**One Tiny Reason to Quit**

Location: Virginia  
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Category: Promising Practice

**BACKGROUND**

Infant mortality (IM) is a critical indicator of the overall health status of a community. Despite advances in research and healthcare, the United States ranks 29th among developed nations, with a national IM rate of 7.2 per 1,000 live births (CDC). Even more striking is that the national IM rate among African American women is more than double that of whites. Leading causes of IM include congenital malformations, prematurity, low birth-weight, and Sudden Infant Death Syndrome. Smoking during pregnancy can be linked to all of these causes, including increased risk for premature rupture of membranes, placenta previa, preterm delivery, and low birth-weight. Risk of SIDS is also higher for babies of women who smoke during pregnancy.

It is estimated that eliminating maternal smoking could lead to a 10% reduction in all infant deaths and a 12% reduction in deaths from perinatal conditions (CDC 2001 Surgeon General’s Report). One evidence-based smoking cessation service available to pregnant women is telephone counseling or “quitlines.” The U.S. Public Health Service Clinical Practice Guidelines and the Guide to Community Preventive Services both recommend quitlines as an effective method to help people stop smoking. A national network of quitlines (accessible through 1-800-QUIT-NOW) offers free, telephone-based smoking cessation support by providing counseling services conducted by trained and qualified professionals, as well as information, self-help materials and referrals to community-based cessation programs (NAQC, 2006). Counselors also have specific training and call protocols for pregnant women. Quitlines must be advertised to make potential callers aware of the service. Campaigns that are positive in tone have been shown to boost call rates among groups of pregnant smokers (Ballard and Radley 2009; CDC 2004), but not African American women. In Richmond, VA, African American women had infant mortality rates that were 3-5 times higher than those of white women.

**PROGRAM OBJECTIVES**

The overall goal of the One Tiny Reason to Quit campaign was to reduce infant mortality risk in Richmond, VA. The campaign strategy was to promote calls from pregnant women.

**TARGET POPULATION SERVED**

The primary intended audience for the One Tiny Reason to Quit campaign was pregnant, African-American women who smoke. Secondary audiences were other pregnant smokers and female African-American smokers with babies under the age of 1 year.

The campaign was implemented in an urban community, and it concentrated its activities in three inner-city zip codes in which infant mortality rates were highest. One Tiny Reason to Quit is most appropriate for urban settings with fairly large percentages of high-risk African American women. There were slightly fewer than 400 African American births per month in the 7 Richmond area health district during the period of the campaign, and a convenience sample survey suggested that approximately 1/3 of the women were exposed to the campaign. The number of African American pregnant callers during the 3-month replication was 48. Moreover, the scientific literature suggests that actual calls are the “tip of the outcome iceberg” because other individuals exposed to a quitline promotion quit spontaneously, are prompted to seek other help, tell others to quit, etc.

**PROGRAM ACTIVITIES**

One Tiny Reason to Quit utilized a free, online performance support tool to guide two years of formative research and

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**TITLE V/MCH BLOCK GRANT MEASURES ADDRESSED**

| #14: A) Percent of women who smoke during pregnancy and B) Percent of children who live in households where someone smokes. |
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African American smokers to the evidence-based, toll-free smoking cessation quitline, 1-800-QUITNOW.

Key objectives included:

- A statistically significant increase in calls to 1-800-QUIT-NOW from pregnant, African American women who smoke during the campaign period; and
- During the 5-year grant period, manualizing our procedures to facilitate replication of the campaign and disseminating the evaluation findings to key professional audiences.
One Tiny Reason to Quit

intervention development. Called the Social Marketing version of CDCynergy, this interactive tool designed by the Centers for Disease Control and Prevention (CDC) is available online at: www.orau.gov/cdcynergy. The formative research included focus groups with open-ended questions that were derived from the Theory of Reasoned Action (Ajzen & Fishbein, 1980). The campaign name and copy were audience-tested prior to launch.

The initial wave of the campaign lasted from June through September 2009. A second campaign wave ran from January through March 2011. Both waves resulted in statistically significant increases in calls to 1-800-QUIT-NOW from pregnant women in Richmond. One Tiny Reason to Quit used a variety of media channels. Its radio spot featured the voice of a child, because we learned from focus groups that a child’s viewpoint resonates with target audience members. Other media channels included bus advertisements, billboards in high-risk communities, and utility bill stuffers. Trained volunteer outreach workers reinforced the media messages and gave pregnant smokers branded give-away items (e.g., lip balm, brochures, cell phone-shaped tins of mints).

