



Results of an Occupational Health Needs Assessment in Energy Impacted Communities

Kem P. Krueger^{1,5}, Jamie L. Johnson¹, Colton M. Eisele¹, Pamela N. Clarke^{2,5}, Christa M. Cooper³, Carol J. Hermansen-Kobulnicky^{1,5}, David M. Hunt^{4,5}, and Suzanne Clark^{1,5}
¹University of Wyoming School of Pharmacy; ²University of Wyoming School of Nursing; ³University of Wyoming Social Work Department; ⁴University of Wyoming Marketing Department; ⁵University of Wyoming Center for Community Health and Economic Development



Background

Current Wyoming Healthcare Issue:

- Major healthcare issues in Wyoming are high occupational death and injury rates.
- Wyoming had the highest US workplace fatality rate in 2007¹ and high occupational injury rates:
 - Many fatalities occurred in dominant Wyoming industries, including transportation, construction, and oil and gas
 - WY has an occupational injury rate higher than the national average²
 - Nonfatal occupational injuries can be severe, costly, and/or disproportionately unusual in nature^{3,4}
- Such injuries often require specialized treatment, yet training focused on occupational injury treatment is not widely available for health professionals in the affected communities⁵
- Significant factors related to fatal occupational injuries have been identified¹
- Less is known about severe non-fatal injuries¹
- The WY Governor's Task Force on Workplace Fatality Prevention is focused on identifying root causes, safety measures and injury prevention
- However, no group is focused specifically on training healthcare professionals who are the first responders, first receivers, and providers who care for injured workers re-assimilating into the community
- Our long-term goal is to improve the care of injured workers in Wyoming and regions and states affected by energy and extractive industries
- This project is the first attempt at identifying relevant healthcare training needs of healthcare workers in the affected communities

Objective

- The purpose of this project was to identify occupational health experiences and training gaps of healthcare providers.

Methods

Instrument Development

- Interviews with key informants, literature reviews, and internet searches were conducted to identify energy-related workplace injuries and potential training gaps for healthcare providers
- A panel of healthcare educators and survey experts revised the items to maximize the content and face validity of the instrument
- A 10-item survey was created
- IRB approval was obtained

Pilot Testing

- Two rounds of pilot tests were conducted.
- Pilot Survey Round 1**
 - Objectives:
 - Determine the time needed to complete the instrument
 - Provide input on instrument readability and feasibility
 - Identify points of confusion and redundancy
 - Identify missing points and/or educational issues
 - Sampling method: a convenience sample of targeted professions
- Pilot Survey Round 2**
 - Objectives:
 - Assess the ease of administration
 - Identify additional problems with the instrument
 - Determine the issues of content and training format preference which future surveys and focus groups should target
 - Identify unaddressed points and/or educational issues
 - Sampling method: a snowball sampling method
 - An invitation to participate in the electronic survey was sent to an initial group of contacts in professional organizations in the state.

Focus Groups

- Focus groups were conducted in conjunction with the annual meetings of the state pharmacy and nursing associations.

Analysis

- Frequencies and other descriptive statistics were used to describe the responses.
- Thematic analysis of focus group data continues.

Results

- Preliminary results (n=13) indicate that first responders and first receivers are interested in additional training (Figure 1).
- The two most preferred modes of training were or live workshops and internet or computer based module training that could be completed on the providers own time (Figure 2).
- The content areas of training identified in the survey and focus groups were similar with two exceptions.
 - Substance abuse and pain management
 - Communication with patients
- The pharmacist and nurse focus groups identified these other training areas:

Figure 1: Interest in Receiving Training (Content Areas)

