

# Chat About That

A mobile web HIV/STI  
prevention intervention

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## **Abstract**

Chat About That is a mobile web app for youth that provides factual, non-judgmental, sex-positive, harm reductionist sexual health information for all genders and sexualities. Users can search, browse by topic, view a “tip of the moment,” find resources near them, play a trivia game, or post a question and receive advice from peer sexual health educators. This project was informed by a collaboration with the C.H.A.T. (Curbing HIV/AIDS Transmission) peer educators at the Hetrick-Martin Institute.

## **Description**

In New York City, we have the highest rate of HIV infections in the United States. With 41% of youth engaging in sex by 9<sup>th</sup> grade, we have failed our youth by not mandating comprehensive sex education in the state of New York.<sup>1</sup> According to CDC reports, “At the end of 2006, an estimated 1,106,250 persons (95% confidence interval 1,056,400-1,156,400) in the United States were living with HIV infection, with 21% undiagnosed.”<sup>2</sup> Barriers to prevention in high-risk populations include criminalization, stigma, poverty, lack of awareness, and substance use.

The intervention proposed in this paper addresses the needs of young people ages 13 to 24. The goals of the proposed intervention are to reduce the number of HIV and other STI infections within the youth population through increased HIV and STI transmission knowledge, increased HIV and STI testing, and increased consistent safer

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<sup>1</sup> NYCLU (March 27, 2010). Advocates Urge NYC Dept. of Education to Expand Successful Sex Ed Program. Retrieved from URL <http://www.nyclu.org/node/3082>

<sup>2</sup> Center for Disease Control (July 27, 2010). Basic Statistics. Retrieved from URL <http://www.cdc.gov/hiv/topics/basic/index.htm> <http://www.cdc.gov/hiv/topics/surveillance/basic.htm>

sex practices including, but not limited to, condom use. It is important to remember the confluence of factors that lead to greater HIV risk: stigma, racism, homophobia, poverty, and lack of appropriate sex education addressing the specific needs of the population. The focus of my thesis project was to research and implement a mobile web application that would provide sexual health information to a diverse spectrum of young people in New York City. By working toward decreasing the prevalence in the most vulnerable populations, we are working toward creating a significant impact on the epidemic.

I began my research by partnering with a community-based organization (CBO) called the Hetrick-Martin Institute, herein referred to as HMI. HMI provides after-school services for LGBTQ youth ages 12-21 including academic enrichment, health and wellness, arts and culture programming, and job readiness training, as well as education for LGBTQ populations at the Harvey Milk High School. I worked with the C.H.A.T. program at HMI. C.H.A.T. (Curbing HIV/AIDS Transmission) is a program developed out of HMI that provides rigorous sexual health education training for peer educators who then, in turn, provide trainings for peers in their own community. C.H.A.T. was developed through a grant awarded by the Office of Minority Health. C.H.A.T. provides direct peer outreach and engages in online outreach utilizing Facebook, Twitter, YouTube, as well as a blog. C.H.A.T. also mounted an SMS-based sexual health intervention that provides two weekly text messages to subscribers on safer sex, sexual health and wellbeing.

When I started my initial planning around this intervention, I consulted with the youth peer educators and staff at C.H.A.T. for key informant interviews. During our first

discussions, it became clear that a partnership would foster a more holistic and better-informed project. For several months, I engaged with the youth on Facebook and Twitter providing relevant articles about sexual health as well as instigating discussions around safer sex, negotiation and consent, and sexual and gender identities. I observed trainings the youth underwent and began to develop a rapport with them to increase their comfort level and trust as we proceeded. It is important to address the community's needs and to listen to the stakeholders to deliver a successful intervention. Following a public health model, I prioritized the knowledge of the community whom the intervention would target. They are the experts of their own experiences. I cast aside the problematic perspective that suggests that the designer knows best what the user wants/needs. When technologists work with marginalized populations, oppressed peoples, or sensitive subject matters, they have an inherent responsibility to be held accountable to the population they serve ("clients").

