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## “It’s On Me”: Perspectives of College Students Without Complex Medical Needs Learning to Manage Their Healthcare

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### Abstract

**Objective:** Most of the transition literature examines adolescents and young adults with special healthcare needs, though many youth will eventually transition to adult healthcare providers, regardless of medical complexity. This study addresses this gap by examining transition needs and experiences specifically within a college student sample of emerging adults without complex medical needs.

**Methods:** 108 college students ( $M_{age}=20.93$  years,  $SD=1.14$ ) completed interviews and questionnaires regarding transition. The most difficult and easiest aspects of healthcare self-management were thematically coded. Differences in questionnaires were assessed across sources of transition education.

**Results:** 52% of college students reported receiving education about managing healthcare from medical providers versus 95% from caregivers. Notably, 57% desired more support. Those receiving medical provider education reported higher responsibility. Students reported most difficulty managing health insurance. Results were similar across racial and ethnic groups and genders.

**Conclusions:** Gaps in transition preparation include low rates of medical provider education and support regarding health insurance. College students receiving education from medical providers reported greater healthcare responsibility. Provider-led transition education is needed for college students without complex medical needs.

**Implications for Impact Statement:** This study suggests that college students without complex medical conditions experience gaps in transition preparation. Although half reported talking to their medical provider about transition to adult care, many desired more support, with the greatest difficulty reported in learning to manage health insurance.

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## Keywords

Young Adulthood; Transition; Transition Readiness

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Transition is the purposeful, planned process of moving from pediatric to adult models of care that is recommended to begin in early adolescence, with the goal of preparing adolescents and young adults (AYAs) to assume increasing responsibility for managing their healthcare (Blum et al., 1993; Sawyer et al., 1997; Telfair et al., 1994; White & Cooley, 2018). While individuals ranging from medical providers to caregivers can facilitate the transition process, the majority of AYAs in the United States are reportedly not receiving adequate transition preparation (Betz et al., 2013; Lebrun-Harris et al., 2018; White & Cooley, 2018). The developmental transition from adolescence to young adulthood is associated with increases in risky health behaviors, low preventative healthcare use, and increases in unmet health needs (Hargreaves et al., 2015; McManus et al., 2020; White & Cooley, 2018). Among some AYAs, in particular college students, this transition may also be associated with extended periods away from their home, caregiver, or familiar primary care provider (PCP). Furthermore, AYAs report behaviors associated with poorer long-term health consequences, including unhealthy eating, substance use, lack of physical activity, and poor sleep, all of which may be exacerbated by peers, stress, and busy schedules associated with the college years (Calamidas & Crowell, 2018).

In addition to the health risks associated with this developmental period, this is also a critical juncture for the adoption of healthy lifestyles and positive experiences within the healthcare system, setting the stage for later healthcare behaviors (Hargreaves et al., 2015; McManus et al., 2020; White & Cooley, 2018). Much of the transition literature centers on AYAs with complex medical needs, such as diabetes or asthma, and findings demonstrate that receipt of structured preparation for transition is associated with improved adherence to medical regimens and self-care skills (Gabriel et al., 2017). However, most AYAs do not have complex medical needs, interact less frequently with the healthcare system and thus have less opportunity to receive structured transition preparation (Parasuraman et al., 2018). Regardless of medical complexity, many AYAs must ultimately learn to manage their healthcare independently and will interact with the healthcare system at some time during their life (Parasuraman et al., 2018). However, barriers to transition include limited time in well visits to discuss transition needs, shortages of both pediatric and adult PCPs in regions of the United States, and training gaps for providers regarding transition (White & Cooley, 2018; Zhang et al., 2020). It is important to understand transition among healthy AYAs and to identify target areas to prevent onset of health challenges and encourage self-efficacy in healthcare management.

The limited research that exists on the transition process for AYAs without complex medical needs relies heavily on caregiver and provider perspectives. Results indicate discrepancies in the transition experience of healthy AYAs compared to those with special healthcare needs, including less time with providers, discussing different information and skills during visits, and having increased loss to follow-up with PCPs (Burke et al., 2008; Davidson et al., 2017; Lebrun-Harris et al., 2018). Although less is known about the perspectives of healthy

AYAs on transition preparation, research indicates they have lower transition readiness and healthcare independence when compared to those with medical conditions (Eaton et al., 2017), while also desiring to be equally or more involved in their care compared to current involvement (Schuiteman et al., 2020).

