CAN HEALTHCARE TRANSITION READINESS BE “SELF-DETERMINED”? 

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Purpose: Adolescents with chronic medical conditions need skills to successfully manage their condition and transition into adult healthcare. Self-Determination Theory (SDT) posits that competence (e.g., skills, confidence), autonomy, and relatedness (e.g., support for autonomy from others) influence behavior change. SDT, an empirically-based theory of human motivation, has proven effective in promoting long-term health behaviors with respect to diet and exercise, but to date has not been applied to the health care transition preparation of transition-age youth (TAY). This study evaluates the utility of SDT constructs in predicting baseline transition readiness of TAY recruited into an intervention to promote successful transition to adult care.

Methods: Over the past 8 months, 95 (target=150 by December 2018) baseline assessments were conducted with youth ages 17-22, from gastroenterology (GI) (n=35), renal (n=29) and rheumatology (n=31) clinical services. Based on SDT, the assessment addressed: transition readiness (Transition Readiness Assessment Questionnaire [TRAQ]); competence (Patient Activation Measure [PAM]); healthcare autonomy (Treatment Self-Regulation Questionnaire [TSRQ]); and relatedness with respect to providers and caregivers (Health Care Climate Questionnaire [HCCQ]); as well as quality of life (CDC Health Related Quality of Life [HRQoL]; e.g., general health rating, symptom severity, number of days physical or mental health is not good or kept from doing usual activities). Chi-square and analysis of variance were used to compare SDT and quality of life constructs for youth from different clinical services. The independent relationships between SDT constructs and transition readiness were evaluated using linear regression while controlling for potential confounders.

Results: Rheumatology versus GI and renal TAY were more likely to be female (87% vs. 46% and 52%, respectively, p<.001) and reported higher transition readiness (2.91±.56 vs. 2.54±.68 and 2.52±.65, p=.030). Renal TAY reported lower symptom severity (p=.004) and were least likely to report that poor physical/mental health prevented usual activities (p=.004). Age was correlated with transition readiness (r=.465, p<.001). After controlling for age, gender and clinical service (step 1), competence (p=.058) and both provider (p=.008) and parent (p=.016) support for health care autonomy (relatedness) successfully predicted transition readiness (step 2, R square=.473; F change, p<.001).

Conclusions: SDT is particularly relevant to adolescent behavior motivation given that competence, autonomy and relatedness undergo significant developmental changes during this period. Our study supports the utility of SDT – in particular competence and relatedness – in interventions to promote greater transition readiness for youth with rheumatic, GI and renal disorders and underscores the important role providers and parents play in promoting transition readiness. Given the congruence between SDT and Motivational Interviewing (MI), interventions to increase competence and relatedness might consider an MI-informed approach that supports TAY autonomy and empowerment and ongoing partnerships with both pediatric and adult providers. This could be especially important as many TAY are ambivalent about transitioning out of pediatric care into an unfamiliar adult healthcare environment.

Sources of Support:
ATTITUDES AMONG MEDICAL STUDENTS TOWARDS PERSONS WITH DISABILITIES
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Purpose: Various studies endorse that exposure to patients with developmental disability (DD) reduces bias and discomfort among physicians. However, few medical schools or residency programs offer structured experiences for learning about patients with special needs. Lack of such training contributes to substantial health disparities in this population. The Debbie Project (DP) was established to provide medical students with structured, longitudinal exposure to children with DD at the Debbie School (DS), working to increase attitudes of confidence, comfort, and willingness to provide care to this patient population. Attitudes can be measured as either explicit, a conscious consideration, or as implicit, an unconscious association. This study aims to explore attitudes among medical students towards persons with disabilities prior to intervention.

Methods: This survey was designed and distributed online via Project Implicit. The questionnaire was administered anonymously prior to the first volunteering session at the DS during a mandatory lecture for first year medical students. Of 152 participants, 39 had signed up to volunteer with the DP during the 2017-2018 school year and 113 had not; 62, 87 and 2 identified as male, female, and nonbinary respectively. The survey included three components: demographics, the Implicit Association Test of Disability (IAT), and the Multidimensional Attitude Scale Towards Persons with Disabilities (MAS). The IAT measures involuntary association that indicates implicit attitudes against disabled individuals. The MAS is a 34-item self-report questionnaire, on a 5-point Likert scale, that measures explicit attitudes toward persons with disabilities through 3 categories: affect, cognition, and behavior.

