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Viewing Focus Groups Through a Critical Incident Lens

Christina M. Getrich¹, Anzia M. Bennett², Andrew L. Sussman³, Angélica Solares⁴,
Deborah L. Helitzer³

¹University of Maryland, College Park, Maryland, USA

²W.K. Kellogg Foundation, Albuquerque, New Mexico, USA

³University of New Mexico, Albuquerque, New Mexico, USA

⁴Environmental Health Department, Bernalillo County, Albuquerque, New Mexico, USA

Abstract

Scholars often do not describe in detail the complex process of conducting focus groups, including what happens when they take unexpected turns. A critical incident lens provides a framework for better analyzing and understanding what actually happens during focus group sessions. Using a critical incident approach, we examine our experiences of carrying out focus groups about the human papillomavirus (HPV) vaccine with vaccine-eligible adolescent girls and parents/caregivers of vaccine-eligible adolescent girls in New Mexico. The critical incident lens allowed us to productively explore the context and interactional dynamics of our focus groups and ultimately pushed us to talk through the challenges of conducting and analyzing them. We hope this serves as a call to qualitative researchers to be attentive to the critical incidents in your own research to enrich your analysis and contribute to a broader discussion of the realities of focus group conduct.

Keywords

focus groups; cancer; screening and prevention; critical incident technique; reflexivity

Qualitative Health Research has long featured articles on advancing focus group methodology, as exemplified by a fairly recent special issue on focus groups (Morgan & Bottorff, 2010). In the overview article introducing the special issue, Morgan and Bottorff emphasize a unifying theme: “there is no single right way to do focus groups.” To this end, the subsequent articles highlight the value of focus groups through demonstrations of variations in project design, participants, recruitment and logistics, and data analysis.

Despite these efforts at advancing focus groups, these scholars—and others—generally do not describe in detail the complex process of conducting focus groups, including what happens when there is a disconnect between one’s best laid plans and how the

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Corresponding Author: Andrew L. Sussman, Department of Family and Community Medicine, University of New Mexico, MSC 09 5040, Albuquerque, NM 87131-0001, USA. asussman@salud.unm.edu.

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session actually unfolds (Gustafson, 2000). Instead, most emphasize project development, recruitment, the logistics of the session itself, and, ultimately, research findings about the topic under examination. In fact, a number of canonical works in the social and health sciences have cemented the conventions for conducting focus groups (Kruger, 1994, 1998a, 1998b; Kruger & Casey, 2000; Morgan, 1996, 1998). However, critics have pointed out that the practices of a few researchers have become the codified mode of conducting them (Hopkins, 2007)—perhaps erroneously so—and that merely following these rules of focus group conduct does not necessarily ensure that the data analysis and interpretations are sound (Kidd & Parshall, 2000; Reed & Payton, 1997).

The principal concern over “how to” conduct focus groups has resulted in the orientation of viewing the focus group as a controlled scientific endeavor, in which the perfectly constituted sample is chosen, an exact number of participants actually show up as planned, the ideal set of questions are crafted ahead of time and deployed with precision by the moderators, the conversation among similarly situated participants flows naturally and smoothly, and the data generated from the encounter are ultimately the end-result of the exercise. This approach to conducting focus groups assumes that the control over the session is held by the researchers. Although Morgan (1995) had addressed the general theme of “why things (sometimes) go wrong” in focus groups, his objective is still to identify preventable problems and troubleshoot these ahead of time rather than reflect on the complexity of what actually transpires. In a rare and, at this point, long-ago exception to this pattern, Agar and MacDonald (1995) provided an account of how they navigated things not following the preconceived plan in their case study of focus groups with former LSD-using adolescents.

As qualitative health researchers, we value the insights that focus groups provide and are committed to advancing their utilization. Preemptive troubleshooting is important for ensuring logistically smooth focus groups. However, to fully appreciate what focus groups contribute to the research process, it is also necessary to better understand what actually happens during the sessions themselves through a reflexive process. As Agar and MacDonald (1995) pointed out nearly two decades ago, every focus group has a story behind it, but these stories are infrequently reported. This article examines our stories of carrying out focus groups about the human papillomavirus (HPV) vaccine with vaccine-eligible adolescent girls and parents/caregivers of vaccine-eligible adolescent girls in New Mexico and our analytic attempt to explore the context and interactional dynamics of focus groups through a *critical incident* lens. Like Anfara, Brown, and Mangione (2002), we support the need to make the research process more transparent and public to contribute to a more in-depth understanding of the complexities of focus groups.

Using a Critical Incident Lens for Understanding Focus Groups

The term critical incident has been used in diverse fields such as organizational and industrial psychology, counseling, social work, communications, market research, nursing, clinical care, and education/teaching. Flanagan (1954) first wrote about the Critical Incident Technique (CIT), which emerged from the Aviation Psychology Program of the U.S. Army Air Forces during World War II. Flanagan and his colleagues developed the tool as a

scientific means of uncovering existing realities or truths so they could be measured, predicted, and ultimately controlled by the trained “expert” observers (Butterfield, Borgen, Amundson, & Maglio, 2005).

Flanagan and his colleagues developed CIT squarely within the positivist paradigm of the time (Butterfield et al., 2005), though it has subsequently been adapted into a qualitative approach designed to capture the perspectives of study participants themselves (MacNeela, Gibbons, McGuire, & Murphy, 2010; Norman, Redfern, Tomalin, & Oliver, 1992; Propp et al., 2010; Williamson, Koro-Ljungberg, & Bussing, 2009). In this qualitative iteration of the approach, interviewers ask participants to reflect on significant or memorable happenings or problematic situations in their lives; these reflections are then often used to try to resolve or prevent similar future episodes (Halquist & Musanti, 2010). This orientation gained particular currency in health care settings as a quality improvement technique for highlighting best practice behaviors as well as negative incidents that might have been handled differently (Avraham, Goldblatt, & Yafe, 2014; Gotlib Conn et al., 2009; Kempainen, 2000; MacNeela et al., 2010; Scott, Estabrooks, Allen, & Pollock, 2008; Wolf & Zuzuelo, 2006).

Another variant of a qualitative CIT approach emerged within educational research (Angelides, 2001; Halquist & Musanti, 2010; Tripp, 1993, 1994). Tripp, an early proponent, argued,

Critical incidents are not “things” that exist independently of an observer and are awaiting discovery like gold nuggets or desert islands, but like all data, critical incidents are created. Incidents happen, but critical incidents are produced by the way we look at a situation.

