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Economic Evaluation Proceedings Paper

Synthesis and recommendations of the economic evaluation of OHS interventions at the company level conference

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Abstract

Problem: In today's economic environment, enterprises may not be able to fund every new project aimed at promoting health and safety in the workplace. Company level economic evaluation of interventions can provide guidance in sound business decision-making. The Economic Evaluation of Occupational Health and Safety Interventions at the Company Level Meeting brought together members of the global occupational safety and health community interested in encouraging the use of economic knowledge and tools to evaluate economic gains from occupational health and safety interventions. *Discussion:* Discussions of the six models presented explored similarities, reliability, and potential use by corporate enterprises, small and medium enterprises, developing and transitioning nations, and economic theorists. Each group provided specific projects that could be pursued to advance knowledge in the area of economic evaluation at the company level. *Conclusion:* This conference established pathway to incorporate economic evaluation of health and safety interventions or programs at the workplace.

Keywords: Occupational health and safety; Economic evaluation; Corporate enterprises; Small and medium enterprises; Developing and transitioning nations; Economic theory

1. Introduction

Six key economic evaluation tools currently in use at the company level were presented during the first sessions of the *Economic Evaluation of Occupational Health and Safety Interventions at the Company Level* conference held in November 2004. These tools, described in this special section of the *Journal of Safety Research*, ranged from individualized approaches for small businesses to computerized systems designed for the corporate client.

The final sessions of this international conference challenged the participants to identify means to accomplish the major goals of the meeting. That is, what steps could be taken to encourage the use of economic knowledge and tools to evaluate economic gains from occupational safety and health interventions in order to make workplaces safer and healthier? Are there demonstration and research projects that if pursued would advance the knowledge and build capacity to conduct economic evaluations at the company level? These overarching goals gave rise to two objectives: Build model(s) in the public domain for widespread use worldwide and identify 5 to 10 collaborative projects ready for implementation.

The organizers of this meeting postulated that elements defining an ideal model may vary substantially by characteristics of the firm such as size of the firm and the economic system in which the firms are operating, as well as the adherence to standard economic theory. To explore these potential differences, four discussion groups were formed. Dialogues focused on specific issues and needs within the context and from the perspective of corporate enterprises, small and medium enterprises, enterprises within developing and transitioning nations, and economic theory. These

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key questions were presented for each group to stimulate and guide discussion:

- What are the common elements of a model that you can identify that should be included in a model for this setting?
- What are the data collection tools (e.g., a standard data set) and approaches (e.g., participatory approach) that are needed or desirable for a model?
- What are the issues of reliability of the models?
- What are the roles you can foresee in the further development of a model for academia, national institutes, the corporate sector, labor, insurance companies?
- How might multi-national corporations and national institutes assist with model usage and capacity building in developing nations?

The following section presents brief summaries and recommendations from each of the four target group's discussions.

2. Discussion group summaries

2.1. Corporate enterprises

The corporate enterprise initially was conceptualized as a single homogenous entity. However, the participants in this group presented a far more dispersed array of entities within the corporate umbrella that a model would need to accommodate. Corporations range from a single enterprise that has incorporated for any number of reasons, including liability. Larger corporations are comprised of differing components, such as individual plants, divisions, corporate offices, and subsidiaries, which may have unique needs, including differing model specificity and content. Furthermore, within any of these components, analysis may be desired at the entire structural level or at an individual project level. In addition to these structural differences, the decision makers within the corporate enterprise are widely dispersed. The audience within a corporate structure may include staff within numerous departments, including safety and health, operations, and finance, as well as individuals such as engineers, plant or division managers, and corporate staff.

The acquisition of data is critical for an economic evaluation tool to be successful. This group carefully examined sources and types of data, as well as the barriers for collection, that could be used for economic evaluation of occupational safety and health interventions. Clearly, the cost of the intervention would need to be ascertained, including the cost of any equipment. The group identified the need for complete injury and accident data, which should include a crude injury or illness diagnosis, job title or task, department or location, date, and time. This information may be available through existing data collection efforts such as workers' compensation, Occupational Safety and Health (OSHA) required records, or First Time Occupational Visit (FTOV) records. Human Resource departments could also be a valuable source of information including absenteeism records, workers' compensation, injury files, and individual employee personnel records, such as hours worked, wage, and benefit scales. Financial data, such as an appropriate discount or interest rate, would have to be obtained for economic calculations. Productivity and quality measures were also named as desired information. In some instances, the enterprise will have this data available, in others one would have to rely on an indirect measure such as applying a multiplier to the direct costs.

In addition to the data, the group named potential data collection tools and sources that the corporate entity should have readily available. Electronic medical records (ideally tied to OSHA recording and reporting requirements) are an excellent method to collect injury data. The group also suggested to begin with the OSHA record systems, which includes incident case data and hours worked, and add data from first aid visits and workers' compensation cases. Discerning days away from work and restricted work activity days should also be a vital part of the data collection system.

Following this discussion, participants offered a tiered approach for economic evaluation for consideration by the meeting participants. The approach includes the following five steps:

- *Surveillance.* This step includes continuing data collection efforts gathering information on first time occupational visits, workers' compensation claims, and work hours.
- *Identify the most important problems.* After thoroughly identifying problems, prioritize them according to the potential impact on workers and the firm. This step also includes identifying potential programs or interventions to address the hazards. Cost estimates for the potential interventions should be developed. Benchmarking should also be completed at this stage.
- *Design the intervention.* All financial assumptions associated with the intervention should be clearly identified at this stage. This would include estimates of the number of injuries or illnesses avoided and any estimated changes in productivity or quality. Additionally, this stage would include identifying the financial inputs, such as the cost of capital, tax rates, and labor costs.
- *Conduct the economic evaluation.* This step would entail application of one or more of the models presented at this conference or potentially a model developed to meet the specific needs of the individual corporate entity.
- *Communicate with decision makers.* This is the final stage in the economic evaluation process, the presentation of the problem, the solution (intervention), and the economic impact of implementing that solution. This is an opportunity to demonstrate that safety and health is more than just "the right thing to do," it can also be profitable.

The remainder of the group discussion focused on appropriate roles for each constituent. Academia should