

USING OCCUPATIONAL DATA FOR HEALTH (ODH) AT HEALTH CENTERS

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ACTION GUIDE

WHAT'S SO IMPORTANT ABOUT OCCUPATIONAL DATA FOR HEALTH (ODH)?

Collecting work information for health center patients - including job/employment status, industry (type of business), and occupation—and coding this information in the Electronic Health Record (EHR) based on the formal Occupational Data for Health (ODH) framework, can empower care teams to prevent or identify health conditions and inequities resulting from work. Coded ODH leads to the identification of occupational exposures as well as physical and mental conditions, injuries, or family impacts related to work hazards.

Occupation is one of the most important social drivers of health.

Occupational Data for Health (ODH) tells us:

- Whether and how someone is exposed to pollutants, toxins, or disease.
- About someone's socio-economic status and income level, which provides information about their social needs and financial security.
- If someone has access to employer-provided health insurance.

Similarly, unemployed status can be linked to hardship and negative health outcomes for mental health, cardiovascular health, and even death.

When community health centers learn about their patients' ODH they can introduce opportunities for health interventions and services. The key is to capture and utilize this data for personalized care and to create policies and procedures that promote safer work processes and reduce or prevent exposure to many work-related risks. Protections could include vaccinations or the provision of personal protective equipment, water for outdoor workers, mental healthcare, or even resources for job training for unemployed patients. By using ODH, health centers can actively identify at-risk populations based on their job and exposures.

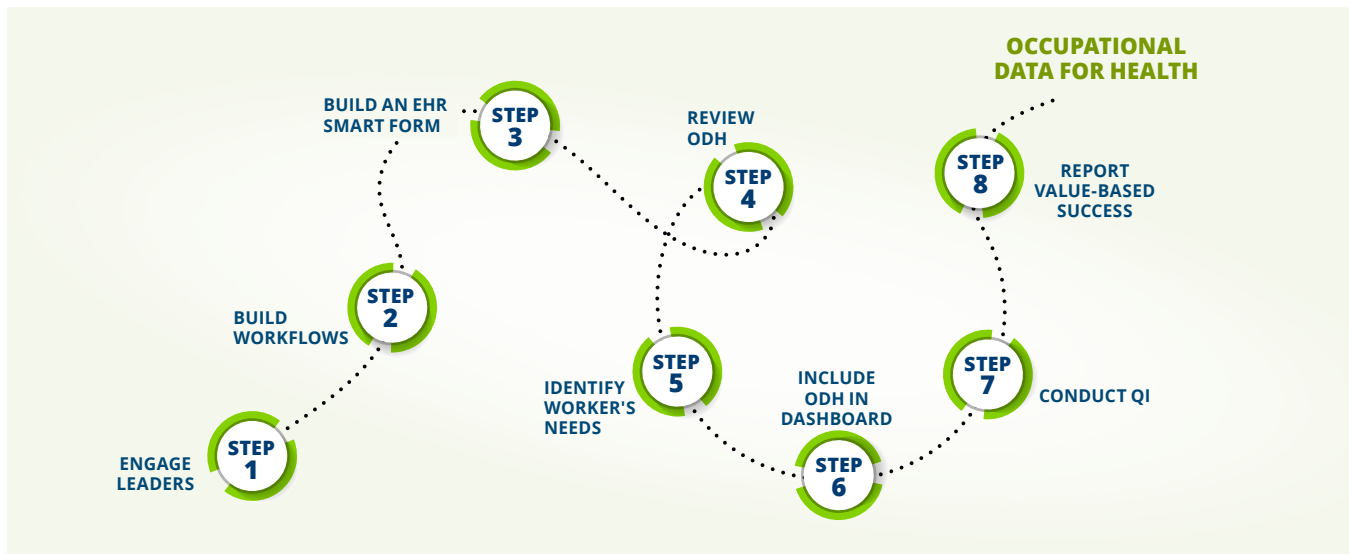
It is currently not standard practice to capture ODH or match it to health trends for care planning. Yet, this is relatively easy data to capture during patient intake or within community health center workflows.

NACHC partnered with the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH) to use NIOSH's Occupational Data for Health (ODH) framework in a series of pilot studies with partnering health centers and health center controlled networks (HCCNs). This Action Guide and the related Implementation Guide for IT and Informatics staff were created for health centers based on the lessons we've learned.

Please use this guide to outline how your health center can build structured forms and fields to capture coded ODH in your EHR system for higher-quality patient and community care.

