

**Attachment E**  
**Pre/Mid/Post Behaviors and Helmet-CAM Interview Questions**

Hello, I work for NIOSH, a non-regulatory agency. For this current research, we are trying to gather examples of the best ways to talk about health and safety with workers to help encourage safety/health behaviors. Because your site is already familiar with the Helmet-CAM, we are using this technology as a communication tool to help encourage discussions around certain health/safety topics. The goal is to improve communication practices that support health/safety behaviors between workers and leadership.

During these interviews, we will focus on communication that takes place with your leadership around dust behaviors, because we can use the Helmet-CAM to inform sources of dust in the environment. As you know, the Helmet-CAM is a simple technology that consists of a lightweight camera, an instantaneous dust monitor, and a pack to house these two instruments in a way that allows you to perform your work as normal. We are asking that you wear the Helmet-CAM at three different times over the next several weeks while we are here for a short amount of time (anywhere from 15 minutes to one hour). Immediately after you take the camera off, we will download the footage onto our computer and show the video to you, so that you can actually see when and where your dust exposure was the highest. Only you and I will go over this video together, unless you would like to have others present as well – I know that it is already common practice for you and your leadership to review this together. However, reviewing the video with you will allow me to discuss specific behaviors and practices related to dust exposure and potentially, things that the organization can do to help lower dust sources here.

During this time we also want to hear about other interactions, related to workplace health and safety, that you have with your leadership. My goal is to dialogue with you about these issues three times over the course of the next several weeks so we can ask about any changes in communication with your management and any changes in your personal behaviors to reduce exposure to dust and other hazards in your work environment. The information you provide will help determine how management can best show their support for safe work practices. In addition, we will be able to determine how the Helmet-CAM helps knowledge flow from workers to leaders and vice versa.

The interviews will last anywhere from 30 minutes to one hour, since we will be going over Helmet-CAM footage with you while we ask questions. The feedback that you provide will not be linked back to you in any way. Your participation is completely voluntary. You don't need to wear the Helmet-CAM and you do not have to answer any questions you don't want to. Your Helmet-CAM footage and responses to each question will be confidential. We do not record the names of any participants. You will be assigned a number to maintain your confidentiality. In any public release of results, no data will be disclosed that could be used to identify specific individuals. Only NIOSH staff who are involved in collecting or preparing the information for analysis will have access to your answers.

If you do not object to wearing the Helmet-CAM and being interviewed, I need you to review and sign this consent form. [Provide form and explain]. Do you have any questions before we begin?

Public reporting burden of this collection of information is estimated to average 45 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Review Office, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; ATTN: PRA (0920-xxxx).

## TIME 1 INTERVIEW

### Icebreakers

1. Tell me a little bit about what you do around here (e.g. main job tasks, responsibilities, etc.).
2. Briefly describe the work, (such as specific job tasks) you have been doing lately.

### Personal Behaviors and Susceptibility toward Respirable Dust (Health Belief Model)

During your job, at what times do you think you are exposed to the most dust? Why do you feel this way?

Explain how you try to lower your exposure to dust during shifts.

[For each behavior listed:]

- a. Is this a rule/policy here?
- b. What prompted you to try [this]? (e.g., did someone tell you, you knew the mining environment, etc.)
- c. To your knowledge, is [this] effective at lowering your exposure level?
- d. What difficulties did you encounter when trying [this method]?
- e. How many times have you done [this]?
- f. Do you consider [this] a regular, preventative behavior you practice to manage your exposure to dust? If so, how long did it take you to regularly practice [this]?

If you change your behaviors do you think it will help prevent the onset of silicosis? Why/why not?

What are some things that the organization can do around here to reduce dust exposures?

If the organization changes these things will it help prevent the onset of silicosis? Why/why not?

Based on your experiences here, what are your chances of getting silicosis/respiratory disease in the future? Why do you feel this way?

Is getting silicosis something that you worry about? Why or why not?

### Communication with Supervisor about Dust (Theory of Operant Leadership)

When was the last time you and your [frontline/immediate supervisor] communicated about dust exposure?