Literature on racial and/or ethnic disparities in transition preparation and outcomes among youth with special healthcare needs suggests that historically marginalized youth (e.g., Black and Hispanic youth, youth from non-English speaking families) may experience greater barriers during transition (Lotstein et al., 2010). These barriers reflect the ways systemic racism impacts healthcare, including reduced access to health insurance, fewer resources provided among low-income communities, and poor provider awareness of sociocultural factors impacting transition (e.g., language barriers; Lotstein et al., 2010). Further, greater attendance at ambulatory care visits among female compared to male patients (Santo & Okeyode, 2021) and the ways that healthcare needs can vary by gender (e.g., transition-related information associated with reproductive health) underscore the importance of understanding individual experiences across gender identity. As such, in addition to understanding the transition experience of AYAs without complex medical needs broadly, specifically highlighting the experiences of those from historically marginalized racial and ethnic groups and gender identities is important for designing healthcare transition programs that promote health equity and individualized transition planning.

The current study examines the perspective of college students without complex medical needs regarding their transition preparation experiences, including views on how they received transition preparation, satisfaction with that preparation, and areas of difficulty remaining in managing their own healthcare. Given the limited data available on the transition to adult healthcare among college students without complex medical needs, a mixed methods approach was used to understand their current transition experiences, including a semi-structured interview regarding the transition preparation experience and validated measures regarding transition readiness and responsibility for healthcare tasks. This approach captures frequency of current preparation efforts and allows for the derivation of themes regarding difficult and easy aspects of transition. Given reported associations between receiving structured transition preparation from medical providers and higher levels of responsibility among AYAs with complex medical needs (Gabriel et al., 2017), it was hypothesized that college students without complex medical needs who received transition education from their provider would report higher levels of responsibility for healthcare tasks and perceived transition readiness, as compared to those who do not. Post-hoc analyses examined the transition experience of college students without complex medical needs by identified racial and ethnic identities and gender with the goal of centering the voices of those from marginalized groups to inform ongoing efforts to improve equitable implementation of transition education and understand individual experiences, needs, and preferences that can ultimately be incorporated into personalized transition planning.

## Methods

The present study is a second wave of data collection from a larger investigation of college students' responsibility for healthcare tasks, health behavior, and transition readiness

(Eaton et al., 2017). Participants were recruited through a university research pool at a public university in the Southeastern United States. All research activities were Institutional Review Board approved and participants provided written informed consent. Participants who indicated willingness to be contacted for future research at wave 1 were invited 18 to 24 months after initial participation to complete questionnaires using Qualtrics (Qualtrics, Provo, UT) and a semi-structured interview during an in-person study visit. Participants were initially compensated \$50. However, to increase recruitment, compensation was increased to \$75 and then \$100.

## Participants

Eligible participants for the present study included college students recruited from an undergraduate research pool who met the following criteria: 1) ages 18 to 25 years at initial recruitment and 2) reported no medical condition at the second wave of data collection. A total of 267 college students were eligible and approached for the current study. One hundred and eight consented at wave 2 and completed the questionnaires and semi-structured interview. Participants from wave 1 who were eligible but did not participate in wave 2 were unable to be reached ( $n = 120$ ), indicated a lack of interest in participating ( $n = 30$ ), and/or graduated or transferred from the university between the first and second wave of data collection ( $n = 11$ ).

## Assessments

All participants completed a comprehensive demographics survey assessing age, gender, year in school, family annual income, race/ethnicity, health insurance status, and frequency of attending primary care appointments. All responses except for age included pre-determined response options, as well as an “other” option followed by a free response.

### Transition Readiness Assessments

**Semi-structured interview.:** Participants completed semi-structured interviews assessing education received about managing their healthcare, satisfaction with that education, and aspects of the transition process that were challenging or easy to navigate. The semi-structured interview guide was developed by an expert in pediatric psychology in conjunction with advanced pediatric psychology graduate students (provided in Supplemental Materials A). Responses to questions with discrete item responses were recorded by trained research assistants on the standardized interview response sheet and participants’ responses to open-ended questions were written with minor summarizing and condensing during the interview, as is frequently used in the creation of field notes and a classification or coding system (Kuckartz & Rädiker, 2019; Tessier, 2012). Semi-structured interviews were not audio or video recorded.

