**Qualitative sub study of abstainer/relapser dyads**

*From grant: A sub sample (n=60) will be recruited for qualitative interviews about relapse/abstinence and the qualitative aspects of PN continuity or change152,153, interactions with members of PN, exchange of information, assistance or goods related to smoking cessation. Participants for qualitative interviews will be selected in 30 dyads (dyad = 1 relapser paired with an abstainer from same study arm, matched on gender). The 15 relapser/maintainer dyads from each arm will be matched on gender and approximate number of weeks participating in the study. Dyads from both study arms will be selected at different lengths of study participation (beginning at 5 months), so as to represent a range of participants who have relapsed/maintained for different lengths of time since study enrollment.*

**Interview guide for participants who have stayed quit from smoking:**

INTERVIEWER INSTRUCTIONS ARE IN CAPS. TEXT NOT IN CAPS CAN BE READ TO RESPONDENTS.

Thank you for taking the time to talk with me today. Just as a reminder, I need to record our interview today, so that it can be transcribed into a written document for the researchers to analyze. After the audio recording is transcribed, it will be destroyed and the only record of our call will be the written transcript. There will be no information that personally identifies you in the transcript. Do I have your permission to continue?

For our interview, I’m going to ask you a series of questions about what might have changed or stayed the same in your personal network since you enrolled in the study. Your personal network are the 25 people you named as having contact with over the past year in the baseline survey. I will show you pictures of your network to help you remember who you included. The purpose of these questions is to help the researchers better understand what happens in someone’s personal network when they quit smoking and are able to stay quit.

CHOOSE VISUALIZATION 1 FOR THE FOLLOWING QUESTIONS:

On the screen you see dots that are different colors and sizes and lines. The dots have names by them representing the people you said you know. A line between the dots means that those two people would talk to each other independently of you. Notice the groupings of dots. If there are a lot of dots clumped together it usually means they form some sort of group.

CONNECTEDNESS AND SMOKING STATUS QUESTIONS:

1. Does the network visualization appear to represent the people you know and how they know each other at the time you quit smoking? Do the groupings make sense to you?
   1. Since you quit smoking, how have the people you interacted with in your network visualization changed?
      1. Are there people you no longer interact with or are there new people you are interacting with?
         1. Why did those changes occur?
         2. What role have they played in helping or hindering your efforts to staying quit from smoking?
2. Please describe the groups you see on the screen. How do the people in each group know each other? MAKE SURE THE RESPONDENT SAYS AT LEAST ONE NAME IN EACH GROUP THEY DESCRIBE SO WE CAN IDENTIFY IT FROM THE INTERVIEW.
   1. The colors represent smoking status of the people you know. Please tell me if the group is mostly made up of people who smoke, people who do not smoke or a relatively even mix.
   2. Also please explain how each group has either helped you or hindered you in your efforts to stay quit from smoking.
3. IDENTIFY ISOLATES IN THE UPPER LEFT OF THE SCREEN IF THERE ARE ANY. The people in the upper left of the screen are people who you said don’t know anybody. What is there name?
   1. Why don’t they know anybody?
   2. How do they either help or hinder you in your efforts to stay quit from smoking?

BETWEENNESS CENTRALITY AND SMOKING STATUS QUESTIONS:

1. The dots are different sizes, the larger dots represent people that bridge the groups in your network. I want to talk about each one of the larger dots. What are their names?
   1. What groups do they bridge?
   2. How do they bridge the groups?
   3. How do they either help or hinder your efforts to stay quit from smoking?
   4. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
            3. If they quit, did this influence the smoking behavior of other people in the groups they bridged?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 2 ON DEGREE CENTRALITY AND SMOKING STATUS QUESTIONS:

1. This network visualization is similar to the last one, the only difference is the size of the dots represents the people that are most central among the people you know. Please describe the people that have larger dots on the screen. What are their names?
   1. How do they either help or hinder your efforts to stay quit from smoking?
   2. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 3 ON CLOSENESS AND SMOKING STATUS FOR THE FOLLOWING QUESTIONS:

