

# The Role of Cosmetologists as Health Promoters in the Prevention of Infant Mortality

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Published online: 24 August 2013  
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**Abstract** Safe sleep practices reduce an infant's risk for sudden infant death syndrome and sleep-related death. While rates of infants placed on their back to sleep are high, other safe sleep practices are less widely implemented. Our objective was to evaluate the feasibility of using cosmetologists as health promoters for infant safe sleep to reduce infant mortality. In this descriptive study, a 27-item survey was mailed to the 405 licensed cosmetologists residing in the five zip codes with the highest infant mortality rates in the county. Of 149 completed surveys (36.8 %), 103 cosmetologists (69.1 %) were currently working. Most were comfortable (68.9 %) promoting health topics with their clients. Popular health-related topics currently discussed included: diet/weight control, healthy eating, and physical activity. Few ( $\leq 13$  %) were interested in discussing infant mortality prevention or safe sleep promotion. Most respondents were either unsure (56 %) or did not feel infant mortality was a problem in their community (41 %); however, more than half (53 %) knew someone who had experienced an infant death. Cosmetologists were not highly interested in providing safe sleep education; however they engaged in diet and exercise talk already. Cosmetologists may be more appropriate for

obesity-prevention programs to reduce infant mortality than safe sleep promotion.

**Keywords** Safe sleep · SIDS · Cosmetologists · Health promotion

## Introduction

Infant mortality (death before 1 year of age) is often used as an indicator for the health of a community, state, or nation as factors affecting infant mortality rates can also impact the well-being of the entire population [1]. The United States (US) infant mortality rate (IMR), 6.6 per 1,000 live births, is higher than countries spending less on healthcare (mean 4.6 per 1,000) [2]. Between 2000 and 2009, the IMRs in Sedgwick County, Kansas, were higher than the rates for both the state of Kansas and the US [3]. The IMR in Sedgwick County for non-Hispanic African American infants was among the highest in the nation at 21.6 deaths per 1,000 live births [4]. This follows the national trend where African Americans have 2.3 times the IMR as non-Hispanic whites [5].

According to the Kansas Department of Health and Environment (KDHE), the leading causes of infant death from 2005 to 2008 in Sedgwick County were conditions of perinatal periods (50 %), birth defects (19 %), and Sudden Infant Death Syndrome (SIDS) (15 %). An increased risk for SIDS is related to poverty, a lack of prenatal care, unsafe sleep environments, and mother's use of tobacco or other substances [4]. Many of these risk factors are related to potentially modifiable maternal behaviors.

The American Academy of Pediatrics (AAP) released guidelines in 1994 for infant sleep to prevent SIDS. Back-to-Sleep campaigns increased the number of infants placed

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supine from 13 % in 1992 to 76 % in 2006. In subsequent years, a greater than 50 % reduction in SIDS was observed. The AAP [6, 7] revised their guidelines to further emphasize sleep environment in addition to sleep positioning. However, studies continue to show infant deaths related to non-supine position and environment [8], and found only 5 % of infants with no extrinsic risk factors (e.g. prone, bed sharing) at time of death [9]. In addition, the IMR seems to have plateaued [4, 7], suggesting we must explore novel venues to influence change.

### Cosmetologists as Health Promoters

Beauty salons are an integral part of a community, which is part of the reason salon-based health education programs have been evaluated in recent years. As beauty and health are inextricably linked, the delivery of health messages in the context of beauty salons represents an innovative way to reach a large number of women [10]. In the US there are over 300,000 licensed beauty-centered salons, which serve, on average, over 150 clients per week [11]. Cosmetologists spend 30 min to an hour with each client [10] and see some clients as often as weekly. Historically, salons served as a place of community for social, political and economic interactions. They are also viewed as places of refuge and healing, where women can go to be pampered regularly. This pampering and personal attention often heightens mood and may increase openness to health promotion messaging [11] and enhance behavior change.

Cosmetologists may be optimal as health promoters because they see themselves as information resources for their clients [12]. Others perceive them as “natural helpers” [13] and trusted members of the community [14]. The relationship between cosmetologist and client is also characterized by stability because many clients tend to return to the same cosmetologist over a period of years [13]. Topics routinely discussed include family, children, health and illness, diet, medical care and daily life events [10], with nearly 20 % of talk characterized as health-related [13]. Cosmetologists reported interest in discussing health issues and were also comfortable giving out pamphlets [14]. Previous studies have used salon-based interventions to increase fruit and vegetable consumption [10], breast self-exams and/or regular mammograms [14–18]; hypertension screening [19], and condom use and HIV/AIDS prevention [20–22]. No identified studies addressed infant mortality prevention or, specifically, safe sleep.

