Attachment C

Surveys and Diary

Contents:

C1- Sleep Activity Diary

Form Approved
OMB No. 0920-XXXX
Exp. Date xx/xx/20xx

[Study ID]

Sleep Activity Diary

Complete the sleep diary as best you can.

Use the following fatigue and sleepiness ratings for your responses.

FATIGUE RATING:

1 = fully alert, wide awake
2 = very lively, responsive, but not at peak
3 = okay, somewhat refreshed
4 = a little tired, less than fresh
5 = moderately tired, let down
6 = extremely tired, very difficult to concentrate
7 = completely exhausted, unable to function effectively

SLEEPINESS RATING:

1 = extremely alert
2
3 = alert
4
5 = neither sleepy nor alert
6
7 = sleepy, but no difficulty remaining awake
8
9 = extremely sleepy, fighting sleep

Standard Dosage of Alcoholic Drinks:

12 oz. of beer, 5 oz. of wine, 1.5 oz. shot of distilled spirits

Sleep Activity Diary Page 2

Start this diary before bedtime on the day you begin wearing the actigraph.

SLEEP DIARY DATE _____/_____/_____ DAY 1

ANSWER BEFORE GOING TO BED FOR YOUR LONGEST SLEEP PERIOD OF THE DAY

PRIOR to this SLEEP period, you were (circle one): ON DUTY OFF DUTY

Did you take any naps today? YES NO Total # of naps: _____

Time of day (24hr) _____:_____ Duration Hours ___ Minutes ____

Time of day (24hr) _____:_____ Duration Hours ___ Minutes ____

Amount (#) consumed: caffeinated drinks ____ alcoholic drinks____

Number of Tobacco products _____ type: _____

Medications taken during this day:_____

Medications taken before sleep_____

Time to bed (24hr) _____:_____

Fatigue Rating: (circle one)

1 2 3 4 5 6 7

Sleepiness Rating: (circle one)

1 2 3 4 5 6 7 8 9

Sleep Activity Diary Page 3

ANSWER WHEN YOU FIRST AWAKEN FOR THIS DAY

DIARY DATE ___/___/___ DAY 1

Time Awakened (24hr) _____:_____

Fatigue Rating: (circle one)

1 2 3 4 5 6 7

Sleepiness Rating: (circle one)

1 2 3 4 5 6 7 8 9

Did you awaken at all during the sleep period? YES NO

Total # of awakenings: _____ Total duration of all awakenings Hours _____ Minutes _____

Cause? _____

Other comments/notes: _____

ANSWER BEFORE GOING TO BED FOR YOUR LONGEST SLEEP PERIOD OF THE DAY

WAKE DIARY DATE ___/___/___ DAY x

TODAY you are: ON DUTY or OFF DUTY

ON DUTY (complete only if on duty this day)

Shift Start Time (24hr) _____:_____

What tasks did you perform? _____

What percentage of your shift involved response to calls? _____%

How many calls were "in-progress" calls? _____

General level of activity: ☐ Mild ☐ Moderate ☐ High

Did you experience a critical incident today (either involved in or witnessed) that caused you trauma or stress? yes/no

Did you have breaks during the work shift when you were free from work activities? YES No

If yes, list times of the breaks: _____

Sleep Activity Diary Page 4

Shift End Time (24hr) _____:_____

Other comments/notes: _____

Did you take any naps today? YES NO Total # of naps: _____

Time of day (24hr) _____:_____ Duration Hours ___ Minutes ____

Amount (#) consumed: caffeinated drinks ____ alcoholic drinks____

Number of Tobacco products _____ type: _____

Medications taken during this day:_____

Medications taken before sleep_____

Time to bed (24hr) _____:_____

Fatigue Rating: (circle one)

1 2 3 4 5 6 7

Sleepiness Rating: (circle one)

1 2 3 4 5 6 7 8 9

Sleep Activity Diary Page 5

OFF DUTY (complete only if off duty this day)

ANSWER BEFORE GOING TO BED FOR YOUR LONGEST SLEEP PERIOD OF THE DAY

Daily Activities Start Time (24hr) _____:_____

What activities did you do today?