**Readiness for Transition Questionnaire (RTQ).:** The RTQ assessed participants’ perceived readiness to assume complete responsibility for their healthcare (Gilleland et al., 2011). The original wording of the transition readiness items of the RTQ were modified to increase relevance for the present study and conceptually similar item responses were collapsed (see Gutierrez-Colina et al., 2020). Responses to the question “Overall, how ready do you think you are to assume complete responsibility for your healthcare?” were

examined on a four-point Likert scale, from “Not at all ready” to “Completely ready or already assumed complete responsibility.” The original RTQ item related to readiness for transitioning from a pediatric to adult doctor was omitted because the vast majority of the sample reported they already transferred to an adult provider ( $n=96$ ; 89%).

**Transition Readiness Assessment Questionnaire (TRAQ):** The TRAQ is a 20-item measure assessing participants’ responsibility for healthcare tasks and activities of daily living (Sawicki et al., 2011). Items were rated on a 5-point Likert scale, from “No I do not know how” to “Yes, I always do this when I need to.” In the present study, the mean TRAQ score was used, which achieved good reliability ( $\alpha=.82$ ).

## Analyses

All open-ended responses during the semi-structured interview were read in their entirety by the first and second author and grouped thematically into categories. The first author developed the initial codebook of derived themes and the second author reviewed and verified these themes. No additional themes were identified by the second author. The final codebook included six themes related to the easiest or hardest aspects of managing healthcare needs: Health Insurance, Medication Management, Scheduling/Attending Appointments, Knowledge of Self, Independence, and Provider Interactions (codebook provided in Supplemental Materials B). These themes from the semi-structured interview largely map onto the healthcare domains established in the TRAQ validation and subsequent factor analysis (Wood et al., 2014), allowing for the qualitative findings to enrich our quantitative data. The first and second author reviewed and coded all open-ended responses independently for the two open-ended prompts: 1) What were the most difficult and 2) What were the easiest aspects of learning to manage healthcare independently? If participants reported multiple aspects of managing their healthcare independently as most difficult or easiest, these responses were coded independently and reflected in theme totals. Coder agreement was assessed by calculating individual kappa values for each coded theme across the two open-ended questions and averaging within each question (McHugh, 2012). Rater agreement across the six identified themes was strong [most difficult: average  $\kappa=.90$ , range .85–1.00; easiest: average  $\kappa=.96$ , range .88–1.00]. Differences in coding were discussed between raters to reach consensus; consensus codes were used as final codes.

The mixed methods analyses were performed using IBM SPSS version 27. Descriptive statistics were calculated for demographic and study variables. Frequencies were calculated for questions with discrete responses within the semi-structured interview (e.g., rating the difficulty of healthcare tasks as “easy,” “moderate,” or “hard”). Frequencies were also calculated within each of the derived themes for the two open-ended questions. To determine how different methods of learning to manage healthcare related to perceived transition readiness and responsibility, independent samples t-tests examined differences in quantitative scores on the RTQ and TRAQ by reported methods of transition education (i.e., medical provider education versus no provider education, independent learning versus no independent learning). Effect sizes (Cohen’s  $d$ ) were calculated for t-test analyses (Cohen, 1988). Post-hoc examinations of interview responses by participant-reported racial and ethnic identity and gender were conducted. Given the post-hoc nature of this aspect of

our investigation, interviewing until thematic saturation for each racial and ethnic group represented was not undertaken. However, sample sizes for each racial group are similar to those recommended in the extant literature for achieving saturation (Guest et al., 2006), thus preliminary results are reported.

## Results

### Demographic Information

One hundred and eight (79% female) college students participated. Average age was 20.93 years ( $SD=1.14$ , range 19 – 25), and the majority (58%) identified their race as White. Neither age, gender, nor race/ethnicity were significantly related to RTQ or TRAQ scores. The majority (79%) had private health insurance and went to their PCP at least every 10-12 months (68%). See Table 1 and Supplemental Materials C.