Simultaneously, I continued researching public health HIV, STI, and sexual health interventions that involved technology. I also culled through available data about teenage usage of mobile technology and social media to better inform the scope of the project as well as the appropriate method of implementation. According to a study by the Pew Internet Foundation, 71% of teens own a mobile phone. Twenty percent of internet users look online for *someone like them* to provide health advice.<sup>3</sup> (Italics my own.) Therefore, it is reasonable to deduce that if 20% of internet users are seeking peers for health advice, even more users are seeking health advice online from other resources.

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<sup>3</sup> Pew Internet (August 19, 2009). Teens and Mobile Phones Over the Past Five Years: Pew Internet Looks Back. Retrieved from URL <http://www.pewinternet.org/Reports/2009/14--Teens-and-Mobile-Phones-Data-Memo/1-Data-Memo/3-How-are-teens-using-phones-mobile-or-otherwise.aspx>

## **Primary Research**

I conducted a survey with a small sample (N = 12) of peer educators from C.H.A.T. to glean a better understanding of how the youth are garnering sexual health knowledge, as well as an understanding of their technology access. The subjects interviewed ranged in age from 18 to 21. In terms of gender identity, they identified as either male or female. In terms of sexual identity, they ran the gamut including gay, lesbian bi-queer, unsure, straight, and bisexual. All of the subjects spoke English, but many spoke a second language, including Spanish or Haitian Creole. They identified primarily as African-American, Black, Dominican, or Latino. Nine of the twelve youth interviewed had a cell phone, and eight of those with a cell phone had smart phones. The majority of youth also had access to the internet at home, with many having access at school as well. Generally speaking, the US market is anticipated to cross a threshold wherein the majority of cell phone owners will no longer be feature phone users, but smart phone users.<sup>4</sup> In my experience doing outreach work and community organizing, I've noticed that individuals who are poor or homeless may have access to phones, whether they share them with a friend, or personally prioritize phone ownership as a need. Therefore, I posit that even more public health interventions targeting young people will soon involve mobile technology as a direct line to resources and information. However, it is important to note that access to technology is a privileged one, and a holistic intervention would incorporate additional points of contact with the target

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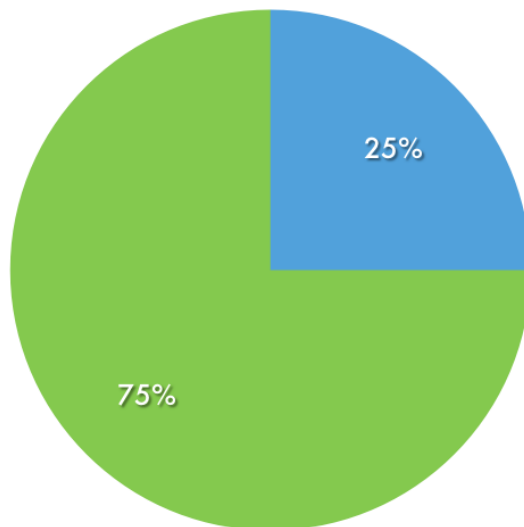
<sup>4</sup> Nielson (March 26, 2010). Smartphones to Overtake Feature Phones in U.S. by 2011. Retrieved from URL <http://blog.nielson.com/nielsenwire/consumer/smartphones-to-overtake-feature-phones-in-u-s-by-2011/>

population.

In my research, I also learned that the youth interviewed were using the internet as a method of accessing sexual health and reproductive health information. Peer outreach programs such as C.H.A.T. were a valuable form of garnering such information, as were friends. Not surprisingly, only one youth responded that a family member was a resource for this sort of information. Therefore, it is imperative to explore all feasible methods of disseminating accurate, non-judgmental sexual health and reproductive health information to youth. I focused on mobile technology for this project because it is portable, participatory, and relatively private.