Results: The results of the IAT and MAS indicated baseline differences among participants. Males exhibited a higher implicit association score (IAT D Score) than females (P=0.012, Standard Error Difference (SED)=0.0767), indicating a higher implicit attitude against individuals with disabilities. Volunteers and non-volunteers showed no significant differences in IAT D scores. There was no significant difference in IAT D scores for students with or without a family member with a disability. Average IAT D Scores were 0.6028 +/-0.4675, indicating an overall negative implicit attitude towards disability across all first year student participants. Total MAS Scores, however, demonstrated no significant differences between demographic groups of medical students.

Conclusions: Few studies have quantified medical student biases towards persons with disability. Our study results demonstrate a divergence between measures of implicit and explicit attitudes. Despite explicit attitudes as measured by total MAS, our study group revealed negative implicit attitudes, as measured by the IAT. Additionally, differences in explicit attitudes based on gender or volunteer status are not mirrored in the IAT’s measure of implicit attitudes. This study demonstrates a discrepancy between implicit and explicit attitudes in medical students. The results are discouraging, as implicit attitudes influence non-verbal behaviours, and likely account for the negative experiences reported by individuals with intellectual disabilities. These baseline measures are a part of a larger study exploring whether a structured, longitudinal exposure to children with developmental disabilities reduces implicit and/or explicit biases toward this patient population.

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A MIXED-METHODS APPROACH TO UNDERSTANDING PARENTAL ROLES IN ADOLESCENT AND YOUNG ADULTS’ RECEIPT OF CONFIDENTIAL CARE

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Purpose: Few studies have explored parental perceptions of their involvement in adolescent or young adult’s (AYA) care. The goal of the Adolescent Health Consortium (AHC) was to improve understanding and delivery of confidential and clinical preventive services for AYA. This mixed-methods analysis explores parents’ perspectives of their role in facilitating AYA’s receipt of confidential care or private time with a healthcare provider.

Methods: We conducted four focus groups in 2015 of parents of AYA (n=33) from NYC, Denver, Washington DC and Chicago addressing adolescent/provider private time, confidential care for AYA, awareness of clinical preventive services and sources of health information. In 2016, we surveyed a nationally representative sample of 1209 adolescents (13-18) and their parents. Domains were based on prior research and preliminary focus group findings. Thematic analysis and bivariate models were used for the qualitative and quantitative data, respectively.

Results: Key qualitative themes included: (1) parental understanding of/agreement with professional and state guidelines for AYA private time and confidentiality, (2) parental assessment of the appropriateness (based on age, risk assessment, relationship with provider) of AYA confidential care and (3) parental support of their child as they transition to independent care use. In the survey, 90.0% of parents strongly or somewhat agreed that they wanted to be present during their AYA’s care to provide support and advice. Parents (73.4%) endorsed wanting to be at healthcare visits to protect their adolescent and agreed (66.3%) that private conversations would encourage their adolescent to take responsibility for their health. Black and Hispanic race and perception of low AYA risk perception (sex and alcohol) were significantly associated (p values all < 0.01) with parents who ‘strongly agree’ with wanting to be present at the visit for support and advice. Black and Hispanic race, lower income, parent of young AYA [13-14] and perception of low AYA medical and behavioral risk behavior were significantly associated (p values all <.05) with wanting to be present for protection of AYA. Black and Hispanic race, higher income, parents of older AYA [17-18] and perception of high AYA risk behavior were also significantly associated (p-values all <.04) with believing private conversations could encourage AYA responsibility.

Conclusions: This study aids our understanding of parents’ considerations with regard to their role in AYA’s healthcare. Parents want to be able to make individual decisions about their involvement in their AYA’s care. These may be driven by parental perception of the support and protection the AYA needs and their AYA’s ability to navigate healthcare on their own. In addition to assuring that parents know and understand care guidelines, providers must address the parent’s desired role in their AYA’s healthcare. Acknowledging parental concerns about not being present or about their AYA’s ability to navigate care will help forge partnerships with parents that are critical to providing quality confidential care and private time for AYA.

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CONSCIENTIOUS OBJECTION BY PRIMARY CARE TRAINEE AND FACULTY PHYSICIANS IN AN APPALACHIAN HEALTH CARE SYSTEM

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Purpose: Refusal to provide medically appropriate care due to strongly held religious or moral beliefs, often called “conscientious objection,” is controversial. The refusal impacts reproductive health and care for gender minorities. This can be particularly restrictive for adolescents and young adults who may have limited access to care, and where the balance of power in the physician-patient relationship may be more pronounced. This study aimed to characterize primary care physicians’ objections to medically appropriate care in a single academic medical center and identify if these objections were associated with religiosity or level of training.

