# Reaching Teens Where They Are

A Review of Sexual Health Apps and Digital Tools for Teens

January 2017

**answer**
sex ed, honestly

# acknowledgments

**Answer** is a national program based at Rutgers University that provides and promotes comprehensive sex education for young people and training for the adults who teach them. To learn more, please visit **Answer.rutgers.edu**

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# introduction

Over the last couple of decades, digital media has grown exponentially in the United States, especially among youth. Because of the pervasiveness of such technology, many sexual and reproductive health organizations have created apps and web-based digital tools (see sidebar) aimed at teenagers and young adults.

A range of tools is available, including general tools that provide information about overall sexual health and more specific ones that, for instance, help users track their menstrual cycles, locate health services or fulfill some other practical task. In order to gather detailed information about the available sexual health tools for teens, Answer conducted an environmental scan to capture information on a subset of them.

### APPS AND WEB-BASED DIGITAL TOOLS

"Apps" refer to applications that are downloaded to mobile phones while "web-based digital tools" are found on the internet. For simplicity, in this report we will use the generic term "tool" to refer to both apps and web-based digital tools, unless we specifically want to describe something that only applies to one or the other.

It is hard to overstate just how pervasive digital media has become in the lives of teens. A 2015 report from Pew Research Center states that "a majority of (American) teens (73%) have smartphones," including 76 percent of 15- to 17-year-olds among a nationally representative sample of 1,060 teens. In addition, Pew reports that 92 percent of teens go online daily, with 24 percent stating they do so "almost constantly." With the majority of teens using their phones and the internet extensively, it makes sense that sexual and reproductive health organizations have attempted to connect with teens digitally.

In terms of American teens' preferences for tools, social media apps predominate. These apps allow users to create and share content, participate in social networking or message friends. When the National Cyber Security Alliance and Microsoft polled 804 U.S. teens ages 13 to 17 about their digital activity, the most popular apps and websites were YouTube, Gmail, Snapchat, Instagram and Facebook. YouTube came out on top with 91 percent of teens surveyed reporting using it. The Pew report, which did not include YouTube in its survey, also cites the top social media platforms among its sample as Facebook, Instagram and Snapchat, with Twitter and Tumblr falling lower on the list but still with solid followings.

Against this backdrop, Answer set out to research what sexual and reproductive health tools were available to teens, gather information on their features and content, and solicit reviews of the tools from our teen staff. As a leading national organization at the intersection of sex education and technology, Answer was well positioned to conduct such a review. We have worked for 35 years to promote access to sex education, with more than 15 years of experience using technology via our teen-focused website, Sexetc.org, as well as a robust social media presence. Our goals for this review were to determine what tools are already available to teens and how they receive them as well as to assess how the field can better leverage technology to reach this audience in the future. We hope this report will help sexual and reproductive health professionals develop a more nuanced understanding of these tools as well as strategies to better reach teens digitally.

# methodology

We compiled a list of relevant tools by reviewing recent media coverage, attending presentations at sexual and reproductive health conferences and conducting an internet search for key terms. Our initial list included 31 tools, which we reviewed against a set of inclusion and exclusion criteria (see Table I). Of those, 24 tools met our criteria.
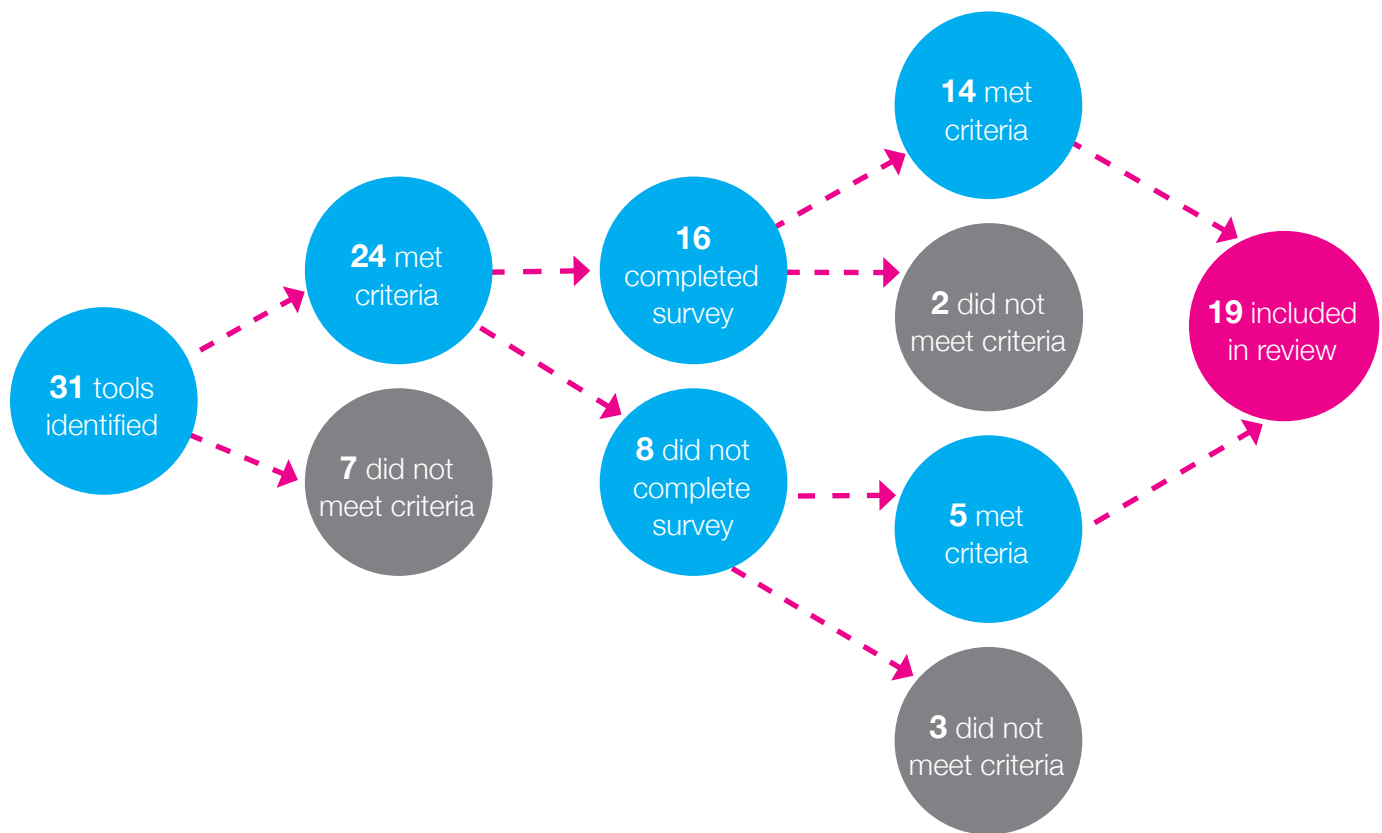
## TABLE I: INCLUSION AND EXCLUSION CRITERIA