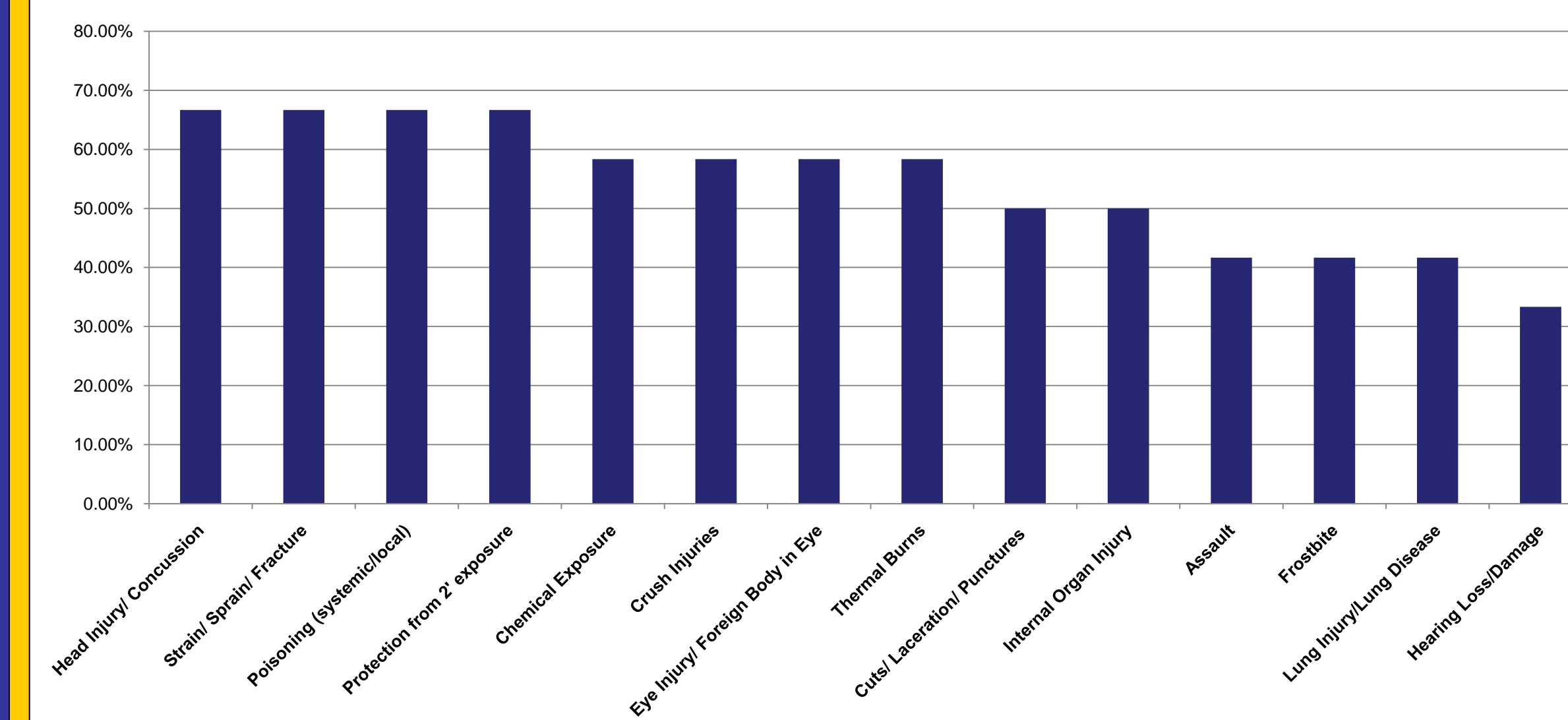
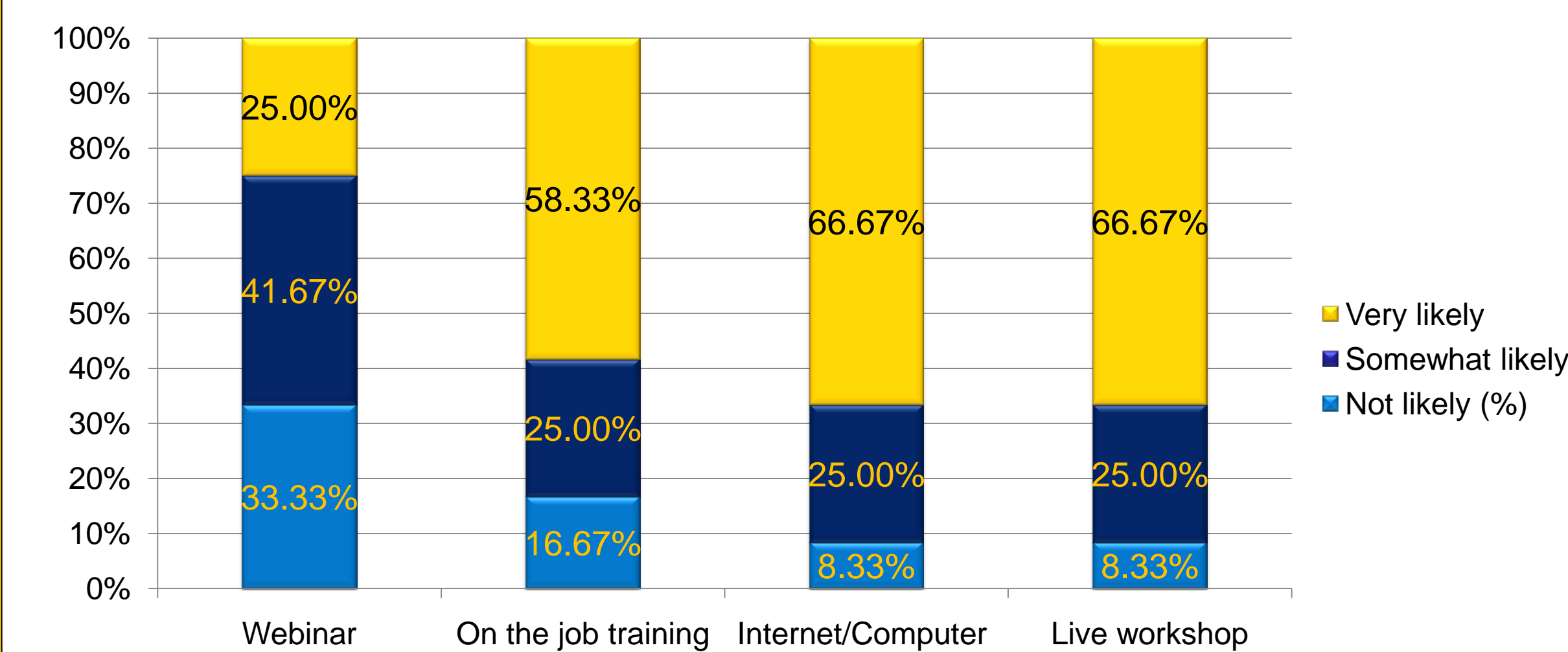


Figure 1: Interest in Mode of Training



Discussion and Implications

- Local energy and mining injuries likely pose healthcare challenges that are not met by our current training system
- Faculty in the Colleges of Health Sciences and Business intend to meet identified healthcare training needs by developing an innovative interdisciplinary distance training system that:
 - Combines rural community, state and university resources
 - Incorporates content experts,
 - Targets first responders, first receivers, providers, and others caring for injured energy and mine workers
- A snowball sampling method prohibits full identification of the sampling frame and follow-up reminders. Thus, an overall response rate cannot be calculated
- Alternative methods of distribution of this survey will be tested in the future
- The number of respondents were small, but the responses mirror preliminary data obtained from focus groups and informal interviews
- Converging requests for training in substance abuse, pain management, and patient communication were unexpected
- These areas of training are logical given the opportunity for primary care providers to impact the lives of injured workers who are re-assimilating into the community

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