Check one:

- During the last few hours?
- Earlier today?
- Yesterday?
- Day before?
- Not at all? – then ask for most recent interaction they recall.

Describe what was or is typically discussed regarding your dust exposure (i.e., describe the interaction – what were you doing, who initiated the interaction).

Issue:

Did you (check one):

- talk one-on-one
- over the phone
- listen to your supervisor speak during a meeting
- communicate via e-mail, etc.?

Who initiated the communication? (you or your supervisor)

Frontline supervisor

- What did your supervisor say/do?
- How did you respond (if at all)?
- How did the interaction make you feel? (e.g., did you feel he/she has genuine concern, want to change behavior, etc.)

Mineworker

- What did you say/do?
- How did your supervisor respond (if at all)?
- How did the interaction make you feel?

What changes have you made to your work practices since you and your supervisor talked about this [*insert topic from above about dust exposure*]?

What changes do you plan to make in the future, as a result of what your supervisor said?

So, it sounds like the main topic(s) of the communication with your supervisor was/were \_\_\_\_\_ [*pick one or more from the list below*]. Would you agree with that?

Safety / health  
List safety/health topics:

Productivity  
List productivity topics:

Quality of work  
List quality of work topics:

Other \_\_\_\_\_

Was this communication with your supervisor helpful? Why or why not?

**Other Communication with Supervisor (Social Support/Extended Parallel Process Model)**

Is there anything else your frontline supervisor communicated about your work, other than dust-related information?

Check one:

- During the last few hours?
- Earlier today?
- Yesterday?
- Day before?
- Not at all? – most recent can remember?

Describe what was discussed (i.e., describe the interaction).

Issue discussed:

Did you (check one):

- talk one-on-one
- over the phone
- listen to your supervisor speak during a meeting
- communicate via e-mail, etc.?

Who initiated the communication? (you or your supervisor)

Frontline supervisor

- What did your supervisor say/do?
- How did you respond (if at all)?
- How did the interaction make you feel? (e.g., did you feel he/she has genuine concern, want to change behavior, etc.)

Mineworker

- What did you say/do?
- How did your supervisor respond (if at all)?
- How did the interaction make you feel?

What changes have you made to your work practices since your supervisor talked to you about this [insert topic from above]?

What changes do you plan to make in the future, as a result of what your supervisor said?

So, it sounds like the main topic(s) of the communication with your supervisor was/were \_\_\_\_\_ [pick one or more from the list below]. Would you agree with that?

Safety / health  
List safety/health topics:

Productivity  
List productivity topics:

Quality of work  
List quality of work topics:

\_\_\_\_\_ Other \_\_\_\_\_

Was this communication with your supervisor helpful? Why or why not?

### **Communication Wishes**

Tell me about the frequency of communication between you and your supervisor...is it adequate? Why or why not?

What would you change about how your supervisor communicates with you?

Is there anything you wish your supervisor talked with you more about? What?

Discuss your ability to communicate with your supervisor about various health/safety concerns.

### **Helmet-CAM Content (Harm Reduction Theory)**

Now that we've asked you these questions, let's go over the Helmet-CAM footage...

- Show worker the video footage, including his/her five max dust exposure points. Focus on these five time points (the software labels them for us).

What is your first reaction while viewing this content?

What goes through your head as you see these higher exposure points?

Tell me about the max dust exposure that is the most surprising to you. Why?

Tell me about the max dust exposure that is the least surprising to you. Why?

Are the tasks we discussed earlier those that had the most exposure?

What are some things that you can do differently to lower your dust during these max exposures?

Do you see yourself actually doing [behavior changes discussed]? What are some reasons you would not want to do this? (e.g., money, production, time, etc.).

What are some things the organization could do to help some of these exposure situations we watched?

What are some reasons that they would not want to make these changes? (e.g. money, production, time, etc.)

What is the most realistic thing you would do in the next couple of weeks to try and reduce your exposure? The organization?

One goal for yourself:

Is there anything we discussed that you want to share with your supervisor? What?