Methods: A 17-question survey, partially based on preexisting instruments, was distributed to the resident and faculty physicians practicing in primary care at an academic institution in Appalachia providing care to a rural and medically underserved population. An investigator-designed religiosity score was calculated using six questions about religious beliefs and practices. Descriptive statistics were calculated to characterize the sample; χ\textsuperscript{2} and Fisher exact tests assessed for differences in religious objections to specific types of medical care by religious beliefs and training level.

Results: A total of 119 physicians participated in the survey (50% trainees). Half were female and the majority identified their training as internal medicine (45%) or pediatrics (23%). The majority identified as being Catholic, Christian, or Protestant, (29%, 22%, 11%, respectively), while 18% indicated having no religious affiliation. Most (66%) identified as white. Using the calculated religiosity score, 42% were “highly religious,” 37% were “moderately religious,” and 21% were “minimally religious.” Compared to 0% of the “minimally” or “moderately” religious participants, 17% of those who were “highly religious” had an objection to prescribing emergency contraception to adults (p<.01) and adolescents (with and without parental knowledge p<.01, respectively). One in five of “highly religious” participants objected to prescribing cross sex hormones to transgender adults (p=0.01) and transgender adolescents (p<.01) compared to 0-2% objection from “minimally” and “moderately” religious participants. Being classified as “highly religious” was also associated with objecting to all presented scenarios for abortion (including <20 weeks gestation, following sexual assault, and in a minor with parental notification) (all p<0.0001). Significantly more trainees than faculty physicians were undecided about telling patients upon establishing care if they had religious or moral objections to medically indicated treatments (24% versus 5%, p=0.03), and to not feel obligated to explain their objections (58% versus 30%, p=0.01). Most physicians felt they had an obligation to present all options for treatment (96%) and to refer to a colleague willing to provide treatments to which they objected (95%).

Conclusions: This study suggests a strong link between personal religiosity and conscientious objection in clinical practice. Nearly all study participants felt there was an ethical obligation to present all options and refer to another willing provider; this proportion was slightly larger than previous studies. The prevalence of conscientious objection continues to be of concern, particularly in rural and medically underserved areas where adolescents, young adults, and others with limited access may be denied medically appropriate care due to lack of willing providers.

Sources of Support: None
COMMUNITY-BASED PARTICIPATORY RESEARCH AS POSITIVE YOUTH DEVELOPMENT FOR ADOLESCENTS: FINDINGS FROM THE ATLANTA YOUTH RESEARCH COALITION PROJECT

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Purpose: African-American (AA) adolescents experience multiple health disparities impacting numerous health outcomes (e.g., HIV, reproductive, asthma, obesity), but they are often only superficially, if at all, engaged by adolescent health researchers in the research process. Community-based participatory research (CBPR) can meaningfully engage adolescents in youth-driven research. Through engagement in adolescent health research, CBPR may also function as a positive youth development (PYD) program and enhance PYD outcomes (e.g., Confidence, Competence, Contribution). Meaningful participation in the research process may also enhance trust in medical research. The Atlanta Youth Research Coalition (AYRC) was a 2-year CBPR project for AA adolescents in Atlanta, GA. We examined the extent to which AYRC participation influenced Youth Board (YB) members PYD outcomes and increased their trust in medical research.

Methods: The YB consisted of 12 AA adolescents recruited through high schools and youth organizations (mean age: 15.40, sd=0.97). Most were in 10th (n=4) or 11th grade (n=5). YB members participated in quantitative surveys (pre- and post-project) and qualitative interviews (post-project). Semi-structured interviews sought to evaluate YB experiences with the program. Interviews were recorded and detailed notes were taken on each of the recordings. NVivo software was used for coding (deductive and inductive codes) and thematic analysis; intercoder agreement was reached. The survey included the 12-item Trust in Medical Researchers Scale (possible score=0-48; higher scores indicate greater trust). Quantitative data was analyzed in SPSS using descriptive statistics and paired t-tests.

Results: Survey results revealed a significant increase in trust in medical researchers among the YB from pre- to post-project (pre mean=28.63, sd=6.10; post mean=32.36, sd=7.15, t=−2.471, df=10, p=.033). From the interviews, seven primary themes emerged across participants that suggest PYD outcomes increased because of participation. Connection: The majority of the YB expressed that they gained confidence talking to adults, conducting research, and expressing their opinions and beliefs. Competence: YB members expressed that they learned new skills in research, teamwork, and communication throughout the project. Character: Many YB members expressed that their participation in AYRC informed how they will practice ethical research and treat others in their daily lives outside of AYRC. Caring: YB members empathized with adolescents who were not receiving adequate sex education (the focus of their community needs assessment), and realized this not only affect individuals, but also the community at large. Contribution: YB members expressed participation in this program was rewarding because it allowed them to affect change in their community. PYD through CBPR: Many YB members were excited to be involved in the research process and felt empowered by their role as key stakeholders.

