TRANSITIONING ADOLESCENTS WITH HIV TO ADULT CARE: EXAMINING PROCESSES AT TWELVE ADOLESCENT MEDICINE CLINICS

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Purpose: The provision of uninterrupted care as youth with HIV transition from pediatric and adolescent to adult HIV care is essential as disengagement from care has implications for an individual’s HIV-related and overall health and with the demonstration that treatment can serve as a means of prevention, the health of the broader community. Accordingly, this study examined the transition processes and protocols that exist across twelve clinics within the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN).

Methods: As part of a larger multi-method Care Initiative program evaluation, we completed three annual visits at each site from 2010–2012 and conducted 178 semi-structured interviews (Baseline n=64, Year 1 n=60, Year 2=54) with clinical and program staff (e.g., physicians, nurses, social workers, case managers). Interview data were analyzed using the constant comparative method with particular attention given to the alignment with the recent American Academy of Pediatrics transition recommendations that include: developing formal written protocols, timelines, and evaluation plans; introducing adolescents to transition early and providing individualized pre-transition preparation with youth; initiating transition between ages 18-25 that includes visits to adult clinics and data sharing (e.g., medical/health records) between adolescent and adult clinics; and the evaluation of transition outcomes for youth (e.g., care engagement and viral loads).

Results: Participants discussed the importance and challenges of transition from adolescent to adult care for both behaviorally and perinatally infected adolescents, highlighted by: “Adolescent care means that we are going to hold their hand a little longer than if they walk into an adult [clinic], the [adult providers] not going to have this patience”. The results correspond with AAP transition guidelines. Formal protocols: Sites had varying levels of formal transition protocols – 4 with formal written protocols and 6 with informal but detailed processes influenced by the location of transition (e.g., new physical space, same space with new provider). Transition preparation: Staff focused on life skills development (e.g., medication management, insurance documentation, budget) to prepare youth for transition, Adult clinic connection: Sites used a variety of strategies (e.g., site visits to adult clinics, adult provider working in adolescent clinic one day per week) to connect youth to adult clinics. Transition evaluation: Sites identified necessary components (e.g., inter-clinic data sharing) for evaluating transition outcomes (e.g., appointment adherence).

Conclusions: Creating a seamless transition process for adolescents with HIV is especially important given the intersecting identities and stigmas often associated with the disease. Transitioning HIV-positive youth involves targeting behavioral and biological factors as well as provider and system-level
issues. Addressing key factors is essential for developing streamlined, comprehensive, and context-specific transition protocols. Adolescent and adult HIV clinic collaboration is essential to reduce service fragmentation, provide coordinated care, and support individual and community level health.

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MEDICAL HOMES FOR DETAINED YOUTH
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Purpose: Youth in the juvenile justice system are a unique population with complex and varied health needs. Many have undiagnosed or poorly managed health conditions and often lack primary care physicians or medical homes. While guidelines stress the need for continuity of care during and after admission to the juvenile justice system, to our knowledge, no current program exists for transitioning care for detained youth. We conducted a three part needs assessment including detainee and guardian surveys, focus groups, and community asset mapping. The needs assessment guided partnership among community clinics, and formalization of a transition plan upon release from detention.

Methods: We conducted surveys among detained youth and their guardians in a large urban juvenile detention center in the Southwestern United States from January 2014 to July 2014. The surveys assessed health needs, mental health needs, care prior to detention and perceived barriers to care. Based on our results we held focus groups with guardians, youth, probation officers, and social services. Concurrently, we identified and surveyed area health care clinics to determine if they met AAP guidelines for medical homes. Next, we created a community asset map of the locations of these clinics and linked them with the zip codes of the detained youths’ discharge locations. Finally, we contacted medical homes in high need areas and formalized the transition plan for youth upon release from detention.

Results: We interviewed 97 guardians and 368 youth. Average age of the youth was 15.2 years (range 10 – 17 years) with 81% male, 52% black, 30% Hispanic, and 18% white. 75% of youth reported having medical insurance and 58% reported having a medical home. The majority of those surveyed (58%) reported mental health needs. Guardian surveys mirrored youth responses and focus groups highlighted additional barriers including inconvenient clinic hours, lack of insurance, and youth refusing to attend clinic visits. We identified 402 area clinics; 170 clinics saw teens and 94 served the needs of youth post-detention. We generated several maps with the release location of detained youth and the 94 teen medical clinics. We assisted the juvenile justice center in creating a medical discharge summary for families and providers, and connected youth with area clinics upon release using the maps.