One goal for the organization:

*These are all of our questions until next time. In the meantime we encourage you to think about the content we watched together and what you can do differently in regards to your own behavior or what you think management needs to know so they can better control dust in the environment. Do you have anything you'd like to add or any questions?*

## TIME 2 INTERVIEW

*Thank you for agreeing to talk with me again today. As you might remember, a couple of weeks ago we talked about your work tasks, some health and safety risks you experience at work, and what you, personally, do to prevent some of those risks, and what your supervisor may do to help prevent those risks. You also used the Helmet-CAM and we reviewed that content together to help reveal any new risks and behaviors you may not have been aware of that are increasing your exposure to dust. Today we are going to follow up on these things. This should only take about 30-45 minutes.*

### **Follow-up from Last Time/Reestablish Rapport**

First, have any of your basic work tasks changed since I was last here? If so, what has changed?

Have you identified any new tasks that may be exposing you to dust? Which ones?

Since you used the Helmet-CAM and we went over the footage, tell me how your awareness of potential dust exposures has changed.

Are you paying more attention to how you perform work tasks that cause dust? Which ones? What have you been doing differently?

### **Communication with Supervisor about Dust**

Since I was here last, have you and your supervisor talked about your dust exposure on the job? / Have you used information that your Helmet-CAM provided to initiate a conversation with your supervisor?

- a. What have you talked about?
- b. How was the information received?

When was the last time you and your frontline (or immediate) supervisor communicated about your dust exposure?

Check one:

- During the last few hours?
- Earlier today?
- Yesterday?
- Day before yesterday?
- Not at all?

Describe what was discussed regarding your dust exposure (i.e., describe the interaction).

Did you (check one):

- talk one-on-one
- over the phone
- listen to your supervisor speak during a meeting
- communicate via e-mail, etc.?

Who initiated the communication? (you or your supervisor)



- \_\_\_\_\_ Frontline supervisor
- What did your supervisor say/do?
  - How did you respond (if at all)?
  - How did the interaction make you feel? (e.g., did you feel he/she has genuine concern, want to change behavior, etc.)

- \_\_\_\_\_ Mineworker
- What did you say/do?
  - How did your supervisor respond (if at all)?
  - How did the interaction make you feel?

What changes did you make to your work practices based on what your supervisor talked to you about during these last couple of weeks [*insert topic from above about dust exposure*]?

What changes do you plan to make in the future, as a result of what your supervisor said?

So, it sounds like the main topic(s) of the communication with your supervisor was/were \_\_\_\_\_ [*pick one or more from the list below*]. Would you agree with that?

\_\_\_\_\_ Safety / health  
List safety/health topics:

\_\_\_\_\_ Productivity  
List productivity topics:

\_\_\_\_\_ Quality of work  
List quality of work topics:

\_\_\_\_\_ Other \_\_\_\_\_

Was this communication with your supervisor helpful? Why or why not?

### **Other Communication with Supervisor**

Is there anything else you and your frontline supervisor discussed about your workplace health/safety, other than dust-related information?

Check one:

- \_\_\_\_\_ During the last few hours?
- \_\_\_\_\_ Earlier today?
- \_\_\_\_\_ Yesterday?
- \_\_\_\_\_ Day before yesterday?
- \_\_\_\_\_ Not at all?

Describe what was discussed (i.e., describe the interaction).

Issue:

Did you (check one):

- talk one-on-one
- over the phone
- listen to your supervisor speak during a meeting
- communicate via e-mail, etc.?

Who initiated the communication? (you or your supervisor)

Frontline supervisor

- What did your supervisor say/do?
- How did you respond (if at all)?
- How did the interaction make you feel? (e.g., did you feel he/she has genuine concern, want to change behavior, etc.)

Mineworker

- What did you say/do?
- How did your supervisor respond (if at all)?
- How did the interaction make you feel?

What changes have you made to your work practices since your supervisor talked to you about [*insert topic from above*]?

What changes do you plan to make in the future, as a result of what your supervisor said?

So, it sounds like the main topic(s) of the communication with your supervisor was/were \_\_\_\_\_ [*pick one or more from the list below*]. Would you agree with that?