Representatives from community partner organizations (local health department, local Healthy Start Initiative, etc.) were part of a planning coalition that made every major decision throughout the campaign planning and implementation processes. Focus groups and individual copy-testing interviews with target audience members were also conducted during the planning process. The data resulting from these endeavors guided all major decisions (e.g., spokesperson choice, radio station selection, graphics used on print media). Fifty trained volunteer peer outreach workers provided suggestions about revising procedures between the original wave of the campaign and its replication.

PROGRAM OUTCOMES/EVALUATION DATA

Campaign success was assessed by comparing the number of quitline calls from pregnant women in the target area during a campaign wave with the number of calls from adjacent seasons that year, and with call data from prior years. This second kind of contrast was conducted to control for seasonal variations such as resolutions to quit smoking at the beginning of a new year. Demographic data on the women were examined descriptively to make sure that the target audience was reached. The major potential biases include incomplete quitline caller interview data, and the lack of a denominator of pregnant women exposed to the campaign. Success was documented by analyzing call records maintained by quitline staff in Seattle, Washington with no ties to the project.

Whether measured by total calls or unique callers, there were statistically significantly spikes in calls from pregnant women during One Tiny Reason to Quit campaign waves 1 and 2. The campaign appeared to be very effective in reaching its high-risk target audience; calls made during the campaign came from younger pregnant women with less education than calls made prior to the campaign, and higher proportions of pregnant callers during the campaign were African American and covered by Medicaid.

The absolute number of pregnant white callers did not drop during Wave 1 of the campaign period, but the race/ethnicity distribution of pregnant callers shifted dramatically compared to pre and post campaign periods ($\chi^2 (2)=19.22, p < .0001$).

African Americans comprised 85.6% of the 28 pregnant callers during the campaign as compared to 41% of the 10 in the season before the campaign. There was a significant increase in the total number of calls from pregnant women during Wave 1 of the campaign compared to the analogous season the prior year ($\chi^2 (1) = 9.88, p < .001$). By contrast, there was no year-over-year increase in calls from all callers ($\chi^2 (1) = 1.0, p > .05$). There was an even larger increase among pregnant women when the comparison period was the season immediately before the campaign ($\chi^2 (1) = 14.6, p < .0001$). Wave 2 findings replicated this general pattern.

The demographics of all unique callers to the quitline (N=3,487, inclusive of pregnant women) in the six months before and during the 2011 campaign provide context for the demographics of pregnant callers. Of all quitline callers, 57% were female, 73% were daily smokers, 26.1% had not completed high school, 30.8% had a high school degree or GED, 28.1% had some college, 15% had at least a college degree, 35% were African American, and 28.6% were uninsured.

During Wave 2, there was a larger increase in the number of calls from pregnant women than there had been in Wave 1; there were more than five times as many calls from pregnant women during Wave 2 than from the same season in the prior year ($\chi^2 (1) = 23.98, p < .0001$). Once again, the increase in calls from pregnant women held when the comparison period was the season just before the campaign ($\chi^2 (1) = 4.1, p < .05$), and this time the spike appeared to persist into the 3-month post-campaign period ($\chi^2 (1) = 2.1, p < .05$). However, the Wave 2 rise among pregnant callers should be viewed in light of a general secular trend; calls from all callers doubled compared with the volume during the campaign season the previous year ($\chi^2 (1) = 232.44, p < .0001$).

In clinic interviews with a convenience sample (N=30), approximately two thirds of the women reported exposure to One Tiny Reason to Quit. While only a handful of the campaign-exposed women had actually called the quitline,
several reported quit attempts, and quitline promotions have been shown to prompt such attempts. Outreach workers reported that the women they encountered liked the give-away items and that merchants were receptive to appeals to display posters.

Complete evaluation and data can be found in Kennedy et al., 2013.

PROGRAM COST
Staffing costs covering 20–25% effort of a full-time bachelor or master’s level staff member are suggested to run the campaign as originally developed. Additional staffing may be required if more channel or material development is planned. Total program costs (in 2009 dollars) were $24,112.