Conclusions: Conducting a needs assessment allowed medical providers in the juvenile justice center to assess barriers to health care and plan transition of medical care upon youths’ release. While the majority of youth reported having insurance, fewer reported having a medical home. The maps enabled
us to create a link between the addresses of juvenile detainees upon release and suitable medical homes, and to partner with the justice center to formalize the process of providing continuity of care for the youth. We plan to develop partnerships with the youth medical homes we identified in the community to facilitate coordinated transfer of care once youth are discharged from detention. Other juvenile justice centers may benefit from community asset mapping and creating a formal discharge transition plan once youth are released.

Sources of Support: AAP CATCH Planning Grant

32.

COST AND HEALTH CARE UTILIZATION FOR ADOLESCENT AND YOUNG ADULT PATIENTS WITH SPECIAL HEALTH CARE NEEDS ONE YEAR BEFORE AND ONE YEAR AFTER ENROLLMENT INTO A RANDOMIZED HEALTH CARE TRANSITION CARE COORDINATION TRIAL

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Purpose: Transitions from one setting to another often lack coordination. Evidence shows these gaps in coordination contribute to unnecessary health services, increased spending and poor care quality. We sought to quantify the cost and health care utilization impact of a health care transition (HCT) care coordination intervention.

Methods: 210 patients ages 16-22 years old (mean 18.9 +/-1.7 years) insured by a DC-based Medicaid managed care organization for SSI-eligible youth with chronic conditions were included. All youth were participating a randomized controlled HCT care coordination intervention and were receiving primary care in an urban academic adolescent health clinic within a pediatric tertiary hospital. Following enrollment and baseline data collection, 105 participants were randomized to the HCT care coordination intervention group, and the other 105 were randomized to the control group. Patients were stratified as having low, medium, or high care coordination needs at baseline using a standardized instrument. Administrative insurance data was analyzed to quantify annual cost and health care utilization (inpatient medical, inpatient mental health, outpatient services, and ER visits). We compared cost and health care utilization for intervention and control patients during a 1-year period after study enrollment. We used a paired t-test to evaluate before vs after intervention changes in total cost of services by age group and by level of care coordination needs. Poisson Regression analysis was used to compare the frequency/rate and relative risk (RR) of visits taking into account age and care coordination needs as well as the correlation between annual assessments on the same person.

Results: Among 19-22 year olds in the intervention group, there was a statistically significant change in health care utilization in the year after enrollment with decreased inpatient hospitalizations (3.5 vs 2.0 visits/patient/year, RR 0.56, p=0.004), outpatient service visits (6.4 vs 3.9 visits/patient/year, RR 0.61, p=0.033), and ER visits (5.3 vs 3.0 visits/patient/year, RR 0.60, p=0.001). There was an increase in inpatient mental health admissions among intervention patients in the year after enrollment (1.0 vs 3.8 admissions/person/year, RR 6.5, p=0.002). Comparing control and intervention groups in the year after
enrollment, yearly cost for intervention patients was significantly lower for the 19-22 year old age group with high care coordination needs (mean of $32.8 vs $6.4 thousand/patient/year, p=0.04). While inpatient mental health hospitalizations were high for both groups, the intervention group aged 19-22 years had significantly more visits per year (2.2 vs 1.8 visits/patient/year, RR 1.3 p=0.009). There were no appreciable decreases in cost the year after enrollment for patients randomized to the intervention group compared with the year before.

**Conclusions:** This intervention decreased cost and health care utilization the year after enrollment among youth aged 19-22 years old with high care coordination needs. Increased mental health inpatient visits by intervention patients may be due to improved health services engagement and access. Given limited resources, targeting HCT care coordination interventions for older aged adolescents/young adults and individuals with high care coordination needs may have the most impact on health services-related outcomes.