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ACTION STEPS TO COLLECT ODH AT YOUR HEALTH CENTER



- STEP 1** Engage Leadership in the value of collecting ODH at health centers
- STEP 2** Partner with Intake Staff to **build workflow and dataflow** to collect ODH
- STEP 3** Partner with IT or Informatics Team to **build a simple Smart Form** in the EHR to collect data on employment status, industry, and occupation and establish a dataflow for data quality
- STEP 4** Partner with Clinical Care Team to **review ODH** and use it for personalized care planning
- STEP 5** Partner with Population Health Team to **identify worker's needs** and address public health & disease prevention opportunities
- STEP 6** **Include ODH in Dashboard** to show patient and population health impacts
- STEP 7** **Conduct a QI Cycle** to identify areas for improvement.
- STEP 8** **Report value-based care success** back to your leadership and staff.

The action steps provided here have been tested in several health centers with success.

For technical details explaining how IT staff can set-up this data collection system, review the [Guide to Collect Occupational Data for Health: Tips for Health IT System Developers](#).





Engage Leadership in the value of collecting ODH at health centers.

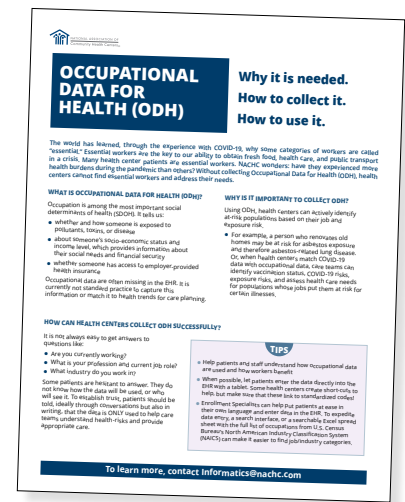
Engage leadership, informatics, occupational medicine and allied provider champions including Physical Medicine and Rehabilitation (PM&R) care team members as well as data science teams to collect, assess, and use ODH. It's critical to present your "business case" for why it's important to collect ODH and how the information benefits patient care, and value-based care.

The importance of collecting ODH became clear during the COVID-19 pandemic and other natural disasters leading to public health emergencies. In those cases, it became critical to identify and quickly care for essential workers ([see page 9](#)). To prepare for emergent concerns, or daily work-related concerns, health center leaders should commit to system-wide collection of ODH and establish policies and processes to use occupational data that benefit patients and the local community. ODH can be used for clinical care decisions, research, public health, and population health efforts.

Resources from [CDC's National Institute for Health and Safety \(NIOSH\)](#) provide more depth on how ODH can assist care teams in providing quality care. NACHC offers this easy explainer—[Occupational Data for Health \(ODH\)](#)— with a case study example to illustrate why it's important to collect ODH, how to collect, and how to use it.

The primary questions patients would be asked to input in the EHR—in any language—are:

- **Job or Employment Status:** "I am currently..." (Field description indicates choices like employed full time, employed part time, unemployed)
- **Industry:** "My employer mainly does/is..." (Field description includes types of business, i.e., the primary business activity conducted by the employer)
- **Occupation:** "My job is in a(n)..." (Field description indicates type of work done in this industry/ business, or a position/job title)





Partner with Care Team Staff to build workflow and dataflow to collect ODH.

Consider the intake workflow at your health center to determine how and when to ask ODH questions. In some cases, patients answer the questions themselves on a tablet, in others a staff member helps patients respond to questions about occupation. Talk with your team to determine the most logical way to collect ODH.

Workflows and dataflows should be developed with the informatics or EHR team that is implementing it.

- Can patients use a tablet, app. or online intake form to answer the questions themselves and in their language of choice?
- Will staff at the front desk or enrollment specialists ask the three questions? Or, should the care team ask these questions?
- How will questions be framed in the Smart Form and where in the EHR will it live? (* just ensure standardized codes are used)

In general, the automated, patient-generated data approach is ideal to minimize burdens on the care team. Initial information may be collected from the patient and then the care team can follow-up by entering or reviewing missing data (or re-enter data if a paper form is used) with the patient as appropriate.

It's important to consider that some patients are reluctant to disclose employment information for a variety of valid reasons (including immigration status). Health centers have found it helps to train frontline staff to explain that **ODH information is used exclusively for patient care** and will not be disclosed to any third parties or used to determine their access to services. Enrollment Specialists can help put patients at ease in their own language and help enter data.



Partner with IT or Informatics Team to build a simple Smart Form in the EHR for data on employment status, industry, and occupation.