Program costs for the original campaign materials were as follows:
- Purchased air time for radio ads – $14,238 (316 total ads that ran for a period of 4 months, during the last 2 weeks of each month)
- Printed materials – $5,015 (3,205 posters of various sizes and 10 billboards - print only, display costs pro bono)
- Outreach worker give-away items – $4,859 (1,500 lip balms, 500 mint tins, 75 tote bags, 500 magnet frames)

A formal cost-effectiveness analysis of One Tiny Reason to Quit was beyond the scope of our evaluation. However, using national estimates of costs for neonatal intensive care for premature infants as a point of comparison, it is reasonable to assume that the campaign saved health dollars. If even one severely premature infant birth and NICU stay was averted, a One Tiny Reason to Quit campaign would more than pay for itself.

ASSETS & CHALLENGES
Assets
This campaign was developed as the community outreach component of a 5-year NIH Research Center (P-60) grant, Jerome Strauss MD, Principal Investigator. The overall aim of the Center (now in its second cycle) is to reduce infant mortality rates among African Americans in the City of Richmond and elsewhere; most Center resources are dedicated to basic biomedical research.

Challenges
Conversations between the peer outreach workers (OWs) and the pregnant women they encountered could not be monitored for fidelity to the procedures taught in outreach training. Also, organizations participating in the planning coalition had different priorities at the outset. The only other major challenge was tight financial resources.

It was anticipated there may have been political challenges to mounting a smoking cessation campaign in the city where the tobacco industry is a major local employer; however none were experienced.

Overcoming Challenges
Procedures taught in outreach worker (OW) training included role-playing and feedback. OWs carried written reminders that cued them to convey the three major project messages in a standard fashion:
1. Even if you’re already pregnant, there’s still time to quit smoking and give your baby a better chance at a healthy start.
2. Call 1-800-QUITNOW for free, friendly, helpful support in quitting smoking.
3. Pass along word about the quitline (and some branded reminder take-away materials) to a friend who needs to know about it.

The multiple partner organization agenda challenge to crafting a focused campaign was overcome by agreeing in advance that there would be a sharp, coherent campaign focus, and then by collecting formative data to inform planning decisions. Our resource needs were met via in-kind support from the VCU health system, a 2-for-1 sale at the radio station, and the creativity, in-kind support and deep community ties of our partner organizations.

LESSONS LEARNED
We developed a One Tiny Reason to Quit Facebook page, but it did not receive many visits during the campaign. The other campaign components were successful and we would keep those going forward.

FUTURE STEPS
By their nature, communication campaigns “wear out” and should not be run indefinitely in the same location. The next step for this practice is to make One Tiny Reason to Quit available for dissemination to other communities with high rates of infant mortality and high-risk African American women.

COLLABORATIONS
We partnered with the Promoting Healthy Pregnancies coalition, which comprised multiple community partners serving the target audience. The key community partner was the Richmond Healthy Start Initiative (which included several funded programs and a 300 member community consortium). The coalition also had representatives from the Virginia Department of Health, the Richmond City Health District, and Virginia Premier Insurance Company. The outcome data were provided to us by Free & Clear (now Alere) which provides quitline services to Virginia under a contract with the Virginia Department of Health.
PEER REVIEW & REPLICATION
Two peer-reviewed articles on One Tiny Reason to Quit have been published in the scientific literature:


The project has also been presented at numerous local, national and international scientific and professional conferences for which abstracts were peer-reviewed.

In addition to the Richmond replication two years after the original campaign, One Tiny Reason to Quit was replicated in rural Southside Virginia. The pattern of outcomes was similar, but we do not have plans to publish the rural data. The approach is probably not cost-effective in settings where the total and target populations are sparse.

RESOURCES PROVIDED
A case study and the outcomes of the evaluation of One Tiny Reason to Quit were published in the peer-reviewed journals as noted above.

Project information is available at the One Tiny Reason to Quit website:

- http://www.healthdisparities.vcu.edu/?id=1388&sid=10

An Operations Manual available on the website provides detailed project information for individuals interested in possible replication of One Tiny Reason to Quit. It includes topics such as OW training procedures and arrangements for accessing electronic files for the creative materials. The manual is available online at no charge.

Key words: Birth Outcomes, Health Inequity/Disparities, Prenatal Care, Reproductive Health, Substance & Tobacco Use, Social Marketing

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