Tripp’s definition highlights a shift toward the analysis of critical incidents and the importance of probing deeper processes through a reflective process (Angelides, 2001; Halquist & Musanti, 2010). Examination of these processes allows for an analysis of one’s direct involvement in an incident and the definition and discussion of its criticality (Halquist & Musanti, 2010)—including ethical challenges in practice (Guillemin & Gillam, 2004). Such an approach considers unanticipated surprises that the researchers may have encountered (Angelides, 2001; Halquist & Musanti, 2010).

Participatory Research as a Potential Contributor to Critical Incidents

These “unanticipated surprises” may be especially likely to crop up in community settings, particularly when researchers are working with community members to arrange focus group sessions. Community-based participatory research (CBPR) has been pinpointed as a particularly effective approach for forging community–university partnerships (Rhodes, Hergenrather, Wilkin, Alegría-Ortega, & Montaña, 2006). Scholars have argued that focus groups as a method are particularly well-suited to CBPR and participatory action research (PAR) approaches (Cristancho, Garces, Peters, & Mueller, 2008; Daley et al., 2010; Gustafson, 2000; Israel, Eng, Schulz, & Parker, 2003; van der Velde, Williamson, & Ogilvie, 2009), particularly because they allow for the essential process of trust-building between academic researchers and community members (Cristancho et al., 2008). The process of

empowering community partners to take more active roles in project design and recruitment efforts, however, may actually increase the likelihood of critical incidents as it can be more difficult to implement a highly standardized research protocol under these conditions. Given that the use of CBPR is now commonly recognized as an appropriate methodology for conducting research in ethnic/racial minority communities (Cristancho et al., 2008; Daley et al., 2010; Devlin, Roberts, Okaya, & Xiong, 2006; Halcomb, Gholizadeh, DiGiacomo, Phillips, & Davidson, 2007; Rhodes et al., 2006; van der Velde et al., 2009) and for addressing health disparities more broadly, (Cristancho et al., 2008; Ruff, Alexander, & McKie, 2005), we anticipate that similarly oriented researchers encounter critical incidents as a regular feature of their partnering processes.

Although we did not set out to use a critical incident approach for our project, we found that we needed a mechanism by which to better understand and learn from unplanned episodes from our focus group sessions. We were consistently presented with situations that shifted the interactional dynamics of the group in a meaningful way and at times presented challenges for us; we came to identify these situations as “critical incidents.” We found that formally marking these incidents offers an opportunity for reflection, enriches analysis, and points to the challenges and possibilities in conducting focus groups. Based on our experiences, we believe that other qualitative researchers may benefit from acknowledging the critical incidents that occur during data collection as well as the contexts which produce them, the ways in which they are resolved *during* focus groups, how they affect later analysis, and how they, in some cases, present enduring quandaries to researchers. By sharing our own critical incident vignettes, we hope to contribute to a richer discussion of qualitative research methodology and tradition of researcher disclosure and reflexivity (Anfara et al., 2002; MacFarlane & O’Reilly-de Brún, 2012; Underwood, Satterthwait, & Bartlett, 2010).

Method

Overview

The larger study within which we conducted these focus groups examined policy makers’, primary care providers’, and community members’ views about health policy and decision making for the HPV vaccine in New Mexico. We conducted a total of 12 focus groups with vaccine-eligible adolescent girls (ages 12–18) and parents/caregivers of vaccine-eligible girls between October 2009 and January 2010. Through the focus groups, we assessed general knowledge and exposure to information about the HPV vaccine, reviewed participant experiences with or views about actual or hypothetical receipt of the vaccine, discussed health policy issues related to the vaccine such as the appropriateness of mandatory vaccination for school entry, and learned about personal and family level health decision-making dynamics. The University of New Mexico Human Research Protections Office approved the protocol.

Members of the core research team served as moderators for these focus groups based on logistical needs and our interest in obtaining a diversity of perspectives in our data collection and analytic efforts. The team consisted of two medical anthropologists (Sussman and Getrich), the former, a non-Hispanic White man, and the latter, a Spanish-speaking

non-Hispanic White woman; a non-Hispanic White woman graduate student (Bennett); a bilingual Mexican national woman outreach liaison for our practice-based research network (Solares); and a non-Hispanic White woman cancer prevention and health services researcher (Helitzer).

Setting

Based on documented health disparities relating to higher rates of HPV infection, higher cervical cancer incidence, and restricted access to cervical cancer screening, particularly along the U.S.–Mexico border (Howe et al., 2006; National Cancer Institute, 2006), we concentrated on Hispanic women. We conducted the focus groups in three different New Mexico communities with purposeful sampling aimed at achieving a mix of different Hispanic sub-populations in a range of geographic settings (rural to urban) and characteristics such as birthplace, length of U.S. residency, immigration status, and other aspects of cultural identity. We identified two rural communities (one in the north and one in the south) where these groupings were more clearly distinguished and decided on Albuquerque, the state’s largest urban center, as the third site, given the unique mixture of these subgroups in the city.

Community A: Northern New Mexico.—We conducted some of the first focus groups in a small, rural town in northern New Mexico. In 2010, the population of the town was approximately 600 residents, with around 90% of the population identifying as Hispanic, though these individuals were largely Hispanos (individuals who trace their history to the Spanish who arrived in New Mexico starting in the 16th century; U.S. Census Bureau, 2010). Statistics from the previous 2010 U.S. census indicated that just under 2% of the population was foreign-born, though some 70% of residents 5 years old and above spoke a language other than English at home, indicating the high level of bilingualism (U.S. Census Bureau, 2013). The focus groups took place at a centrally located, bustling community center and were conducted by Getrich and Bennett over the course of two visits.

Community B: Albuquerque.—Our first and last sets of focus groups took place in Albuquerque. We were interested in exploring how being situated in an urban center might shape views about HPV vaccine acceptance. In 2010, the population of Albuquerque proper was 545,852, with 47% of residents identifying as Hispanic. Approximately 11% of Albuquerque’s population was foreign-born from 2005 to 2009, with some 29% of residents 5 years old and above speaking a language other than English at home (U.S. Census Bureau, 2010b). We convened the Albuquerque focus groups on-site at two different non-profit organizations—one, an afterschool program, and the other, an organization concerned with affordable housing and sustainable economic opportunities. Getrich and Bennett and Bennett and Solares conducted focus groups with the adolescent girls, while Getrich and Sussman and Bennett and Solares moderated the parent/caregiver sessions.

Community C: Southern New Mexico.—We conducted the third set of focus groups in Southern New Mexico in a U.S.–Mexico border town of approximately 9,000 residents. As of 2010, the town was 97% Hispanic, mostly composed of immigrants (around 35% of the town’s population was foreign-born) and their children (approximately 36% of residents

were under the age of 18). Spanish was the dominant language, with nearly 85% of residents 5 years old and above reporting speaking a language other than English at home from 2005 to 2009 (U.S. Census Bureau, 2010b). One of the centerpieces of the town is the multi-service community center where we held the focus groups. We completed four focus groups at the center—two with parents in the morning and early afternoon and two with adolescent girls in the late afternoon—during one long day of data collection. Getrich and Solares, the two Spanish-speaking members of the research team, conducted the focus groups.