Use the standardized National Institute for Occupational Safety and Health (NIOSH) ODH framework and value sets defined by the North American Industry Classification System (NAICS) and Standard Occupational Classification (SOC) value sets. NIOSH provides a detailed guide [Technical Report A Guide to the Collection of Occupational Data for Health: Tips for Health IT System Developers \(cdc.gov\)](#). In this guide, NACHC has distilled critical technical information for health centers with information on how to achieve quality data.

Structured fields in smart forms or the EHR interface will ensure standardization and make data aggregation easily align with the workflow identified in [Step 2](#). If you don't have in-house staff to make a smart form in the EHR to collect this data, partner with your EHR vendor or gain assistance from your health center-controlled network (HCCN).

To expedite data entry, a search interface or a searchable Excel spread sheet with the full list of occupations from [U.S. Census Bureau's North American Industry Classification System \(NAICS\)](#) can make it easier to find job/industry categories.



Partner with Clinical Care Teams and Population Health Teams to review ODH and use it for personalized care planning.

Introduce the Care Team and Population Health Team to the locations in your EHR where they can find and use the ODH collected for value-based patient care, population health care, and public health practices. Some tips for success:

- Video-based or in-person training can be used to show staff how to collect and use ODH.
- Share case-examples like those in [Step 8](#).
- Consider a huddle (meeting) between intake teams, care teams, and the data analysts/informatics leads to ensure that continuous quality improvement is applied to ODH and that population health work supports the clinical care teams.

The ODH collected can be used for personalized care and prevention guidance based on each patient's needs. During a crisis, ODH is used [to identify essential workers](#) who may need extra outreach and attention. Consider interoperability and coordinated care with local hospitals and partners as well as value-based payment for care.



Include ODH in dashboards to show patient and population health impacts.

Data dashboards display real-time metrics and performance indicators that can identify care gaps and guide public health and medical decisions. Build ODH into your health center's dashboard to identify and close care gaps. Consider a population-level dashboard that will help health center administrators and planners better understand their patient population's needs and the relationship between occupational information and social drivers of health (SDOH).

To improve trust and data literacy in the data presented, teams will benefit from background information and instructions on how the dashboard is created and what it's intended to support.



Conduct a QI Cycle to identify areas for improvement.

When you build-in Continuous Quality Improvement (CQI) processes, you set your efforts up for success. Regular monitoring of ODH-related data practices within your health center including an assessment of data quality, dataflow, and workflow will enable you to make changes that benefit the data collection and use and reduce stress on staff. Here are some strategies to build in CQI:

1. Ensure metrics are measurable to track progress and evaluate if ODH data collection and analysis is effective.

Identify key performance indicators (KPIs) that align with the health center's objectives and desired outcomes, such as increased accuracy of ODH or improved patient care based on ODH insights. Clinical measures, like screening tests in high-risk populations, should be considered and implemented as well.

2. Implement data validation processes to ensure the accuracy, completeness, and consistency of data.

Data accuracy, completeness, and consistency are often initially low in quality. Plan to conduct a root cause analysis (RCA) and implement continuous data quality improvement. This will help you identify underlying causes and contributing factors, so you can take corrective and preventive actions (CAPA) to address issues and prevent their recurrence.

3. Monitor data entry practices and provide ongoing training and feedback to staff members.

Involve frontline staff, including clinicians, data entry personnel, and informatics teams, in the CQI process, fostering open communication channels to share insights, challenges, and suggestions.

4. Conduct regular audits to assess if ODH collected predicts or addresses health outcomes.

Continuously monitor and evaluate the impact of ODH on patient care, population health, and public health outcomes by analyzing trends and patterns and identifying areas for improvement or opportunities for targeted interventions. This will be used to compare performance against established metrics and benchmarks for progress and identify areas that require further attention.



Report back to your leadership and staff to share the value of ODH.

ODH can have a great impact on clinical outcomes. The following are examples that demonstrate the general utility of these data for health center care teams. When your health center collects patient stories, be sure to share them with your administration, board, and staff so they appreciate the value of ODH on patient lives - and so your teams can identify more ways to use the data for value-based care and population health. Here are some examples:

1. Patient Care

A 42-year-old man presents with asthma. His symptoms of wheezing and cough began 6 months ago. For the past year, he has worked in an autobody shop, painting cars. The health center's automatic clinical decision support tool is set up to flag patients that work in hazardous industries and pops up an alert when the patient visits. An occupational medicine consultant is called in and she notices that chemicals called isocyanates are in the paints he uses. This is the likely cause of his asthma. He was able to change to a job without exposure to these paints, which resolves his symptoms within 3 months.