Apps and tools included in this review…

| MUST | MUST NOT |
|---|---|
| ✅ Target young people between the ages of 13-24 | ❌ Primarily target or appeal to adults |
| ✅ Address some aspect of sexual and reproductive health | ❌ Be limited to one or more states or local regions |
| ✅ Be available nationwide | ❌ Be difficult or impossible to access on a mobile phone |
| ✅ Be accessible on a mobile phone | ❌ Be static websites without interactive features |
| ✅ Include some interactive features | ❌ Cost money to use |
| ✅ Be free | ❌ Lack available information on the developer or be developed by third-party programmers without subject-matter expertise |
| ✅ Be developed by/with credible subject-matter experts | |

We contacted the developers of those 24 tools by email with a request to complete a survey via SurveyMonkey. During the spring and summer of 2016, 16 developers completed the survey. Based on their responses, two of the 16 were excluded from this review because they did not meet criteria. Of the eight tools that did not respond to our survey, five met all criteria for inclusion in this report and three contained some aspect that made them ineligible. However, information on those five tools was limited because their developers did not respond to our survey. Figure 1 depicts the process for identifying and vetting tools for inclusion in this report. Finally, we requested additional information from seven of the developers who completed the survey to clarify and expand on their initial responses. Over the spring and summer of 2016, five of those developers completed a phone interview with Answer staff and two sent additional information via email.

# FIGURE 1: PROCESS FOR TOOL SELECTION



**31** tools identified → **24** met criteria / **7** did not meet criteria

**24** met criteria → **16** completed survey / **8** did not complete survey

**16** completed survey → **14** met criteria / **2** did not meet criteria

**8** did not complete survey → **5** met criteria / **3** did not meet criteria

**14** met criteria + **5** met criteria → **19** included in review

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The survey asked about the following topics (see Appendix on page 19 for the complete survey):

- Goals/intended outcomes of the tool
- Topics covered by the tool
- How the tool is promoted
- How the tool is kept up to date

- How success is defined and measured for the tool
- Target audience of the tool
- User data collected by the tool
- Funding for the tool

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It should be noted that many of the tools we identified are targeted to young adults rather than teens. A few specifically target adolescents or tweens (e.g., Planned Parenthood, My Sex Doctor Lite, etc.), but this was not the majority. While teens are often aspirational in seeking media for a slightly older audience, it is important to consider that some tools may not be developmentally appropriate for all teens.

Once we collected this background information, we employed Answer's teen staff to review the tools. We wanted to hear directly from young people about what they thought of the tools since they are members of the target audience. Answer's teen staff is a diverse group of high-school students that receives extensive, nuanced and ongoing training in sexual health, writing and media skills. Along with additional national contributors, they write content for our award-winning magazine, *Sex, Etc.*, and website, **Sexetc.org**.

Eleven members of our teen staff reviewed the tools during a meeting at Answer and responded to a series of open-ended questions about them. Two national contributors, who write for *Sex, Etc.* and **Sexetc.org** remotely from around the U.S., also reviewed tools and provided feedback via email. All teens received incentives of $25 Target gift cards for their participation. No individual teen reviewed all of the tools. Each teen was asked to provide frank feedback.

## Teens reviewing the tools at the Answer office were asked the following questions:

- Would you download this tool?
- Can you think of a situation where you would use or need this tool? If yes, give us an example.
- Would you recommend this tool to a friend or peer?
- Was the tool easy to use?

- Was the information presented in the tool useful?
- Was there anything you especially liked or disliked about the tool?
- Do you have any additional comments?

## Teens reviewing the tools via email were asked the following abbreviated questions:

- Would you download this tool or go to its website?
- Would you use this app/tool?
- Why or why not (be specific about design, appearance, functionality, etc.)?
- Would you recommend this tool to friends?

In order to gain more insight into patterns of general app use, we asked some of our teen staff which tools they utilize on a regular basis. Not surprisingly, their responses ranged widely; some use several apps or tools regularly, while others tend to not rely on them very often. In line with what we found in industry reports of teen app usage, our teen staff mostly uses apps for social contact, entertainment or practical purposes, such as getting directions, accessing news stories or calling an Uber.

For instance, David, 17, uses apps "near-daily, definitely more than weekly" but does not have that many. He mainly relies on "social media and mail apps and apps for news and media outlets." Jordan, 17, says she doesn't have a lot of apps, and the ones she has are "very generic: typical social media apps, Google maps…the Care.com app to look for babysitting opportunities." Gillian, 17, uses "a whole slew of apps but mainly Snapchat and Uber." Adrian, 17, says he uses apps daily:

> **"I tend to use the same ones over and over again. I download new apps once in a while if I find something interesting, but I will delete the app to save up space once I find it boring or no longer useful."**

Adrian uses mainly social media/messaging tools (i.e., Facebook Messenger, Skype, WhatsApp) and creative, interactive tools like Hearthstone (a game) and CameraMX (for short GIFs and photos), explaining, "I find [these] to have the highest utility, either for contacting friends or for entertainment purposes…many of my friends use these apps as well." Natalya, 17, uses social media apps daily: "Snapchat and Instagram the most because I love having the chance to see what my friends are seeing and what they're up to; [they're] easy ways to communicate with someone." Ruby, 18, also uses apps often, but she can't keep them for very long because her phone has low storage space: "I mostly use my Health app and the News app (on my iPhone). I like to track how much I walk each day, and I like to stay up to date with world news." None of the teens interviewed claimed to use apps on a regular basis for sexual health-related reasons.