Recruitment

We identified key community partners—organizations and individuals with whom we already had relationships—to coordinate recruitment and logistics in each of the three communities. We provided these coordinators with a recruitment packet that included a description of the project, a fact sheet on HPV, basic guidelines for recruiting, and assent forms for the minors. We then reinforced the study protocol through regular telephone and email contact with the coordinators.

We asked coordinators to recruit vaccine-eligible girls, 12 to 18 years of age, for the adolescent groups. We requested that they recruit participants with different HPV vaccine experiences—those who had received the vaccine, those who had not, and those who were offered but refused. For the adult groups, we asked the recruiters to recruit parents/caregivers of vaccine-eligible adolescent girls (aged 12–18). Although we wanted to include fathers and men who were caregivers, all but two participants were women. In five sessions, the local coordinators participated in the focus group discussions because many of them were mothers or caregivers of adolescent girls themselves.

Data Collection

We conducted 12 focus groups—6 with adolescent girls and 6 with parents/caregivers of adolescent girls. A total of 94 individuals participated in the focus groups (41 adolescents and 53 parents/caregivers). Ten focus group sessions were held in English, whereas the two adult groups held in Community C were in Spanish and the two adolescent groups were in a mix of English and Spanish. For the parent/caregiver groups, moderators distributed, reviewed, and collected signed consent forms at the start of each session. In the adolescent groups, the local coordinators distributed assent forms for parent/guardians and their children to review and sign prior to the scheduled session; we then reviewed and collected the consent forms prior to the group discussion. Along with the focus group guide, we prepared flip charts with HPV and HPV vaccine information (in English and Spanish) to share with participants. Focus group sessions lasted between 1 and 2 hours; we digitally recorded the sessions for subsequent transcription and translation (as necessary). Immediately following each session, we gave each participant a US\$30 gift card to thank them for their time and offered them HPV fact sheets to take with them.

Data Analysis

Following the completion of each focus group, the full research team met to conduct a debriefing session to review initial moderator impressions regarding logistics (issues

related to convening the group), interactional dynamics among participants, and emergent themes. During these sessions, we were struck by the consistent need to address important challenges to and departures from our focus group protocol. As it became apparent that these issues represented something more fundamental to the process of conducting focus groups, we began to direct more systematic analytic attention to these moments as critical incidents that affected the group and had broader implications.

Once we received the electronic version of transcripts, we imported the files into the qualitative data analysis software package NVivo8 (QSR International, 2008) for coding with a template generated through an iterative process of review and refinement. We created the coding template to capture the full range of relevant themes related to views about HPV vaccine decision making and health policy. Following this initial coding process, the team selected six exemplary focus group sessions in which the overall direction of the session was affected by a particular critical incident, including challenges to the research protocol, contextual factors, and/or interactional dynamics in the group. We then conducted a secondary round of analysis with these transcripts aimed at documenting how these critical incidents influenced group dynamics, including interactions between participants and the emergence or co-construction of issues resulting from our decisions about how to respond to critical incidents when they arose. In the vignettes presented below, we outline these critical incidents, highlighting supportive quotes from the focus groups.

Results

We categorized the critical incidents we selected into three thematic groups: (a) responding to insights from unexpected participants, (b) addressing challenges associated with adolescent participants, and (c) negotiating participants' influence and expertise. We have provided a selection of these critical incidents here to discuss how they affected the process of conducting the focus groups, the decisions made while the groups were happening, and how they continue to affect our own process as researchers.

Responding to Insights From Unexpected Participants

In each community, we worked with our designated local coordinator to guide logistical efforts related to the focus group. We provided an informational list to all coordinators on topics such as recruitment criteria, informed consenting process, and space needs for the focus group session. With regard to recruitment criteria, we emphasized that in the parent focus groups we sought both women and men who were parents/caregivers of vaccine-eligible girls between the ages of 12 and 18. In the adolescent groups, participants needed to be girls (because the HPV vaccine had only been approved for girls when we were organizing the sessions) and between the ages of 12 and 18 years. We decided on these recruitment criteria based on human subject protection considerations as well as views about achieving an optimal interactional dynamic in each group to facilitate lively discussion and reflection. In two of the focus groups, we found that individuals who were technically exceptions to these criteria led to unexpected insights and ultimately enriched the sessions.

An adolescent in the parent group.—We (Sussman and Getrich) arrived early to moderate a parent focus group on a weekday evening in early winter at a nearby non-profit

organization in Albuquerque. As we organized the room and set out the refreshments, most of the group arrived simultaneously, rushing in from the cold and warmly greeting the coordinator. As the group filled their paper plates with pizza, a mother and daughter were among the last to arrive. The pair found adjacent seating, removed their coats and settled in. Confused about the daughter's presence, I (Sussman) introduced myself to the mother. She immediately asked if it was alright for her daughter to participate in the group. Before I could respond, she continued by stating that her daughter, a 16-year-old, was interested in the topic. After stealing a quick glance to the co-moderator for confirmation, I nodded affirmatively and welcomed the daughter.

As part of our purposeful sampling criteria, we had decided to conduct separate adolescent and parent groups to enhance disclosure and general comfort level. Given the strong likelihood that the discussion would veer into views about perceived risk and sexual behavior, we believed a mixed parent–adolescent group would not lead to a productive interactional dynamic. The decision, therefore, to include this adolescent was spontaneous and fraught with uncertainty. Would the daughter feel comfortable contributing to the group? How would her presence affect the other participants? With these concerns in mind, the room settled and we hit “record.” A few minutes into the group, the answer became clear.

After each participant shared a cursory introduction, I thought it would be important to diffuse any potential awkwardness created by the daughter's presence by acknowledging her as an equal member of the group. Although the daughter does not comment in the following exchange, the shared laughter seemed sufficient to establish her as an active contributor as her involvement was steady throughout the session.

Moderator (*Directed to daughter*) I think it would be really good as well to have you sort of say, “Well, here is what it looks like as a teenager.”

Mother And they—you know—they talk about this stuff, I think. I don't know. I hear half stories.

Moderator (*Directed to daughter*) And if you need to send your mom out of the room—

Mother (*Directed to daughter*) You're in trouble if you need to send me out of the room. No, no, she's her mama's daughter.