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**LET’S GET MOTIVATED!: IDENTIFYING WHAT FACILITATES YOUTH’S MOTIVATION FOR LEARNING ABOUT HEALTH SELF-MANAGEMENT**

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**Purpose:** In this study we focused on youth’s perceptions of healthcare providers as potential motivational supports in learning how to self-manage their health and healthcare needs. As youth transition to adulthood, they need to know how to communicate with healthcare providers, who to call when sick, and when it is necessary to call a healthcare provider. In this study we tested the universality of basic psychological needs in facilitating motivation for learning about health management among youth with varying degrees of mobility limitations (ML). That is, we wanted to determine whether autonomy, relatedness, and or competence, would be more or less important for one group of youth, than for others.

**Methods:** Data come from the MyPath project, a longitudinal study that investigates the transition from pediatric to adult centered healthcare for youth with and without ML. The community-based sample from the Midwest includes 352 young people with severe (n=67), moderate (n=84), and little to no (n=201) mobility limitations (ML) between the ages of 16 and 24. Participants completed an online survey at baseline and at 18 months following enrollment. Predictor variables were measured at baseline and include healthcare autonomy (4-items, α= .81), health competence (6-items, α= .85), and relatedness (4-items, α= .82). The dependent variable, motivation for learning about self-management (5-items, α= .87), was measured at 18 months. Covariates included age, sex, geographic location, maternal education level, and assistive equipment use. We employed a multigroup path analysis comparing three groups of youth: no ML, moderate ML and severe ML.

**Results:** Results from the multigroup path analysis revealed that the model was invariant between the
three groups. The path coefficients from autonomy to motivation and relatedness to motivation were only significant for youth with severe ML. Results indicate the invariance constraints on autonomy to motivation were significant $\chi^2(2) = 17.750, p = .001$, as were relatedness to motivation, $\chi^2(2) = 8.265, p = .016$. Although path coefficients were different for competence, the path was not significantly different.

**Conclusions:** Results from our study show that for youth with severe ML, autonomy matters, as does relatedness. For youth with severe ML, their sense of control in their interactions in the healthcare environment and sense of freedom of health-related choice facilitates their motivation to learn about health self-management. Additionally, relatedness had a surprisingly negative effect on motivation for youth with severe ML—it impeded youth’s motivation for learning about health self-management. The more belonging or affiliated youth felt to healthcare providers, the less motivated they were in learning how to manage their healthcare. Motivation for learning about health self-management is critical as youth are expected to manage their health and healthcare needs in adulthood; and knowing what facilitates or impedes this motivation can help providers in developing effective interventions. As we develop programs that teach youth about the healthcare transition and engage them in transition related conversations we need also to be examining their motivation to learn such information.

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**A SCHOOL-BASED HEALTH PROMOTION PROGRAM TO PROMOTE PHYSICAL ACTIVITY AMONG YOUNG ADOLESCENTS IN HONG KONG**


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**Purpose:** Despite the strong evidence for the benefits of physical activity on the health and development of young people, the majority of the Hong Kong adolescents have sedentary lifestyles. A recent study found that less than 10% of teens engaged in 60 minutes or more of physical activity per day. There are tremendous barriers to promoting physical activity among students in Hong Kong, including pressure to perform well academically and lack of open space. In addition, students with low socioeconomic background may have limited opportunities to engage in regular physical activity. The aim of this study was to promote an active lifestyle and positive development among Hong Kong adolescents through a structured school-based physical activity program.

**Methods:** A quasi-experimental study design was used. Focus group discussions and in-depth interviews were conducted among teachers, students and parents. Information was used to develop an 18-week program with health education workshops and skill-training sessions (rope skipping, street dancing and martial arts). The intervention program was conducted in two schools with lower socioeconomic background and academic performance. The program was implemented as part of regular PE lessons in
one school and as an after-school program in another. Students in two other schools located in the same geographical area with comparable socio-demographic background and academic performance were used as controls. Students in the control schools received the usual PE curriculum during the program period. A total of 396 boys and girls (aged 12-17) were enrolled in the study. Program effectiveness was assessed by comparing the changes in selected physical and psychosocial parameters including BMI, physical fitness, self-reported physical activity level, attitudes towards physical activity, self-esteem, self-efficacy, and school connectedness before and after the program. Focus group discussions with participants and a teacher survey were also conducted upon completion of the program.

