

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

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We seek to inform the development of culturally sensitive and appropriate digital interventions to improve health care transition for youth living with HIV.

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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PolicyLab Leads

Nadia Dowshen

MD, MSHP

Faculty Member

Nadia Dowshen (she/her) is a faculty member at PolicyLab at Children's Hospital of Philadelphia (CHOP) and serves as Director of Adolescent HIV Services in the Craig Dalsimer Division of Adolescent Medicine at CHOP. She is also an associate professor of pediatrics and the Associate Director of the Masters of Health Policy Research at the Perelman School of Medicine at University of Pennsylvania and a Stoneleigh fellow.

In addition to specialized care for youth living with HIV/AIDS, Dr. Dowshen also provides general adolescent medical care at CHOP and Covenant House, PA, a youth shelter located in Philadelphia. She recently co-founded the CHOP Sexuality and Gender Development Clinic which now provides medical and psychosocial support to more than 2,000 gender variant children and adolescents. Dr. Dowshen's research focuses on using youth-friendly technology to improve adherence to antiretroviral therapy and improve other health outcomes for adolescents living with HIV/AIDS. She is also interested more broadly in research around issues of STD and HIV prevention and treatment as well as achieving health equity for other marginalized youth including LGBT and homeless adolescents.

Dr. Dowshen received the 2010 Society for Adolescent Health and Medicine New Investigator Award for her research identifying protective factors against HIV infection among transgender youth. She was recently named an NIH Adolescent Trials Network (ATN) Scholar and a Best Young Investigator by the National Centers for AIDS Research (CFAR). Dr. Dowshen also serves on the Board of Directors of the Sexual Information and Education Council of the United States (SIECUS), a national non-profit which promotes comprehensive education about sexuality, and advocates for the right of individuals to make responsible sexual choices. Dr. Dowshen received both her M.D. and Masters of Science in Health Policy Research from the University of Pennsylvania.



Nadia Dowshen
MD, MSHP

Team

Susan Lee, MPH

Kayla Knowles, MPH

Julia Madden

Sophia Hussen, MD, MPH

Amanda E. Tanner, PhD, MPH

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National Institute of Mental Health (NIMH)

Project Contact

Nadia Dowshen, MD, MSHP

DOWSHENN@EMAIL.CHOP.EDU

Related Tools & Publications

- [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
- [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

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](#)