Moderator I won't get between that. (*Group laughter*)

Later in the session, a brief but poignant exchange between the mother and daughter pointed to an essential dynamic regarding HPV vaccine decision making. Earlier in the session, the daughter had indicated that she had received the vaccine but she had not explained the context of that decision. During a lively exchange between several of the mothers regarding the factors that would influence such a decision, I asked the daughter to share her vaccination experience, which she did:

Daughter And it was like 2 or 3 years ago, and I guess they were giving it [the HPV vaccine] free for some time. And so we were like, “Oh, let’s just get it.” So I ended up getting all three of them in a couple months.

Co moderator And did they ask you do you want this? I mean, you were a minor, but still, did your daddy ask you? Did you take part in the decision?

Daughter He was like, “I think you should get it.”

Mother (*With anger*) Well, I mean, I’m going to share with you right now, him and I, he would do anything—

Daughter (*Directed to Mother*)—to make you mad—

Mother To make me upset and to exclude me from anything that was supposed to be my decision.

Through the critical incident of the daughter’s participation in an adult focus group, we learned about the specifics of her decision making about the HPV vaccine. The daughter shared that her parents are divorced and that she had received the HPV vaccine while staying with her father. The mother believed that such a unilateral decision was inappropriate and intended as a spiteful act. As the mother and daughter recounted this story, it seemed as if the group faded away and they were expressing shared frustrations about the challenge of health care decisions in a dual custody context.

During the session, this mother–daughter dyad contributed unique insights into decision-making dynamics by offering a window into actual, rather than hypothetical, conversations. Moreover, the daughter’s role in the focus group evolved into that of an expert consultant, serving as a “check” to both the moderators’ and other parents’ assumptions about adolescent behavior and perspectives. The moderator’s decision to allow her to participate resulted in discussion that provided a richer understanding of actual HPV vaccine decision making because of her participation.

Parents without vaccine-eligible daughters.—For the focus group sessions in southern New Mexico, we (Getrich and Solares) departed early from Albuquerque and arrived midmorning at the community center, a large bustling building in a central part of the town, and met the coordinator. She led us to the main room, a large airy space, which we reconfigured to better accommodate the group. As people arrived, we started reviewing consent forms and passing out demographic forms for them to fill out. Soon the trickle had turned into a flood of people, and it became clear that we had too many participants for just one group. Although we had intended to comoderate the session, we decided to conduct a second concurrent session and worked with center staff to locate another space, which ended up being an unfinished storage room. People continued arriving and eventually we had to cap the groups and very begrudgingly turn people away. Because of the chaos of managing the flow of people and finding a new space, we started the sessions about 30 minutes late, which left us a little frazzled as we each embarked on our individual focus group sessions.

Once we started with the actual focus groups, the moderator of the group in the storage room (Getrich) went around the table and asked people their daughters' ages. As parents answered, it became increasingly clear that the coordinator had recruited more broadly than just parents/caregivers of 12- to 18-year old girls, despite the recruitment criteria that we had continually reinforced with her. After a few mothers who had daughters in the ideal age range spoke, the next mother in sequence stated that she had a daughter who was 6—and thus technically did not fit our recruitment demographic profile. As the mothers continued, the final mother, seated next to me, stated, “I don't have any daughters, just sons.”

The immediate conundrum was whether or not to continue with these parents who did not meet our recruitment criterion of having daughters within the desired age range (or, in this case, even daughters at all). Rather than dismiss these participants, I decided to let them remain part of the group—after all, they had willingly carved out the time to come to the center and participate. Beyond that, it might have seemed rude to the other parents to do so and might have had negative ramifications on the group's willingness to engage.

As the focus group proceeded, one of these unexpected participants provided unique perspectives regarding the implications of the HPV vaccine for boys in terms of transmissibility. After discussing general community health issues, I started reviewing information about HPV from the flip chart. As members of the group discussed the challenges in getting teenagers to pay attention, the mother of the boys chimed in, saying, “What I want to know is why the vaccine is only for girls, and not for boys. The boys need that protection too. They're also having [sexual] relations.” As she said that, a grandfather sitting across the table from her nodded his head and concurred, “Yes, yes—they do too.”

After letting the group know that the vaccine had only just been approved for boys the previous month, the conversation opened up to a discussion about HPV transmission, including the frequent lack of symptoms. Having parents who did not fit the specified inclusion criteria once again presented a critical incident, and similarly actually enhanced the content of the focus group. Some parents who had not been participating as much early on in the session started asking questions, providing their own commentary, and engaging in the group more actively. Having the mother of adolescent boys remain at the table turned out to be productive. She provided an interesting foil to all of the discussion about adolescent girls and sparked discussion among the parents. She was actively engaged throughout the focus group, often steering the conversation back to the role of boys in transmitting HPV and the need for them to learn about HPV and the vaccine as well. The moderator's decision to proceed with the session and allow them to participate resulted in a conversation that provided richer insight into parental reflections on and concerns about the HPV vaccine.

Addressing Challenges Associated With Adolescent Participants

Given that the HPV vaccine is approved for girls and women between the ages of 9 and 26 and the Advisory Committee on Immunization Practices (ACIP) pinpointed 11 to 12 years of age as the ideal target age, we felt it was important to understand the perspectives of adolescent girls who had been/would be the recipients of the vaccine. Beyond that, the project funder, the National Institutes of Health, explicitly asked us to include minors in our study. We ultimately chose 12 as the lower limit of the age range for our study not

only because of the minimum age of assent guidelines used by the Human Subjects Review Board but also because we felt it would be difficult and perhaps inappropriate to engage in frank discussions about adolescent sexuality with even younger girls.

Once we had narrowed the age range, we meticulously followed all the rules for conducting research with minors—especially those regarding obtaining the parents’ consent and the girls’ assent beforehand. The trusted local coordinators carefully explained the study to potential participants and their parents and we conducted the sessions in familiar community spaces. Nonetheless, we harbored concerns about how comfortable girls across this broad developmental range (12–18) would be in discussing these topics. As the focus groups progressed, we encountered a number of critical incidents related to the adolescents’ capacity (referring both to the cognitive ability to participate and maturity level) and willingness to engage in conversation about these topics and also observed their unanticipated influences that affected group dynamics.

Capacity and willingness to participate.—After our chaotic experiences in conducting our own focus group sessions with the adults of Community C in the morning, we were hopeful that the adolescent groups would run more smoothly. The coordinator scheduled the adolescent focus groups after school and logistically planned around the school bus schedule and route, allowing the girls convenient and easy access to the center. Although only two girls were present at the designated start time, more girls slowly started arriving, eventually yielding more participants than could be accommodated in one group. Here, too, we made the quick determination to split the group in two and conduct a second concurrent session. We divided the girls into groups by age (12–14 and 15–18-year-olds).