# findings

As part of our survey, we asked developers which of several broad topic areas were covered by their tool, including abuse and violence, anatomy, birth control, HIV/AIDS and STDs (sexually transmitted diseases), LGBTQ (lesbian, gay, bisexual, transgender and questioning) issues, relationships and sex. Several developers added additional topics that were more specific to their individual tools: abortion, abstinence, accessing health services, condoms, consent, emergency contraception, fertility, future planning, menstruation, personal safety, puberty, refusal skills, reproductive health, talking to parents and waiting to have sex. Based on this information, we divided the tools into the following categories, according to the primary content they cover: Birth Control and Safer Sex, Clinic Finders, Consent, General Information, Partner Communication, Period Trackers, Safety, and STD Information (see Table II).

## TABLE II: CATEGORIES OF DIGITAL TOOLS

### BIRTH CONTROL AND SAFER SEX

- Bedsider Birth Control Reminders
- CondomCraze
- Condom Pro

### CLINIC FINDERS

- HIV Testing Sites & Care Services Locator

### CONSENT

- Yes to Sex

### GENERAL INFORMATION

- It Matters
- Planned Parenthood Quizzes and Games
- Juicebox
- SexPositive
- My Sex Doctor Lite
- Tabú
- Planned Parenthood Chat/Text

### PARTNER COMMUNICATION

- So They Can Know

### PERIOD TRACKERS

- Bearhug
- Clue
- Eve
- Spot On

### SAFETY

- Circle of 6

### STD INFORMATION

- HPV: The Challenge

On the following pages, the tools are organized in the categories noted in Table II and described in detail. In their survey responses, the developers mentioned a range of funding sources, including the federal government, grants from private foundations, individual donors, venture capitalists and angel investors. Some were self-funded tools. Because of the lack of detail provided on specific funding sources, this information is not included in the descriptions of individual tools.

## BIRTH CONTROL AND SAFER SEX

**A main goal of tools in this category is to guide users on how to correctly use condoms or help them remember to take their chosen birth control.**

**Bedsider Birth Control Reminders**

The National Campaign to Prevent Teen and Unplanned Pregnancy, a private nonprofit organization, runs **Besider.org**, a website dedicated to helping women ages 18 to 29 find the best birth control. The National Campaign launched Bedsider Birth Control Reminders in August 2016. The app is intended to prompt users to take whatever birth control they use (if that particular method needs to be updated or taken on a regular basis, like the Ring, the Pill, the Patch or the Shot). While the target audience is 18- to 29-year-old women in the U.S., they "anticipate a wider audience of users." The app collects user data in aggregate, like numbers of downloads and installations. They also track user attrition, engagement and geographic spread. They have had over 10,000 installs as of late August 2016.

Our teen reviewer Gillian found the app "very easy to use." She explains, "When you set up your profile and it asks what birth control you're on, it actually explains the different types. I'm 100 percent keeping this app...this is the perfect pill reminder app for me."

> **"I'm 100 percent keeping this app...this is the perfect pill reminder app for me."**

**CondomCraze**

This app, launched in early 2016, was started by two independent developers with the goal of informing young people about condom use. The app provides users with information about external (or "male") condoms. Users can also use the app to search for local STD-testing centers in their area. On their website, the creators discuss what motivated them to create the app: "Sexual

health is extremely important to us because we come from sub-Saharan African countries that are ravaged by the impact of HIV/AIDS." They note that they collect user email addresses and app data, such as number of downloads. The app, with a target audience of 15- to 24-year-olds, had 2,500 downloads as of May 2016. The developers would like the app to be global, but currently lack funding and time to market and update it.

Our teen reviewers did not find this app helpful or especially engaging. "First off, it's like reading a health textbook, which I feel shouldn't be the case since these are supposed to be fun, easy-to-use apps," Gillian commented. "Which brings me to the second point: this app is annoying to use, and it took me a minute or two to realize what I was doing." Ruby said that while she wouldn't use the app, she appreciated that the graphics were "modern and bright." However, she added, "I don't really feel the need to 'design' condoms, and I think I could find all the information about condoms I need on the internet without downloading a special app for it."

> **"I think I could find all the information about condoms I need on the internet without downloading a special app for it."**

Michael, 18, and Shelsea, 17, would also not use it: "All the information could be found faster with Google," said Michael, and Shelsea found it "complex for no reason."

**Condom Pro**

Like Bedsider Birth Control Reminders, Condom Pro was also developed by the National Campaign. This app is intended to help users become more familiar with how to use condoms. The developers did not respond to our survey, so our information is limited.

Teen reviewer David said the app is "not user-friendly for smaller screens." He was also

distracted while using it: "I was more focused on trying not to lose the grip on the condom than actually learning how to put one on. I'd recommend it to friends…with an eHow link on how to actually put on a condom." Svanik, 15, said he would "probably only use this app once [and] then delete it." He also thought the loading screen took too long and that as part of the game, the condom should be "put on a dildo instead of a candle or a carrot."

## CLINIC FINDERS

**The tool in this category helps users connect with local resources where they can receive health care and other services.**

- ▶ **HIV Testing Sites & Care Services Locator**
This app allows users to plug in their location to find resources nearby, including where they can get tested for HIV and other STDs, find housing and health centers and locate family planning, mental health and substance abuse services, among other services. The tool is also a feature on the AIDS.gov website run by the U.S. Department of Health and Human Services. The app's developers did not respond to our survey.