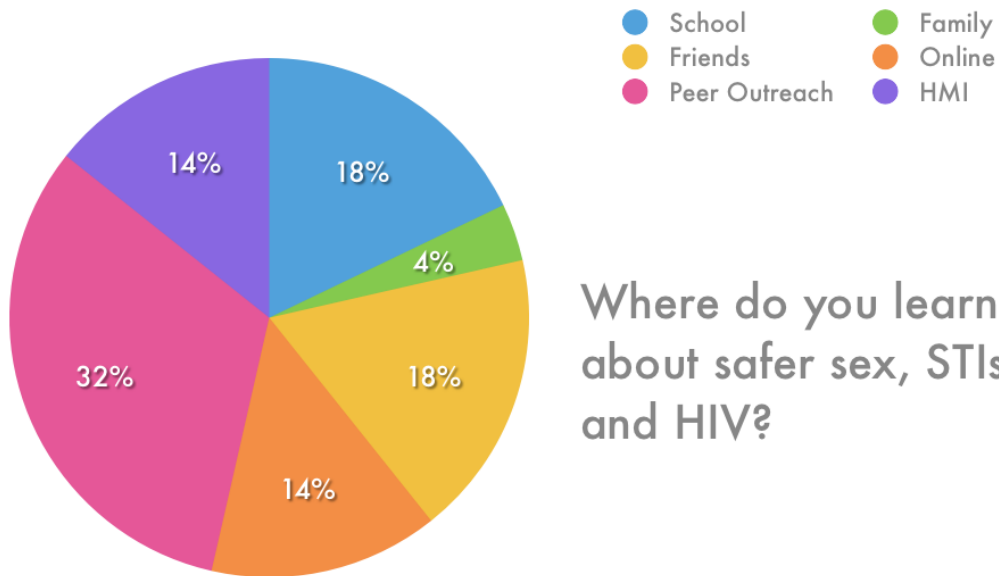
## C.H.A.T. Survey

● No Cell Phone ● Cell Phone



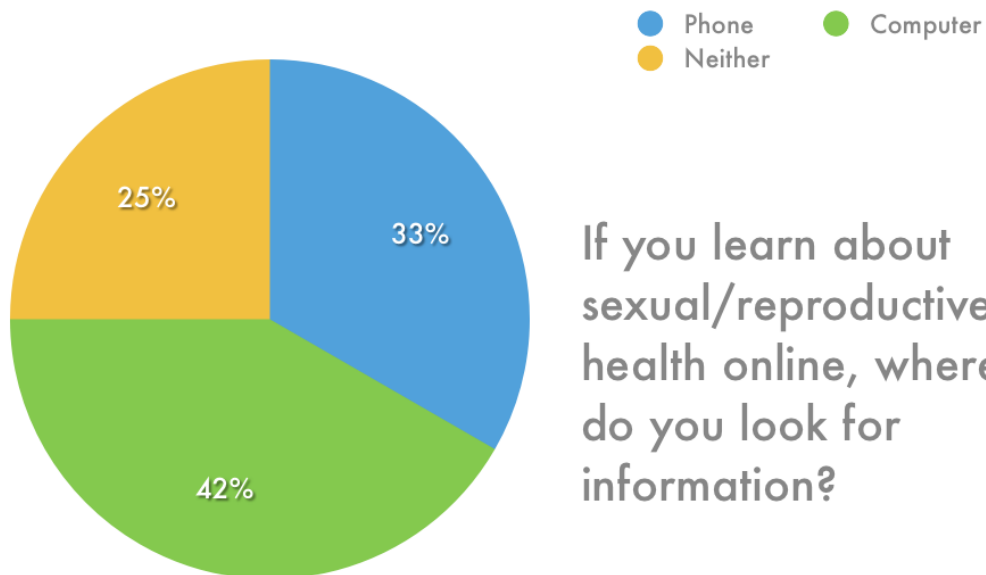
Do you have access to a cell phone?

# C.H.A.T. Survey



Where do you learn about safer sex, STIs, and HIV?