I (Solares) moderated the session with the younger girls, which consisted of four 12-year-olds, two 13-year-olds, and one 14-year-old. As I started with the session, it soon became evident that the girls did not know much about the HPV vaccine, which we anticipated. When I asked who had heard of HPV, only one girl nodded affirmatively and responded, “My mom ... heard about it from the neighbor, so we went to the clinic and she got the information for it.” Another girl shook her head no and looked down when I made eye contact with her. As I provided them some information about HPV, their discomfort with the topic was clear. Several girls made audible “eew” sounds as I described that HPV was sexually transmitted.

Sensing the younger girls’ discomfort early on, I tried engaging the older girls in the group to counterbalance the dynamics of the discussion. This tactic was also unsuccessful; one older girl was texting whereas the others shied away from the conversation. Surprisingly, a 12-year old emerged as the key participant in the group, offering her commentary and asking probing questions about HPV, including questions about how long HPV had been around and whether HPV would be transmitted if a girl was raped. This experience highlighted the complexities of conducting focus groups with adolescent girls as age and maturity are not necessarily equivalent.

By contrast, the girls in Community B were quite comfortable with the topic and forthcoming with information about personal and peer group experiences. The first focus

group session that we (Getrich and Bennett) conducted was at the afterschool center in Community B. As we were arranging the room and the girls started arriving, it was clear that we were going to have spread of ages represented. The group comprised two 13-year-olds, one 14-year-old, one 15-year-old and two 17-year-olds. The girls seemed to know each other fairly well because of their participation in the same program, though the older girls set themselves slightly apart from the younger girls as they filled their plates with pizza and snacks.

As we started the session, we learned that both of the older girls knew a fair amount about HPV and the HPV vaccine already, in part because one served as a peer educator at her school. Although the younger girls were perhaps less knowledgeable, they freely shared their views about adolescent sexuality and actually set the tenor of the conversation. The girls disclosed their own history of sexual behavior (or lack thereof) and that of their friends and peers. As we were asking general ice-breaker questions in the beginning of the session, one of the 13-year-olds brought up teen pregnancy, saying, “I had a friend [when] I was in 7th grade ... she was 12 and she got pregnant. That’s young. She told her mom, they didn’t tell her dad, and she aborted the kid.” We were surprised by the girl’s frank comment, but it most definitely served the purpose of opening up the conversation so that by the time we were talking about HPV, the girls were already quite engaged. Similar to the group dynamics that emerged in Community C, once again the younger girls actually participated more actively than the two 17-year-olds and we had to encourage the older girls to share their opinions.

The critical incidents in these cases resulted from having young participants exemplifying a range of capacities in their ability to participate in these focus groups. Moderators tried to make the best of each situation, encouraging all participants equally to share their thoughts. The result in some cases was lukewarm discussion in which some participants did not have the capacity to engage in the type of discussion we hoped to have. In these cases, this capacity had little to do with age and more to do with maturity level. Although the moderator’s efforts in response to the critical incidents during the focus group did not lead to necessarily productive discussion, as it did with the first set of critical incidents presented above, our own subsequent examination of these incidents during the analysis phase led to important conversations about the ethical implications of conducting research with adolescent participants and how we would adapt future recruiting protocols accordingly.

Unlike the first set of critical incidents that were resolved and ultimately enriched the focus group sessions, we are still grappling with how to process this second set of experiences conducting focus groups with adolescents. Although we anticipated that there might be a range of capacities among adolescents, there was no particular screening conducted with the girls prior to participation; whomever the local coordinators identified and actually showed up comprised the sessions. There was a range of maturity represented among adolescent participants, and some adolescents—ironically, many of the younger ones—provided great insights.

Preexisting relationships affecting the session.—As we attempted to make sense of our experiences in Communities B and C, we tried to strategize about how better to engage

with the younger adolescents. Our next-to-last group (conducted by Getrich and Bennett) took place in Community A, a mountain town on a chilly, snowy night at a centrally located community center where other activities, including food bank distribution and a youth group meeting, were simultaneously taking place.

During our first round of focus groups there, the preexisting relationships in the community positively affected the group dynamics, particularly with the parents. The mothers seemed excited to participate in the session, but it also seemed that the focus group was an excuse for an evening out—it was a social event. When we arrived for the second round of focus groups, we encountered a group of primarily older adolescents and initially felt a sense of relief, given our unresolved feelings about conducting groups with the less-mature adolescents in the other two communities. Indeed in this particular session, general comfort level with and capacity to engage about the topics did not present a challenge. Instead, we encountered a different quandary: the role of preexisting social relationships in negatively affecting intragroup dynamics.

This time we found that some of the relationships among participants to be problematic. The group contained two sets of siblings (aged 14 and 16, and 14 and 17) who were also cousins. Apart from the four cousins, there was only one other participant, a 16-year-old, who also knew the other girls and attended school with them. The two older cousins sat together on one side of the table, whereas the two younger ones sat on a different side, and the final girl sat by herself next to the moderators. As we were talking in general about what the community was like, I (Getrich) asked what kinds of topics they discussed with friends. One of the younger cousins snapped at one of the older ones, saying, “Why are you looking at me?” to which the older one responded, “You just seemed like a person who gossips.” The back-and-forth tension continued as the group proceeded.

It also became clear that the smallness and closeness of the community was something the girls did not perceive favorably. In discussing sex, one of the girls noted,

People over here really don't say if ... anything is happening, because like within a couple of hours everybody will know. You can do something one day and then you go to school the next day and people are asking you all kinds of questions.

Although the gossip circuit is certainly not unique to this rural community, the girl's point underscored the pre-cautionousness of conducting a focus group touching on issues of perceived risk related to sexual behavior. Although we issued a customary introduction to the focus group emphasizing the importance of not disclosing any information revealed during the session with others, the preexisting social tensions coupled with a level of distrust likely discouraged fuller disclosure (especially relative to the adolescent group in Community B). Given these circumstances, the group dynamic remained tense throughout and we experienced the consequences of convening a group derived from a tight social community network. The critical incident here resulted from conducting a focus group in a small community where, inevitably, preexisting social relationships exist and might be unavoidable. In a rural state like New Mexico, this is not an unusual dynamic. Although the moderators struggled through a tense hour of discussion, this experience influenced discussion among the research team in the analysis phase with regard to the challenges of

conducting focus groups in small, tight-knit communities, especially when the topic being discussed is related to sexual health.