Teen reviewer David felt the app is important but "seems more adult-oriented." He noted that the "map tool is a little glitchy, but I love how comprehensive the list of services near me are." He didn't find the appearance appealing, but he would recommend it to a friend who needed to find a health center. Jordan liked that you could use it to find reproductive health services as well as "places for family planning, housing assistance, mental health services, etc." She noted, "Mental health and substance abuse services are very important, too! It was also generally easy to use and could give you directions from your house to the facility you wish to go."

## CONSENT

**Consent is a complex topic, and the tool in this category aims to help users negotiate it with a partner clearly and directly.**

- ▶ **Yes to Sex**
This app is designed to facilitate partner communication about consent before engaging in sexual behaviors. It asks the user and a partner a few questions to determine if they are both 16 or older, able to consent (i.e., not asleep, passed out or otherwise incapacitated), whether they will be able to speak up if something bothers them and if they are "voluntarily and consciously consenting without being coerced." It then asks questions about what protection they will use before asking the partners to record their consent. The developers did not respond to our survey; their website states: "Yes to Sex, the only safe sexual consent app, encourages all partners to decide on protection together, prior to personally consenting, then provides safe words and reminds partners that consent is ongoing."

Our reviewer Gillian found the app impractical. "Like, I know your hand is up my skirt, but hold on and let me grab my phone where we can go through a five-step process with a decent amount of reading to make sure we're both consenting, when it's VERY EASY to just ask." She believed that the app could be used more as a classroom tool to "show what it means to have safer and consensual sex." She liked that the app is not heteronormative and that you can choose condoms or condoms and another form of birth control when prompted to choose a form of protection you agree to use with a partner.

## GENERAL INFORMATION

**When it comes to sex and sexual health, teens have questions. The tools in this category are intended to provide information across a wide range of topics.**

- ▶ **It Matters**
This app, launched in 2016, is developed by AccessMatters, a nonprofit organization based in Philadelphia, PA, "working to transform access to sexual and reproductive health." The developers aim to "provide teens and young adults ages 14 to 24 with accurate, timely information about sexual- and reproductive-health topics and

connect users to nearby health services." The tool includes a section with "general information" about topics like STDs/HIV, pregnancy, birth control and relationships. The developers note that the service-finder feature is presently limited to southeast Pennsylvania, but they are looking into ways to expand their reach. Their goal is to have 1,200 downloads, and they've held off on paying for advertising to devote resources to developing content areas. The developers held focus groups before the app's launch and used online surveys to solicit user input; users can also ask questions or make suggestions within the app to provide feedback. The developers monitor user interactions/engagement metrics and app download numbers.

Our teens had mixed reactions to this app. Spencer, 17, said he would use it if "I wanted to keep the symptoms of STDs and information about birth control in an easy-to-find location." He also appreciated that "other" was an option when the app asked him his gender, and "how accessible and easy [it was] to find the information needed." However, he did not feel it was inclusive of all sexual orientations or gender identities: "Although it included mention of being gay and bisexual, the question was only addressed towards a guy liking guys. There are also other sexual orientations besides gay and bisexual. Also, the app was not inclusive of transgender people, since there are transgender women with penises and transgender men with vaginas who would have the symptoms of STDs that correspond to those body parts." In spite of this, Spencer felt the information was accessible and organized well but was disappointed to discover it only had resources local to Philadelphia: "That should be mentioned in the app description."

The app features a common questions section that includes various topic areas, like STDs/HIV, Pregnancy and My Body. David was disappointed that there were "no common questions related to LGBTQ+ health?!" He also noted that while it's pretty comprehensive, it was also very "female-oriented." David said that he would "recommend it to friends who have questions about their body,

but for a clinic finder, I'd redirect them to the AIDS.gov site."

## Juicebox

Formerly known as Hookup, Juicebox is an app about sex and relationships that hopes to expand globally and include culturally specific content and "sexperts." Juicebox is aimed at those under 25, and the developer reports a core audience of 15- to 22-year-olds. The app has two features: "Snoop" and "Spill." Via Snoop, sexual health experts—all certified by AASECT (American Association of Sexuality Educators, Counselors and Therapists)—answer questions submitted by users. Spill allows teens to share stories about relationships or sex. The creator explained in an article on FastCompany.com that she wanted to create something entertaining and fun first and not just a "sex ed app." In terms of user data, the app collects age, gender and location; engagement metrics include how many times a user opens the app daily.

So how do our teen reviewers rate Juicebox? Ruby liked it:

> **"It promotes asking questions about sex rather than being anxious…it has a good mix of comedy and humor as well as helpful information."**

She liked the app's graphics and design and that it was "easy to navigate." Jordan said she would recommend it to friends and appreciated that users receive feedback from both experts and peers. She also liked "how you can report others' comments if they're inappropriate or mean." Yet Svanik, 15, thought the app's "bad user interface forced us to ask questions when we did not have any," and he would not use it, citing "there are better places to get answers (e.g., Google)."

## My Sex Doctor Lite

The London-based My Sex Doctor Lite was launched in 2014. There are three versions of the

app: My Sex Doctor Lite (for ages 12 and older, with free access to age-appropriate content with light ads), My Sex Doctor (for ages 17 and older, with free access to all content with light ads) and My Sex Doctor Plus (for ages 17 and older, with ad-free access to all content for a small fee). The developers' goal is to provide "comprehensive sex education in an easy to access and understand format." The apps are aimed primarily at teens and young adults. The developers track the number of downloads and online comments to measure success.

Several of our teen reviewers liked this app and would recommend it to their friends. Alexis, 17, found it useful for "questions about sex that you need a fast and direct answer to"; she also liked how the categories were organized. Natalya said she would download it because of its "abundance of information" but wouldn't necessarily use it, because "it takes a lot of time to find the questions you want answered." She also thought its design "could be more entertaining and pleasing to look at." Jordan thought the app was a great idea but said she "wouldn't use it or recommend it to friends because I don't think it was executed very well." She was also dismayed that the app used the term "hermaphrodite" instead of the accurate and more appropriate "intersex" and didn't make it clear that words like "dyke" and "tranny" are slurs.

