**Title**: A Comparison of MyChart Message and E-mail for Recruitment Into a U.S.-based Autism Research Cohort

**Authors**: My-Linh Luu, Rebecca J. Sanchez, Ivana Lozano, Gabriela Marzano, Leandra N. Berry, & Robin P. Goin-Kochel

**Introduction:** MyChart is a secure web portal that allows patients to view their medical information, communicate with their providers, and actively manage their healthcare—essentially, the patient-facing side of the electronic health record. We previously demonstrated that (a) using MyChart to introduce patients to the national SPARK (Simons Foundation Powering Autism Research for Knowledge) study ([www.sparkforautism.org/texaschildrens](http://www.sparkforautism.org/texaschildrens)) was as effective as a best practice advisory (BPA) about SPARK (Simon et al., 2022; Duhon et al., 2022), the latter of which relied on providers to introduce the study to eligible patients at the point of care (Goin-Kochel et al., 2023); and (b) MyChart messages that included testimonial videos from SPARK participants generated slightly higher enrollment and DNA-kit return rates compared to MyChart messages without videos (Lozano et al., 2024). Historically, when patients responded as interested in SPARK via the BPA, they were emailed information about the study and a link to the registration site. However, given the success of MyChart as a recruitment tool, we sought to determine whether type of communication platform (MyChart vs. email) for delivery of study information to interested patients influenced their rates of enrollment and return of DNA for the individual with autism. Understanding whether one mode of communication is more effective than another for participant recruitment can guide research teams’ use of outreach strategies in ways that lead to increased enrollment.

**Methods:** Between 1/25/2023 and 1/25/2024, a total of 864 families had expressed interest in the SPARK study as a result of receiving the BPA. These families were randomized to receive study information + a registration link via MyChart 432 (50%) or email 432 (50%). Those who had not enrolled within 6-8 weeks following this communication received a reminder email. Enrollment status (i.e., consenting to provide clinical data only or consenting to clinical + DNA data) and return of DNA was tracked throughout the year-long surveillance, with an allowance window of ~ 5 months for return of DNA (i.e., study closed 6/19/24).

**Results:** Among the 864 families interested in SPARK, a total of 145 (16.8%) enrolled in the study; and among this group, 137/145 (94.5%) consented to genetic testing. Of those who received the MyChart message, 70/432 (16.2%) participants enrolled in the study and consented to genetic testing, with 33 (48.5%) of this group returning DNA for the individual with autism. Likewise, among those who received the email message, 67 (15.5%) enrolled in the study and consented to genetic testing; 35 (51.5%) returned DNA for the individual with autism. The differences between groups were not significant for either rates of enrollment (χ2[1] = 0.078, *p* > 0.05) or DNA-kit return (χ2[1] = 0.104, *p* > 0.05). Those who received reminder emails did not subsequently enroll by the close of study. (Figure 1).

**Discussion:** This study compared the effectiveness of a MyChart message versus e-mail in helping to recruit and engage patients with autism and their families into the national SPARK study. Notably, the majority of participants who enrolled consented to provide a salivary DNA sample, suggesting that most families recognized SPARK as a genetic study. Rates of enrollment and DNA-kit return were similar to those reported in our prior MyChart surveillance studies (Goin-Kochel et al., 2023; Lozano et al., 2024), albeit slightly lower. Type of communication platform (i.e., MyChart vs. email) did not appear to impact rates of enrollment or DNA-kit return. It is possible that, once patients receive initial information about the study from their providers (via the BPA), either platform is acceptable as a form of secondary, personalized outreach. Interestingly, email reminders did not yield new enrollments for either group. This is helpful information, as research staff can reallocate time spent on email reminders to other, more productive activities. Among those who consented to provide DNA, approximately half returned their DNA kit within the study period, which is consistent with our prior observations of kit-return rates for the BPA alone (i.e., without MyChart follow-up communications; Simon et al., 2023; Duhon et al., 2023) and MyChart when used as the initial invitation to join SPARK (Goin-Kochel, et al., 2023; Lozano et al., 2024). Considering that all families in the current study indicated initial interest in SPARK yet only ~16% enrolled in the study, it will be important to consider alternate strategies to improve the conversion from being a *patient* *interested* in the study toan *enrolled participant*. Exploring these strategies in future studies could help identify combinations of recruitment methods and communication platforms that yield higher participant-response rates and sustained engagement for all types of clinical research.

**References/Citations**

Duhon, G.F., Simon, A.R., Limon, D.L., Ahmed, K.L., Marzano, G., & Goin-Kochel, R.P. (January, 2023). Use of a best practice alert (BPA) to increase diversity within a US-based autism research cohort. *Journal of Autism and Developmental Disorders,* 53(1), 370-377. doi: [10.1007/s10803-021-05407-9](https://doi.org/10.1007/s10803-021-05407-9)

Goin-Kochel, R.P., Lozano, I., Marzano, G., Sanchez, R., Luu, M.L., & Berry, L.N. (2023, May). *An Examination of MyChart for Recruitment into a U.S.-Based Autism Research Cohort*. Poster session presented at the 2023 meeting of the International Society for Autism Research, Stockholm, Sweden.

Lozano, I., Marzano, G., Sanchez, R., Luu, M.L., Berry, L.N., & Goin-Kochel, R.P. (2024, May). *A Comparison of MyChart Messages With and Without Participant Videos for Recruitment Into a U.S.-based Autism Research Cohort*. Poster session presented at the 2024 meeting of the International Society for Autism Research, Melbourne, Australia.

Simon, A.R., Ahmed, K.L., Limon, D.L., Duhon, G.F., Marzano, G., & Goin-Kochel, R.P. (January, 2023). Utilization of a best practice alert (BPA) at point-of-care for recruitment into a US-based autism research study. *Journal of Autism and Developmental Disorders,* 53(1), 359-369. doi:10.1007/s10803-022-05444-y

Figure 1.

Responded to the SPARK BPA as Interested

***864***

Received Study Information via Email

***432 (50%)***

Received Study Information via MyChart

***432 (50%)***

Not Enrolled

***361 (83.6%)***

Enrolled: Clinical + DNA Data

***67 (15.5%)***

Enrolled: Clinical Data

***4 (0.9%)***

Not Enrolled

***358 (82.9%)***

Enrolled: Clinical Data

***4 (0.9%)***

Enrolled: Clinical + DNA Data

***70 (16.2%)***

***864***

Enrolled

***0 (0%)***

DNA Kit Returned

***35 (51.5%)***

Email Reminder Sent

***256 (70.9%)***

Enrolled

***0 (0%)***

Email Reminder Sent

***241 (67.3%)***

DNA Kit Returned

***33 (48.5%)***