Information Sharing: Negotiating Expertise and Participant Influence

As we designed the focus group guides, it became clear that we would need to present some information about HPV and the HPV vaccine to participants during the sessions because it was a relatively unfamiliar topic for many parents and adolescents. In our preparations, however, we struggled with developing a format that enabled us to convey a sufficient amount of relevant information without asserting ourselves as experts and inadvertently transforming the focus group into an educational seminar or limiting discussion. In developing our focus group protocol, we agreed that each moderator needed to emphasize that the intent of the session was to share some initial information about HPV and the vaccine but that our primary purpose was to hear about participant views and experiences in considering HPV vaccination. Despite this approach, we were confronted with several challenges—some expected and others unexpected—that influenced the interactional dynamic of these discussions. In the following vignettes, we present additional details about these critical incidents and how each influenced our process of data collection and interpretation and contributed to discussion about the ethical implications of providing health information in the focus groups.

Participant influence and decisional regret.—Prior to the period in which these focus group sessions were convened, several potential adverse events believed to be associated with the HPV vaccine had been widely publicized nationally. Some of these stories involved girls from New Mexico and had also been reported in the local media. Our final focus group (conducted by Bennett and Solares) was held at the afterschool center in Community B where we had convened previous adolescent sessions. During the session, a mother of an unvaccinated child shared a story about how she had heard about how HPV vaccination had harmed a local adolescent:

I got it on Facebook from my friend, and her daughter is in the hospital and is now testing at a 4-year-old level. And she has daily seizures, not one a day, but they are pretty much continuous and none of the anti-convulsants have helped that.

A mother of a vaccinated daughter listened silently to this discussion and then commented, “Had I known all of that last year, there’s no way I would have gotten [my daughter] vaccinated.” Another mother similarly responded, “I will definitely not be giving my other girls that shot.”

The mother recounting this story did so with a high degree of certainty regarding the association between HPV vaccination and this adverse outcome and, not surprisingly, her tone frightened the group. As moderators, we struggled with various options in responding. We did not want to offend the mother sharing the story by casting doubt on the account; however, the lack of a response could have been interpreted as a tacit endorsement of potential vaccination risks and influenced negative perceptions about the vaccine. As a strategy to balance these competing views, we did not direct comments toward the mother to cast doubt on the story, but rather encouraged the group to focus on elements of this account

that related to informed decision making and the role of health care clinicians in informing patients about the risks of the vaccine.

During a parent focus group in Community B, also held at the afterschool center, a similar outcome of decisional regret resulted from a consideration of information shared by the research team. In this session, a few parent participants reacted very strongly to information about the evolving research related to the duration of protection of the vaccine and the vaccine's incomplete coverage of HPV cancer-causing types (Gardasil targets four types of HPV responsible for 70% of cervical cancer; therefore, it is possible to receive the vaccine and still develop cervical cancer; Bosch et al., 1995; Muñoz et al., 2003). Most mothers in the group had assumed that the vaccine offered both lifetime and complete protection against all strains of HPV. Although we explained that the duration of protection information was based on current data and could change, many of the participants expressed regret about vaccinating their daughters who they believed were not yet sexually active. In addition, they questioned whether the risk of adverse events and the pain of the three injections were worth the incomplete protection offered by the vaccine. We tried to reassure them that their choice to vaccinate their daughters did not make them bad parents, as the following exchange reveals:

Mother I don't know. I feel really bad because I did that to her.

Moderator You made your decision with the information that you were given. You asked really good questions and I think you made an informed decision with what you had.

Although we felt confident in the information that we shared, it was clear that some parents reconsidered their vaccination decisions and reassessed perceived risk/benefit ratios relevant to these actions. As we noted above, the composition of these groups varied. In every parent group, some participants had little to no familiarity with HPV and the vaccine, whereas others had researched the issue and vaccinated their daughters. Our efforts to establish a "level playing field," therefore, enabled the former group to more substantively consider their initial position on the vaccine while the latter parents often processed the information as a way to reframe their decision (toward an anti-vaccination position).

For the most part, participants in all three communities were receptive and excited to have the information that we provided about HPV and the vaccine and in many cases reported that the information reinforced their decision to vaccinate. In this group, however, we encountered critical incidents that were the exception to that rule. In these sessions, the incidents were related to information shared by participants and moderators related to the safety and efficacy of the vaccine. The stories that mothers shared with the group led to shifts in the group dynamic and influenced the course of discussion in significant ways. In each of these incidents, we struggled with our roles as moderators. At times, we worried that the perception of us as "experts" contributed to mothers' feeling like they had made a mistake getting their daughters vaccinated. In other instances, we hoped that our decisions not to challenge the validity of information brought up by participants did not lead to the miseducation of the group. Ultimately, these incidents influenced the research team as well,

prompting discussion, and anxiety, about our role in conducting the groups. In fact, even now we continue to wonder if we managed the group dynamics adequately.

Discussion

As qualitative researchers, we need to talk about the reality of conducting focus groups in community-based settings and share our stories of what actually happens during focus groups, “messy” as they might be (Agar & MacDonald, 1995). We must be upfront about the fact that the focus groups do not always go according to the idealized plan. Acknowledging these critical incidents and building their identification into the analytical process represents movement toward a framework that embraces this variability as inherent to qualitative research rather than seeking to “engineer” data collection activities in a way that controls for confounding influences in a way that mirrors more empirically driven research.

Collectively, the critical incidents from our study on the HPV vaccine point to a broad range of factors that influence processes of convening, conducting, and interpreting focus groups. Although we anticipated some of these challenges, a number of critical incidents that we did not foresee emerged and forced us to make on-the-spot decisions about how to manage them. As we analyzed the groups themselves, we realized that the challenges we faced were important to talk about to strengthen our own research processes and understandings. Hashing through these critical incidents enabled a better understanding of what actually happened in the groups, and prompted discussion about the ethics of qualitative research and our own role as moderators in the groups.

The first set of critical incidents that we identify in this article provided insights from unexpected participants. We found that some of the challenges related to recruitment—namely, the inclusion of a daughter in an adult group, and mothers of boys—actually presented analytic opportunities as well. Including these categories of individuals who did not “fit” the specified inclusion criteria ultimately generated deeper insights into adolescent girls and parents/caregivers’ perspectives on adolescent autonomy in vaccine decision making, the complicated dynamics of decision making in a dual custody context, and parents’ concerns about boys’ role in the transmission of HPV. Although they made for uncomfortable or confusing critical incidents for the researchers, in the end, the focus groups were more productive.

The second set of critical incidents centered on the challenges associated with conducting focus groups with adolescent participants. In some cases, young participants were clearly not able to participate in the discussion because of their maturity level in discussing sexual health (Helitzer-Allen, Makhambra, & Wang, 1994). In other cases, girls who were the same age were incredibly engaged and offered substantial insight into the ways in which they think about and understand the role of the HPV vaccine in their own lives. For those adolescent participants who brought preexisting tension into the focus groups, moderators could not move the group past the tension. In all the cases, however, our experience working with these adolescent participants pushed us to think about the complexities of conducting research with adolescent populations and the best manner in which to do so.