The authors hypothesize that cosmetologists are currently acting as health promoters, but are not providing specific education about preventing infant mortality, such as safe sleep recommendations. Colson et al. [23] found advice from a female friend or relative increased the

chances a baby was placed supine (AOR = 5.82), which is an important component of preventing SIDS. The purpose of this study was to evaluate the feasibility of utilizing cosmetologist for safe sleep promotion with new and expecting mothers.

### Methods

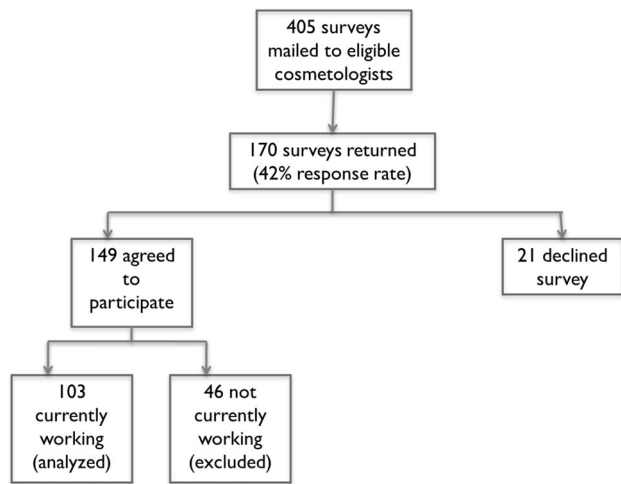
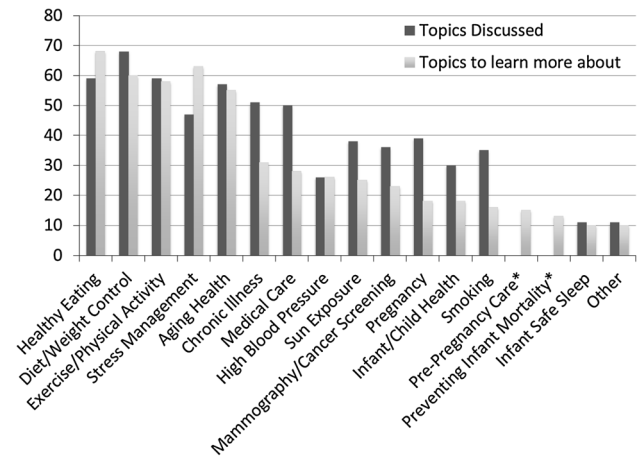
This was a descriptive, qualitative research design in which cosmetologists were surveyed. In Sedgwick County there are 3,146 licensed cosmetologists; 405 reside in the zip codes with the highest IMRs: 67,208 (n = 94), 67,214 (n = 63), 67,217 (n = 164), 67,218 (n = 107) and 67,219 (n = 48). Contact information for these licensed cosmetologists was obtained from the state licensing bureau. The Dillman approach [24] was used, along with a \$5 pre-response incentive to enhance response rate [3, 25–29]. An informational post-card was mailed to these 405 cosmetologists to alert them to expect a copy of the survey. The full survey was mailed 1 week later. The survey contained 27 questions, focusing on clientele demographics, topics commonly discussed during appointments, comfort and interest in promoting health topics, and biggest health concerns facing their communities. A reminder post-card was sent to non-responders after 2 weeks. The remaining non-responders were sent a second copy of the survey 2 weeks after the initial reminder, either hard copy or by email, if an email address was on file. Approval for this study was received from the University of Kansas School of Medicine–Wichita Human Subjects Committee. Data was analyzed using SPSS 19.0 (Chicago, IL).

### Results

Of the 405 surveys mailed out, 149 were completed (36.8 %); however only 103 (69.1 %) were currently working at the time of the survey and were included in the analysis (Fig. 1). The majority were female, non-Hispanic white (see Table 1) and between 22 and 84 years (M = 44; SD = 15).

Cosmetologists reported serving between 3 and 500 clients per week (Median = 30) and most spent a significant amount of time with each client, averaging nearly an hour (M = 53 min; SD = 31; range 12–158). Number of cosmetologists (including respondent) working in the same salon ranged from 1 to 45 (Median = 6).

