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Urine Cotinine in Children and Parental Behavior Modification: A Pilot Study

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Urine Cotinine in Children and Parental Behavior Modification: A Pilot Study

Qualitative Research & Analysis

Teresa Lachance

Capstone Report

May 10, 2017

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Qualitative Research & Analysis

Background

“Urine Cotinine in Children and Parental Behavior Modification” was designed by Dr. Deirdre Burns, a pediatrician at the Barbara Bush Children’s Hospital (BBCH). It was implemented as a pilot study to determine whether urine cotinine testing in children who are admitted to the hospital for respiratory illness and tracking parental smoking behaviors over time was feasible. Upon enrollment in the study the hospitalized child would be tested for the presence of cotinine – a breakdown product of nicotine, that can be found in urine (Benowitz, 1999). Parents were given a brief survey to assess their current smoking behaviors and to understand their readiness to quit smoking. They received smoking cessation materials provided by the Breathe Easy Coalition of Maine. These materials outline information about second-hand and third-hand smoke, and encourage children to participate in their parent’s smoking cessation efforts as well. Parents were referred to Maine Tobacco Helpline. With their permission, the parents were contacted by the Maine Tobacco Helpline and offered tobacco cessation counseling and treatment, including nicotine patches, gum or lozenges. One month after the initial enrollment, parents were contacted via phone and given the same survey they took at enrollment. This was done so the research team could compare follow-up responses to the baseline responses. In addition to the quantitative survey questions, the parents were asked a series of open-ended qualitative questions. These questions were used to gather narrative data that will be used to inform future studies. There is existing data from a qualitative study on parental interpretation of cotinine feedback that suggests urine cotinine testing is helpful and provides valuable

information to parents (Johansson et al 2014). This pilot study aimed to use a similar protocol to create the most effective smoking cessation program for future studies and to guide smoking cessation programs for BBCH.

Methods

As a graduate student, my role in the study was to design, implement and analyze the qualitative interview protocol. The goal of the qualitative interview section of the study was to obtain information that reaches beyond the scope of the quantitative survey alone. In *Qualitative Interview Design: A Practical Guide for Novice Investigators*, Daniel W. Turner III explains that “often times, interviews are coupled with other forms of data collection in order to provide the researcher with a well-rounded collection of information for analyses” (Turner, 2010). The qualitative interviews sought to assess the intervention, as well as the participant’s overall experience as a study participant.

Design

The qualitative interview protocol was designed to obtain information that could be used to inform future studies. For the qualitative piece of this research, we chose what author Sharan B. Marriam calls a “basic qualitative study” design (2009). She explains that “qualitative researchers conducting a basic qualitative study would be interested in (1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences. The overall purpose is to understand how people make sense of their lives and their experiences” (Marriam, 2009, p. 22-23). The intention of the qualitative interview portion of the study was to answer three overarching questions:

- How effective was the intervention?

- What motivated participation?
- What was the overall experience like?

Using a semi-structured interview, we sought answer these questions which will be discussed in the “Results” section.

The qualitative interview questions were specifically designed, focusing on the following recommendations for creating effective research questions: “(a) wording should be open ended, (b) questions should be as neutral as possible, (c) questions should be asked one at a time, (d) questions should be worded clearly, and (e) be careful asking “why” questions” (Turner, 2010).

The interview protocol consists of nine questions, with additional probes to provoke deeper thought and produce the most complete responses possible. The principal investigator and I met with faculty at USM and Maine Medical Center well versed in qualitative research to help design these questions and the subsequent probing questions.

