

# Designing mobile sexual and reproductive healthcare with and for adolescents

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## PURPOSE

In communities like Chicago's South Side where rates of adolescent pregnancy, HIV, and sexually transmitted infections remain disproportionately high,<sup>1,2</sup> participatory design offers a methodology where community members identify gaps in sexual and reproductive health (SRH) care, generate innovative solutions, and also develop their agency to take care of their health needs.<sup>3,4</sup> The Summer Design Challenge (SDC) was a series of five, four-hour, community-based participatory design workshops. The workshops engaged young people from Chicago's South Side in co-design activities to improve SRH care offered on a mobile health unit serving high schools in their communities. The purpose of this study was to evaluate participant gains in sexual health knowledge, as well as the feasibility and acceptability of a community-based participatory design process to refine service delivery on a mobile health unit.



## METHODS

Participants in the SDC were invited to participate in research activities at three time points. At the start of the program (T1), participants completed a pre-survey. Immediately upon program completion (T2), participants completed a post-survey and took part in a focus group. Six months after program completion (T3), participants completed a follow-up survey and took part in a one-on-one interview. At all time points, surveys investigated participants' sexual health knowledge, trust in healthcare providers, and confidence in their abilities to problem-solve and take action around their own healthcare. At T2, program feasibility and acceptability were also assessed. Focus groups and interviews explored participants' experiences in the workshop and their perceptions of how the SDC impacted them. A collaborative research team developed codebooks for the focus group and interview data, and a two-person team coded qualitative findings and explored emergent themes. Survey data were analyzed in Stata using descriptive statistics, as well as McNemar and Wilcoxon signed rank tests.

Table 1. Data collection activities across time points.

	T1 (Pre)	T2 (Immediate post)	T3 (Six-month post)
Surveys	X	X	X
Focus groups		X	
Interviews			X

## RESULTS

During June and July 2017, we recruited young people to participate in one of two cohorts for the SDC. Participants in Cohort A (n=13) were recruited from a selective enrollment high school located in a community area with high rates of STIs and teen pregnancy on Chicago's South Side, and participants in Cohort B (n=19) were recruited through community-based organizations in the same community area. The SDC took place during July and August 2017. Six-month follow-up surveys and interviews were conducted in February 2018. Results presented here include data collected at T1 and T2.

Table 2. Participant retention across time points.

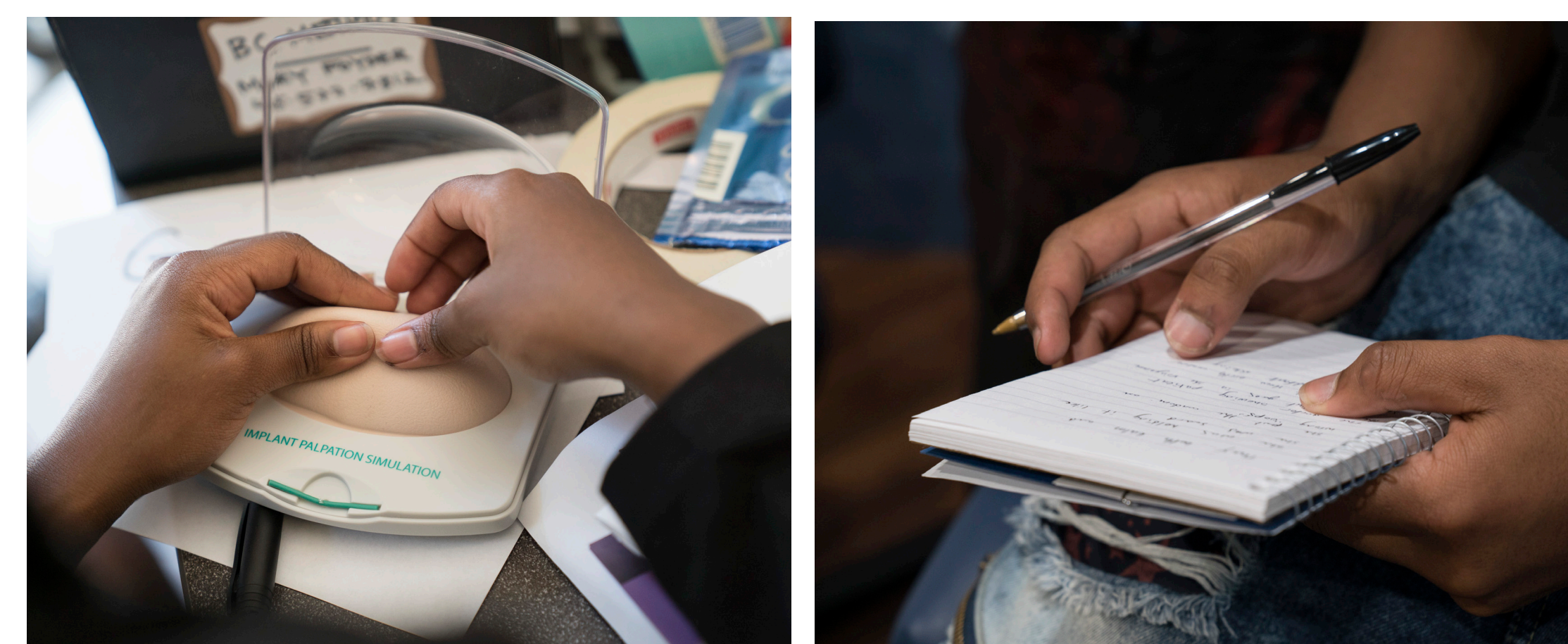
	T1 n (%)	T2 n (%)	T3 n (%)
COHORT A	13 (100)	13 (100)	9 (61.5)
COHORT B	19 (100)	13 (68.4)	6 (46.9)
TOTAL	32 (100)	26 (82.3)	15 (46.9)

