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Using Formative Research and Audience-Centric Intelligence to Develop the #JustBe Digital Magazine: An mHealth Strategy to Improve Adolescent Sexual Health

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INTRODUCTION

Emphasis is increasing to deliver teen pregnancy prevention education in innovative ways to at-risk populations – older teens, ethnic minority youth, LGBTQ (lesbian, gay, bisexual, transgender, queer) youth, school dropouts, and high-risk males – that are not reached through traditional programming channels, which include schools, clinics, and community-based organizations.¹ Digital strategies may help to overcome the challenges of reaching these populations. According to the Pew Research Center, 93% of US youth are online daily, and 75% have a mobile phone.^{2,3} Moreover, 80% of US youth say they cannot imagine a day without technology.⁴ However, questions remain regarding the feasibility and long-term effects of mobile health interventions for contraception use.⁵⁻⁹ Specifically, these strategies may not target youth, may not be culturally specific for ethnic minority youth, and may not provide information on the most effective contraceptive methods. A recent systematic review of mobile phone apps for teen pregnancy prevention found that although several evidence-based mobile strategies are available, most miss opportunities to provide users with information on the most effective contraception methods, including long-acting reversible contraception (LARC).¹⁰ Furthermore, it was found that 72% of apps did not target any race/ethnicity, and only 10% explicitly targeted youth.¹⁰ As part of a community-based demonstration project, we developed a strategy to reach hard-to-reach youth in an engaging and culturally relevant way. In this article, we describe the three steps used to develop *#JustBe*, a digital magazine, to engage and inform youth on contraception, sexual health, consent, and healthy relationships.

Step 1: Planning Group Development and Engagement

When an intervention is developed, it is essential that planning groups include members of the target population and experts in the field.¹¹ Thus, we developed two types of planning groups: youth in our target population and experts on social media and marketing. Before selecting a final strategy, we engaged these planning groups essentially to “think outside the box” to generate innovative ideas.

Engagement with youth. To engage youth as partners in the development of a strategy, we hosted paid high school summer interns, conducted focus groups, and engaged in regular feedback sessions during every step of the development phase. As part of this effort, we conducted training in sexual health education; survey development and interpretation; presentation

development; formative research, such as PhotoVoice and focus groups; and human subject protection.

Engagement with marketing and social media experts. To obtain ideas and advice on strategies for targeting hard-to-reach populations, we interviewed and engaged marketing firms from across the nation. After realizing that many marketing firms are not familiar with sexual health education and that we needed a data-driven approach to arrive at a final strategy, we contracted with CentraForce, an audience-centric marketing firm. We worked with CentraForce to gain a better understanding of our target audiences – namely, young women and their influencers; integrate our formative research and data sets with secondary data sets and social media monitoring; define the marketing area and build deep, hyperlocal data sets; develop audiences and their personas; and develop messaging and media strategies for these personas. Social marketing strategies, such as audience segmentation techniques, may help focus interventions and identify effective delivery channels.⁶¹²⁻¹⁴

Persona development with audience-centric intelligence. Persona development has gained traction as a useful strategy to help researchers, program developers, and stakeholders understand the needs and desires of target users of an intervention.¹⁵ In addition to demographic data (ie, age, race/ethnicity, and socioeconomic status), personas are a valuable resource because they include the skills, attitudes, motivations, frustrations, and goals of specific subgroups, mostly within geographic boundaries.¹⁵ Input from our youth engagement process clearly indicated that we should use a digital strategy to engage hard-to-reach youth. The suggestions from marketing experts varied from implementing a Web site strategy to buying mobile vans that sold beauty products in high-risk neighborhoods. To narrow our options, we relied on CentraForce to generate audience-centric intelligence. Based on their analysis of audience-centric marketing data, census data, and health behavior data, CentraForce developed personas for young female teens (aged 12-17 years), young female adults (aged 18-29 years), young male teens (aged 12-17 years), and young male adults (aged 18–29 years) (**Table 1**).

Step 2: Strategy Development

Based on the planning group activities, we refined goals, identified messaging strategies, developed youth-centered content, and selected dissemination channels that were most feasible for youth and young adults.

Collectively, the following lessons and specifications were gleaned from these activities:

1. A digital strategy should be used to engage hard-to-reach populations.
2. Information should be “chunked” to help youth process it. Chunking is an information processing technique that allows learners to memorize and retain information.¹⁶ Because information in a multimedia form can quickly create cognitive overload, it is important to use information processing strategies such as chunking to overcome these barriers.⁹
3. Information should be presented in a relevant or contextual way in relation to the learner’s experience.¹⁷ The planning groups suggested the use of real-life stories and struggles. Story elements could include voices of people who are credible, compelling images that resemble youth in their community, powerful symbols, and social math to show the extent of the problem.¹¹
4. Humor should be used to engage and entertain target audiences. In addition to grabbing attention, humor can make something memorable, change attitudes and knowledge, and foster dissemination of the intervention.¹⁸⁻²⁰
5. Content should include sexual minority youth’s and males’ perspectives of relationships, sexual health, and contraception.