The first four questions sought to elicit the parent’s experience with the three-part intervention – the cotinine testing, the Breathe Easy Coalition materials and the Maine Tobacco Helpline over-the-phone counselling and tobacco cessation materials. The questions relating to the intervention were designed in two parts. The first part of the question was designed in a Likert-type fashion and was intended to be rated on a three-point scale. “Likert-type or frequency scales use fixed choice response formats and are designed to measure attitudes or opinions (Bowling, 1997; Burns, & Grove, 1997). The rated questions asked: “How helpful was the [intervention]?” and offers three options for the response: “not helpful”, “somewhat helpful”, or “very helpful”. These Likert-type questions were added to the qualitative protocol to set a baseline understanding of the perceived efficacy of the intervention. By asking the question to be rated, the answers would

provide more accurate data than simply relying on the narrative information from the second part of the question. The fixed choice format allowed us to quantify the perceived experience – an important piece of the pilot study that was not included in the quantitative survey questions.

The second part of the qualitative interview questions were open-ended. Questions were designed based on the principle that, “*Good* interview questions are those that are open-ended and yield descriptive data, even stories about the phenomenon. The more detailed and descriptive the data, the better” (Marriam, 2002, p.99). Our interview protocol asked the participant open-ended questions, such as: “Tell me about your experience with [insert intervention].” In using qualitative data, we intended to both “allow the participants to contribute as much detailed information as they desire” and to “ask probing questions as a means of follow-up” (Turner, 2010).

The five remaining questions aimed to assess the participant’s motivation to take part in the study, their overall experience and suggestions for improvement; they did not include rated questions. They were simply open-ended questions seeking to understand the participant’s perspective (see see Appendix A for qualitative assessment protocol).

These qualitative questions were reviewed by investigators and the parent of a child who had previously been admitted to BBCH for a respiratory illness and whose urine cotinine was tested by way of mock telephone interview. Real-time answers were provided by the parent, followed by immediate feedback from the parent on the question wording and content. The questions were then evaluated by the investigators for clarity and edited as appropriate. (Telephone Interview, Lachance and Burns). Following the first trial interview, we rephrased some of our interview questions, and added additional questions to gather more robust data. The next two

pilot interviews were done with personal contacts, and were used to focus on interviewing techniques. The mock-interviews were conducted over the phone, and both the quantitative survey questions and the qualitative interview questions were rehearsed. We followed a script written by the primary investigator, Dr. Burns, to ensure that each interviewee had the same experience and that no pertinent information was overlooked (see Appendix B for investigator script). The final two pilot interviews were recorded with a handheld recording device, as well as an iPad. They were done to specifically mimic the live interviews.

Both the quantitative survey and qualitative interview protocol were entered into a system for Research Electronic Data Capture, otherwise known as REDCap. REDCap is an online data collection software that is HIPAA compliant and allows for sharing and analysis of surveys. We chose this system for three major reasons, 1) for the simplicity of quantitative data analysis, 2) for HIPAA compliance purposes, and 3) for its convenience.

Implementation

We chose to conduct the follow up interviews over the phone to ensure convenience for the participants. During the original enrollment in the study, we asked participants for a window of time that would be most convenient for them to be contacted by phone for follow up. We reached out to the participant one month after their initial enrollment in the study and within the recommended timeframe. Each participant was called once a day, for up to three days. We felt that more than three phone calls would be an inconvenience for subjects who chose not to participate in the follow-up phone call and a maximum reasonable time commitment for investigators.

The process for the phone calls remained consistent among all participants. The researcher would

enter a private, secured room to ensure patient confidentiality, as it was required that the phone calls be made on speaker phone for recording purposes. Subjects were called from a hospital land line. The researchers followed the script provided. If we were able to connect with the participant, we would begin the first part of the two-part phone call with the quantitative survey. The survey questions were not recorded with the voice recorder, but were entered into REDCap for analysis. Following the survey, we requested the participant's permission to record the remainder of the phone call. Upon confirmation, we would proceed with the qualitative interviews. The interviews were brief, generally lasting no longer than 10 minutes. After the phone call was complete, the voice recording was sent via encrypted email from the iPad to a transcriptionist. Upon receipt, transcripts were analyzed using a conventional content analysis. The interviews were de-identified to maintain patient confidentiality.

