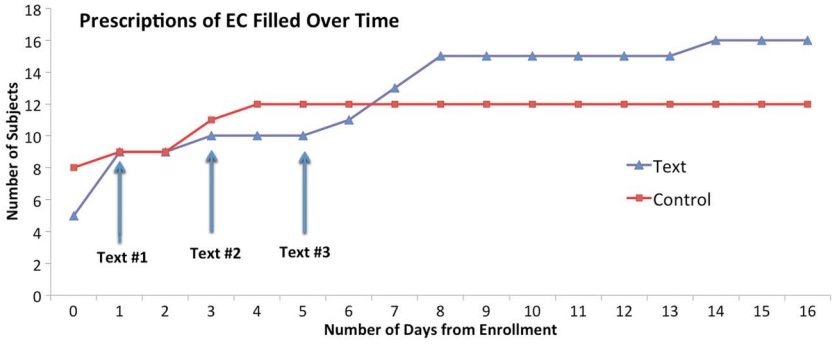

Figure 1 Emergency contraception (EC) prescriptions fulfilled over time for the study group.

Feasibility of using text message reminders to increase fulfilment of emergency contraception prescriptions by adolescents

Emergency contraception (EC) is a safe and effective form of pregnancy prevention after intercourse, but its efficacy decreases with time.[1 2] Having EC in advance of need enables it to be taken soon after unprotected intercourse, thus maximising its effect. EC is available over-the-counter in the USA without age restrictions, but many clinicians provide EC in advance to their patients as a means of eliminating residual barriers to access.[3–5]

In a randomised pilot study among sexually active women in an urban adolescent clinic, we examined the feasibility of using text messages as a convenient mechanism to remind adolescents to fulfil their advance EC prescriptions. Participants were English-speaking, aged between 13 and 21 years, and had cell phones that could receive texts. Participants' health plans covered EC at no cost and all participants completed a baseline survey. After receiving standardised education on EC, a prescription was sent electronically to the pharmacy of the participant's choice and they were encouraged to fulfil the prescription in advance of need. Participants in the texting group received a text reminder on Days 1, 3 and 5 after randomisation; those in the control group received no texts. We obtained prescription fulfilment information from insurance claims, direct calls to the pharmacy and contacting participants 6 weeks after enrolment.

Of 446 individuals pre-screened for eligibility, 170 (38%) did not attend their scheduled appointments, 149 (33%) were ineligible and nine (2%) declined to participate. Participants' mean age was 18.05 [standard deviation (SD) 1.73] years; the mean age of sexual debut was 15.22 (SD 1.77) years; and the median number of lifetime partners was 3.5 (range 1–20). Twenty per cent of participants had had a prior pregnancy. There were no differences between the two groups at baseline. Claims data were not obtained for seven (12%) individuals due to lack of active insurance coverage at the time of follow-up; 28 (46.7%) subjects were successfully contacted for follow-up. Of four total discrepancies between insurance claims and subject self-report, three participants reported fulfilling their prescriptions when there was no evidence of an insurance claim, and one reported not fulfilling it when there was evidence of a claim. For the intervention group, there was a trend towards prescription fulfilment immediately after text messages were sent and this effect appears to be additive after each text reminder (Figure 1).

Our pilot study provides evidence that recruiting high-risk, low-income adolescents into a randomised trial on EC advance prescription is possible, but that follow-up is challenging. Additionally, we could not rely solely on self-report for outcomes data since adolescents frequently overestimated their prescription fulfilment.

While not powered to assess differences across randomised groups, our study did suggest a promising temporal relationship between text reminders and EC prescription fulfilment. Based on these findings, however, a single text message may not serve as a sufficiently strong reminder. Subsequent studies of text message reminders should therefore test 'multi-dose' interventions. If texting can be used to increase the fulfilment and subsequent usage of EC prescriptions, this could be a relatively simple and replicable intervention for increasing adolescents' access to safe and effective pregnancy prevention.

Tracey A Wilkinson, MD, MPH*

Department of Pediatrics, Indiana University School of Medicine, Children's Health Services Research, Indianapolis, IN, USA; tracwilk@iu.edu

Michelle R Berardi, MPH, BSN

Hahnemann University Hospital, Philadelphia, PA, USA; mberardi76@gmail.com

Erin A Crocker, BS

Department of Endocrinology, Brigham and Women's Hospital, Boston, MA, USA; erincrocker826@gmail.com

Christina Nordt, MD

Harvard Medical School, Boston, MA, USA; Christina_nordt@atriushealth.org

Michael Silverstein, MD, MPH

Department of Pediatrics, Boston University School of Medicine/Boston Medical Center, Boston, MA, USA; michael.silverstein@bmc.org

***Corresponding author**

Competing interests None declared.

Published Online First 25 November 2016

J Fam Plann Reprod Health Care 2017;**43**:79–80.
doi:10.1136/jfprhc-2016-101647

REFERENCES

1 Davidoff F, Trussell J. Plan B and the politics of doubt. *JAMA* 2006;296:1775–1778.
2 Piaggio G, Kapp N, von Hertzen H. Effect on pregnancy rates of the delay in the administration of levonorgestrel for emergency contraception: a combined analysis of four WHO trials. *Contraception* 2011;84:35–39.
3 Wilkinson TA, Fahey N, Suther E, *et al*. Access to emergency contraception for adolescents. *JAMA* 2012;307:362–363.
4 Sampson O, Navarro SK, Khan A, *et al*. Barriers to adolescents' getting emergency contraception through pharmacy access in California: differences by language and region. *Perspect Sex Reprod Health* 2009;41:110–118.
5 Duffy K, Gold MA. Adolescents and emergency contraception: update 2011. *Curr Opin Obstet Gynecol* 2011;23:328–333.