Step 3: Program Production and Implementation

Based on formative evaluation, audience intelligence analysis, and planning group input, we developed a digital magazine strategy entitled *#JustBe*. This strategy focuses on user-centered digital content that targets critical subgroups to provide engaging and informative education on contraception, sexual health, consent, and healthy relationships. Additionally, we based the “look and feel” of this strategy on the results of persona development (**Table 1**). Specifically, we structured many of the magazine articles as “tips” or “steps” instead of traditional articles, and we created designs that were edgy with limited juvenile imagery to ensure the magazine connected with our target population’s needs: taking small actionable steps; seeing real people; and feeling valued as young adults, not youth.

Initial content included youth subculture topics such as fashion, beauty, and fitness. However, through an iterative process that used feedback from ongoing listening groups, we refined content to focus solely on sexual health and contraception (**Figure 1**). Youth in our listening groups reported spending more time on those sections and sharing articles related to sexual health and contraception with their peers. From these listening groups, we also learned the importance of including the perspectives of males and of LGBTQ youth on relationships, sexual health, and contraception (**Figure 2**).

We successfully implemented the *#JustBe* digital magazine in two participating high schools located within our demonstration project community. We conducted multiple outreach activities during school lunch periods, which included interactive games and group activities, to market the magazine and its message. The two high schools had a combined student population of approximately 2000 students. Implementation goals were met, as viewership remained contained within our target population with approximately 1899 unique readers (**Figure 3**).

CONCLUSION/IMPLICATIONS

In this article, we describe the preliminary steps used to develop *#JustBe*, a user-centered digital strategy for ethnic minority older youth and young adults with a specific focus on teen pregnancy prevention. Technology-based strategies such as *#JustBe* offer advantages over traditional face-to-face methods by using a confidential way to retrieve sexual health information that may be sensitive and potentially embarrassing. Research has shown that technology-based strategies appeal to youth¹⁰; induce specific and measurable health behavioral changes in sexual risk taking²¹; and improve contraception uptake, specifically for those at high risk for unintended pregnancy.²¹

We learned several important lessons from the development of *#JustBe*. First, health literacy in particular and literacy in general should be considered when digital education is delivered. Content, especially that presenting medical information, must be provided in a manner that is engaging, interesting, and easily digested. Second, various marketing strategies that are user-centered and based on audio-centric marketing behavior (eg, timing and placement of social media ads, modification of layout to include design thinking strategies that encourage behavior change) are needed to target different subgroups within a target community. Lastly, given the importance of technology in the lives of youth, digital strategies such as *#JustBe* warrant further investigation. Our preliminary

results from this community-based demonstration project indicate the need to evaluate the influence of *#JustBe* on health behavior, including the use of reproductive health services and contraception.

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Table 1. Outcomes of Personas Developed From Youth and Young Adults in Target Community

	Persona	Persona Description	Implications
Age Group	Females		
12-17	<i>Opinionated newcomers</i>	Actively insert themselves into conversations and have a desire to belong to a group.	Aren't "wowed" by celebrities; they like to see real people making real choices.
18-29	<i>Aspiring seekers</i>	Currently sorting out who they want to be, what kind of career they want to have, and how to achieve all their goals.	Actions or interventions should be broken down into easy wins, so that they don't lose hope or sight of the goals they want to achieve.
Age Group	Males		
12-17	<i>Receptive watcher</i>	Learning to navigate the ways technology affects real-life relationships and choices.	Addressing them as young adults – while understanding their limited worldview – will help them feel respected and appreciated.
18-29	<i>Image promoter</i>	Proud, informed, "hooked in," and surrounded by a crowd, offering a polished point of view that their peers respect and emulate.	An authentic approach to being cool and hip will resonate.

Figure 1. Content progression by phase, May 2015 – September 2016.

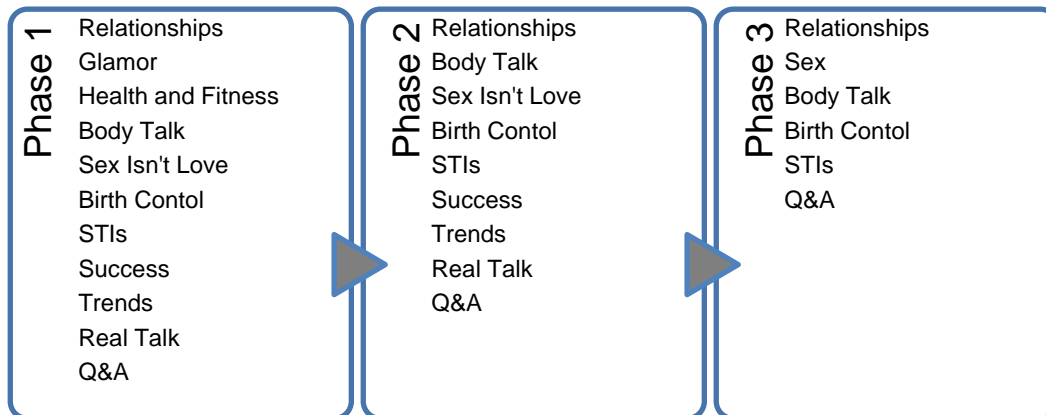


Figure 2. Snapshot of topics for digital magazine #JustBe.