Results: Baseline data showed that 54.4% of the students did not meet the WHO recommendation on physical activity. Preliminary data analyses found significant improvement in some physical fitness parameters (grip test \( p=0.001 \) and curl up \( p<0.001 \)) among participants. Furthermore, there was a significant increase in certain aspects of physical self-perception, including physical activity \( (p=0.006) \), sports competence \( (p=0.004) \), appearance \( (p=0.048) \), endurance \( (p=0.004) \) and perceived social support for physical activity from friends \( (p=0.035) \) among male participants. Post-study focus group discussions indicated that participants overall liked the program and many expressed interest in trying a new sport.

Teachers recommended incorporating the program into school curriculum, providing a greater variety of options to students for physical activity at school and increasing their access to sports facilities during school time.

Conclusions: This study explored the feasibility of a school-based approach to promote physical activity among Hong Kong adolescents. Preliminary evaluation shows that the program was effective in improving certain aspects of physical fitness, physical self-perceptions, and perceived social support regarding physical activity. Further study is needed to assess the longer term sustainability and effectiveness of these strategies to promote physical activity among adolescents in school setting.

Sources of Support: This project is supported by the Freddy Zimmern Sports Foundation.

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DOES A MOTIVATIONAL LIFESTYLE INTERVENTION (THE HEALTHY EATING AND LIFESTYLE PROGRAMME (HELP)) WORK FOR OBESE YOUNG PEOPLE
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Purpose: To assess whether a motivational multi-component lifestyle intervention delivered in the community was effective in reducing body mass index (BMI) and improving related health outcomes in obese adolescents.

Methods: 174 obese adolescents (13-17 years old; 109 females) from a community setting in London (UK) were randomised into intervention or control arms. Intervention participants received 12 HELP
sessions (45 minutes each) across 6 months, addressing lifestyle behaviours (e.g. physical activity, healthy eating and emotional eating) and focusing on motivation to change and self-esteem rather than weight change. The intervention was delivered by trained Graduate Health Workers at local community settings. Control participants received a single 2 hour nurse-delivered session providing didactic weight management advice. The primary outcome was BMI change at 6 months. Secondary outcomes included body fat (bioelectrical impedance; Tanita BC-418MA), dieting behaviours (EAT-26), self-esteem (Rosenberg scale) and quality of life (adolescent- and parent-reported Impact of Weight on Quality of life scale (IWQOL)). Random-effects linear regression (with multiple imputation for missing outcomes) was used to detect differences in end-point outcomes between Intervention and control groups, adjusting for sex, age, and outcome value at the beginning of the intervention. The primary analyses used the intention to treat sample. Sensitivity analyses were also carried out using complete case analyses and Complier Average Causal Effects (CACE) analyses. Fidelity monitoring and qualitative process evaluations were carried out.

**Results:** 145 (83.3%) adolescents completed the intervention and 29 adolescents withdrew during the study. Mean BMI across the whole group was 32.3 kg/m² (SD 4.4) at start and 32.6 kg/m² (SD 4.7) at the end of the intervention. We found no significant difference in the primary outcome, BMI at 6 months: effect estimate -0.06 (95% CI: -0.57 to 0.45) p=0.8). The CACE estimate for primary outcome was similarly non-significant: -0.07 (-0.71 to 0.56) p=0.8. No significant differences were observed for changes in secondary outcomes including BMI z-score, fat mass, self-esteem, eating behaviours, or quality of life (all p>0.4) between intervention and control groups 6 months. Fidelity monitoring showed moderately strong fidelity to intervention delivery. The process evaluation found that participants and their families found the intervention highly engaging, respectful and helpful in making reported behavioural changes.

**Conclusions:** We did not find evidence that a motivational multi-component lifestyle modification intervention delivered in the community was effective in reducing BMI or improving obesity related health and well-being outcomes in a community sample of obese adolescents, despite moderately strong fidelity and process evidence that young people used the intervention to make changes in their lifestyle. We are currently investigating outcomes at 12 months after the intervention. Our findings suggest that obesity interventions with a strong theoretical basis and evidence of effectiveness when delivered by trained psychologists may not be effective when delivered at lower intensity in the community by entry-level health workers.