Conclusions: Our findings suggest that AYRC had a strong, positive impact on the youth involved. The YB experienced overall greater trust in medical research and positive changes in PYD after participating in AYRC. Findings highlight how meaningfully engaging youth in research can strengthen developmental assets in youth participants as they contribute to improving adolescent health.

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**ADOLESCENT MALE PARENTHOOD AND ROUTINE HEALTHCARE**
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**Purpose:** Adolescent males have health concerns similar to adolescent females, but are less likely to be seen in clinical settings. There is increasing interest in adolescent male access, knowledge and comfort with seeking health care. Feelings of invincibility and comfort with health discussions have been identified as some reasons for low utilization. Adolescent fathers are faced with the developmental tasks of adolescence in addition to the stressors that being a young father entails. Adolescent fathers in particular are at elevated risk for poor physical and mental health outcomes, likely related to the social and contextual factors that contribute to their likelihood of young fatherhood. Little is known about the influence of adolescent fatherhood on health care utilization. The purpose of this study is to describe the association of routine physical care by adolescent males with and without children.

**Methods:** This analysis is based on interview data of 15-21 year old males from the National Survey of Family Growth (NSFG). The NSFG is based on a national multistage probability sample design to represent noninstitutionalized individuals. The primary outcome variable was reported routine physical in the last 12 months. Predictors included having a biologic child, continuous health insurance coverage (last 12 months), race/ethnicity, poverty level and preventive health attitudes. Descriptive statistics were used to describe adolescent male characteristics. Unadjusted and adjusted logistic regression models were used to assess associations between adolescent fatherhood and reported routine physical care.

**Results:** Of the 1504 adolescent males, 49 (3%) had a biological child. These males were predominately Hispanic (44%) and had income 100-499% above the poverty level (54%). Nearly half (51%) of adolescents with children had continuous health coverage for the last 12 months and nearly one third (27%) had received a routine physical in the last 12 months. Adolescent fatherhood was an important predictor for routine physical care in unadjusted and adjusted analysis [OR=0.21, (95% CI 0.1-0.44); AOR=0.47, (95% CI 0.25-0.88)]. Having a biologic child [AOR=0.47, (95% CI 0.25-0.88)], older adolescents age 18-21 years [AOR=0.46, (95% CI, 0.33-0.64)], health insurance coverage interruption [AOR=0.27, (95% CI 0.19-0.41)] and poor preventive health attitudes [AOR=0.28, (95% CI 0.19-0.40)] were associated with reduced odds of having a routine physical in the last 12 months.

**Conclusions:** In this nationally representative sample, adolescent males with biologic children were less likely to have received a routine physical in the last year even after adjusting for age and health care coverage. This is despite the fact that those with children had views more supportive of preventive health. Adolescent fathers may be a special population of young men who experience marginalization and decreased exposure to health services. Identifying young fathers, establishing additional points of contact for access to care (including infant well visits) and requiring a welcoming healthcare system have the potential to reduce negative health outcomes. Additionally, strategies to address cultural and gender norms related to preventive health among adolescent males are needed.

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HOSPITAL AVAILABILITY OF EMERGENCY CONTRACEPTION FOR TEXAS ADOLESCENTS
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Purpose: Texas has the 5th highest teen pregnancy rate and the 1st highest repeat teen pregnancy rate in the United States. Access to confidential contraceptive services in the state is often challenging. Therefore, emergency contraception (EC) is an invaluable resource for teen pregnancy prevention. A prior study of community pharmacies in Texas showed variable EC availability and inadequate pharmacy staff knowledge of EC. The purpose of this study was to evaluate availability of EC in Texas hospitals providing care for adolescents and to assess hospital pharmacists’ knowledge of EC.

Methods: A list of Texas hospitals was obtained from the American Hospital Directory. Those hospitals admitting patients under the age of 18 to inpatient care were included in the study. The hospital pharmacy was contacted by phone and verbal consent for participation was obtained. A series of 8 questions regarding EC availability and knowledge were asked. Data were recorded and stored securely using RedCap. Data were de-identified with the exception of zip code. Descriptive statistics and frequencies were calculated. A chi-square test of independence was used to test if EC availability, age requirement, or pharmacist knowledge varied by hospital type.