### Method of Transition Preparation: Frequencies from Semi-Structured Interview

Semi-structured interview item responses regarding how students received healthcare education and reported difficulty of healthcare tasks are summarized in Supplemental Materials D. The majority ( $n=88$ ; 82%) endorsed that “someone” taught them how to manage their own healthcare needs, including their medical provider ( $n=46$ ; 52%) or their parent/caregiver ( $n=84$ ; 95%). Nearly all indicated education was primarily received through verbal discussion (medical provider,  $n=46$ , 100%; parent or caregiver,  $n=83$ , 99%), and included a variety of content, including filling prescriptions, scheduling and remembering appointments, medical history, communicating with providers, and medication information. Notably, the fewest number of college students indicated receiving education about insurance, with only 22% receiving insurance education from their medical provider and 51% receiving education from their parent or caregiver. Written information or pamphlets were reportedly helpful materials for future reference or as a memory aid for information discussed, though most preferred verbal discussion.

Just over half of the participants (56%;  $n=61$ ) indicated learning some aspects of their healthcare without help from others, including how to fill prescriptions and take medications as prescribed, as well as scheduling and attending appointments. Students rarely indicated learning about health insurance ( $n=9$ ; 15%) or their families’ medical history ( $n=20$ ; 33%) independently. Independent learning primarily involved internet searches or experiential learning from past healthcare interactions. Students reported needing more information on managing their own healthcare than they received ( $n=62$ ; 57%), specifically more details on health insurance. When asked to directly rate the difficulty of provided healthcare tasks, the majority rated knowing family history ( $n=61$ ; 57%) and being in charge of their own health insurance ( $n=64$ ; 59%) as moderate or hard, respectively, and rated other tasks as “easy.” Thirty-three percent still reported moderate difficulty related to communicating with healthcare providers and almost one-quarter (23%) reported moderate difficulty with knowing personal medical history.

### Mixed Method Analyses Regarding Preparation, Responsibility, and Transition Readiness.

College students who reported a medical provider taught them to manage at least some of their healthcare needs reported significantly higher overall healthcare responsibility on the TRAQ ( $M=4.33$ ,  $SD=0.39$ ) than those who did not receive education from their medical provider ( $M=4.13$ ,  $SD=0.46$ ;  $t(106)=2.26$ ,  $p=.027$   $d=.47$ ). Those learning to manage some aspects of their healthcare on their own reported significantly higher scores on perceived readiness to self-manage healthcare tasks ( $M=3.07$ ,  $SD=1.03$ ) compared to those who did not learn any aspects of healthcare on their own ( $M=2.54$ ,  $SD=0.96$ ;  $t(86)=2.67$ ,  $p=.009$ ,  $d=.53$ ). No other significant differences on the TRAQ or RTQ emerged based on who delivered transition education (i.e., self-taught, medical provider). Full details provided in Table 2.

### Frequencies of Coded Themes Emerging from Open-Ended Interview

The vast majority of college students reported the most difficulty with aspects of transition encompassed under the theme Health Insurance ( $n=72$  responses; 66%), with specific difficulties including understanding insurance options and coverage and knowing how to transfer from their caregivers' insurance plans to their own plan. Fewer reported difficulties related to Scheduling/Attending Appointments (e.g., remembering to make appointments;  $n=10$  responses; 9%) Knowledge of Self (e.g., knowing medical history;  $n=10$  responses; 9%), Independence (e.g., attending appointments by yourself;  $n=10$  responses; 9%), Medication Management (e.g., remembering to take medications;  $n=10$  responses; 9%), and Provider Interactions (e.g., communicating with providers and asking questions;  $n=3$  responses; 3%).

Among aspects of learning to manage healthcare which were "easiest," students most frequently endorsed Scheduling/Attending Appointments ( $n=63$  responses; 58%), given the ease with which appointments can be made (e.g., online portals, phone calls) and merely having to "show up." The second most frequent theme of responses indicated as "easiest" was Medication Management ( $n=35$  responses; 32%), including the ease of using phone reminders and automatic prescription refills to promote medication adherence. Fewer reported the easiest aspects of transition related to themes of Independence (e.g., directly communicating and organizing;  $n=10$  responses; 9%), Provider Interactions (e.g., assurance of privacy;  $n=9$  responses; 8%), Knowledge of Self (e.g., lived experience;  $n=6$  responses; 6%), and Health Insurance (e.g., picking from providers in network;  $n=2$  responses; 2%). See Supplemental Materials D.

