

# Collection and Use of Industry and Occupation Data IV:

Development of Training Materials to Improve  
Occupational Data Collection in Cancer Registries

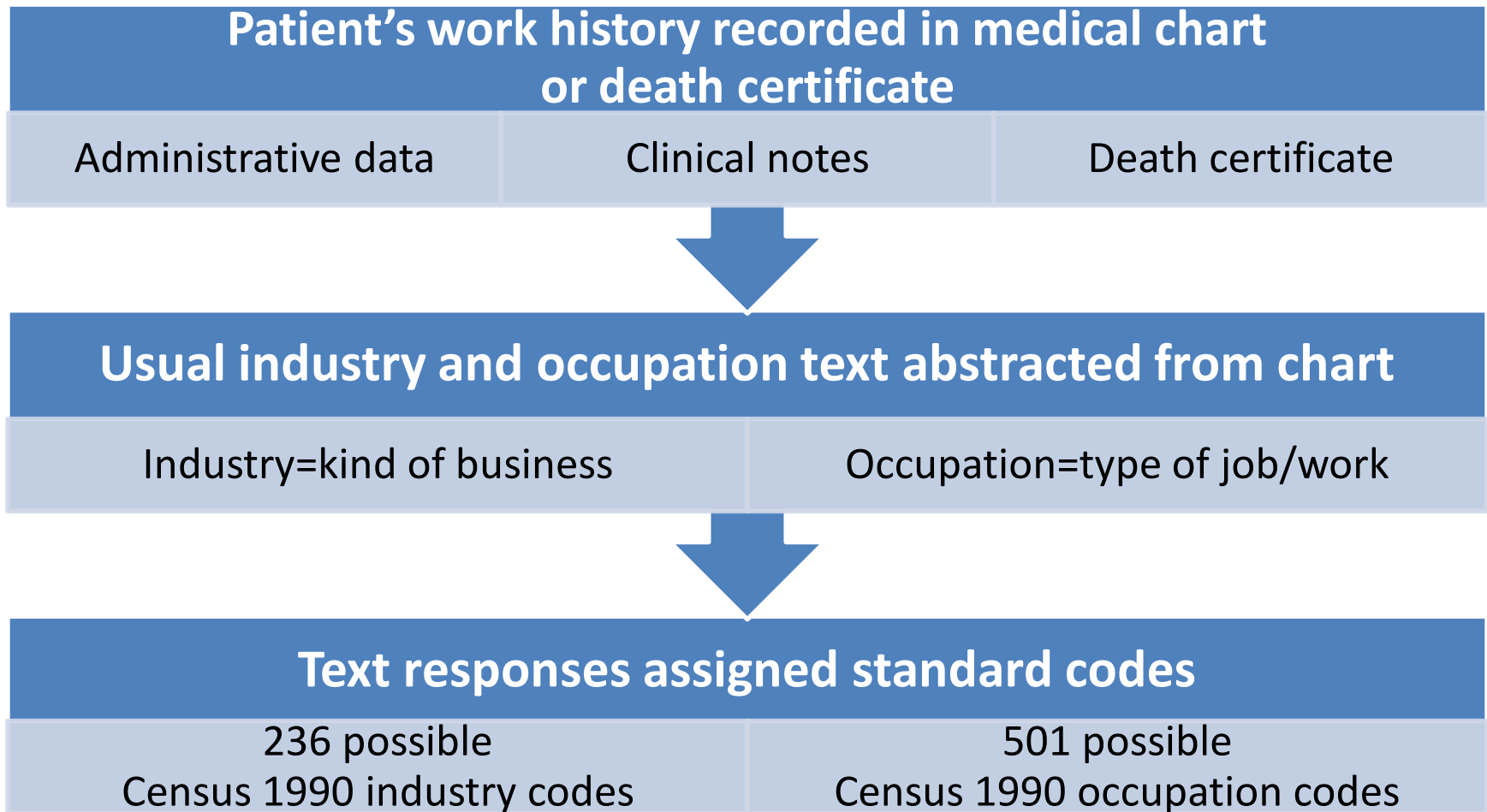
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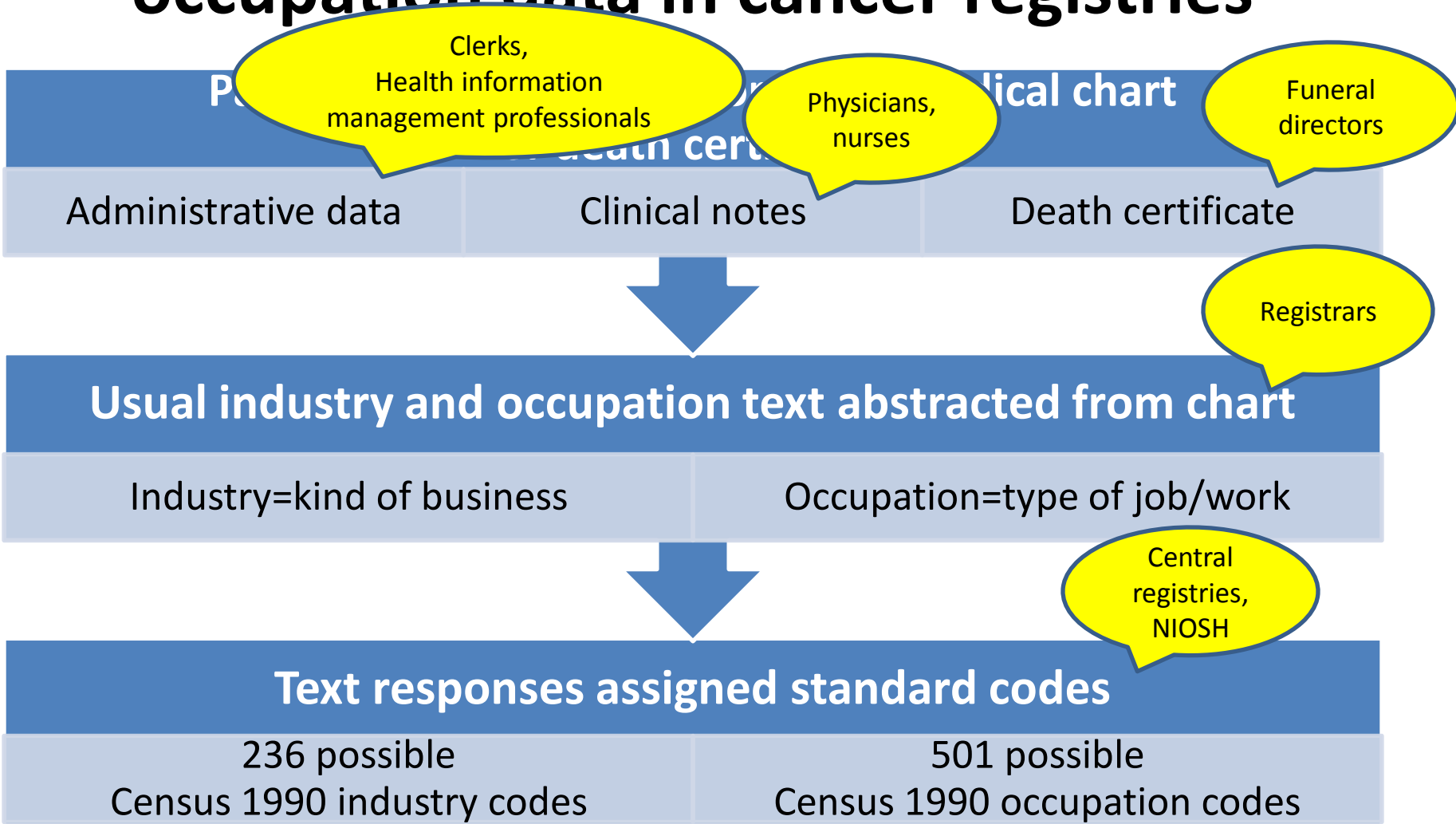
# Purpose of Our Registrar Training Project