Analysis

Our analysis aimed to find recurrent themes and patterns in our patient interview transcripts and compare our findings among multiple interviews to better understand the impact of the intervention on parental smoking behaviors. We chose a conventional content analysis as it is "generally used with a study design whose aim is to describe a phenomenon" (Hsieh & Shannon, 2005). After performing the analysis, five primary themes emerged.

The content analysis was a multi-step process. Step one involved data review. Researchers listened to the audio files and studied the transcripts to become familiar with the content of each interview. Being mindful of our overarching research questions: how effective was the intervention, what motivated participation, and what was the overall experience like, we moved on to the next step by highlighting common themes in each of the interviews that was pertinent

to the research questions (see Appendix C for participant 0302, and Appendix D for participant 0303 interviews). We then entered the information into a table, creating a column for each participant and listing the common themes found within each interview (see Appendix E, Table 1E). Emerging themes included items such as: perception of overall experience, motivation to change behavior, and use of resources. We color-coded the themes that related closely, and from them identified five primary themes: Resources, Motivation to Participate, Motivation to Change, Overall Experience, and Future Studies. The literature suggests that rather than creating main themes at the beginning of the analysis and searching for secondary themes that fall within the scope of each category that researchers performing a content analysis should allow the primary themes to emerge organically (Taylor-Powell & Renner, 2003). Once the primary themes were identified we created a second table that organized the primary and secondary themes, listing primary themes in column one, and secondary themes in column two. (see Appendix E, Table 2E). Next, we created a document that outlined the primary and secondary themes. We supported each theme with qualitative data taken directly from the interviews. This document allowed us to identify patterns within each category (Taylor-Powell & Renner, 2003 & Cotton, 2016), (see Appendix F for thematic outline).

Results

Eight individuals were eligible to participate in the study. Of the eight, four families agreed to be approached by our researchers. Three of the four agreed to participate in the study, and we completed the process from enrollment to follow-up with a total of two participants.

The results of the content analysis identified the similarities and differences of the two participant's experiences, and helped us answer our research questions. One notable difference

was the result of the cotinine tests. One participant received a negative cotinine test, while the other received a positive one. This variance had an impact on each participant's experience. The individual who received the negative test felt reassured by it. She felt that she and her family could continue with the same habits, as their behaviors had no impact on their child's health. Whereas the individual who received the positive test felt that it was an eye-opening experience, and it motivated him to begin change his behavior.

The participants' use of the resources, including materials from the Breathe Easy Coalition and counselling and tobacco cessation materials from the Maine Tobacco Helpline, demonstrated additional differences. Both participants reviewed the Breathe Easy Coalition materials, but did not use them on a daily basis. Participant 0302 was not the smoking adult and spoke on behalf of the smoker. She answered questions about the resources as best she could, noting that "I'm not really sure how helpful it [the Maine Tobacco Helpline] was. I know that he learned a lot of stuff from them and he's still trying to quit" (Appendix C). Participant 0303, was the smoking adult and was able to provide more detailed information about the resources and their benefit to his life. He took advantage of the resources offered, most specifically the Maine Tobacco Helpline counselling. Neither participant utilized the smoking cessation options. It is difficult to assess the efficacy of the intervention due to the limited number of interviews and conflicting experiences.

The most prominent similarity was the participants' motivation to participate in the study: the health of their children. Their child's admission to the hospital raised concerns in both participants. They saw the study as an opportunity to learn how their smoking behaviors were affecting their child's health. Both participants also noted a desire to quit smoking. The cotinine

results and the educational materials were both motivating factors.

In terms of the overall experience as a study participant, both individuals shared a neutral to positive reaction: 0302: “I feel okay about it. It was kind of nice” (Appendix C) And: 0303: “I don’t feel bad about it or anything. I feel like I made the right decision” (Appendix D). Neither participant shared any recommendations for future studies. They did, however, express an openness to the idea of participating in cotinine testing in the future if it could be done at their child’s primary care office. Again, it is difficult to assess the impact of these experience due to limited data.