Safety / health

List safety/health topics:

Productivity

List productivity topics:

Quality of work

List quality of work topics:

Other \_\_\_\_\_

Was this communication with your supervisor helpful? Why or why not?

### **Communication Wishes**

Have you noticed any differences in the communication between you and your supervisor? What has changed in the last couple of weeks about how your supervisor communicates with you? (more, less, quality, etc.)

What could be changed to improve how your supervisor communicates with you?

Is there anything you wish your supervisor talked with you more about? What?

What are some things that you would like to talk with your supervisor about related to health/safety around here?

### **Helmet-CAM**

When we ended last time, you identified a few things you thought you could do differently to reduce your dust exposure. What have you tried these last couple of weeks?

Let's see if there are any differences since last time... let's look at the footage...[Download data].

- Show worker the video footage, including his/her five max dust exposure points. Focus on these five time points (the software labels them for us).

What are your general thoughts while viewing this content?

What is different compared to the last time you viewed your video?

What max exposures are different? [we will have a list of each workers' max exposures to reference].

Tell me about the max dust exposure that is the most surprising to you. Why?

Tell me about the max dust exposure that is the least surprising to you. Why?

Did any of the things you did differently this time seem to help your exposure? What? What behaviors seemed to work the best, if any?

Do you see yourself continuing [behavior changes discussed]? What are some reasons you would not want to do this? (e.g., money, production, time, etc.).

Are you aware of any changes made by the organization/supervisor to help reduce dust?

Did any of the things they did differently seem to help? What? Can these changes be maintained by the organization? If not, why? (e.g. money, production, time, etc.)

What is the most realistic thing you would do in the next couple of weeks to try and reduce your exposure? The organization?

One goal for yourself:

One goal for the organization:

*Thank you for agreeing to speak with us again today. We would like to follow-up and ask you some final questions about your experience with the Helmet-CAM, any behavior changes you have made, and what you and your supervisor have discussed, in response to the Helmet-CAM information over the past couple of weeks. We also have a short follow-up survey for you to complete. Your feedback has been informative and we hope you've enjoyed using the Helmet-CAM and seeing where your primary sources of dust exposure are in the workplace.*

### **Follow-up from Last Time/Reestablish Rapport**

First, have any of your basic work tasks changed since I was last here? If so, what has changed?

Have you identified any new tasks that may be exposing you to dust that you want us to check with the Helmet-CAM? Which ones?

You've used the Helmet-CAM a couple of times now...tell me how your awareness of potential dust exposures has changed.

How do you think your dust exposure is changing since using the Helmet-CAM?

- What methods have worked particularly well to lower your dust exposure?
- What methods have not worked as well to lower your dust exposure?

Do you feel you can better identify dust sources in your environment? How so?

Are you paying more attention to how you perform work tasks that cause dust? Which ones? What have you been doing differently?

### **Communication with Supervisor about Dust**

Since I was here last, have you and your supervisor talked about your dust exposure on the job?

When was the last time you and your frontline (or immediate) supervisor communicated about your dust exposure?

Check one:

- During the last few hours?
- Earlier today?
- Yesterday?
- Day before yesterday?
- Not at all?

Describe what was discussed regarding your dust exposure (i.e., describe the interaction).

Issue:

Did you (check one):

- talk one-on-one

- \_\_\_\_\_ over the phone
- \_\_\_\_\_ listen to your supervisor speak during a meeting
- \_\_\_\_\_ communicate via e-mail, etc.?

Who initiated the communication? (you or your supervisor)

\_\_\_\_\_ Frontline supervisor

- What did your supervisor say/do?
- How did you respond (if at all)?
- How did the interaction make you feel? (e.g., did you feel he/she has genuine concern, want to change behavior, etc.)

\_\_\_\_\_ Mineworker

- What did you say/do?
- How did your supervisor respond (if at all)?
- How did the interaction make you feel?

What changes have you made to your work practices since your supervisor talked to you about this [insert topic from above about dust exposure]?

What changes do you still plan to make as a result of what your supervisor said?

So, it sounds like the main topic(s) of the communication with your supervisor was/were \_\_\_\_\_ [pick one or more from the list below]. Would you agree with that?