- Public health practice project resulting from experience with pilot research project with the California Cancer Registry (CCR)
- Goal: Improve the capture of occupational data from hospital/clinic medical and administrative records
- Why? To increase the validity of using these data for surveillance and research with the ultimate goal of decreasing the incidence of cancers related to occupational exposures

# Steps for including useful industry & occupation data in cancer registries



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# Results of 2001 NAACCR Survey on Collection & Coding of I&O

- 41 state registries responded
  - 37 (90%) reported that they received I&O data in case reports submitted by reporting hospitals
  - All 37 reported collecting I&O in narrative form
    - 11 (30%) also received pre-coded I&O data from hospital registries
    - 11 (30%) coded I&O at the central cancer registry
    - 15 (41%) central cancer registries computerized their narrative I&O information
      - 10 of these also computerized their I&O codes.
  - Only 1 registry reported ever using I&O data in an annual report
  - 27 used or provided I&O data for special epidemiological investigations

# Results of 2001 NAACCR Survey on Collection & Coding of I&O (cont.)

- Barriers cited
  - Collection and coding of data is labor intensive
  - I&O data available in medical records is incomplete and sometimes difficult to find
  - Hospitals do not have a standard protocol for the collection of I&O data

# Results of 2008 NPCR Survey on Collection of I&O

- 44 states responded
  - Of these, 41 states (93%) reported collecting I&O data when available:
    - 20 states use both medical records and death certificates
    - 18 states use medical records/hospital abstracts only
    - 3 states use death certificates only.