2. Population health

A health center practice that routinely collects occupation information during registration uses a population health tool to analyze where people work in their catchment area. Notable is the number of patients who are housepainters. Most speak Portuguese. In follow-up discussions with some of these patients, it is revealed that much of their work involves removing lead paint from older houses. Screening for lead poisoning is instituted based on occupation, and educational materials in Portuguese are provided to patients on how to take preventive measures while working.

A community health center that piloted the collection of occupation and industry information from patients learned many of their patients work at dairy farms. An exploratory analysis found that this population of dairy farm workers disproportionately had diagnoses of asthma and other respiratory illnesses. The health center proceeded to treat patients' respiratory conditions and offered a COVID vaccine clinic for workers and their families at the dairy farm work site, in collaboration with the employer. (See links to the ODH Info Sheet below for more information)

3. Public health Reporting

A 19-year-old man presents to an emergency department with flu-like symptoms. His occupation is a farm worker and the industry is peach farming. Based on this information, the physician asks about his activities right before symptom onset. He was at work, picking peaches. Laboratory testing confirms a diagnosis of pesticide poisoning. As required by state law, a report is sent by the healthcare organization through their health IT systems to the state health department. A health department epidemiologist analyzes reported cases from all nearby healthcare facilities and sees that many cases were people working for the same employer. The state health department then worked with the employer to assess and reduce exposure to pesticides.

HOW CAN ODH HELP IN A NATIONAL DISASTER?

As the nation plans for future disasters and infectious disease outbreaks, we've learned frontline or essential workers must be identified early with ODH data and supported by health centers. These individuals must remain healthy so they can deliver critical services when those events occur.

Essential workers* are individuals who perform critical jobs necessary for the health, safety, and well-being of a community during a crisis or emergency. These jobs include healthcare workers, emergency responders, food and agriculture workers, transportation workers, energy workers, and water and wastewater treatment workers among others.

Essential Industries are the businesses and organizations in our economy that employ essential workers. They provide goods or services that are considered fundamental for maintaining the basic needs and infrastructure of a society. They are considered vital for a community's stability and survival. For example:

- healthcare
- food production and distribution
- transportation
- public utilities

When we learn about our patients' employment, industry, and occupation during a health center visit, we can identify the wide range of essential workers living in our communities and provide them with expedient care. To learn which industries or occupations are most common in your health center's catchment area, use external data from the US Census Bureau, Bureau of Labor Statistics, or other local or state resources to identify local employers. This data can be used to customize pre-populated industry lists to check in the EHR.

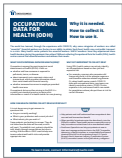
* **The definition of an "Essential Worker"** is typically determined by governmental authorities, such as the federal Cybersecurity and Infrastructure Security Agency, which identify those whose work is critical to maintaining essential services and societal functioning during a crisis.

The specific criteria used to define essential workers change depending on the nature of the crisis. For example, during a public health emergency like a pandemic, essential workers may include healthcare professionals, first responders, and individuals involved in public health response and medical supply chains. However, during a natural disaster or an economic downturn, the definition of essential workers may encompass different roles, such as emergency responders, utility workers, or individuals involved in waste removal or food production and distribution.

Organizations can reassess and update their lists of essential workers as definitions change once the data are collected in the EHR.

RESOURCES

To learn more about this work, use these helpful resources:



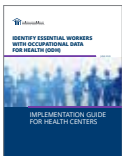
ODH Info sheet (English) Outlining the What, Why, and How related to this work. <https://www.nachc.org/wp-content/uploads/2022/12/NACHC-Occupational-Data-for-Health-Info-Sheet.pdf>



ODH Info sheet (Spanish): https://www.nachc.org/wp-content/uploads/2022/12/Spanish_NACHC-Occupational-Data-for-Health-Info-Sheet.pdf



Health Centers on the Frontlines. This NACHC podcast discusses Work as a Social Driver of Health: <https://www.nachc.org/podcast-work-as-a-social-driver-of-health-how-la-casa-family-health-center-identifies-farmworkers/>



IEW Implementation Guide provides clear instructions for the inclusion of ODH in your health center's EHR. Designed for informatics and quality improvement staff, called: Guide to the Collection of Occupational Data for Health: Tips for Health IT System Developers: <https://www.cdc.gov/niosh/docs/2022-101/default.html>



Occupational Health Data in Electronic Health Records, Guidance from the American College of Occupational and Environmental Medicine (ACEOM) now states that industry and occupation are core data elements in the US Core Data for Interoperability (USCDI), and EHR vendors will be required to include and use ODH standards, nationwide, in USCDI v3.

**Contact Informatics@nachc.com
or visit: <https://www.nachc.org/topic/essential-and-frontline-workers>**