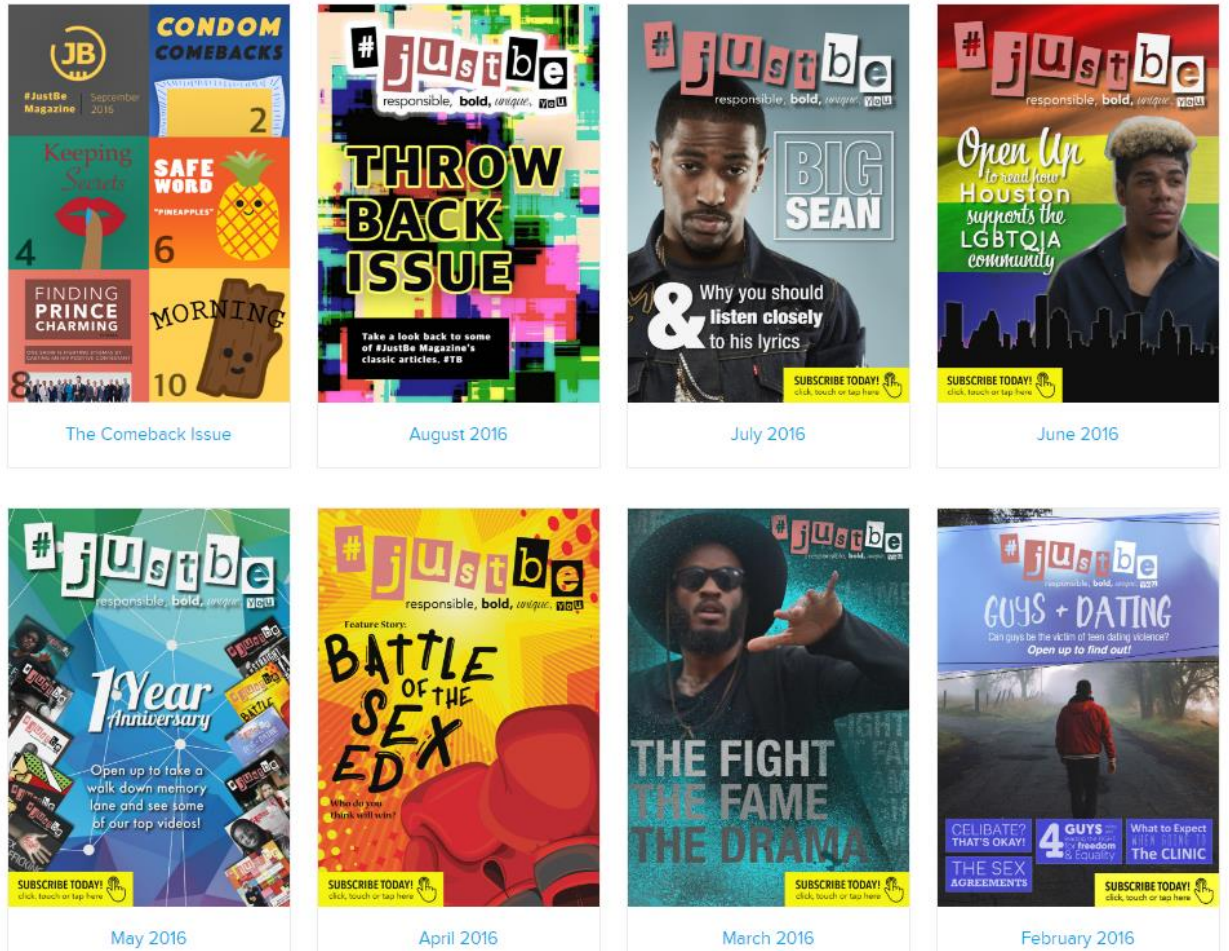


Figure 3. Readers, sessions, and viewership for #JustBe digital magazine, May 2015 – September 2016.

Readers: Total number of unique people (unique IP addresses) who had sessions.

Sessions: Page views where there has been interaction (page flipping).

Unique Views: Total number of unique people (unique IP addresses) who have loaded the magazine issue.

Views: The number of times the magazine issue was loaded