# I&O in Medical Records

- Not well standardized
- Entered into the medical record through a variety of administrative or clinically based mechanisms
  - By physicians, nurses, admitting clerks, and other hospital personnel
- Purposes for which information is collected often unrelated to identifying occupational exposures
- May be incomplete
- Time frame may be uncertain
  - May be current rather than usual I&O



# Current vs. Usual I&O

- Analyses of a large representative sample of US workers found moderate-to-high levels of agreement between current/most recent occupation and longest-held job
  - Implication: current employment information (often what is found on medical record Face Sheets) can serve as a reasonable surrogate for longest-held job

Reference: Gómez-Marín O, Fleming LE, Caban A, Leblanc WG, Lee DJ, Pitman T. Longest held job in U.S. occupational groups: the National Health Interview Survey. *J Occup Environ Med.* 2005 Jan;47(1):79-90.

# Documents in the Medical Record Most Likely to Contain Codable I&O

- According to a study of 1,020 cases from the Massachusetts Cancer Registry, codable I&O information was available from:
  - At least 1 section of 80% of medical records
    - 51% of Inpatient Face Sheets
    - 34% of Outpatient Face Sheets
    - 27% of Inpatient Nurse's Assessments
    - 26% of Admit Note/History and Physicals
- Often only industry or occupation, but not both, was available
- Only rarely was there mention that the I&O information represented *usual* employment

# I&O in Death Certificates

- Complete in a vast majority of cases (81-94%)
- Usual (i.e. longest-held) I&O
- Obtained by interviewing next-of-kin
- Overall agreement between death certificates and interviews with workers before their death: 65-75%
- Separate NIOSH project to train funeral directors on collecting I&O in progress

# Despite Limitations of I&O in Medical Records, Abstraction of I&O Data Can be Improved

## Results of Massachusetts study

Type of I&O data	Routine record review <sup>a</sup>	Detailed record review <sup>b</sup>	Best information available <sup>c</sup>
Industry OR occupation only	22.5%	19.3%	20.1%
Both industry and occupation	27.8%	42.5%	47.3%
Not in paid workforce	13.3%	11.1%	13.0%
No codable information	36.3%	27.1%	19.6%
Any codable I/O data	63.6%	72.9%	80.4%

a. I&O data collected by the routine cancer registrar.

b. Data collected after a detailed and dedicated medical record review.

c. Represents the best data available, whether from the routine or detailed record review. In some cases, better data was found from the routine record review

Reference: Levy J, Brooks D, Davis L. Availability and quality of industry and occupation information in the Massachusetts Cancer Registry. Am J Ind Med. 2001 Jul;40(1):98-106.

# Abstraction of I&O Data Can Also be Improved by Training Registrars

## Results of New Hampshire study

Type of I&O data	Original 2005 registry data	2005 data after detailed review <sup>b</sup>	2008-2009 routine registry data (post-training) <sup>c</sup>
Industry OR occupation only	3.6%	14.8%	17.9%
Both industry and occupation	15.2%	54.2%	47.7%
Not in paid workforce	4.0%	19.2%	20.0%
No codable information	77.2%	11.8%	14.4%
Any codable I/O data	22.8%	88.2%	85.6%

a. I&O data collected by the routine cancer registrar, study sample (n=474).

b. Data collected after a detailed and dedicated medical record review, study sample (n=474)..

c. I&O data collected by the routine cancer registrar after state-wide training of registrars (n=5,495)

Reference: Armenti KR et al. Improving the quality of industry and occupation data at a central cancer registry. *Am J Ind Med.* 2010 *in press.*

# Planned Training for Registrars

- Webinar (with NAACCR)\*
- Online training module\*
- Pocket guide
- Live presentations

\*Hoping to make continuing education credit available through  
NCRA

# Outline of Content of Registrar Training

- Background
  - Importance of I&O statistics
  - Previous research on improving I&O data in cancer registries
- Guidelines for collecting I&O
  - NAACCR instructions
  - Where to look
  - Tips for industry
  - Tips for occupation
- Examples of adequate and inadequate entries for I&O

# Plans for Webinar

- Content to be developed jointly by NIOSH project team and NAACCR training staff
- Will be presented by NAACCR training staff
- Will be available free of charge through NAACCR training portal
  - Separate from NAACCR annual subscription webinar series
  - Will be available live with interactive Q&A session and recorded for later download
- Expected duration: 1 hour
- Expected date: October, 2010



# Plans for Online Training Module

- Format: Flash, animated, e-learning tutorial
- Content will be adapted from webinar developed by NIOSH and NAACCR
- Will be produced by independent contractor
- Will be more interactive than webinar
- Will be available free of charge through link from NAACCR, NCRA, NIOSH websites
- Will include interactive exam
- Expected duration: 1 hour
- Expected date of availability: April, 2011

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## NCRA

*The findings and conclusions in this report have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.*