

## Occupation and Industry [NAACCR Data Items #270-#330] (last reviewed June 2024)

### Overview:

*Census Occ Code 1970-2000* [[#270](#)], *Census Ind Code 2010 CDC* [[#272](#)], *Census Ind Code 1970-2000* [[#280](#)], *Census Occ Code 2010 CDC* [[#282](#)], *Occupation Source* [[#290](#)], *Text--Usual Occupation* [[#310](#)], *Text--Usual Industry* [[#320](#)], *Census Occ/Ind Sys 70-00* [[#330](#)] are standard NAACCR data items that are required, when available, by NPCR.

Historically, occupation and industry were coded using data from the [Census Industry and Occupation Classification System](#) maintained by the U.S. Census Bureau. In 2011, the National Institute for Occupational Safety and Health (NIOSH) automated the coding by creating the [NIOSH Industry and Occupation Computerized Coding System \(NIOCCS\)](#).

In 1992, the Cancer Registries Amendment Act required central registries funded by NPCR to collect occupation and industry data to the extent available in the source documents for US central cancer registries<sup>1</sup>. CDC recommends using the NIOCCS to code occupation and industry<sup>2</sup>. NIOSH maintains and regularly updates the NIOCCS coding system to assure the most up-to-date information is available. However, to incorporate the data into the central registry, US central registries often have to manually code the information from text. Canadian cancer registries do not routinely collect occupation or industry data, although operations may vary by province or territory.

### Issues:

Cancer registries have found the collection of usual occupation and industry data to be difficult. Data are often missing in medical records, and, when known, may be biased due to lack of external validity. For example, selection bias may be an issue if a person's work history is suspected to be associated with their cancer diagnosis and, therefore, more likely to be documented. Also, most of the occupational and industry data available in the cancer registry is from linkages with death certificate data, which also can lead to selection bias as the data are significantly more likely to be known for deceased versus alive patients. Even when available, the quality of the data in the medical record or death certificate are often limited to less useful information such as "retired" or reported with the current rather than the usual occupation and industry. Prior evaluations of these data described the issues in more detail<sup>3,4</sup>.

While these data are important to understand the burden of occupational exposures, the systematic bias of the data doesn't support population-based assessments. These data are not suitable for national-level assessment and are currently excluded from CiNA data products. Specific occupational exposure assessment is best supported by cohort studies. Registries that link with occupational cohorts can also then supplement their surveillance data. However, specific research questions may be supported using local or regional data for registries that are able to actively incorporate these data into their registry. Regardless, results must be interpreted with caution due to the issues with systematic bias.

**Status:**

NAACCR will continue to evaluate the quality and completeness of occupation and industry data and will consider the inclusion of occupation and industry in CiNA data products if additional data are made available to central registries.

**References:**

1. [Cancer Registries Amendment Act](#), Public Law. 102-515, 106 Stat 3372 (October 24, 1992).
2. Department of Health and Human Services Centers for Disease Control and Prevention National Institute for Occupational Safety and Health. [A Cancer Registrar's Guide to Collecting Industry and Occupation](#). 2011. DHHS (NIOSH) Publication No. 2011-173.
3. Fulton, John et al. "The Collection and Use of Occupation and Industry Data by NAACCR Member Registries". [CINA-Article.pdf \(naaccr.org\)](#). Accessed April 10, 2024.
4. Freeman, MaryBeth B et al. "[Capture and coding of industry and occupation measures: Findings from eight National Program of Cancer Registries states](#)." American journal of industrial medicine vol. 60,8 (2017): 689-695. doi:10.1002/ajim.22739