

An Approach to Addressing Occupational Public Health Surveillance Through Clinical Decision Support (CDS)

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BACKGROUND

Timely presentation of patient work information could assist primary care practitioners (PCPs) in recognizing the complex relationship of work and health: the impact of disease and injury on the ability to work and the impact of work on disease and injury.

Health information systems and electronic health records (EHRs) 1) are a potentially rich source of surveillance data and 2) can provide prevention knowledge and guidelines to the right people at the right time. Clinical decision support (CDS) has been shown to change clinician behavior.¹

NIOSH is working to develop CDS for patient care related to work and health for PCPs; this effort aligns with 2018 recommendations from the National Academies of Sciences, Engineering, and Medicine.²

THE FIVE 'RIGHTS' OF CDS³

- The **Right** information
- To the **Right** person
- In the **Right** intervention format
- Through the **Right** channel
- At the **Right** time in the clinical workflow

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METHODS

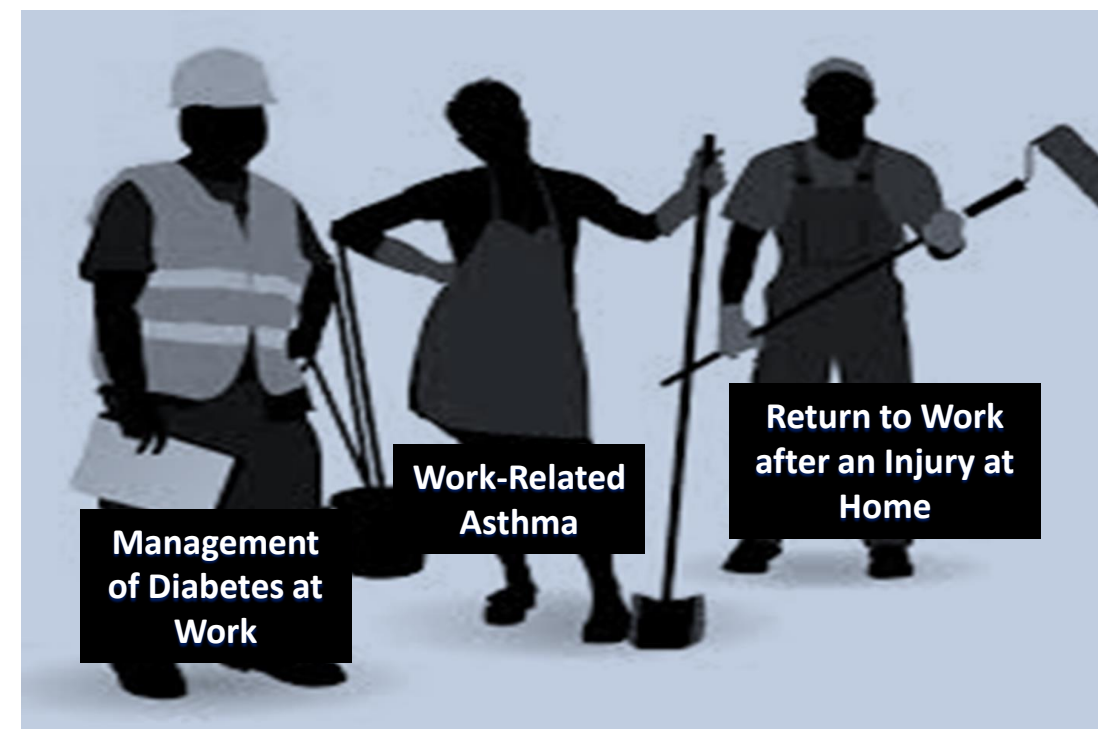
For each topic (Figure 1), a subject matter expert (SME) group:

- Reviewed clinical practice guidelines, best practices, and published literature.
- Used BRIDGE-Wiz and the electronic GuideLine Implementability Appraisal (eGLIA) applications to identify recommendations and obstacles.^{4,5}
- Summarized evidence and produced decision logic (If/then statements) to form the basis of potential CDS tools.

The value and feasibility of the proposed CDS were evaluated in five primary care settings that varied by geography, EHR vendor, and by size and type of setting.* Subjects were selected based on role; semi-structured interviews, observations, and thematic analysis triangulated with observations were used.⁶ (Figure 2)

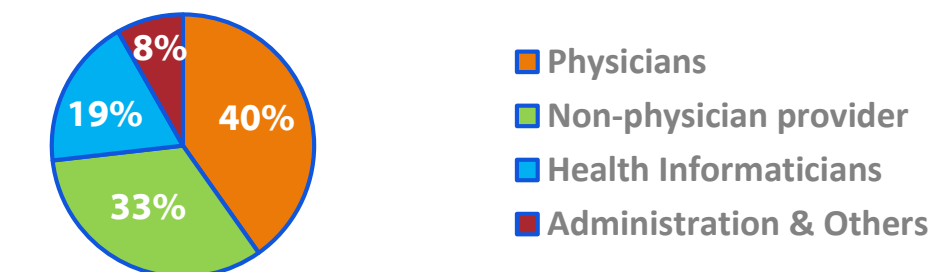
*NIOSH HSRB approved this research and all participants provided informed consent

Figure 1 THREE TOPICS RELEVANT TO PRIMARY CARE⁷



RESULTS

Figure 2: 76 Interviews in Five Primary Care Settings, Proportion of Respondents by Role⁸



"And my guess is we do not put the pieces together in a busy day...So having something to remind you to ask about that, I think would be helpful."

- Respondent

Primary Care Practitioners and/or Staff:

- Recognized the importance and value of work's impact on health.
- Welcomed accessible and evidence-based recommendations through CDS.
- Wanted something that saved time and was not a time burden.
- Suggested that existing health information systems could deliver the proposed CDS.
- Needed assistance addressing the complexities of how to intervene to improve patients' working conditions.

CONCLUSION: Clinicians are interested in CDS using work information

RECOMMENDATIONS TO SUPPORT OCCUPATIONAL PUBLIC HEALTH SURVEILLANCE

- Encourage collection of patient work information.
- Implement guidelines from public health.
- Improve recognition of reportable conditions.
- Trigger case reporting.

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