_____

Were you scheduled for court today? Yes No

If yes, did you testify? Yes No

Were you scheduled for other work related duties today? Yes No

If yes, what types of work related activities?_____

Were you serving in any sort of "on call" capacity? Yes No

Did you experience a critical incident today (either involved in or witnessed) that caused you trauma or stress? Yes No

General level of activity: ☐Mild ☐Moderate ☐High

Other comments/notes:

_____

Did you take any naps today? YES NO Total # of naps: _____

Time of day (24hr) _____:_____ Duration Hours ___ Minutes ____

Amount (#) consumed: caffeinated drinks ____ alcoholic drinks____

Number of Tobacco products _____ type: _____

Medications taken during this day:_____

Medications taken before sleep_____

Time to bed (24hr) _____:_____

Fatigue Rating: (circle one)

1 2 3 4 5 6 7

Sleepiness Rating: (circle one)

1 2 3 4 5 6 7 8 9

C2- Demographic and Work Experience Information

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OMB No. 0920-XXXX
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[Study ID]

Demographic and Work Experience Information

1. Do you have previous experience working night shift or long work hours (shifts longer than 9 hours or work weeks longer than 40 hours)?
   - o Yes
   - o No

   If yes, how many years? _____

2. Have you had other previous training about sleep and/or strategies for working shift schedules from another source?
   - o Yes
   - o No

   If yes, please describe briefly._____

3. In which of the following categories does your age fall:
   - o Under 18 years of age
   - o 18-24 years of age
   - o 25-34 years of age
   - o 35-44 years of age
   - o 45-54 years of age
   - o 55-64 years of age

4. Gender
   - o female
   - o male

5. Ethnicity: Are you of Hispanic or Latino origin?
   - o Yes
   - o No

Public reporting burden of this collection of information is estimated to average 2 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).

What is your race? Fill in one or more circles that apply.

- o American Indian or Alaska Native
- o Asian
- o Black or African American
- o Native Hawaiian or Other Pacific Islander
- o White

What is your marital status?

- o Married
- o Unmarried living with a partner
- o Divorced
- o Widowed
- o Separated
- o Single never been married
- o Refused

Number of children under age 18 living in the household

- o None
- o 1-2 children
- o 3-4 children
- o 5 or more children

How long have you worked night shift? _____Years _____ months

On average, how many hours do you work each week excluding overtime in your law enforcement job?

____hours ____ minutes

On average, how many hours overtime do you work each week in your law enforcement job?

____hours _____ minutes

Do you have a second paid job besides your law enforcement job or do any other work for pay?

- o Yes

- o No

If yes, how many hours a week on average do you work at additional jobs for pay?

____hours _____ minutes

How many years have you been employed as a police officer? _____Years _____ months

Provide the date you started police work _____Month _____ Day _____ Year

What is your present rank?

- o Sergeant
- o Corporal
- o Officer
- o Deputy
- o Trooper
- o Constable
- **o** Other (please specify)

C3- Knowledge Survey

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Knowledge Survey

Select the best answer for each question.

1. Which interval for rest breaks during work shifts is associated with reduced risk for errors and accidents?
   - o every 2 hours
   - o every 4 hours
   - o every 6 hours

2. If you want to modify work scheduling patterns for law enforcement officers, what do work schedule researchers strongly recommend?
   - o get upper management's approval and input and make the change to the work schedules
   - o involve the officers whose schedule will be effected in the process of change

3. Which response below is an evidence-based recommendation about this schedule?

   Work Tuesday 3pm – 11:30pm

   Work Wednesday 7am – 3:30pm

   - o a recommended work scheduling pattern
   - o a scheduling pattern to avoid

4. The sun’s light and dark cycles have minimal effect on sleep/wake cycles.
   - o True
   - o False

5. Most people's circadian clocks adapt easily to night shifts.
   - o True
   - o False

6. With training, experience, and professionalism, most people can adjust to sleeping less than 7 hours without negative consequences.
   - o True
   - o False

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).