The third set of critical incidents had to do with negotiating expertise and participants' influence. Generally, we were able to present material on HPV and the vaccine and successfully generate discussion about the topics. However, we were more challenged in negotiating information that the participants themselves introduced to the group. Although we did not want to contradict the opinions of focus group participants, we worried about the implications of participants stating questionable information about the safety of the HPV vaccine as fact. We also worried about the implications of providing health information that contradicted what participants believed to be true. Despite our lack of comfort with the information being presented, these discussions nonetheless opened a space for frank and reflective discussions regarding views of adolescent sexual behavior, health policy, and decision-making dynamics that expanded our understanding of these complex processes.

Collectively, these critical incidents helped us to understand what took place in the focus groups but almost more significantly pushed us to talk through the challenges of conducting and analyzing focus groups in ways that make us better researchers. Despite these opportunities, we also recognize that not all critical incidents result in positive outcomes. Although there is no one right way to handle these types of situations when conducting focus groups, we hope that sharing the challenges that we faced will help researchers think through potential scenarios, better understand their role as moderators, and value the utility of a critical incidents framework.

Implications

We have highlighted unanticipated situations, some of which enhanced the interactional dynamics of the group whereas others diminished them. Based on the experience of this study, and several others, we have come to believe that such critical incidents are commonplace and are especially likely to occur in community-engaged research as the goal is to cede control of the protocol to our partners. Prior to each round of community-based focus groups, we spent significant time with local coordinators to review the protocol and ensure relative standardization in recruitment. However, despite these efforts, deviations from the protocol occurred. We came to view these departures as part of the dynamic nature of qualitative research and used them instead as a valuable part of our interpretive process to refine our understanding of the data as well as our approach to recruitment and moderating practices during the focus groups. We similarly encourage other researchers to acknowledge and report their critical incidents not as simply failures of protocol but rather rich opportunities for reflection.

In conclusion, we reassert our agreement with Morgan and Bottorff's (2010) statement that "there is no single right way to do focus groups." As qualitative researchers, we strive to engineer optimal data collection contexts but acknowledge that the uncontrolled community settings in which we work will always present unanticipated challenges and deviations from our best laid plans. Although the vignettes presented in this article have been derived from focus groups, we believe that the critical incident framework can be equally applied to other qualitative forms of data collection including individual interviews and to more regular collaborative work featured through CBPR.

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Biographies

Christina M. Getrich, PhD, is an assistant professor in the Department of Anthropology at the University of Maryland in College Park, MD, USA.

Anzia M. Bennett, MA, MPH, is W.K. Kellogg Foundation Fellow in Albuquerque, New Mexico, USA.

Andrew L. Sussman, PhD, MCRP, is an assistant professor in the Department of Family and Community Medicine at the University of New Mexico in Albuquerque, New Mexico, USA.

Angélica Solares, MCRP, is a city planner with the Environmental Health Department of the County of Bernalillo, Albuquerque, New Mexico, USA.

Deborah L. Helitzer, ScD, is the associate dean for research education and a professor in the Department of Family and Community Medicine at the University of New Mexico in Albuquerque, New Mexico, USA.

References

- Agar M, & MacDonald J (1995). Focus groups and ethnography. *Human Organization*, 54(1), 78–86.
- Anfara VA Jr., Brown KM, & Mangione TL (2002). Qualitative analysis on stage: Making the research process more public. *Educational Researcher*, 31(7), 28–38. doi:10.3102/0013189X031007028
- Angelides P (2001). The development of an efficient technique for collecting and analyzing qualitative data: The analysis of critical incidents. *International Journal of Qualitative Studies in Education*, 14(3), 429–442.
- Avraham N, Goldblatt H, & Yafe E (2014). Paramedics' experiences and coping strategies when encountering critical incidents. *Qualitative Health Research*, 24, 194–208. doi:10.1177/10497323135198 [PubMed: 24495988]
- Bosch FX, Manos MM, Muñoz N, Sherman M, Jansen AM, Peto J, ... Shah KV (1995). Prevalence of human papillomavirus in cervical cancer: A worldwide perspective. *Journal of the National Cancer Institute*, 87, 796–802. doi:10.1093/jnci/87.11.796 [PubMed: 7791229]
- Butterfield LD, Borgen WA, Amundson NE, & Maglio AT (2005). Fifty years of the critical incident technique: 1954–2004 and beyond. *Qualitative Research*, 5, 475–497. doi:10.1177/1468794105056924
- Cristancho S, Garces DM, Peters KE, & Mueller BC (2008). Listening to rural Hispanic immigrants in the Midwest: A community-based participatory assessment of major barriers to health care access and use. *Qualitative Health Research*, 18, 633–646. [PubMed: 18420537]

