prevention, policy, and outreach initiatives

Data completeness

Occupation			Industry		
% cases with complete Occupation	# of cities/towns	Range of total cases in MAVEN	% cases with complete industry	# of cities/towns	Range of total cases in MAVEN
100%	4	2-4	100%	0	0
80-99%	6	5-80	80-99%	1	5
60-79%	43	4-453	60-79%	4	8-114
40-59%	92	2-1,791	40-59%	31	5-155
20-39%	121	3-285	20-39%	94	3-1,791
0-19%	67	1-684	0-19%	164	1-632

Entering industry and occupation data in MAVEN

04. Medical/Risk History - Test Occupation_TB - Tuberculosis

Occupation: What kind of work does the person do?

Homemaker

Add New

Occupation Code: 00-9010

Probability Score: 1.0

When the API runs it will auto-populate from SOC

Occupation Text: Homemaker (Unpaid)

Industry: What kind of business or industry does this person work in? (for example, hospital, elementary school, clothing manufacturing, restaurant)

Own Home

Industry Code: 009890

Probability Score: 0.9999997

When the API runs it will auto-populate from NAICS

Industry Text: Non-Paid workers

Every night the free text industry and occupation data entered in MAVEN is run through the NIOSH Industry and Occupation Computerized Coding System (NIOCCS) to categorize the data using standardized codes (NAICS and SOC).

Resources

DPH Tip Sheet: Collecting Industry & Occupation (I&O)

<https://storymaps.arcgis.com/stories/f0c45e811a6e4aa0822af591d74aa47d>

NIOSH Video on Collecting Occupation & Industry

<https://youtu.be/kXDWJxKAG3A>

New Hampshire Video on Collecting Industry and Occupation Data

https://youtu.be/zr53yP5xf_c

Examples of Adequate & Inadequate Information

<https://www.cdc.gov/niosh/topics/coding/pdfs/example-of-inadequate-and-adequate.pdf>

Tips from the Behavioral Risk Factor Surveillance System (BRFSS)

<https://www.cdc.gov/niosh/topics/surveillance/brfss/tips.html>

Questions?

MAVEN related reports/data

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