iTransition: Developing and Testing a Web App to Support Youth Living with HIV and the Transition from Pediatric to Adult Care

Statement of Problem

Of the approximately 38,000 new HIV diagnoses in the U.S. in 2018, 21% of those cases were among youth ages 13-24 years. Youth living with HIV will all experience a health care transition from pediatric/adolescent HIV care to adult care, and this care transition can be disruptive to care engagement. Yet, this period is crucial for youth living with HIV to continue working on and maintaining their health goals and achievements (e.g., undetectable viral load).

Unfortunately, youth living with HIV face several barriers to health care transition on the individual, clinical and structural levels. For example, insufficient preparation for disease self-management over 18 (individual), lack of quality inter-clinic communication to facilitate health care transition (clinical), and financial and transportation difficulties (structural) all contribute to poor health care transition outcomes.

Despite these challenges, there are no existing evidence-based interventions that are tailored by and for youth living with HIV to improve the health care transition process. However, mobile health (mHealth) and electronic Health (eHealth) interventions have been shown to be useful tools for improving medication adherence as well as care engagement for youth living with various chronic illnesses, and may be useful to youth living with HIV in the health care transition process to keep young adults engaged and retained in care during their care transition.

Description

iTransition is a dynamic Social Cognitive Theory-based mHealth native and website application (web app) to improve health care transition at the patient, provider and clinic levels with features focused on medication and appointment reminders, direct messaging between patients and providers, and important health care transition tips and resources. As a native app and web app, iTransition can be used on a range of devices (computer, tablet, smartphone), web browsers and operating systems (iOS, Android, Windows).

To develop *iTransition*, our team followed a multi-step process in collaboration with Emory University, University of Carolina Greensboro, and Pattern Health (app developers). We first created a development framework and held iterative design meetings to receive feedback on health care transition needs and preferences for a web app with a youth advisory board comprised of individuals who had recently experienced or were about to experience this health care transition from pediatric/adolescent care to adult care. We also received feedback from clinical providers who directly helped youth through the health care transition process.

To test *iTransition* and determine its preliminary efficacy, we conducted a non-randomized intervention trial with youth living with HIV, comparing a historical control group who experienced standard health care transition and an intervention group who received *iTransition* app. The trial also included HIV care providers who facilitate

health care transition in their clinics and tested iTransition. We consulted “transition champions” who were HIV care providers nominated by their peers to endorse and promote use of iTransition to youth living with HIV and providers in the intervention.

Through this study, we implemented *iTransition* and reviewed how it was utilized, conducted surveys to assess *iTransition* satisfaction and past/current health experiences, organized qualitative interviews on the health care transition process and iTransition experiences, and reviewed medical charts of youth living with HIV to assess care retention and viral suppression. For more information on the implementation of iTransition, please read our protocol paper published in Journal of Medical Internet Research (JMIR) Research Protocols.

The preliminary outcomes from piloting *iTransition* were presented at various conferences from 2022-2025. Data collection of the *iTransition* pilot study concluded on June 30, 2024 followed by data analysis through 2025.

Project results have been published. This study was conducted during the COVID-19 pandemic which may have impacted results. We discuss lessons learned in this publication of Tropical Medicine and Infectious Disease. Read about *iTransition* pilot outcomes published here in AIDS Patient Care and STDs.

Next Steps

The iTransition study provided key preliminary data for future development of mHealth interventions that are culturally sensitive and appropriate for health care transition engagement and retention, as well as have broad implications for improving the pediatric/adolescent to adult health care transition experience and clinical outcomes for youth and providers.

Published abstracts:

1. Tanner AE, Dowshen N, Lee S, Goldstein M, Doraivelu K, Knowles K, et al. Development and usability testing of iTransition: an mHealth intervention to support patients' movement from pediatric- to adult-oriented HIV care. 24th Annual International AIDS Conference (AIDS 2022), Montreal, QC, Canada, July-August 2022.

2. Tanner AE, Dowshen N, Rulison KR, Pather A, Knowles K, Goldstein M, et al. 198. Developing and Pilot Testing iTransition: A multilevel mHealth Intervention to Support Transition to Adult Care for Youth Living with HIV - Journal of Adolescent Health. Society for Adolescent Health and Medicine Annual Meeting, Chicago, IL/Virtual, March 2023.

3. Hussen SA, Dowshen N, Rulison KR, Doraivelu K, Knowles K, Goldstein M, et al. 1127. Lessons Learned from iTransition: An mHealth Intervention to Support Transition to Adult Care for Youth Living with HIV. 18th International Conference on HIV Treatment and Prevention Adherence, International Association of Providers of AIDS Care (IAPAC), Fajardo, PR, June 2023.

4. Urquhart R, Phillips K, Jibriel MSE, Mertus S, Dutta S, Lee S, et al. 178. Transiting Adolescents to Adult Hiv Care: Implementation Lessons From the Itransition Pilot Study - Journal of Adolescent Health. Society for Adolescent Health and Medicine Annual Meeting, Baltimore, MD, March 2025.

Published articles:

1. Tanner AE, Dowshen N, Philbin MM, Rulison KL, Camacho-Gonzalez A, Lee S, et al. An Intervention for the Transition From Pediatric or Adolescent to Adult-Oriented HIV Care: Protocol for the Development and Pilot Implementation of iTransition. JMIR Res Protoc. 2021;10(4):e24565.

2. Tanner AE, Mertus S, Jibriel MSE, Urquhart R, Phillips K, Dowshen N, et al. Transitioning Adolescents to Adult HIV Care in the United States: Implementation Lessons from the iTransition Intervention Pilot Trial. Trop Med Infect Dis. 2024;9(12).

3. Tanner AE, Jibriel MSE, Rulison, KL, Mertus S, Urquhart R, Phillips K, et al. Supporting youth from pediatric- to adult-oriented HIV care across two metro sites in the United States: Results from the iTransition pilot trial. AIDS Patient Care STDS. 2026;0(0).

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Related Tools & Publications

Supporting Youth from Pediatric- to Adult-Oriented HIV Care Across Two Metro Sites in the United States: Results from the iTransition Pilot Trial
Article
Feb 2026

An Intervention for the Transition From Pediatric or Adolescent to Adult-Oriented HIV Care: Protocol for the Development and Pilot Implementation of iTransition
Article
Apr 2021

Transitioning Adolescents to Adult HIV Care in the United States: Implementation Lessons from the iTransition Intervention Pilot Trial
Article
Dec 2024
Related Projects

Development of Mobile Health Interventions to Improve Adherence to Medication and Reduce Sexual Risk Behavior among HIV+ Youth
Adolescent Health & Well-Being

Positively Connected for Health (PC4H): Use of eHealth/mHealth tools to Improve Health of HIV+ Youth
Adolescent Health & Well-Being