Results: Of 170 hospitals meeting inclusion criteria, 77 pharmacists (45%) verbally consented to participate and answered at least 1 question about EC. Of these, 78% represented primarily adult hospitals admitting pediatric patients, 12% were free-standing children’s hospitals and 10% were psychiatric hospitals. EC was available to be administered for any purpose (not just cases of suspected sexual abuse) in 26% of emergency rooms and 22% of inpatient units. The availability of EC did not vary significantly by hospital type (free-standing children’s hospitals, adult hospitals admitting patients under the age of 18, or psychiatric hospital) (p=0.93 for inpatient availability, p=0.53 for ER availability). Nearly all hospitals with EC availability had levonorgestrel on formulary (97%), though only 40% of those hospitals did not require parental consent to dispense EC to patients under 18 years of age. This finding was significantly different between hospital types as all psychiatric hospitals required parental consent (p=0.025). For hospitals with EC available in the ER, none of them reported patients receiving medication counseling prior to being discharged from the ER. Statewide, only 19% of inpatient pharmacists recognized that there might be a weight limitation with use of LNG EC, and only 5% correctly stated that it could be used up to 120 hours after unprotected intercourse.

Conclusions: Despite EC being available over-the-counter and without an age requirement for purchase, multiple barriers exist for Texas adolescents seeking EC in the inpatient and emergency room setting. These barriers include limited availability of the medication for non-sexual assault situations and the requirement of parental consent for administration of the medication. Additionally, pharmacist knowledge of EC is limited, and pharmacy medication counseling is rarely required. While preliminary, results of this study reveal a need to proactively educate patients and hospital pharmacists regarding EC.

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HPV VACCINATION QUALITY IMPROVEMENT EFFORT AT AN URBAN UNIVERSITY: A NOVEL SETTING TO INCREASE VACCINATION UPTAKE

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Purpose: Indiana has below national average HPV vaccination rates, and above average rates of HPV-related cancers. Of particular concern is the low vaccine uptake for males, with Indiana ranking last in the country. The HPV vaccine is recommended to all 11 and 12 year olds, but can be given up to age 26. While prior efforts to increase uptake in Indiana have focused on younger ages, there is a need to increase HPV vaccination in those aged 13-26, particularly males. University campuses are an opportune setting to address this issue, especially given that most students are over age 18 and able to consent. This quality improvement project aims to increase HPV vaccination on a large urban university campus.

Methods: This project is a collaboration between our team, campus health, campus administration, the Indiana State Department of Health, regional non-profit organizations, and student leaders from various organizations on campus. This is a three tiered effort: a) theory-informed education and promotion about HPV and the vaccine through digital and paper posters placed around campus encouraging students to visit campus health to get vaccinated, b) training all staff at campus health on how to answer questions about, and give a strong recommendation for, HPV vaccination, c) a text message reminder system for subsequent vaccine dose reminders. This project was deemed IRB exempt. The intervention period will run for 6 months; HPV vaccination uptake (dose 1) and adherence (doses 2 and 3) are being tracked through campus health clinic records and Indiana’s immunization registry. Descriptive statistics have been performed on the data using SPSS.

Results: In the first three weeks, 120 students were vaccinated in campus health clinics, representing a 900% increase in campus HPV vaccinations from the same period in 2017. State vaccine registry data revealed that during this period an additional 24 were vaccinated outside of campus health. These 144 vaccinees were comprised of 53.5% women, 43.1% men, 3.4% unknown, with a mean age of 23.2 years. Additionally, 64.6% were receiving their first dose, 16.7% their second dose, 14.6% their third dose, and 4.2% unknown. 75.8% of men vaccinated during this period were receiving their first dose, compared to 53.2% of women. The project and data collection is ongoing through September 30, 2018.

Conclusions: This ongoing quality improvement project represents a successful effort to increase HPV vaccination on a college campus by targeting eligible young adults. Our preliminary results reveal that while slightly more women than men got vaccinated during our initial campaign phase, results also show that three fourths of the men getting vaccinated were starting their first dose, compared to only about half of the women vaccinees starting their first dose, suggesting that this campaign may be particularly effective at encouraging men to start the vaccine series. The three components of the effort represent a novel approach to educate students on the importance of HPV vaccination, motivate them to get vaccinated, and encourage timely follow up for subsequent doses; a model that could be replicated on other college campuses.

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