Participative Ergonomics for Manual Tasks

- Manual tasks risk management requires worker participation
- Participation requires training in risk assessment and control
- This poster presents a multiple-case study of 6 surface and underground coal mines involving 60 site visits to train 400 miners
- Risk assessment via semi-quantitative assessment of risk factors
- Facilitated workshops to generate control suggestions
- Assistance with implementation

Lessons Learned

- Site champion role essential
- Participation needs to extend to refinement of controls
- Communication of progress important
- Documentation successes and failures
- Communication between shifts, between miners and management, and between mines needs improvement (let alone between companies and countries)

Gas Drainage Drilling

**RISK ASSESSMENT**

**RISK CONTROLS**

### DESIGN CONTROL OPTIONS

1. Minimize the distance that the worker needs to bend to access the tool
2. Provide a tool that is easier to use and requires less force
3. Minimize the need for the worker to exert force
4. Ensure the tool is well designed and fits the worker's hand

### WORKSTATION CONTROL OPTIONS

1. Provide a comfortable and ergonomically designed workstation
2. Ensure the workstation is well designed and fits the worker's body

**COMMENTS**

The risks associated with gas drainage drilling can be minimized through the implementation of control measures. The tool should be designed to minimize the need for force and accommodate the worker's body size and shape. This can be achieved through the use of adjustable components and ergonomic design. The workstation should also be designed to accommodate the worker's body size and shape, ensuring that the worker is comfortable and can perform the task without strain.

Pump Changeout

**RISK ASSESSMENT**

**RISK CONTROLS**

### DESIGN CONTROL OPTIONS

1. Minimize the force required to operate the tool
2. Provide a tool that is easier to use and requires less force
3. Minimize the need for the worker to exert force
4. Ensure the tool is well designed and fits the worker's hand

**COMMENTS**

The risks associated with pump changeout can be minimized through the implementation of control measures. The tool should be designed to minimize the need for force and accommodate the worker's body size and shape. This can be achieved through the use of adjustable components and ergonomic design. The workstation should also be designed to accommodate the worker's body size and shape, ensuring that the worker is comfortable and can perform the task without strain.