Only one (0.97 %) participant did not feel there was a relationship between beauty and health. Most cosmetologists were either comfortable (N = 37; 35.9 %) or very comfortable (N = 34; 33 %) promoting health topics with their clients. Three (2.9 %) reported not being at all

**Fig. 1** Survey respondents**Fig. 2** Comparison of topics currently discussed during appointments and topics cosmetologists are interested in learning more about to share with clients. \*Not included in “Topics Currently Discussed” question**Table 1** Cosmetologist demographics

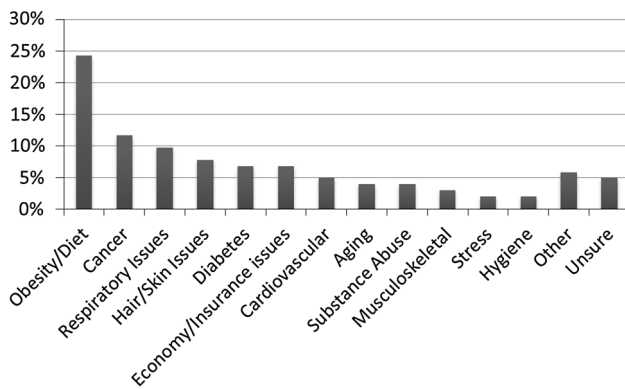
Variable	N	%
Status at salon		
Sole owner	25	24.3
Part owner	10	9.7
Employee	35	34
Rent station/booth	33	32
Sex		
Female	92	89.3
Male	11	10.7
Highest level of education		
GED/HS graduate	31	30.4
Some college	50	49
Associate's degree	7	6.9
Bachelor's degree	7	6.9
Other	7	6.9
Race		
White	81	80.2
African-American	6	5.9
Mixed Race	7	6.9
Other	7	6.9
Hispanic		
Yes	10	10.2
No	88	89.8
Smoker		
Yes	22	23.7
No	71	76.3
Rate personal health		
Excellent	12	11.7
Good	71	68.9
Fair	20	19.4

comfortable. Fewer were interested ( $N = 30$ ; 29 %) or very interested ( $N = 20$ ; 19 %) in promoting health topics. However, 40 % ( $N = 41$ ) were still somewhat interested in promoting health topics, and only 11 % ( $N = 11$ ) were not at all interested.

When sharing health topics with their clients, talking during appointments was most often selected as the preferred method ( $N = 74$ ; 72 %). Handing out pamphlets or written materials ( $N = 45$ ; 44 %) and referring clients to other health agencies/resources ( $N = 43$ ; 42 %) were also supported by almost half of participants. During appointments, a variety of topics were discussed, including personal/social topics and health issues; cosmetologists also reported interest in learning more information on a variety of topics (Fig. 2). Few cosmetologists were interested in learning more about Infant/child health ( $N = 18$ ; 17 %), preventing infant mortality ( $N = 13$ ; 13 %), and infant safe sleep ( $N = 10$ ; 10 %).

Response to an open-ended question regarding the biggest health problem facing their community suggest obesity and diet issues were by far the biggest concerns (Fig. 3). When specifically asked about infant mortality, most respondents were either unsure ( $N = 58$ ; 56 %) or did not feel that infant mortality was a problem in their community ( $N = 42$ ; 41 %). However, 53 % ( $N = 55$ ) knew someone who had experienced an infant death.

Regarding access to the priority population for the intervention (expectant African American mothers), most cosmetologists reported having 0 ( $N = 54$ ; 52.4 %), 1 ( $N = 16$ ; 15.5 %), 2 ( $N = 7$ ; 6.8 %) or 3 ( $N = 9$ ; 8.7 %) currently pregnant clients. The remainder had 4 or more ( $N = 11$ ; 10.7 %) or failed to respond ( $N = 6$ ; 5.8 %). In addition, only 5 (4.9 %) reported serving a “mostly African-American” clientele, and 16 (15.5 %) serving a



**Fig. 3** Biggest community health concerns as identified by cosmetologists

clientele that is “nearly equal mix of several races/ethnicities”.

## Discussion

### Cosmetologists as Health Promoters

The purpose of this study was to evaluate the feasibility of using cosmetologists as health promoters to provide community-based education to reduce infant mortality through safe sleep training. As supported by previous studies [10, 12, 13] the majority of cosmetologists confirmed they currently engage in some health-related talk and are at least somewhat interested in discussing health topics with their clients. Additionally, the respondents agreed with the commonly-held belief that “beauty and health” are related, indicating an association between their work in the beauty industry and acting as health promoters.

However, even though the respondents are comfortable and interested in discussing health topics, our findings did not align with previous studies in regards to the specific health topics that were routinely discussed with clients. For example, Linnan et al. [10] found that about 84 % of cosmetologists discussed dieting and weight control with clients, while only 66 % of our respondents reported exploring these health topics with clients. Other topics, such as healthy eating, physical activity, and stress management were also discussed less frequently. While one study found that pregnancy and motherhood were the most frequently discussed health-related topics [13], only about one-third of our respondents conversed with their clients regarding maternal/child health issues.