7. After what length nap will a person be **less likely** to experience a longer period of grogginess when they awaken?
   - o 20 minute nap
   - o 1 hour nap
   - o 2 hour nap

8. Taking a long nap (1 hour or more) after coming home from day shift, will have what effects?
   - o will decrease the buildup of sleep pressure and as a result could lead to difficulty with falling asleep at the usual bedtime
   - o will alert you
   - o could lead to an extended period of grogginess on awakening
   - o All of the above.

9. If you were going to take a nap in the afternoon or evening before night shift, which nap length would reduce buildup of sleep pressure more?
   - o 20 minute nap
   - o 1.5 hour or longer nap

10. Window blinds block out light adequately for officers who sleep during daylight hours.
    - o True
    - o False

11. Coffee and other caffeinated beverages take on average how many minutes to have an alerting effect after consumption.
    - o 1 minute
    - o 5 minutes
    - o 30 minutes
    - o 60 minutes

12. Manipulation of light exposure can help circadian rhythms adjust to permanent shift work schedules.
    - o True
    - o False

13. Which are effective strategies to facilitate the onset of sleep?
    - o Watching TV in bed
    - o Looking at the computer close to bedtime
    - o Meditation
    - o All the above

14. Four to eight ounces of wine at bedtime is an effective coping strategy for individuals who have trouble falling asleep and staying asleep.

- True
- False

15. If feeling sleepy after completing a night shift, which strategy (ies) is (are) recommended by sleep and drowsy driving experts for the drive home?
    - turn up the radio and open the window on the drive home
    - pinch your leg or sit in an awkward position to keep awake
    - take a short nap before driving home
    - any of the above

16. Researchers think shift workers have difficulties with personal relationships because of which factors.
    - Demanding schedules are linked to poorer sleep which leads to mood disturbances.
    - Less quality time to spend with family and friends.
    - All above

17. Which of the following is the **least** effective strategy for shift workers to improve personal relationships?
    - educate family and friends about challenges of working shift schedules or long hours
    - tell family what they can do to help
    - shorten your time for sleep to meet the demands of work and the family
    - adopt ways to maintain communications
    - get enough good quality sleep

18. What is critical to recognize about these symptoms: difficulty focusing; frequent blinking; yawning repeatedly or rubbing eyes; trouble keeping head up; feeling restless and irritable?
    - Can be dangerous if occurs when driving or performing critical tasks
    - A person who has motivation, training, and professionalism can force himself or herself to stay awake.
    - Both above

19. Identify strategies that officers can use to increase their alertness.
    - A. Eat sugar rich food
    - B. Work in a brightly lit area or go outside in sunlight
    - C. Have a good sleep environment and prepare oneself for sleep
    - D. Take a short nap
    - E. All the above
    - F. All but A (first item)

20. Loud snoring is something some people do while sleeping and is not something to be concerned about.
    - True
    - False

21. Behavior (s) to promote falling asleep more easily and good sleep quality is (are):
    - Eating a large meal an hour or two before bedtime
    - Having a regular relaxing routine 1 hour or more before bedtime
    - Exercise about 1 hour before bedtime
    - Vary your times for going to sleep and getting up
    - All of the above

22. Health problems, such as high blood pressure and gastrointestinal symptoms, have no relationship to the amount and quality of a person's sleep
    - o True
    - o False

23. Getting too little sleep or having poor quality sleep can increase hunger, eating and body weight.
    - o True
    - o False

24. Which of the following is the **least** effective strategy for shift workers to improve personal relationships?
    - o educate family and friends about challenges of working shift schedules or long hours
    - o tell family what they can do to help
    - o shorten your time for sleep to meet the demands of work and the family
    - o adopt ways to maintain communications
    - o get enough good quality sleep

25. What is critical to recognize about these symptoms: difficulty focusing; frequent blinking; yawning repeatedly or rubbing eyes; trouble keeping head up; feeling restless and Irritable?
    - o Can be dangerous if occurs when driving or performing critical tasks
    - o A person who has motivation, training, and professionalism can force himself or herself to stay awake.
    - o Both above

26. Identify strategies that officers can use to increase their alertness.
    - o A. Eat sugar rich food
    - o B. Work in a brightly lit area or go outside in sunlight
    - o C. Have a good sleep environment and prepare oneself for sleep
    - o D. Take a short nap
    - o E. All the above
    - o F. All but A (first item)