Table 3. Acceptability of SDC (T2: n=26).

1= STRONGLY DISAGREE, 7=STRONGLY AGREE	MEAN (SD)
The information discussed during the summer workshops was easy to understand	6.6 (.64)
The information discussed during the summer workshops was accurate	6.6 (.57)
The information discussed during the summer workshops was trustworthy	6.9 (.37)
These summer workshops make it easier to live a healthier life	6.6 (.64)
These summer workshops increase my ability to live healthier	6.5 (.86)
These summer workshops enable me to find information and support for my health care more quickly	6.6 (.57)
I found these summer workshops useful in my life	6.6 (.57)
Overall, I am satisfied with these summer workshops	6.9 (.27)
I would recommend these summer workshops to my friends	6.6 (.64)

Table 4. Changes in SRH Knowledge between T1 and T2.

ITEM	CORRECT AT T1 (n%)	CORRECT AT T2 (n%)	P-VALUE
Anyone 12 years or older does not need permission from a parent or guardian to get tested for sexually transmitted diseases (STDs) and HIV in Illinois, or to receive treatment.	22 (84.6)	25 (96.2)	0.375
Teens of any age can buy condoms from a drugstore, pharmacy, grocery store, or even online.	19 (73.1)	25 (96.2)	0.031
A minor can get a prescription for birth control without a parent's permission.	13 (50.0)	22 (84.6)	0.023
If you are under or over 18 years old and want an abortion, you do not need to ask your parents or guardians for permission.	9 (34.6)	17 (65.4)	0.057
People of any age need a prescription to buy an emergency contraceptive over the counter at a local pharmacy.	10 (38.5)	17 (65.4)	0.065
If you are 12 years or older, you can tell clinic staff how to contact you about HIV test results without your parents or guardians knowing.	19 (76.0)	24 (96.0)	0.063
Condoms do not expire.	26 (100.0)	25 (96.2)	1.000
The dep shot, a birth control option, also protects against sexually transmitted diseases.	17 (65.4)	21 (80.8)	0.289
You can legally consent or agree to sex when you become 17 years old.	13 (50.0)	15 (57.7)	0.625
For people 17 years or younger, a doctor, or an MD, is the only type of health professional that can test for sexually transmitted diseases (STDs).	6 (23.1)	10 (38.5)	0.455
MEAN CORRECT ANSWERS	6.0	7.8	<0.001



## FOCUS GROUP DATA (T2)

Three overarching themes emerged from the focus group data regarding the impact of participation in the Summer Design Challenge on young people. First, interacting with the mobile health unit challenged misconceptions and empowered participants to use services available on the unit.

"...then we learned more about the mobile health unit, I'm like, this is a really great resource to teenagers...playing the primary role when it comes to their sexual health. Then I learned that the mobile health unit is not dusty."

*Thinking about all the activities you did, what activity, would you say, changed your point of view the most?*

"The mobile health unit activity. Going on there and experiencing what it looks like. In my group, we actually came up with a scenario, going on there to see what the healthcare providers, how they would react and stuff, to improve it. That was probably the activity that stood out that made me change the way I thought about things."

"I didn't know you could get treated like [by] a real doctor-doctor, so going here to this program I learned more about it then I already knew, even though I already been on [the mobile health unit] before."

Second, participants described the Summer Design Challenge as shifting how they think about health care and interacting with providers, as well as familiarizing them with SRH resources.