# C.H.A.T. Survey



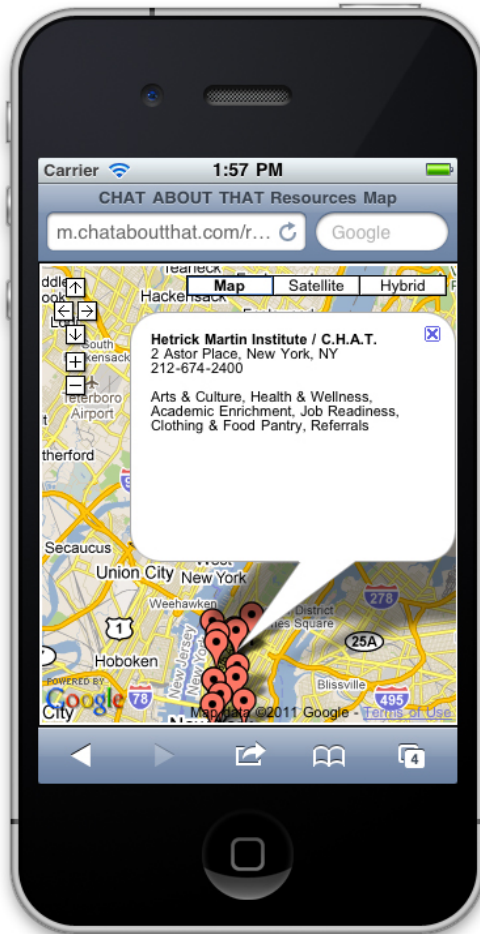
If you learn about sexual/reproductive health online, where do you look for information?