\_\_\_\_\_ Safety / health

List safety/health topics:

\_\_\_\_\_ Productivity

List productivity topics:

\_\_\_\_\_ Quality of work

List quality of work topics:

\_\_\_\_\_ Other \_\_\_\_\_

What have you learned about sources of dust exposure and ways to reduce dust from your supervisor over the last month?

Was this communication with your supervisor helpful? Why or why not?

### **Other Communication with Supervisor**

Is there anything else your frontline supervisor communicated about your work, other than dust-related information?

Check one:

\_\_\_\_\_ During the last few hours?

\_\_\_\_\_ Earlier today?

- \_\_\_\_\_ Yesterday?
- \_\_\_\_\_ Day before yesterday?
- \_\_\_\_\_ Not at all?

Describe what was discussed (i.e., describe the interaction).

Issue:

Did you (check one):

- \_\_\_\_\_ talk one-on-one
- \_\_\_\_\_ over the phone
- \_\_\_\_\_ listen to your supervisor speak during a meeting
- \_\_\_\_\_ communicate via e-mail, etc.?

Who initiated the communication? (you or your supervisor)

\_\_\_\_\_ Frontline supervisor

- What did your supervisor say/do?
- How did you respond (if at all)?
- How did the interaction make you feel? (e.g., did you feel he/she has genuine concern, want to change behavior, etc.)

\_\_\_\_\_ Mineworker

- What did you say/do?
- How did your supervisor respond (if at all)?
- How did the interaction make you feel?

What changes have you made to your work practices since your supervisor talked to you about [*insert topic from above*]?

What changes do you plan to make in the future, as a result of what your supervisor said?

So, it sounds like the main topic(s) of the communication with your supervisor was/were \_\_\_\_\_ [*pick one or more from the list below*]. Would you agree with that?

\_\_\_\_\_ Safety / health

List safety/health topics:

\_\_\_\_\_ Productivity

List productivity topics:

\_\_\_\_\_ Quality of work

List quality of work topics:

\_\_\_\_\_ Other \_\_\_\_\_

Was this communication with your supervisor helpful? Why or why not?

**Communication Wishes**

Have you noticed any differences in the communication between you and your supervisor? What has changed this month about how your supervisor communicates with you? (more, less, quality, etc.)

What would you change about how your supervisor communicates with you?

Is there anything you wish your supervisor talked with you more about? What?

### **Helmet-CAM**

When we ended last time, you identified a few things you thought you could do differently to reduce dust exposure. What have you tried these last couple of weeks?

Let's see if there are any differences since last time... let's look at the footage...[Download data].

- Show worker the video footage, including his/her five max dust exposure points. Focus on these five time points (the software labels them for us).

What are your general thoughts while viewing this content?

What is different compared to the last time you viewed your video?

Are any of your max exposures for work tasks different? [we will have a list of each workers' max exposures to reference]. What is different?

Tell me about the max dust exposure that is the most surprising to you. Why?

Tell me about the max dust exposure that is the least surprising to you. Why?

What behaviors seemed to work the best at reducing dust sources, if any?

Do you see yourself continuing [behavior changes discussed]? What are some reasons you would not want to do this? (e.g., money, production, time, etc.).

Are you aware of any changes made by the organization/supervisor to help reduce dust?

Did any of the things they did differently seem to help? What? Can these changes be maintained by the organization? If not, why? (e.g. money, production, time, etc.)

What is the most realistic thing you would do in the next couple of weeks to try and reduce your exposure? The organization?

One goal for yourself:

One goal for the organization:

### **Closing**

Tell me how you think communication in general has changed around here.

Have other workers noticed any differences – what have they been saying?

Thinking back to when we first started talking, do you feel more in control/less in control/ or the same with respect to your health/safety at work? Why do you feel this way? [may depend on if change or no change occurs]

In what ways did the Helmet-CAM meetings encourage you to pay attention to your dust sources?

Tell me why you prefer more or less communication with your supervisor.

Tell me about changes that have been made to your work environment to help your health/safety.

Do you think all of these changes will help you stay healthier, longer?

Do you have any questions for me?