*What other things changed your thinking, or activities, changed how you thought about things?*

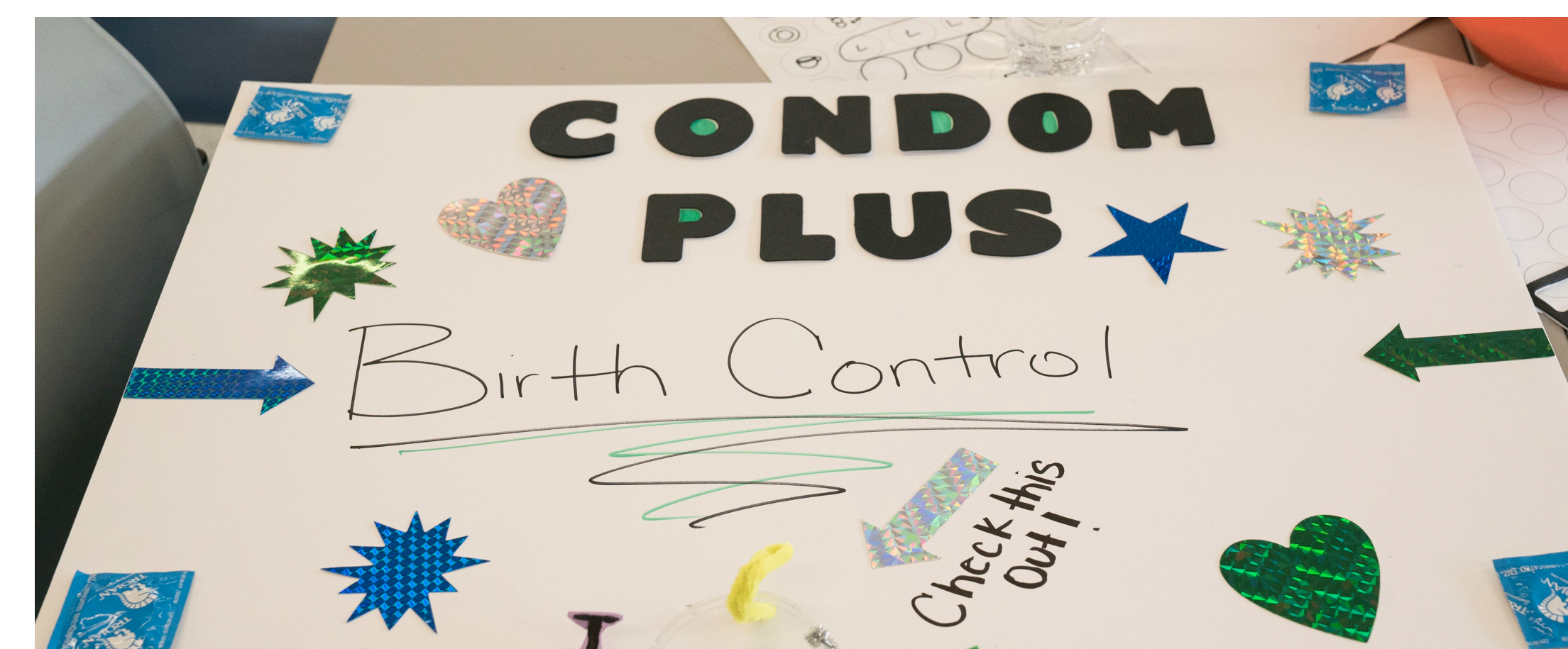
"Just learning more about how to be safe and making decisions. It was really impactful but that was through every single session because, especially with the healthcare where you never really get to talk about what you want to experience going to the doctor. I feel like that's more important than going to the doctor yourself, just knowing how you can be comfortable with your own health and how you want to be treated when it comes to your health."

"I feel like out of the whole process, I learned a lot about resources. I'm the type of person who doesn't go to the doctor, I just kind of got trust issues with doctors. I don't know why, but after here, going through about like different clinics, free clinics, how to get insurance, etc., the services on the health care unit itself, and it was just like I know what's going on. I know that you can always search it up and figure it out, but it's good to know and be able to ask questions with a professional and things like that. I learned about a whole bunch of resources."

Third, the activities of the SDC led participants to consider how design activities and processes may contribute to their problem solving abilities and personal growth.

"[Before the SDC] for every problem, I necessarily wouldn't write down and brainstorm, just going through the process of what I need for this to work and, if it won't, redesign it like that, but if you think about everyday problems like that, some of the steps are more necessary than others, but maybe if I'm doing a project or something, that could be a simpler way of approaching it."

"That game [during the SDC] was basically going around seeing how people treat you based off of how you appear to them from the outside, and no one liked getting treated like they was less of a king or a queen. I guess that was teaching us when you go into the mobile healthcare unit you want to get treated like you're a king or a queen. Every attention is on you, and the supervisors really care about your situation and who you are as a person."



## CONCLUSION

Based on our initial evaluation results, the Summer Design Challenge was an effective way to engage young people in co-design activities centered on improving SRH care for adolescents. Preliminary findings suggest that the SDC is highly acceptable to young people, and pre/post-analyses demonstrate a significant increase in SRH knowledge between T1 and T2. The focus group data indicate that young people perceived gains in their problem solving capacities, their ability to seek and use health care, and their impressions of the mobile health unit. Next steps will focus on completing analyses on six-month follow-up data (survey and interviews) and examining the potential for a larger-scale pilot of the SDC.

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**SOURCES OF SUPPORT:** Funding for this project was provided by an anonymous donor.