Limitations

As described by Turner, the intention of our pilot study was to identify any weaknesses or limitations in the study design and allow for revisions prior to the full-scale study (Turner, 2010). The limitations of this study began with the initial submission to the Internal Review Board (IRB) at Maine Medical Center. Our original timeline had a target start date for enrollment and data collection of December 1st, 2016 through March 30th, 2017 (see Appendix G for timeline). The review process lasted much longer than anticipated and we were unable to begin data collection until March 1st, 2017, but were required to maintain the end date of March 30th, 2017, due to the availability of the investigators. We did not enroll our first participant until March 12th, leaving us only three weeks to enroll as many participants as possible.

Our criteria for enrollment required the child to be admitted to the hospital for a respiratory illness. The majority of respiratory illness-related admissions occur in the coldest winter months, and as such, the potential to enroll participants in March was lower than December through February. During the twenty-day window of data collection, eight patients were approached and

three were enrolled, which was significantly lower than we anticipated. Based on all-winter admissions from previous years, our study had anticipated 60 patients eligible from December through March and hoped to enroll 30 of the eligible population (Burns, Wyatt, Lachance & Jacobs, 2017).

Based on our target number of 30 participants, our initial plan was to conduct qualitative interviews with specifically selected individuals until we reached saturation. The selected individuals would be chosen based on their interest in the subject matter, and willingness to elaborate on their experiences. Due to the limited number of participants, we contacted all three participants for follow up interviews. It should be noted, that due to unforeseen logistical challenges, we were able to interview a total of two participants. Our limited sample made it difficult to collect meaningful data.

Discussion

This pilot study identified both successes and challenges to be considered in future research. In terms of the qualitative research piece of the study, the results of the interviews showed promise as an effective method of data collection. Recording the interviews with a hand-held device as well as an iPad was one successful piece of the qualitative data collection. It allowed us to focus our undivided attention on the participants during the interviews. Having the ability to go back and listen to the audio files and read the subsequent transcripts allowed for a detailed analysis of the qualitative data. The use of REDCap as a central hub for all collected data was an effective and efficient method and is recommended for use in future studies. The interviews were especially beneficial to our understanding of the efficacy of the interventions – the cotinine testing, Breathe Easy Coalition materials and the Maine Tobacco Helpline referral.

Reflections

My experiences in the Master of Public Health (MPH) program contributed to my success as a research assistant in this study. I have gained written skills that I used to design the qualitative interview protocol. I understand the importance of evidence to support the research process from design to interpretation of results. I also considered the importance of health literacy (Judy Tupper) when designing the qualitative interview protocol. Open-ended questions were created effectively through skills developed in Brenda Joly's Research and Evaluation course.

Techniques I learned in the same course for moderating focus groups proved to be helpful when it came time to interview the study participants. Working as a research assistant on this study was a unique opportunity to apply and develop the skills I have developed as an MPH student.

One resounding piece of advice that became glaringly evident to me throughout this process was something that Elise Bolda shared with our Planning and Marketing class during my first year of school. "When you make a budget or timeline, estimate your numbers and then multiply by three. That will give you an idea of the realistic amount of money and time that you will spend of the project." That statement came to life time and time again, throughout the planning process.

Through my work as a student in the MPH program, my related work experiences from my graduate assistantship and field experience, and my contribution to this study I feel confident in moving forward in the field of Public Health. This specific experience has opened so many doors for me and helped me tap into my true potential. I am looking forward to thriving and am excited to share my knowledge and experiences in the future.