### Post Hoc Examination of Interview Responses by Race/Ethnicity and Gender

Post hoc examinations assessed the frequency of coded themes by college student-reported race and ethnicity and gender. Descriptive results and representative thematic responses are detailed in Supplemental Materials E and F. Preliminary results suggest similar experiences regarding easiest and most challenging aspects of transition across students from diverse racial and ethnic identities and gender, with many noting insurance as the most challenging aspect (50% to 77%) and scheduling and attending appointments as the easiest (41% to 78%).

## Discussion

The current study fills a gap in transition literature by examining transition preparation experiences of college students without complex medical needs. The majority reported receiving education on transition and healthcare management from their caregivers, with just over half reporting they received transition preparation from a medical provider. However, those who received education from medical providers reported higher levels of responsibility in managing healthcare tasks compared to those who did not. Further, the majority indicated wanting more transition preparation than they received, regardless of the primary source of their preparation (i.e., caregivers or medical providers). College students endorsed the most difficulty with tasks related to health insurance and knowing their family medical history. This was consistent with thematic coding of open-ended responses, in which they reported most difficulty with aspects of transition related to Health Insurance, while aspects of transition related to Scheduling/Attending appointments were easiest. Of note, these findings were consistent across students of various racial and ethnic backgrounds and across genders, suggesting some common elements of the transition experience. Overall, findings help advance our understanding of college students' perspectives on their healthcare needs and transition experiences, which can ultimately inform efforts to promote involvement in care and self-efficacy in successful healthcare management.

This study highlights the need to integrate healthcare transition training into routine, preventative care for college students without complex medical needs. Only half of students in the present study reported transition preparation or education by their medical provider, despite the majority reporting attendance at primary care appointments at least yearly. This is aligned with national data on AYAs' annual healthcare utilization (Park et al., 2014) and suggests it is not a lack of interaction with their PCP hindering discussion about transition, but rather a lack of specific transition-related preparation occurring within this setting. Aligned with models of transition education among youth with complex medical needs (Kelly et al., 2002), integrated pediatric psychologists, social workers, and nurse care coordinators in the primary care setting can be essential for promoting overall well-being, including transition readiness (Asarnow et al., 2017). While college students in this study who learned to manage healthcare tasks without help from others reported greater perceived transition readiness than those who did not, these may be individuals who exhibit increased overall ability to navigate various aspects of their lives independently, and thus may inherently require less support from providers to prepare for transition. Those who received preparation from a medical provider reported significantly higher levels of healthcare responsibility than those who did not and most preferred to have a verbal discussion over receiving written materials, such as pamphlets. This highlights the need for increased transition preparation involving direct communication between clinicians and college students without complex medical needs in the medical settings they are most frequently visiting during adolescence and young adulthood. Particularly for college students, these settings may include university health centers specifically aimed at caring for this student population, given that three-quarters of the sample was seen at the student health center for primary care concerns, in addition to their established PCP outside the university setting.



To more effectively implement transition education and preparation for all AYAs, guidelines on the “Six Core Elements of Health Care Transition” were developed (White & Cooley, 2018). A recent quality improvement study found that implementing the Six Core Elements resulted in improvements in several critical areas related to transition practice, including establishing written practice policies regarding transition (e.g., privacy/consent and decision-making policies), improving integrated staff and provider transition knowledge and skills, implementation of a transition registry, and use of standardized transition readiness assessment (McManus et al., 2015). Structured policies and practices related to transition are associated with positive outcomes among AYAs with complex medical needs, including improved adherence and self-care skills (Gabriel et al., 2017). Clear and consistent transition preparation is needed to improve the transition experience of all AYAs, including those without complex medical needs, with resources on how to incorporate into preventative care across development available through Got Transition (P. White et al., 2018). Screening for pertinent transition-related outcomes, such as perceived readiness, is one method for tailoring transition preparation and beginning transition-related discussions. Screening and brief interventions within university health centers regarding other health behaviors (e.g., substance use) have been shown to be acceptable, feasible, and efficacious at promoting behavior change among college students, suggesting this setting may be similarly well-suited for the delivery of brief screening and intervention programs regarding transition preparation (Seigers & Carey, 2010).