27. Loud snoring is something some people do while sleeping and is not something to be concerned about.
    - o True
    - o False

28. Behavior (s) to promote falling asleep more easily and good sleep quality is (are):
    - o Eating a large meal an hour or two before bedtime
    - o Having a regular relaxing routine 1 hour or more before bedtime
    - o Exercise about 1 hour before bedtime
    - o Vary your times for going to sleep and getting up
    - o All of the above

29. Health problems, such as high blood pressure and gastrointestinal symptoms, have no relationship to the amount and quality of a person's sleep
    - o True
    - o False

30. Getting too little sleep or having poor quality sleep can increase hunger, eating and body weight.
    - o True
    - o False

31. Fatigue-related impairments are similar to impairments due to alcohol intoxication.
    - o True
    - o False

32. Researchers report people tend to recognize when they are too sleep deprived to function adequately.
    - o True
    - o False

C4- Epworth Sleepiness Scale

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Epworth Sleepiness Scale (Johns 1993)

In your current, usual way of life, how likely are you to nod off or fall asleep in the following situations, in contrast to feeling just tired?

Even if you haven't done some of these things recently, try to work out how they would affect you. It is important that you answer each question as best you can.

Using the scale, choose the most appropriate number for each situation.

Situation	Would never nod off 0	Slight chance of nodding off 1	Moderate chance of nodding off 2	High chance of nodding off 3
Sitting and reading				
Watching TV				
Sitting, inactive, in a public place (e.g., in a meeting, theater, or dinner event)				
As a passenger in a car for an hour or more without stopping for a break				
Lying down to rest when circumstances permit				
Sitting and talking to someone				
Sitting quietly after a meal without alcohol				
In a car, while stopped for a few minutes in traffic or at a light				

Add your responses to each item to get your score. A score of 10 or greater raises concern: you may need to get more sleep, improve your sleep practices, or seek medical attention to determine why you are sleepy.

<u>If your score is 13 or higher, we recommend that you see your healthcare provider</u> for an evaluation and possibly a referral to a sleep disorder specialist for an evaluation and treatment to relieve excessive worktime sleepiness.

C5- Pittsburg Sleep Quality Index

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Pittsburgh Sleep Quality Index

INSTRUCTIONS: The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply **for the majority of days and nights between night shifts during the past month**. Please answer all questions.

1. During the past month, what time have you usually gone to bed after your night shift?

   BED TIME _____

2. During the past month, how long (in minutes) has it usually taken you to fall asleep after going to bed after night shift?

   NUMBER OF MINUTES _____

3. During the past month, what time have you usually gotten up after your main sleep period between night shifts?

   GETTING UP TIME _____

4. During the past month, how many hours of actual sleep did you get? (This may be different than the number of hours you spent in bed.)

   HOURS OF SLEEP BETWEEN NIGHT SHIFTS _____

For each of the remaining questions, check the one best response. Please answer all questions.

5. During the past month, how often have you had trouble sleeping because you . . .

   a) Cannot get to sleep within 30 minutes

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

b) Wake up in the middle of your main sleep period between night shifts

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

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c) Have to get up to use the bathroom

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

d) Cannot breathe comfortably

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

e) Cough or snore loudly

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

f) Feel too cold

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

g) Feel too hot

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

h) Had bad dreams

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

i) Have pain

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

_____

j) Other reason(s), please describe_____

_____

How often during the past month have you had trouble sleeping because of this?

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

6. During the past month, how would you rate your sleep quality overall?

Very good _____

Fairly good _____

Fairly bad _____

Very bad _____

7. During the past month, how often have you taken medicine to help you sleep (prescribed or "over the counter")?

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

8. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

9. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?

No problem at all _____

Only a very slight problem _____

Somewhat of a problem _____

A very big problem _____

10. Do you have a bed partner or roommate?

No bed partner or room mate _____

Partner/roommate in other room _____

Partner in same room, but not same bed _____

Partner in same bed _____

If you have a roommate or bed partner, ask him/her how often in the past month you have had . . .

a) Loud snoring

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

b) Long pauses between breaths while asleep

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

c) Legs twitching or jerking while you sleep

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

d) Episodes of disorientation or confusion during sleep

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

e) Other restlessness while you sleep; please describe_____

_____

Not during the past month____	Less than once a week____	Once or twice a week___	Three or more times a week___

C6- Feedback about the Training, Barriers, and Influential People

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Feedback about the Training, Barriers, and Influential People

Please rate the training. Give us your candid opinion-how was it?