1. This network visualization is similar to the last one, the only difference is the big dots are now people you say you are very close to and the smaller ones less so. Let’s talk a little about your relations with those you are closest to. What are the names of the people that are large dots?
   1. Since you quit smoking, how has your relationship changed with the people you feel closest to?
   2. How do the people you feel closest to help or hinder you in your efforts to stay quit from smoking?
   3. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 4 ON INTERACTION AND SMOKING STATUS FOR THE FOLLOWING QUESTIONS:

1. This network visualization is similar to the last one, the only difference is the big dots are now people you say you interact with a lot and the smaller ones less so. Let’s talk a little about your relations with those you interact with most. What are the names of the people which are large dots?
   1. Since you quit smoking, how has your relationship changed with the people you interact with most?
   2. What is their smoking status?
   3. How do the people you interact with most help or hinder you in your efforts to stay quit from smoking?
   4. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 5 ON DEMOGRAPHICS AND SMOKING STATUS FOR THE FOLLOWING QUESTIONS:

1. In this network visualization the dot color still represents smoking status, but the size now represents age, with older people as larger dots and younger people as smaller dots. Also, the shape of the dot now represents gender with circles for women, triangles for men, and squares for people that are non-binary.
   1. Are the people that smoke mostly in one age group or are they in different age groups?
      1. If they are in one age group, is it the same age group as you?
   2. Are the people that smoke primarily in one gender group or are they in different gender groups?
      1. If they are in one gender group, is it the same gender group as you?
2. Is there someone else in your network that we haven’t talk about yet that has been highly influential in helping you to stay quit? Please describe how they have helped you stay quit.
3. Why do you think you have been able to stay quit from smoking this long?
4. What else would you like us to know about your quitting smoking and how it has affected your interactions with people in your personal network?

Thank you again for taking the time for this interview. You have provided important information that will help us better understand how to help people quit smoking and stay quit.

**Interview guide for those participants who have started smoking again:**

INTERVIEWER INSTRUCTIONS ARE IN CAPS. TEXT NOT IN CAPS CAN BE READ TO RESPONDENTS.

Thank you for taking the time to talk with me today. Just as a reminder, I need to record our interview today, so that it can be transcribed into a written document for the researchers to analyze. After the audio recording is transcribed, it will be destroyed and the only record of our call will be the written transcript. There will be no information that personally identifies you in the transcript. Do I have your permission to continue?

For our interview, I’m going to ask you a series of questions about what might have changed or stayed the same in your personal network since you enrolled in the study. Your personal network are the 25 people you named as having contact with over the past year in the baseline survey. I will show you a pictures of your network to help you remember who you included. The purpose of these questions is to help the researchers better understand what happens in someone’s personal network when they quit smoking and then start smoking again.

CHOOSE VISUALIZATION 1 FOR THE FOLLOWING QUESTIONS:

On the screen you see dots that are different colors and sizes and lines. The dots have names by them representing the people you said you know. A line between the dots means that those two people would talk to each other independently of you. Notice the groupings of dots. If there are a lot of dots clumped together it usually means they form some sort of group.

CONNECTEDNESS AND SMOKING STATUS QUESTIONS:

1. Does the network visualization appear to represent the people you know and how they know each other at the time you quit smoking? Do the groupings make sense to you?
   1. Since you quit smoking and then started smoking again, how have the people you interacted with in your network visualization changed?
      1. Are there people you no longer interact with or are there new people you are interacting with?
         1. Why did those changes occur?
         2. What role have they played in helping or hindering your efforts to staying quit from smoking?
2. Please describe the groups you see on the screen. How do the people in each group know each other? MAKE SURE THE RESPONDENT SAYS AT LEAST ONE NAME IN EACH GROUP THEY DESCRIBE SO WE CAN IDENTIFY IT FROM THE INTERVIEW.
   1. The colors represent smoking status of the people you know. Please tell me if the group is mostly made up of people who smoke, people who do not smoke or a relatively even mix.
   2. Also please explain how each group has either helped you or hindered you in your efforts to stay quit from smoking.
3. IDENTIFY ISOLATES IN THE UPPER LEFT OF THE SCREEN IF THERE ARE ANY. The people in the upper left of the screen are people who you said don’t know anybody. What is there name?
   1. Why don’t they know anybody?
   2. How do they either help or hinder you in your efforts to stay quit from smoking?