Resources

- Benowitz, N. L. (1999). Biomarkers of environmental tobacco smoke exposure. *Environmental Health Perspectives*, 107(Suppl 2), 349–355.
- Bowling, A. (1997). *Research Methods in Health*. Buckingham: Open University Press.
- Burns, N., & Grove, S. K. (1997). *The Practice of Nursing Research Conduct, Critique, & Utilization*. Philadelphia: W.B. Saunders and Co.
- Cotton, S. (2016). *Content analysis coding*. [Video file]. Retrieved from:
<https://www.youtube.com/watch?v=wilBzZLjZ1M>
- Johansson A, Carlsson N, Almfors H, Rosen M, Alehagen S. Parents' experiences of participating in an intervention on tobacco prevention in Child Health Care. *BMC Pediatrics*. Mar 2014. 14:69.
- McLeod, S. A. (2008). Likert Scale. Retrieved from www.simplypsychology.org/likert-scale.html
- Marriam, S. (2009). *Qualitative research: a guide to design and implementation*. San Francisco, CA: Jossey-Bass A Wiley Imprint
- Renner, M., & Taylor-Powell, E. (2003). Analyzing qualitative data. *Programme Development & Evaluation, University of Wisconsin-Extension Cooperative Extension*. Retrieved from:
<https://pdfs.semanticscholar.org/8ee4/a0c8532720200bb4359cf5a3741fac60ca74.pdf>
- Telephone interview. Mother of pediatric patient previously hospitalized at BBCH, identity confidential. Teresa Lachance and Deirdre Burns. 12 Sept 2016.

Turner III, D. W. (2010). Qualitative interview design: A practical guide for novice

investigators. *The qualitative report*, 15(3), 754. Retrieved from:

<http://search.proquest.com/openview/d378ec2c9d7929d226d1f0b46b26eae2/1?pq-origsite=gscholar&cbl=55152>

Appendix A

Confidential

Pediatric Cotinine Project
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Qualitative Assessment

Record ID _____

Date and time of interview. _____

Record ID number: [record_id]

Version Date: 2/20/2017

(The numbered questions below will all be asked, unnumbered questions are prompts to elicit complete responses and will not be explicitly asked if the response to the numbered question has already incorporated that topic).

1. How helpful was the cotinine testing? Not helpful Somewhat helpful Very helpful

Tell me about your experience with cotinine testing. _____

2. How helpful were the materials provided by Breathe Easy Maine? Not helpful Somewhat helpful Very helpful

Tell me about your experience with the Breathe Easy Maine printed materials. _____

How did you use them? _____

Do you still have the printed materials you received from Breathe Easy Maine? _____

3. How helpful was the over-the-phone counseling provided by the Maine Tobacco Helpline? Not helpful Somewhat helpful Very helpful

Tell me about your experience with the over-the-phone counseling provided by the Maine Tobacco Helpline. _____

4. Did you use any of the nicotine replacement therapy options provided by the Maine Tobacco Helpline? Yes No

Which nicotine replacement therapy option did you choose? _____

What was your experience like with the [patch, gum, lozenges] provided? _____

5. What motivated you to participate in the study? _____

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Do you feel like your expectations were met?

6. How do you feel about your overall experience as a part of this study?

Think back to when you were first asked to participate in the study. What was your first thought?

Are there any changes that you would recommend to improve future programs to support families?

7. What would you tell other families who might participate in a similar study in the future?

8. If this study had asked, do you think you would have been able to provide us with a repeat urine test after your child went home from the hospital? (Check all that apply)

- No
- Yes, at my child's primary care office
- Yes, at Maine Medical Center in Portland
- Yes, at a NorDx lab
- Yes, if I was able to do it by mail

What would be the biggest challenge to participate in cotinine testing again?

Transcription of interview

Appendix B
Investigator Script

DAY 1 Introduction : Hello, my name is _____, I am a (masters student / resident / attending physician) doing research about our families here at The Barbara Bush Children's Hospital. With your permission, I would like to talk to you about participating in a study we are doing about supporting families with tobacco smoke exposure.

(Wait for permission) If no: I understand that you are not interested at this time. With your permission, I am happy to come back later if you think you might want to participate. If yes:

I can come back before _____ (12 hours after admission time), when might work for you? If no: Thank you, please excuse the interruption. If yes:

Is it ok to discuss medical care or would you like to speak separately? (wait for response, find a private space to speak or ask family members to leave the room as appropriate)

Our study is on a volunteer basis and you can choose not to participate at any time. Our study is a program designed to educate and support parents whose children have been admitted to Barbara Bush Children's Hospital with a respiratory illness, in your child's case _(respiratory diagnosis)_. We know that smoke exposure affects the health of a child's lungs and we also know that despite wanting the best for their child, smoking can be one of the hardest things for a person to change in his or her life.