### Planned Parenthood Chat/Text
Available online or via smartphone, this tool invites users to "chat with a health educator" and "get answers to your questions about pregnancy, birth control, emergency contraception, STDs and abortion." It's aimed at 15- to 24-year-olds in the U.S. Planned Parenthood collects users' age, gender, zip code, race/ethnicity and the topics users want to discuss. It's available to users over 90 hours a week; their hours are listed on the tool. To measure success, the developers track total number of chats, helpfulness of chats, intention to execute the behavior discussed in chats, percentage of users referred to health care services and percentage introduced to the most effective methods of contraception as

well as STD testing and prevention. A recent randomized-controlled trial found that the tool's users were significantly more likely to seek care at a health center, use condoms in addition to other forms of birth control and be familiar with the IUD and implant.

Our teen reviewers were fans. Svanik said he "liked that [the tool] provided detailed and helpful responses to questions, but [the] responses were a little delayed." Jordan appreciated that it's available both as an online and text-based service: "It's accessible to lots of people, which is great." Ruby said that she would "absolutely use" this tool and found it especially invaluable for "young girls who are just starting to become sexually active." She also noted that "being able to have online support would mitigate anxiety about sex, which is so important....The design is easy to use, with a simple layout, and I would love to see more advertising for this chat/text. I know earlier in my high-school career this could have come in very handy."

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### Planned Parenthood Quizzes and Games
Planned Parenthood also offers a "suite" of sex education tools, which are accessible via **Plannedparenthood.org/apps**. Launched in 2013, these quizzes, games and videos are geared toward heterosexual middle or high school students, with an emphasis on African-American and Latino youth. Planned Parenthood reports that the tools were designed to help teens explore contraception options, pregnancy and STD prevention as well as how to talk to parents about sex, plan for the future, explore beliefs and values about sex, and learn skills to avoid risky

situations. Planned Parenthood reports on its website that the tools have been actively used and that "completion rates for the tools were high, and young people spent an average of four minutes per tool—two minutes more than the average time spent on health apps." Planned Parenthood also notes on its website that they are identifying "funding for an efficacy trial of tool effectiveness in the near future."

Overall, teen reviewer Ruby thought the tools— which include quizzes, games and videos—had some "awesome features," especially the "My Birth Control" quiz, but some of the language "tries to be too hip and modern." She also said that the tool design could be "updated, [it] looks outdated." However, she would use the tools: "[they] contain some great quizzes that can help teens get to know themselves better, a key part of going through puberty." Adrian commented that "I did find it a little weird how you had to give your age, gender, ethnicity and location before each app; this seemed a little excessive."

> **"I did find it a little weird how you had to give your age, gender, ethnicity and location before each app; this seemed a little excessive."**

The "My Birth Control" quiz was our teen reviewers' favorite tool for high schoolers and older teens. Ruby and Adrian liked it, and Adrian said it had a "nice design with simple questions to help a teen find out more about suitable birth control methods." He thought that the layout and design could be "less repetitive," but he loved the videos for each method of birth control as well as the "Find a Health Center" link.

The other tools ("Been There, Done That," "It Takes Two" and "Fast Forward") garnered varying responses. Adrian said he would use these tools despite "some of the videos seeming scripted." Jordan found "It Takes Two"—a quiz that features videos of young people talking

about using condoms along with another form of birth control—very "heteronormative." (Note: This suite of tools was developed specifically for a heterosexual teen audience, and Planned Parenthood is currently developing a separate online resource aimed at LGBTQ youth.) However, Adrian said he would use "It Takes Two" and that "teens can relate to the teens in the video, and it's effective in telling teens to use double protection for safer sex and how to talk to a partner." Adrian did not like "Fast Forward," which helps teens plan their future and consider the impact having a child would have on those plans. He was dismayed by the tone of the quiz, and said that it does not "explain how to prevent teen pregnancy or…the various options" if a teen does become pregnant. He wishes the tool included links to resources for people who want more information about teen pregnancy and/or who are already teen parents.

For middle-school age teens, the tools include "What's Your Future Plan?", "What's Your Love Personality?" (for girls), "Where Do You Stand?" (for guys) and "The Kickback." "What's Your Future Plan?" like "Fast Forward" walks younger teens through planning for their futures. "What's Your Love Personality?" (for girls) and "Where Do You Stand?" (for guys) are both quizzes that offer information about relationships and deciding about sex. The user answers a series of questions that culminate with the user being assigned a personality type. Adrian said that he would use "Where Do You Stand?" only once, and he also thought that the answers were limited: "No matter what you choose, you get the same outcome!" Using multiple choice questions and videos, "The Kickback" walks users through different party scenarios. Gillian thought that "The Kickback" would be "good for middle-school health classes," and Adrian said he would use it. ("I felt like I was in one of those 'Choose your own adventure stories.'")

Finally, for all preteens and teens, Planned Parenthood offers "Awkward or Not?"—a tool to encourage parent-child communication. While Adrian said that he would not use this tool, he

thought it would be useful for teens who want to break the ice with their parents. He reported that the best, most useful feature was "the pre-written texts you could send to your parents to set up a future conversation with them about sex and relationships."

## SexPositive

SexPositive is a "shame-free sex education smartphone app from the University of Oregon Health Center," according to its developers website. It includes a game where users spin a wheel to find out the risk for STDs when one person's body part touches another person's body part as well as information about safer-sex practices, communication and videos about readiness for sex and consent. The developers did not respond to our survey, so we have limited information about the tool. Their website states that "SexPositive delivers sexual health information without the fear, secrecy, misinformation, judgment and general negativity that often surrounds conversations about sexuality." It also states that the app has been downloaded 36,131 times as of late June 2015.

Our teens' reviews of SexPositive were mixed. Seventeen-year-old Grace was "unsure about the mix of humor and information." She said, "It's kind of like sex dice that tell you how dangerous unprotected sex can be." She did like that it included ways to practice safer sex. She wouldn't download the app, but she would recommend it to others: "It is probably a good teaching tool to show the ways that STDs are transmitted." Our reviewer David wanted the app to look more modern but otherwise praised it: "I love that there are answers for almost any sexual activity…it removes the stigma from anything you want to do that can be perceived as 'kinky.' The videos aren't aesthetically appealing but [they're] pretty informative."