On a scale from 1 to 5, where 1 indicates strongly disagree, and 5 indicates strongly agree, please give the number which indicates how much you agree or disagree with each statement.

	1 Strongly agree	2	3 Neutral	4	5 Strongly disagree
I liked this training overall.					
This training told me something I didn't already know.					
The training motivated me to take action.					
This training said something important to me.					
The messages were dumb.					
I did **not** like this training.					

Next questions ask how you feel about the CDC as the source of this information.

	Yes	No	Do not know/not sure	Refuse to respond
Have you heard of them before?				
Are they a good source of information?				
Do they seem trustworthy?				

Was there any content in the training that was difficult to understand? If yes, which sections_____

What is the most negative part of the training?_____

Is there additional content on the topic of sleep, shift work, and long work hours that you would have liked to see? If yes, please enter the topics here. _____

What could improve this training?_____

Please indicate how strong a barrier it would be to use the information from this Training Program when working evenings, nights, rotating shifts, or long hours. Please select the number that corresponds with your opinion.

	1 Not a barrier at all	2 Minimal barrier	3 Neutral	4 Strong barrier	5 Extremely strong barrier
The Cost	1	2	3	4	5
My lack of expertise in work schedule management	1	2	3	4	5
Lack of time to set up my sleep environment	1	2	3	4	5
Techniques are too difficult or complicated	1	2	3	4	5
Difficult to get support from persons I live with	1	2	3	4	5
Difficult to get support from family and friends I don't live with	1	2	3	4	5
Lack of support from my supervisor	1	2	3	4	5
Constraints of my home environment	1	2	3	4	5
My competing personal priorities	1	2	3	4	5
Other_____ please specify	1	2	3	4	5

Now we would like to ask you about **who might influence you** to use or not use information from the sleep and work schedule training program. Please select the number that corresponds with your opinion.

Based on your knowledge and experience with these persons below, how likely is it that the following would like you to use the information from the training program.	**Extremely Likely**	**Somewhat likely**	**Neither Likely or Unlikely**	**Somewhat unlikely**	**Extremely Unlikely**
1. My senior officers	1	2	3	4	5
2. Officers who I work with	1	2	3	4	5
3. police organizations	1	2	3	4	5
4. spouse partner girlfriend boyfriend	1	2	3	4	5
5. parents	1	2	3	4	5
6. children	1	2			
7. Family, friends, or people I know who have worked shifts or long hours	1	2	3	4	5
8. The public	1	2	3	4	5
9. Other Please specify_____	1	2	3	4	5

If there is anything else you would like to tell us about the training program, please do so in this space._____

C7- Changes in Behaviors after the Training Program

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Changes in Behaviors after the Training Program

Has your life improved at all since you took the NIOSH training for law enforcement?

- o Yes, my life has improved because I took the NIOSH training for law enforcement
- o No, my life has not improved as a result of taking the NIOSH training for law enforcement

If yes, please explain: _____

Have you noticed any changes in your behavior since you took the NIOSH training for law enforcement?

- o Yes, I have changed my behavior as a result of the NIOSH training for law enforcement
- o No, I have not changed my behavior as a result of the NIOSH training for law enforcement

If yes, please select all the ways in which you have changed your behavior:

- o I try to get more sleep
- o I take more naps than I used to
- o I have improved my sleeping environment
- o I use caffeine differently now and adjust the times I drink it and the amount
- o I pay more attention to my level of fatigue
- o I am less likely to drive while drowsy
- o I am more likely to balance bidding for overtime with my need for sleep
- o I use relaxation techniques
- o I educated my family and the important people in my life so they understand my needs due to my work hours
- o I went or plan to go to a sleep disorder specialist or my healthcare provider for help with sleep symptoms
- o Other

  Please explain: _____