If you would like to participate, you (and your child if over the age of 7) will sign a consent form, which we can go through together now. After signing the consent:

I now have some questions to ask, I will give you some handouts and a copy of the consent form, and then we will need a urine sample from your child which your nurse will collect. This is done by _____ (If in diapers: cotton balls in a diaper or a

sticky plastic bag, if not in diapers: with a collection cup that sits in the toilet). Close:

This is information from the Breathe Easy Coalition of Maine. This sheet talks about the health dangers of secondhand smoke and thirdhand smoke for children and other people in the home. This is information about how to reduce your child's exposure to smoke.

There is also information about the Maine Tobacco Helpline and a postcard drawing contest for kids. In the next few days you should receive a phone call from us with your child's urine test results and a phone call from the Maine Tobacco Helpline. In one month you will receive a phone call from our team again. Thank you for your time, I will right back with your copy of the consent form and your \$5 gift card. Your nurse will be in soon to collect the urine sample. Actions: Print and deliver parent's copy of the consent form Distribute one \$5 gift card to the family Notify nurse of urine cotinine order and time limitations (within 24 hr of admission) DAY 2 to 4 Hello, my name is _(your first name)_, may I please speak to _____? If parent unavailable ask for when would be a better time to call back.

I'm calling from the research study at Barbara Bush Children's Hospital with the results of your child's urine test. Positive: Your child's cotinine level was _____, this is considered a positive for inhaling a large amount of cigarette smoke regularly. Cotinine is formed when you have nicotine in your body, nicotine is a chemical in cigarette smoke. A cotinine level goes higher with more time in a smokey room or car and more cigarettes smoked around a child. It is important to avoid exposing your child to smoke using the strategies reviewed in the Breathe Easy Coalition materials. Would you like me to review those strategies? If yes: Do not allow anyone to smoke inside your house. Remove articles of clothing that you have worn while smoking before being in the same room as your child. If you rent and your landlord does not have a nonsmoking policy, you can ask them to make one in your building. If no: move on

If the Maine Tobacco Helpline has not called you yet, they will be getting in touch with you soon. You will hear from us again in one month. Thank you for your time. Negative:

Your child's cotinine level was _____, this is considered a negative test, meaning that your child is not likely to be inhaling a large amount of cigarette smoke regularly.

However, your child may still be breathing in smoke, only at levels not detectable by our test. Cotinine is formed when you have nicotine in your body, nicotine is a chemical in cigarette smoke. A cotinine level goes higher with more time in a smokey room or car and more cigarettes smoked around a child. It is important to avoid exposing your child to smoke using the strategies reviewed in the Breathe Easy Coalition materials. Would you like me to review those strategies? If yes: Do not allow anyone to smoke inside your house.

Remove articles of clothing that you have worn while smoking before being in the same room as your child. If you rent and your landlord does not have a nonsmoking policy, you can

ask them to make one in your building. If no: move on If the Maine Tobacco Helpline has not called you yet, they will be getting in touch with you soon. You will hear from us again in one month. Thank you for your time. DAY 30 Hello, my name is _(your first name)_, may I

please speak to _____? If parent unavailable ask for when would be a better time to call back. I'm calling from the research study at Barbara Bush Children's Hospital with the second round of questions. This should take about _____ minutes. (5 minutes for the quantitative piece, a few select families will have an additional 25 minutes of qualitative questions)

You will be compensated for your time volunteered with a mailed \$10 gift card. Is now an okay time to talk? If No: When would be a better time for me to call you back? (set a time within the next 24 to 48 hours). If Yes: Thank you. (proceed with questioning). I have _____ questions.