## Tabú

This tool was released in 2016 and includes a section in which users can have questions answered by other users as well as verified "sexperts." It also includes a section with basic information on topics like masturbation, birth control and STDs. The developers say their goal is to "modernize the way millennials (specifically, college students) learn, discuss and understand sex." Their target audience is 18- to 26-year-olds. They collect users' gender and age and hope to capture location and sexual health habits/preferences. They use a "suite of analytical tools," including Google Analytics, Branch Metrics, (Apple) App Analytics and Mixpanel to track use. They report that they have approximately 1,000 users. They also work with sex coaches and partner with "Unbound," a website for purchasing sex toys, which makes their content inappropriate for teens under 18.

Jordan likes the tool's style and layout and commends it for having both "sexperts" and the general community answer questions in the Q&A section. Though she thinks it's a well-developed app, she says she wouldn't keep it on her phone long-term or use it a lot.

## PARTNER COMMUNICATION

**The tool in this category aims to help users with a potentially sensitive task: letting sexual partners know they may have been exposed to an STD. It also provides detailed information on safer sex and STDs.**

## So They Can Know

Through this STD-reporting website people can anonymously notify partners that they may have contracted an STD. Launched in 2012, the tool was developed by Sexual Health Innovations, "a nonprofit organization dedicated to creating technology that advances sexual health and well being in the U.S." The tool's intended target audience is 18- to 25-year-olds. The site gets about 120,000 visitors every year and developers track what pages users access on the site, whether they send an anonymous STD partner-notification email (and if so, what STD it's for, to how many people, and, if stated, their reason for sending the email). The developers report that most of their users come from Google

and they are "#1 in search results for 'how tell partner STD.'" They estimate a general location (metro region) from users' IP addresses. For people who receive partner-notification emails, they track whether they clicked through any of the links in the email. They do not store IP or email addresses. They plan to work with Planned Parenthood to ensure that the site's content is clear and consistent. This tool could also be included in the STD-information category, but it is unique because of its notification function.

Teen reviewer David commented, "I obviously hope I won't have to use this website, but if I did this seems like a really informative way of letting a partner know [about an STD] without placing stigma on yourself. I like the fact that the anonymous email gives information, tips and steps on how to take care of yourself."

> **"...a really informative way of letting a partner know [about an STD] without placing stigma on yourself."**

He also found the site simple to use, relatively attractive and user-friendly. He said he would likely recommend the tool. Reviewer Natalya also thought it was easy to use and provided valuable information: "The amount of information can be a bit overwhelming, however it's all important with little to no 'fluff.'"

## PERIOD TRACKERS

**The popular tools in this category let users keep track of their menstrual cycles. Some have other features as well, such as tracking one's mood. There are several choices available, and we reviewed a few of them.**

### Bearhug

This is a cloud-based service so data is stored remotely. Launched in 2016, Bearhug's goal is to "build the best (most accurate, hassle-free and

easy-to-use) period tracker." They use a bot to keep track of users' information and then contact them via Facebook Messenger with reminders about when to expect their periods. The developers track number of users and prediction accuracy for an upcoming period. They report that they have thousands of users.

Teen reviewer Gillian comments, "At first I was very confused as to what exactly this was, but after opening it, I understood exactly what was going on. I like the idea of not having an extra app downloaded on your phone with just having a reminder sent via Facebook Messenger. Now, I can just get a message whenever I'm close to starting my period, which is a lot easier than having an entire app to keep up with."

> **"I like the idea of not having an extra app downloaded on your phone and just having a reminder sent via Facebook Messenger."**

### Clue

Clue, released in July 2013, is aimed toward "those who are about to have a first period through those who are entering menopause." Users have the option to create an account in the app by submitting their first name, last name and email address. (They also have the option to enter their birth date to improve the app's accuracy.) Developers track user behavior (e.g., how many times per day/week/month a user opens and/or enters data in the app as well as which screens in the app they visit most often and features they use the most, such as how many customized reminders they set within the app). They use this data to determine how effective and relevant specific features are for users, so they can provide the best possible app for user needs.

The developers are currently rolling out the ambassador program, which is still in its early phase. "We have reached out to some of our

top users (those who are the most engaged/use the app the most/most likely to promote Clue to their personal networks) and invited them to apply for access to exclusive content and other perks, like merchandise or first access to new features," the developers reported. When asked to clarify how they maintain an up-to-date tool, they said, "We have a dedicated development team of 11 developers and designers working full time to grow and enhance the app. We have several team members with academic degrees and/or professional experience in the medical and science fields, and they write, edit and review all content within the app, making sure it is backed up by the most current and most reputable scientific research. We also have an advisory network of OB/GYNs whom we consult on our content to ensure accuracy."

Overall, our teen reviewers had a generally positive reaction to Clue. Grace commented that there were already many apps like this on the web with similar formats, but "Clue is one of the best designed apps of its kind and seems to be good for all ages." Natalya thought the tool was "one of the best period app trackers due to its beauty, simplicity, accuracy and functionality." Jordan shared that she had used it for several months but ended up stopping because she didn't need all of the features it offered. "I would recommend Clue to friends that want to know when they're ovulating and when they'll get their periods," said Jordan. "I love its design; it looks very happy and upbeat to me. I also like how you can track so many things about your body with it, like your temperature and energy level. Overall, a well-designed and easy-to-use app that I would recommend to anyone who has a period."

- ▶ **Eve**
Started in 2015, Eve (created by parent company, Glow) is geared toward "any woman who wants to know more about sex and periods." The developers report that they "collect data [that] users enter about their period and sexual activity. However, most data entered by users, such as name, email addresses and birth date, is anonymized when analyzing data." More

information was available on their website: "Eve is one of the better bets for younger women who don't want to be pregnant anytime soon, but still enjoy having a sex life. It still tracks when you're fertile and ovulating….The focus with Eve is keeping track of your sexual activity as well as contraceptives, periods, PMS, moods and other symptoms."