Education about navigating health insurance, knowing personal medical history, and effectively communicating with providers could further improve transition preparation and experiences, as these areas were rated by college students in the present study as moderately difficult or hard to manage. Desire for more discussion about health insurance in the present study is consistent with previous literature regarding provider report of lower rates of discussing legal aspects of transition (e.g., insurance coverage) (Davidson et al., 2017) and AYA-reported poor health insurance literacy and difficulty understanding insurance options (Wong et al., 2015). Notably, the current sample included only college students 25 years or younger. Under current law in the United States, AYAs are legally able to stay on their caregivers’ insurance until age 26, if applicable. As such, it is not altogether surprising that independence in navigating health insurance is viewed as most challenging, as those younger than 26 may have less experience doing so. However, as they approach the age at which they are required to transfer to their own insurance, increasing the accessibility of health insurance knowledge and encouraging AYAs to ask questions and learn about their health insurance during clinic encounters may be helpful for promoting health insurance literacy and improving confidence in the ability to self-manage. Furthermore, communication with healthcare providers and knowing personal medical history represent additional targets for transition preparation. These may include medical providers devising and reviewing individually-tailored transfer of care summaries of AYAs’ medical history and plan of care, while encouraging patients early on to communicate directly with their providers during clinic encounters, even while caregivers still attend appointments.

Although preliminary findings from the present study suggest common themes in terms of easy and challenging aspects of transition across college students of different racial and ethnic or gender identities, a more nuanced investigation of the transition experience for

all structurally marginalized AYAs is a critical next step for this line of research. Providing culturally-responsive transition care will likely entail adaptations to transition programs to fit the needs and preferences of individuals. These may include culturally-sensitive assessment of familial expectations for when AYAs assume healthcare responsibility and adjusting the timing of transition planning accordingly, ensuring access to interpreter services when needed to help with education on transition-related topics, and increasing access to and awareness of the importance of having a medical home for AYAs during transition (Lotstein et al., 2010).

Limitations of the present study inform several avenues for future directions. The sample in the current study self-selected to enroll in this study from a single university research pool thus results may not generalize to AYAs not pursuing college education and it is possible self-selection led to a sample that was more experienced or interested in the transition process than peers who did not opt into this study. Further, the majority of the sample was White and female from households with above-average incomes and private insurance, and it was not assessed whether students were still on their caregivers' insurance. While this is consistent with other research using college samples (Mahmoud et al., 2012; Sharkey et al., 2017), there may be unique aspects of the transition process in samples with representation of those who identify as other genders or races or are from households with lower incomes. Preliminary post-hoc examination of interview responses suggests college students across gender and racial or ethnic identities experience similar challenges during transition. However, targeted research is needed to further understand the experience of all minoritized AYAs during the critical transition period, as well as how other situational differences may impact transition experiences (e.g., income, insurance status). Additionally, this study was conducted in the United States, thus, additional research is needed to understand the experiences of healthy AYAs within other healthcare systems. Certain findings, such as difficulties navigating health insurance, would not be as applicable to countries with universal healthcare, such as Canada or the United Kingdom.

Methodological limitations include semi-structured interviews were not audio- or video-recorded and thus rich data related to intonation, inflection, or other aspects of participants' expression was not captured and there is the potential for content loss related to summarizing and condensing of responses when notating on the interview sheet. Thus, while our approach aligns with the goal of rapid qualitative procedures in implementation science, balancing scientific rigor with the need for timely implementation of much needed health services (Gale et al., 2019), future research should use robust qualitative methods to further inform understanding of the experiences of healthy college students, and AYAs more broadly. Nonetheless, the current data collection approach, including the triangulation of questionnaire and interview responses, provides important preliminary data on their transition experience. Additionally, participants retrospectively reported whether they had discussed aspects of transition with medical providers or caregivers, which may be subject to recall bias. Future research may incorporate behavioral observations, surveys, or interviews throughout the transition process, including observations of well-visits in which transition topics are likely discussed and interviews with AYAs who are in the midst of transition. Corroborating provider or caregiver reports may also be beneficial.