We theorize that both cosmetologists and clients tend to discuss topics that are appropriate to their current life situation; therefore, clients/cosmetologists who are not pregnant and do not have an infant may be less likely to

discuss pregnancy and infant health topics. Nearly 50 % of our sample were 40 years of age or over, suggesting they may be beyond the standard age of parents of newborns. Data was not collected about the clients’ age or children, which could be significant relative to discussion about infants, children, and safe sleep habits. Additional research should be directed at the demographics of clients and cosmetologists with regards to their specific conversation during the beauty appointment.

### Awareness of Infant Mortality as a Community Problem

With regards to the awareness of the local infant mortality problem, we discovered a major discrepancy. While only 3 % of respondents recognized infant mortality as a problem in their community, over half (53 %) knew someone who had experienced an infant death. This inconsistency highlights the question as to whether there is a lack of public awareness versus a personal lack of interest and attention paid to the issue. The high rate of personal experience with this issue amongst the respondents demonstrates the severity of the issue. Either cosmetologists are experiencing infant deaths in their circle of family and friends, or these tragedies are being communicated to them by their clients due to the trust of the relationship [13] or impact of the event. Since communication may be occurring among cosmetologists and their clients about this type of health topic, we believe that further studies are needed to elucidate the details surrounding knowledge of local infant deaths.

### Access to Target Groups

Cosmetologists recruited for our survey were living in the zip codes with the highest IMRs in Sedgwick County. Many of these zip codes also have higher population densities of African Americans than other zip codes in the area [30]. However, few respondents were either African American or served a predominantly African American clientele. This may indicate that African Americans were less likely to participate in our study through the mail and may require a more direct recruiting approach.

In addition, few cosmetologists reported having more than two or three pregnant clients. A very small minority of our respondents (11 %) acknowledged discussing infant safe sleep with their clients; however, this number might reflect the low exposure of our respondents’ to pregnant clients. In order to maximize the engagement in health education training and maximize the outreach of a safe sleep promotion intervention, salons may not be the ideal location.

## Infant Mortality Prevention

As part of our data, we analyzed specific health topics, beyond safe sleep, that were directly and indirectly related to the major causes of infant mortality. The most common cause of infant mortality in Sedgwick County were conditions of the perinatal period. Per KDHE, this refers to cases that are most often a result of premature births (before 37 weeks gestation) and low birth weight (less than five and a half pounds). Prematurity and low birth weight are impacted by a variety of factors, including maternal health, access to quality prenatal care, socioeconomic conditions and public health practices [7]. Specific health topics that are directly associated with maternal health include healthy eating, high blood pressure, and smoking. Although infant mortality is not directly identified by cosmetologists as a health problem facing Sedgwick County, certain risk factors for infant mortality were addressed as concerns by the respondents.

SIDS is the third-leading cause of infant death in the county, which is also affected by modifiable maternal health behaviors. Similar to perinatal period conditions, SIDS is related to inadequate prenatal care and tobacco use during pregnancy [7]. SIDS has additional modifiable risk factors that are related to infant safe sleep strategies. The prevention strategies for infant safe sleep are also related to the sleep environment. Tobacco use in the home, both during and after pregnancy, is a risk factor for a unsafe sleep environment. Our data showed that smoking was discussed less often than other health-related topics. Over 20 % of respondents reported smoking, which may decrease their desire (and effectiveness) to promote smoking cessation. This factor and others should be specifically evaluated in future studies in order to elucidate the correlation between the discussion of infant safe sleep and the future application of that health knowledge by the clients.

## Limitations

This research project has several limitations, including a low response rate, a large portion of respondents who were not currently working, limited ethnic and racial diversity of respondents, and the self-report nature of survey data. Limited information was collected on the clients, and that information was based on the cosmetologists' perceptions. Additionally, we limited the survey to the five zip codes in the county with the highest IMR, which suggests the generalizability may be limited.

## Implications for Theory, Policy, and/or Practice

Cosmetologists are currently acting as health promoters; however the accuracy and effectiveness of their

communication is unknown. Regardless, our data suggested that cosmetologists were interested in receiving more information about health topics that can be shared verbally with clients during appointments. With regards to infant mortality, cosmetologists in our sample were not aware of the high IMR affecting their local community and show limited interest in promoting safe sleep behaviors. However, cosmetologists show interest in promoting maternal health behaviors that influence infant mortality such as obesity prevention, which includes exercise and healthy eating. In conclusion, further studies are needed to evaluate the potential of cosmetologists to enhance maternal health behaviors related to infant mortality.

**Acknowledgments** This work was funded by a Kansas Bioscience Authority/Wichita Center for Graduate Medical Education grant.

**Conflict of interest** The authors have no conflicts of interest to report.

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