Our teen reviewers were fans of Eve. "I would use it," said Gillian. "It's very different for a period tracker. My favorite features are the community, which makes me very happy because I feel like people with vaginas should be able to talk about their periods and share advice. It has stuff that most period apps don't mention, such as asking if you have pain while peeing or weird discharge. That's something all of these apps should have because vaginal health is very important….[It's] a great substitute to boring-old period trackers." Natalya felt it was "pleasing to the eye" and "personal—engaging the user well." She also liked the open community page where users could share their stories.

- ▶ **Spot On**
Spot On, from Planned Parenthood, was launched in 2016. It was designed with 18- to 22-year-olds in mind but can be "helpful for anyone who has a period or just wants to understand their menstrual cycle." Data is locally stored on users' phones, so they are the only people who have access to it. Planned Parenthood monitors basic app data in aggregate (e.g., downloads, session frequency, ongoing app usage, etc.) but doesn't collect any individual user data. The organization hopes to make this "the most effective and user-friendly period tracker possible."

This tool got mixed but mainly positive reviews from our teen reviewers. Gillian liked it and planned to keep it on her phone: "It's very tailored to you as a person, [has a] nice design and [is] easy to use. Also, it has a health-center finder! And period fun facts! I love it." Ruby also liked it but noted that there are many apps like this. "However, it's very attractive and is a bit more

modern and young-adult friendly than some of the apps I've seen," she explained. "It would be especially great for younger girls going through puberty to stay on top of their cycles." Alexis did not like it, finding it inefficient and "extremely hard to figure out how to use."

## SAFETY

**The tool in this category helps users connect quickly and easily with trusted friends or family should they find themselves in any kind of danger.**

- ▶ **Circle of 6**

This unique app allows users to set up a "circle" of six trusted people who can be contacted quickly with a preprogrammed alert message and the user's location if a user winds up in an "uncomfortable or risky situation."

The app, released in 2012 by an organization called Tech 4 Good, has been downloaded more than 300,000 times in over 36 countries. Developers say that user privacy is very important. They do not share the data or collect or keep track of personal identifying data or information. "We do, however, utilize anonymous aggregate data, field assessments administered by colleges and/or hosting institutions, focus groups and comprehensive climate surveys." They shared that the idea for the app came from the White House's 2011 "Apps Against Abuse" technology challenge, which challenged developers to build and design an app to stem the tide of sexual violence and violence against women on college campuses.The developers also say they "have never and will never charge an individual to use the app."

"I would definitely use this app," said teen reviewer Gillian. "It's very easy to navigate and, in my opinion, very important to have because college campuses can be scary places late at night. I love the prewritten messages and the fact that you can easily send your location to the group. Another great feature is that people in your circle do not have to have the app downloaded to

be in your circle and get the message. I texted my friends to download it."

## STD INFORMATION

**The tool in this category is dedicated to educating users about STDs, including myths and facts.**

- ▶ **HPV: The Challenge**

This game from The Society of Obstetricians and Gynaecologists of Canada tests users' knowledge of HPV (human papillomavirus). The developers did not respond to our survey, so information is limited. There appears to be minimal opportunity for repeat usage since once a user plays the game, there is no incentive for playing again.

Teen reviewer Jordan wished the tool didn't feel so much like "a pop quiz" instead of a game, yet she planned on "keeping this app in my phone and challenging all my friends to the game." Ultimately, she thought it provided important information about HPV in a "game that can be finished in a few minutes."

# recommendations

**It is clear from the information we collected and Answer's teen staff reviews that young people find certain tools helpful and appealing. However, their interest in using such tools for sexual and reproductive health information presents important limitations that must be considered by organizations seeking to engage teens digitally. Based on this analysis, we recommend considering the following key findings before proceeding with any digital-tool development project.**

## 1. Consider the practicality of the tool.

Teens especially appreciate when a tool has a specific, practical use. For example, the period trackers garnered consistently positive feedback; however, several such apps are already available, so there is competition in this market. Bedsider Birth Control Reminders appealed to teens for its concrete application. As teen reviewer Gillian said, "I'm 100 percent keeping this app…this is the perfect pill reminder app for me."

Apps like Circle of 6 and So They Can Know also garnered praise, but these tools are likely to be limited in reach because there is a situation-specific need for such tools. While teens appreciated their utility, these tools would not be appropriate for day-to-day use.

The teens also liked some of the general information tools, but we are skeptical about whether these would become "go-to" apps for teens or something they might download and quickly abandon. For instance, Juicebox has some appeal but opinions were mixed, with one teen commenting that Google would be a better place to get answers. Another teen commented that she would download My Sex Doctor Lite but wouldn't necessarily use it, because "it takes a lot of time to find the questions you want answered."

## 2. Involve teens and young adults in the development of tools intended for them.

As with any health education program, it is essential to know your target audience and involve them when developing content for a tool. One way to do this is to conduct focus groups or surveys to solicit teens' feedback on content and features. A literature review (Cornelius and Appiah, 2016) that examined information on safer sex and sexual health messages delivered via mobile phones (mainly text message) found that teens wanted this information to be specifically tailored to adolescents and written in clear, accessible language. This finding was reflected by one of our teen reviewers who said that the CondomCraze app was "like reading a health textbook." The literature review also showed teens' desire to have an immediate response to text messages. One of our teen reviewers expressed a similar reaction to Planned Parenthood Chat/Text, stating it was "too slow" and another wished it could be a 24-hour service.