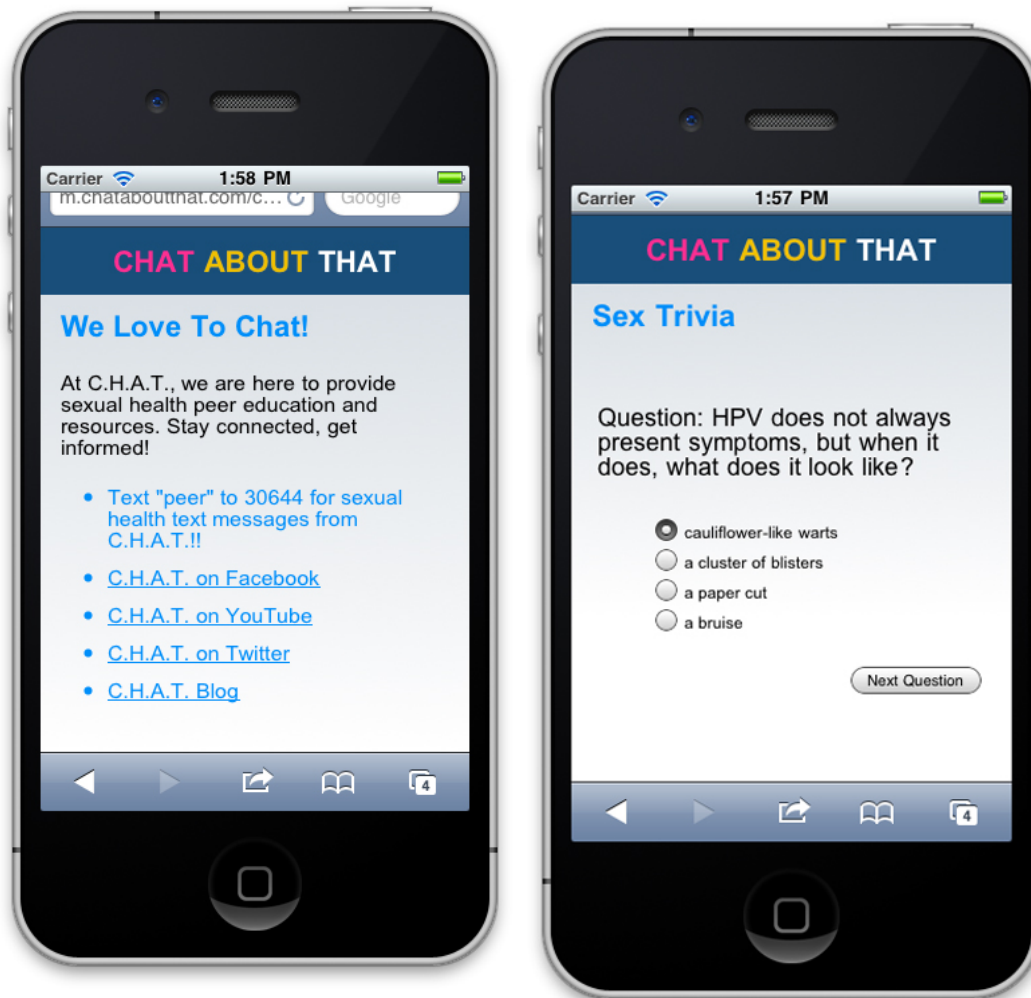
## **Evaluation**

Evaluating interventions that utilize technology, mobile technology in this case, is rather difficult. The current methods of evaluation available have not caught up to the capabilities of technology. Traditionally, a pre-post test could be administered to collect data about the participants' understanding about issues of HIV transmission and methods of safer sex practices, as well as statistics on their current sexual health practices. A second test would be administered after the evaluation, and data would be compared to evaluate the effectiveness of the program. However, the particular intervention I've proposed is broadly accessible and relatively anonymous. Therefore, no pre or post data could be collected for evaluation purposes. While I strongly believe that this mobile web project can and will create an impact on the knowledge and decisions made by youth, current evaluation options are murky are best. In accordance with the current collaborative process, exploring new methodologies for evaluation of technology-based or technology-centered public health interventions would be a worthwhile investigation.

## **The App**

Below you will find a series of images that document the functionality and features through screenshots. The specific functionality will be discussed afterward.





## Functionality

The mobile web app was composed with HTML, CSS, JQuery, Javascript, MySQL, Google Maps API, and PHP. I chose to work with the mobile web due to cross-platform compatibility, as well as to work from my existing skill set as a front-end web developer. The mobile web app is currently accessible on iPhone, iPad, Android, and desktop computer.

The home screen features the main menu items: Safer Sex Tip of the Moment,

Topics, Resources Near You, Advice from Peer Educators, Sex Trivia, and Get in Touch!

If the user is on an iPhone, they receive a prompt instructing them how to make a home screen icon for their device. In the Safer Sex Tip of the Moment, the user receives a randomized safer sex tip from a series of arrays in Javascript. For example “Never brush your teeth within thirty minutes of sexual activity -- the brushing can cause small abrasions leaving your mouth more susceptible to bacteria and viruses. Worried about sexy breath? Opt for gum instead!” The page can also be “liked” on Facebook.

In the Topics section, users can browse through seventeen topics as follows: birth control options, condoms, consent and negotiation, dental dams, female condoms, gloves, HIV/AIDS, HIV+ and safer sex, LGBTQ safer sex, lube, morning after pill, PEP, pregnancy, sex toys, STIs, and testing for HIV and STIs. Each topic button can be clicked to navigate the user to a page discussing basic information and defining relevant terminology. In many of these topic areas, the user can click or tap the screen to view photos of the topic at hand.

In the Birth Control Options section of the topics area, the following sixteen methods of birth control are discussed: abstinence, cervical cap, condom, diaphragm, female condom, fertility awareness method, the implant, IUD, morning after pill, the birth control patch, the pill, the pull out method, the ring, the sponge, and spermicide. Each method is defined and a list of both “pros” and “cons” are provided, as well as the cost on a scale of 1 to 5 symbolized by dollar signs, from 1 dollar sign meaning low cost, to five dollar signs meaning high cost.