It is important that you answer to the best of your abilities. We hope to have the most honest

answers so we can learn how to best support parents in the future. If asking qualitative questions:

Ask quantitative questions first. The rest of the questions will be about your thoughts and experience. I will be recording the rest of our conversation to be able to look at your responses later and make sure I didn't miss anything you said. Is that ok with you? Wait for response.

Thank you. Again, please be honest with your answers, as we hope to use your experience to help families in the future. Wrapup: Thank you for participating in this study. We will be sending your gift card in the mail. Where is the best address to send the card? (Confirm this address with the address on record, if different update the information.)

RESPONSE TO MEDICAL DISCLOSURES If a parent discloses information about their child's medical wellbeing or asks questions about their child's health or medical care outside the scope of the study at any time. It sounds like you are concerned about _____. Unfortunately, I'm not able to discuss any aspects of your child's care other than the care provided in the study, or to give medical advice. I suggest you contact your child's (primary care physician, or if still in hospital: provider team) _____ to discuss this with them. Be sure to include "immediately" or "within 24 hours" if the situation seems emergent or urgent. Speak with Deirdre Burns, MD, (650) 5755866 immediately if you are not sure if this is a medical emergency.

Appendix E

Table 1E: Initial Themes from Qualitative Interviews

0302	0303
Perception of overall experience	Motivation to change behavior
Impact of participation	Applying what was learned
Use of resource	Use of resource
Impact of intervention	Motivation to participate
Motivation to participate	Perception of overall experience
Future improvements	Future improvements
Future participation	Future participation
	Future challenges

Table 2E: Primary and Sub-Themes from Qualitative Interviews

Primary Themes	Sub-Themes
Resources	Breathe Easy Coalition materials Maine Tobacco Helpline counselling Maine Tobacco Helpline smoking cessation materials
Motivation to Participate	
Motivation to Change	Impact of intervention Motivation to change behavior
Overall Experience	Perception of overall experience Impact of participation
Future Studies	Future improvements Future participation Future challenges

Appendix F

Thematic Outline

Theme 1: Use of Resources (2 of 2 participants)

- Breathe Easy Coalition materials
 - “There wasn’t very much of an experience. I just read them really, and just kind of, I knew mostly all of it.” - 0302
- Maine Tobacco Helpline counselling
 - “He gave me some good ideas and information, how to quit, you know ---- ways, and different tips to recognize triggers and stuff like that, and how to cope.” - 0303
- Maine Tobacco Helpline smoking cessation materials
 - “The guy gave me information about that and how to use it and stuff like that. And different ways some people use it and stuff like that.” - 0303

Theme 2: Motivation to Participate (2 of 2 participants)

- “I was just really curious to know if my daughter had any side effects from the clothing and the skin contacts that he had with my mother in law and my husband because they did both smoke.” – 0302
- “My daughter being in the hospital and stuff like that.” – 0303

Theme 3: Motivation to Change (2 of 2 participants)

- Impact of intervention
 - “I know that he learned a lot of stuff from them and he’s still trying to quit” – 0302
- Motivation to change behavior
 - “It was very helpful because it opened my eyes up to me really needing to quit smoking and stuff like that.” - 0303

Theme 4: Overall Experience (2 of 2 participants)

- Perception of overall experience
 - “I feel okay about it. It was kind of nice.” – 0302
 - “I don’t feel bad about it or anything. I feel like I made the right decision.” – 0303
- Impact of participation
 - “I just thought that it was really cool that I could find out that my daughter had no exposure to third hand smoke. It was the only way that she could have gotten around the smoke, because my husband and my mother in law do smoke but they wash their hands and brush their teeth even though they use mouth wash, change their clothes. So the fact that she had none in her system was really good.” – 0302

Theme 5: Future Studies

- Future improvements
 - No future improvements recommended
- Future Participation
 - “Yes, if I could do it at my child’s primary care.” – 0302
 - “Yes, if I was able to do it by mail. Yeah, probably that or at her doctor.” – 0303
- Future Challenges
 - Barriers to transportation was the only challenge reported