## 3. Explore ways to integrate with the apps teens are already using.

The vast majority of adolescents and young adults in the U.S. use social media apps on a regular basis, including YouTube, Gmail, Snapchat, Instagram and Facebook. This finding was reinforced by our teen staff. Rather than developing new apps that young people will need to download and use, consider ways to link sexual health information to these already popular and established apps. At least one survey (Wartella et al., 2016) found that social networking sites are a source of health information for some teens; however, most teens are cautious about using social media for health information. Although teens may come across health-related information on social networking sites, most don't go looking for it there. Nine percent of teens ages

13 to 18 have sought out health information on Facebook, and four percent on Twitter. Nearly nine in ten teens (88 percent) report that they would not be likely to post a health question or ask for health advice on a social networking site. Despite these limitations, organizations can connect with young people on social media—whether or not they are looking for sexual health information—through targeted ads and diffusion via existing networks. In these ways, organizations may circumvent the barriers to promoting a new health app or tool to young people.

## 4. Explore other options besides apps that teens may utilize and find helpful.

According to a recent national survey on teens, health and technology (Wartella et al., 2016), 29 percent of teens with a mobile device have downloaded a health-related app. This statistic includes fitness, medication and nutrition-related apps among other topics like sexual health; it should be noted, however, that some teens may be reluctant to download sexual health apps for fear of them being discovered by parents or other adults with access to their phones. This survey also found that 18 percent of 13- to 18-year-olds have downloaded a period tracker. However, the report notes that almost half of teens who have downloaded health-related apps "hardly ever or never use them." This obstacle is hardly unique to health-related apps (see sidebar, "Retention vs. Abandonment"). In light of this challenge, developers should consider alternative formats for digital tools, such as mobile websites and web-based games, that do not require users to download and open the tools. Young people are early adopters of new technology, so it behooves developers to stay on top of trends and capitalize on innovative approaches to reach teens.

## 5. Evaluate user outcomes from digital tool use.

While the majority of developers we surveyed track user data to measure reach and engagement, very few have invested in evaluation efforts that

assess outcomes like changes in users' knowledge, attitudes or behaviors related to sexual health. In order to truly understand the impact of digital tools on young people's sexual and reproductive health, developers must do more to evaluate their work. Both quantitative and qualitative findings can be instrumental in informing the next generation of digital tools. Conducting research in the digital environment presents technical and logistical challenges, but such efforts are essential to ensuring these tools truly meet teens' needs.

## RETENTION VS. ABANDONMENT

When evaluating app usage, it is important to consider retention and abandonment rates. Retention refers to how many users continue to revisit and use an app after installing it, whereas abandonment refers to the rate at which users stop utilizing an app after installing it. While acquisition of new users is important, retaining users is even more vital. A writer on Localytics. com, a mobile engagement website, reflected on this in May 2016, reporting that "businesses are in a mobile engagement crisis" because 23 percent of users abandon apps after just one use. Further, only 38 percent of users retain an app past 11 visits, meaning that 62 percent will use it somewhere between one and ten times. Appboy, an organization dedicated to helping companies maximize their digital strategies and increase mobile app loyalty, noted in May 2016 that mobile gaming, social media and messaging apps have a strong retention rate. They cite a statistic from Marketingland.com, a digital marketing industry daily publication: "Roughly 80 percent of smartphone app time is spent with users' top three apps," so it is important to try to build engagement and loyalty from the start—or to capitalize on already popular apps if your tool can't compete with Facebook and Snapchat. While this information is not specific to teens or sexual health apps or tools, many of the hurdles faced by app and digital tool developers are consistent across industries.

# conclusion

**Digital media holds a powerful influence in the lives of American teens that can and should be harnessed to improve young people's sexual and reproductive health. Answer conducted this review to assess how well sexual and reproductive health organizations reach teens using digital tools and to identify opportunities for improvement. We hope the prior recommendations will do just that.**

Our review had several limitations. In order to ensure broad applicability of our findings, we reviewed a limited set of tools. This approach meant that we left out many local or regional tools that may provide effective examples for others to follow. Furthermore, since we had a small group of teen reviewers, we cannot draw definitive conclusions about the popularity of these tools among a general teen population. Additional research involving larger, diverse groups of adolescents is needed. However, given our teen staff's extensive training and work developing sex education materials for their peers nationwide, they possess unique insights into American teens' preferences for such apps and tools.

Numerous questions remain to help guide the future efforts of sexual health professionals and app and web-based tool developers. Future research should focus on questions such as the following:

- Which approaches are most effective at reaching and engaging teens?
- Which approaches are most effective at influencing sexual and reproductive health outcomes?
- What topic areas have not been addressed by existing tools?
- What new technology or features could be deployed to reach teens?
- What are potential alternative strategies to reaching teens in the digital space?

As we heard from our teen reviewers in this report, existing tools are doing many things right to reach and engage young people with crucial information and resources to enhance their sexual health. With increased effort devoted to understanding how teens seek and utilize such resources, the sex education field can achieve even greater success.

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# appendix

**Survey Questions for Sexual Health App and Digital Tool Developers**

**1.** What is the name of your organization?

**2.** What is the name of your app or digital tool?

**3.** In what year was your app or tool released?

**4.** What is the goal/intended outcome of your app or digital tool?

**5.** What topics does your app or digital tool cover? (Question with checkmark boxes for users to select all that apply.)

- Abuse and Violence
- Anatomy
- Birth Control
- HIV/AIDS and STDs
- LGBTQ Issues
- Pregnancy
- Relationships
- Sex
- Other (please specify): (With a box below to fill in additional information.)

**6.** Is your app or digital tool intended for a particular target audience? (Please be as specific as possible, e.g., age range, LGBTQ youth, specific geographic area, etc.)

**7.** How are you promoting the app or digital tool?

**8.** How do you keep the app or digital tool up to date?

**9.** How was the development of the app or digital tool funded?

**10.** How is the ongoing maintenance of the tool funded?

**11.** What user data do you collect (if any)?

**12.** How do you measure the success of your app or digital tool?

**13.** What is the reach of your app (number of downloads or people engaged)?

**14.** What other sexual and reproductive health apps and digital tools do you recommend we include in our report? (Feel free to list other tools developed by your organization or those developed by others.)

**15.** Would you be willing to talk with a member of the Answer staff by phone to provide more details about your app or digital tool?

**16.** If yes, please provide your contact information.