In the Resources Near You section, the page requests access to the GPS

functionality of the device, thus determining the latitude and longitude of the user. These coordinates are set to a MySQL PHP database that looks for the closest database entries within a 25-mile radius. The database is populated with a list of services for youth in the New York metropolitan area, with a primary focus on sexual health, mental health, and general medical care. However, many of the services are directly focused on specific populations such as homeless youth, LGBTQ youth, and so forth. After a few seconds, the services appear as pinpoints on a map. The user can tap a pinpoint to find out the name, location, and phone number of the agency as well as the list of services provided.

The Ask a Peer Educator section provides a forum to allow users to ask questions to the peer educators in four key areas: general inquiries, dating and relationships, sexual health, and sexuality and gender. For the launch of Chat About That, the forum was pre-populated and seeded with content provided by the C.H.A.T. program. I chose a public forum over more private options, such as emailing in a question, because forums are often read by “lurkers” – people who are not posting to the forum, but who are nevertheless seeking the same information.

In the Sex Trivia section, Javascript was utilized to run a quiz script that asks a series of sexual health questions with multiple-choice answers. When a user answers incorrectly, a popup appears, notifying them of their incorrect answer and providing them with the correct answer before moving on to the next question. In the future, I would like the quiz score to be aggregated to Facebook, so users can show their high scores. This would add a competitive gaming piece to the existing functionality.

Lastly, the Get In Touch section provides information on how to subscribe to the

SMS-based program, and links to connect with C.H.A.T.'s other media, including their Facebook page, Twitter account, YouTube page, and their blog.

## **Conclusions**

In my initial research, I reached a disconcerting understanding that a mobile app for youth pertaining to sexual health and wellbeing would not be widely adopted. As I continued the research and spoke directly with the youth, the majority of those I surveyed were interested in utilizing such an app. I've excerpted some of their responses below:

“I would like to search for sex tips on how to be protective and safe.

So I know what I am getting myself into.”

“Yes [I would use it] because it might teach me new things about sexual health info that I might not know of.”

“Yes [I would use it] because it's interesting and accessible.”

“Yes [I would use it] you never know when you're going to need that information.”

“Yes, [I would use it] so I can take what's out there and educate others who are sexually active as well. I think people need to create more apps and websites that can help to educate people more and they need to provide the apps or websites to all kinds of phones, not just smart phones.”

This last response is particularly poignant because while smart phones are becoming more widely adopted, they are not necessarily the most accessible for youth due to the high cost of entry as well as maintenance through pricey service plans. Only one youth was adamant that they would not use such an app and the other two who were unsure stated reasons such as not having access to a cell phone.

The end product was a functional prototype. One of the initially proposed features was not able to be resolved in the first iteration, however. The feature allowed for users to search app content but remained quite buggy. Additionally, it would have presented the users with an onslaught of ads as was required through the Google API if the service was not purchased. I found this problematic, since the Google paid search results could not be vetted and as the users would be presented with them, it would be confusing which content was advertising and which was legitimately part of the app.

Future improvements include some element of privacy – either password-protected access, or instructions on how to clear one’s cache so it would be difficult to trace the presence of the mobile app on the phone. I would also expand the range of “Resources Near You” beyond New York City, so the mobile app would be relevant nationally and perhaps one day, internationally. Continuing on the thread of accessibility, I would also like to enable a translation feature, so the app would be available in multiple languages. More immediate concerns include having all content vetted by a certified sex educator, engaging in search engine optimization (SEO), and aggregating content from the “Advice from Peer Educators” section to the website, so as to not duplicate input manually. The trivia section would also allow users to post their scores to their Facebook

page, allowing a competitive gaming element and connection within social networks.

While Chat About That is a mobile web app that can be used in its current format, there is a wealth of opportunity to explore additional features and functionality to increase and encourage adoption and efficacy. Additionally, the platform has tremendous potential to be customized for the specific needs of the population, whether they are a subset of a youth demographic or another population lacking in comprehensive sexual health information. Adequate and accurate sexual health information should be freely available to all people, and Chat About That is a humble step in increasing said access.

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