- Daley CM, James AS, Ulrey E, Joseph S, Talawyma A, Choi WS, ... Coe MK (2010). Using focus groups in community-based participatory research: Challenges and resolutions. *Qualitative Health Research*, 20, 697–706. [PubMed: 20154299]
- Devlin H, Roberts M, Okaya A, & Xiong YM (2006). Our lives were healthier before: Focus groups with African American, American Indian, Hispanic Latino, and Hmong people with diabetes. *Health Promotion Practice*, 7, 47–55. [PubMed: 16410420]
- Flanagan JC (1954). The critical incident technique. *Psychological Bulletin*, 51, 327–358. doi:10.1037/h0061470 [PubMed: 13177800]
- Gotlib Conn L, Lingard L, Reeves S, Miller K, Russell A, & Zwarenstein M (2009). Communication channels in general internal medicine: A description of baseline patterns for improved interprofessional collaboration. *Qualitative Health Research*, 19, 943–953. doi:10.1177/1049732309338282 [PubMed: 19474415]
- Guillemin M, & Gillam L (2004). Ethics, reflexivity, and “ethically important moments” in research. *Qualitative Inquiry*, 10, 261–280. doi:10.1177/1077800403262360
- Gustafson DL (2000). Best laid plans: Examining contradictions between intent and outcome in a feminist, collaborative research project. *Qualitative Health Research*, 10, 717–733. doi:10.1177/104973200129118787 [PubMed: 11146855]
- Halcomb EJ, Gholizadeh L, DiGiacomo M, Phillips J, & Davidson PM (2007). Literature review: Considerations in undertaking focus group research with culturally and linguistically diverse groups. *Journal of Clinical Nursing*, 16, 1000–1011. [PubMed: 17518876]
- Halquist D, & Musanti SI (2010). Critical incidents and reflection: Turning points that challenge the researcher and create opportunities for knowing. *International Journal of Qualitative Studies in Education*, 23, 449–461. doi:10.1080/09518398.2010.492811
- Helitzer-Allen D, Makhambra M, & Wangel AM (1994). Obtaining sensitive information: The need for more than focus groups. *Reproductive Health Matters*, 2, 75–82. doi:10.1016/0968-8080(94)90084-1
- Hopkins PE (2007). Thinking critically and creatively about focus groups. *Area*, 39, 528–535. doi:10.1111/j.1475-4762.2007.00766.x
- Howe HL, Wu X, Ries LA, Cokkinides V, Ahmed F, Jemal A, ... Edwards BK (2006). Annual report to the nation on the status of cancer, 1975–2003, featuring cancer among U.S. Hispanic/Latino populations. *Cancer*, 107, 1711–1742. doi:10.1002/cncr.22193 [PubMed: 16958083]
- Israel BA, Eng E, Schulz AJ, & Parker EA (Eds.). (2003). *Methods in community-based participatory research for health*. San Francisco, CA: Jossey-Bass.
- Kemppainen JK (2000). The critical incident technique and nursing care quality research. *Journal of Advanced Nursing*, 32, 1264–1271. doi:10.1046/j.1365-2648.2000.01597.x [PubMed: 11115012]
- Kidd PS, & Parshall MB (2000). Getting the focus and the group: Enhancing analytical rigor in focus group research. *Qualitative Health Research*, 10, 293–308. doi:10.1177/104973200129118453 [PubMed: 10947477]
- Kruger RA (1994). *Focus groups: A practical guide for applied research* (2nd ed.). Thousand Oaks, CA: Sage.
- Kruger RA (1998a). *Developing questions for focus groups*. Thousand Oaks, CA: Sage.
- Kruger RA (1998b). *Moderating focus groups*. Thousand Oaks, CA: Sage.
- Kruger RA, & Casey MA (2000). *Focus groups: A practical guide for applied research* (3rd ed.). Thousand Oaks, CA: Sage.
- MacFarlane A, & O’Reilly-de Brún M (2012). Using a theory-driven conceptual framework in qualitative health research. *Qualitative Health Research*, 22, 607–618. doi:10.1177/104973231143189 [PubMed: 22203386]
- MacNeela P, Gibbons A, McGuire B, & Murphy A (2010). “We need to get you focused”: General practitioners’ representations of chronic low back pain patients. *Qualitative Health Research*, 20, 977–986. doi:10.1177/1049732310364219 [PubMed: 20335499]
- Morgan DL (1995). Why things (sometimes) go wrong in focus groups. *Qualitative Health Research*, 5, 516–523. doi:10.1177/104973239500500411
- Morgan DL (1996). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

- Morgan DL (1998). *The focus group guidebook*. Thousand Oaks, CA: Sage.
- Morgan DL, & Bortorff JL (2010). Advancing our craft: Focus group methods and practice. *Qualitative Health Research*, 20, 579–581. doi:10.1177/1049732310364625 [PubMed: 20406995]
- Muñoz N, Bosch FX, de Sanjosé S, Herrero R, Castellsague X, Shah KV, ... Meijer CJLM (2003). Epidemiologic classification of human papillomavirus types associated with cervical cancer. *New England Journal of Medicine*, 348, 518–527. doi:10.1056/NEJMoa021641 [PubMed: 12571259]
- National Cancer Institute. (2006). Surveillance epidemiology and end results cancer statistics review 1975–2003. Retrieved from http://seer.cancer.gov/csr/1975_2003/sections.html
- Norman I, Redfern S, Tomalin D, & Oliver S (1992). Developing Flanagan's critical incident technique to elicit indicators of high and low quality care from patients and their nurses. *Journal of Advanced Nursing*, 17, 590–600. doi:10.1111/j.1365-2648.1992.tb02837.x [PubMed: 1602075]
- Propp KM, Apker J, Zabava Ford WS, Wallace N, Serbenski M, & Hofmeister N (2010). Meeting the complex needs of the health care team: Identification of nurse-team communication practices perceived to enhance patient outcomes. *Qualitative Health Research*, 20, 15–28. doi:10.1177/1049732309355289 [PubMed: 20019348]
- Qualitative Solutions and Research International. (2008). NVivo qualitative data analysis software (Version 8) [Computer software]. Melbourne, Australia.
- Reed J, & Payton VR (1997). Focus groups: Issues of analysis and interpretation. *Journal of Advanced Nursing*, 26, 765–771. doi:10.1046/j.1365-2648.1997.00395.x [PubMed: 9354990]
- Rhodes SD, Hergenrather KC, Wilkin A, Alegría-Ortega J, & Montañó J (2006). Preventing HIV infection among young immigrant Latino men: Results from focus groups using community-based participatory research. *Journal of the National Medical Association*, 98, 564–573. [PubMed: 16623070]
- Ruff CC, Alexander IM, & McKie C (2005). The use of focus group methodology in health disparities research. *Nursing Outlook*, 53, 134–140. [PubMed: 15988450]
- Scott SD, Estabrooks CA, Allen M, & Pollock C (2008). A context of uncertainty: How context shapes nurses' research utilization behaviors. *Qualitative Health Research*, 18, 347–357. doi:10.1177/1049732307313354 [PubMed: 18235158]
- Tripp D (1993). *Critical incidents in teaching: Developing professional judgment*. New York: Routledge.
- Tripp D (1994). Teachers' lives, critical incidents, and professional practice. *International Journal of Qualitative Studies in Education*, 7, 65–76. doi:10.1080/0951839940070105
- Underwood M, Satterthwait LD, & Bartlett HP (2010). Reflexivity and minimization of the impact of age-cohort differences between researcher and research participants. *Qualitative Health Research*, 20, 1585–1595. doi:10.1177/1049732310371102 [PubMed: 20479134]
- U.S. Census Bureau. (2010). State and county quick facts. Retrieved from <http://quickfacts.census.gov/qfd/states/35000.html>
- U.S. Census Bureau. (2013). American Community Survey. Retrieved from <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>
- van der Velde J, Williamson DK, & Ogilvie LD (2009). Participatory action research: Practical strategies for actively engaging and maintaining participation in immigrant and refugee communities. *Qualitative Health Research*, 19, 1293–1302. [PubMed: 19690209]
- Williamson P, Koro-Ljungberg MK, & Bussing R (2009). Analysis of critical incidents and shifting perspectives: Transitions in illness careers among adolescents with ADHD. *Qualitative Health Research*, 19, 352–365. doi:10.1177/1049732308329683 [PubMed: 19224878]
- Wolf ZR, & Zuzuelo PR (2006). "Never again" stories of nurses: Dilemmas in nursing practice. *Qualitative Health Research*, 16, 1191–1206. doi:10.1177/1049732302250722 [PubMed: 17038752]