Only half of college students without complex medical needs in the present study reported receiving education regarding self-management of healthcare responsibilities from a medical provider, despite national calls for transition preparation for all youth, regardless of medical complexity. When college students received preparation from medical providers, they reported significantly higher levels of healthcare responsibility. These findings support the integral role of medical providers in preparation for self-management, particularly in understanding and managing health insurance, which was consistently endorsed as “most difficult.” Incorporating transition preparation into existing integrated primary care, via inclusion of pediatric psychologists, social workers, and nurse care coordinators in verbal discussions alongside educational materials and standard instruments for tracking readiness and barriers to transition, could improve the transition experience. In line with calls to utilize direct-to-consumer marketing in dissemination and implementation efforts (Becker, 2015), it will be important to develop educational materials (e.g., posters and pamphlets in university health centers) that empower college students to ask their providers for assistance with the transition process.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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**Table 1.**

## Sample demographics and study variables

| Descriptives/Frequencies ( <i>N</i> = 108)   | <i>M</i> ( <i>SD</i> )/ <i>n</i> (%)  |
|--|---------------------------------------|
| Age (years)  | 20.93 (1.14)                          |
| Gender   | Male 22 (20%)                         |
|  | Female 85 (79%)                       |
|  | Not reported 1 (1%)                   |
| Race/Ethnicity   | White 63 (58%)                        |
|  | Asian 19 (18%)                        |
|  | Black 13 (12%)                        |
|  | Hispanic 9 (8%)                       |
|  | Other 2 (2%)                          |
| Annual family household income   | \$49,000 or less 15 (14%)             |
|  | \$50,000 - \$99,999 32 (29%)          |
|  | \$100,000 - \$199,999 26 (24%)        |
|  | Not provided 16 (15%)                 |
| Year in school   | 2 <sup>nd</sup> year 47 (44%)         |
|  | 3 <sup>rd</sup> year 35 (32%)         |
|  | 4 <sup>th</sup> year 19 (18%)         |
|  | 5 <sup>th</sup> year or beyond 7 (7%) |
| RTQ – How ready do you think you are to <u>assume complete responsibility for your healthcare?</u> | 2.83 (1.03)                           |
| TRAQ – overall score   | 4.17 (.46)                            |

*Note.* Neither age, gender, nor race/ethnicity were significantly related to scores on transition readiness questionnaire assessments. RTQ = Readiness for Transition Questionnaire (higher scores = greater perceived readiness, range 0 – 4), TRAQ = Transition Readiness Assessment Questionnaire (higher scores = greater responsibility for healthcare tasks, range 1 – 5).

**Table 2.**

Method of transition preparation, TRAQ, and RTQ.

|   | Did a medical provider teach you how to manage your own healthcare needs? |                         | Did you learn to manage any aspects of your healthcare on your own |                         |
|---|---|-------------------------|--|-------------------------|
|   | Yes<br>n=46<br>Mean (SD)  | No<br>n=42<br>Mean (SD) | Yes<br>n=61<br>Mean (SD)   | No<br>n=46<br>Mean (SD) |
|   |   |                         |  | <i>t</i>                |
| <i>Perceived Transition Readiness</i>   |   |                         |  |                         |
| RTQ – How ready do you think you are to assume complete responsibility for your healthcare? | 2.96 (1.10)   | 2.74 (0.94)             | 3.07 (1.03)  | 2.54 (0.96)             |
|   |   |                         |  | <b>2.67**</b>           |
| <i>Healthcare Responsibility</i>  |   |                         |  |                         |
| TRAQ – overall score  | 4.33 (0.39)   | 4.13 (0.46)             | 4.22 (0.43)  | 4.11 (0.49)             |
|   |   |                         |  | <b>2.26*</b>            |

Note.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .

Bolded rows are significant. RTQ = Readiness for Transition Questionnaire, TRAQ = Transition Readiness Assessment Questionnaire