BETWEENNESS CENTRALITY AND SMOKING STATUS QUESTIONS:

1. The dots are different sizes, the larger dots represent people that bridge the groups in your network. I want to talk about each one of the larger dots. What are their names?
   1. What groups do they bridge?
   2. How do they bridge the groups?
   3. How do they either help or hinder your efforts to stay quit from smoking?
   4. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
            3. If they quit, did this influence the smoking behavior of other people in the groups they bridged?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 2 ON DEGREE CENTRALITY AND SMOKING STATUS QUESTIONS:

1. This network visualization is similar to the last one, the only difference is the size of the dots represents the people that are most central among the people you know. Please describe the people that have larger dots on the screen. What are their names?
   1. How do they either help or hinder your efforts to stay quit from smoking?
   2. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 3 ON CLOSENESS AND SMOKING STATUS FOR THE FOLLOWING QUESTIONS:

1. This network visualization is similar to the last one, the only difference is the big dots are now people you say you are very close to and the smaller ones less so. Let’s talk a little about your relations with those you are closest to. What are the names of the people that are large dots?
   1. Since you quit smoking and then started smoking again, how has your relationship changed with the people you feel closest to?
   2. How do the people you feel closest to help or hinder you in your efforts to stay quit from smoking?
   3. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 4 ON INTERACTION AND SMOKING STATUS FOR THE FOLLOWING QUESTIONS:

1. This network visualization is similar to the last one, the only difference is the big dots are now people you say you interact with a lot and the smaller ones less so. Let’s talk a little about your relations with those you interact with most. What are the names of the people which are large dots?
   1. Since you quit smoking and then started smoking again, how has your relationship changed with the people you interact with most?
   2. What is their smoking status?
   3. How do the people you interact with most help or hinder you in your efforts to stay quit from smoking?
   4. What is their smoking status?
      1. Have you tried to help them quit smoking?
         1. If yes: Please tell me more about why you have tried to help others quit smoking and how you have tried to help. (E.g. emotional support, shared your own story, shared information about quitting resource such as quitline, informational handouts, medications to help quit smoking)
            1. What happened with the person you were trying to help quit? (e.g. quit, quit attempt, thinking about quitting, kept smoking)
            2. How did that effect your thoughts, feelings, and behaviors around your own quitting?
         2. If no: Please tell me more about why you have NOT tried to help them quit smoking

CHOOSE VISUALIZATION 5 ON DEMOGRAPHICS AND SMOKING STATUS FOR THE FOLLOWING QUESTIONS:

1. In this network visualization the dot color still represents smoking status, but the size now represents age, with older people as larger dots and younger people as smaller dots. Also, the shape of the dot now represents gender with circles for women, triangles for men, and squares for people that are non-binary.
   1. Are the people that smoke mostly in one age group or are they in different age groups?
      1. If they are in one age group, is it the same age group as you?
   2. Are the people that smoke primarily in one gender group or are they in different gender groups?
      1. If they are in one gender group, is it the same gender group as you?
2. Is there someone else in your network that we haven’t talk about yet that has been highly influential in helping you to stay quit or start smoking again? Please describe how they have helped you stay quit or influenced you to start smoking again.
3. Why do you think you started smoking again now?
4. What else would you like us to know about your quitting smoking, starting again, and how it has affected your interactions with people in your personal network?

Thank you again for taking the time for this interview. You have provided important information that will help us better understand how to help people quit smoking and stay quit.