

observed in the proportion of HIV/ID specialists who answered all assessment questions correctly (5% pre vs. 68% post; $P < 0.0001$; $V = 0.397$). Improvements were also observed in several specific areas of assessment (table). Additionally, 43% of HIV/ID specialists indicated they planned to modify their treatment approach among adolescents as a result of participating in the education.

Conclusion. Participation in this online, interactive, case-based, educational intervention significantly improved HIV/ID specialists' ability to develop individualized strategies for adolescents living with HIV. These findings highlight the positive impact of well-designed online education.

Assessment of Educational Effectiveness			
Area of Assessment	% relative improvement (% of ID specialists selecting the correct response at pre- vs post-assessment)	P-value for change	Cramer's V for the magnitude of the change
Performing the appropriate evaluation and assessment for an adolescent who is re-entering care and had discontinued antiretroviral (ARV) therapy nearly a year prior	15% improvement (75% vs 86%)	$P < .0001$	$V = .144$ (Noticeable)
Selecting an ARV regimen informed by prior treatment history, resistance testing results, and contraceptive use	213% improvement (26% vs 83%)	$P < .0001$	$V = .565$ (Extensive)
Recognizing that treatment with INSTI-based regimen often results in an initial mild elevation in serum creatinine levels, which plateaus within the first month	95% improvement (46% vs 90%)	$P < .0001$	$V = .467$ (Extensive)

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2528. Inflammation and Plasma Selenium and Chromium in Ugandan Children Living with HIV

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Background. Selenium deficiency has been reported to be associated with HIV disease progression and chromium deficiency with insulin resistance and hyperlipidemia. Here, we assessed selenium and chromium status in a cohort of Ugandan HIV+, HIV exposed uninfected (HEU) and HIV negative (HIV-) children and their associations with markers of systemic inflammation, immune activation, and gut integrity.

Methods. This is a cross-sectional study in HIV+, HEU and HIV unexposed uninfected (HIV-) children aged 2–10 years old enrolled in Uganda. HIV+ children were on stable ART with undetectable viral load. We measured plasma concentrations of selenium and chromium as well as markers of systemic inflammation, monocyte activation, gut integrity and insulin resistance (HOMA-IR).

Results. Among HIV+ children ($n = 57$), 93% had viral load ≤ 20 copies/mL, mean CD4 was 34% and 77% were receiving a non-nucleotide reverse transcriptase regimen. Mean age of all participants was 7 years and 55% were girls. Mean selenium concentrations were higher in the HIV+ group (106 $\mu\text{g/L}$) compared with the HEU (84 $\mu\text{g/L}$) and HIV- (98 $\mu\text{g/L}$) groups (p). Mean chromium concentrations were 1 $\mu\text{g/L}$; 1 HIV+ child and 6 HEU children had chromium levels $> 1 \mu\text{g/L}$ (p).

Conclusion. In this cohort of HIV+ children on ART in Uganda, plasma selenium and chromium concentrations appear sufficient. Higher plasma selenium concentrations were associated with lower systemic inflammation and higher gut integrity markers. Although our findings do not support the use of selenium supplementation broadly for HIV-infected children in Uganda, further studies are warranted to assess the role of selenium supplements in attenuating heightened inflammation.

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2529. Child HIV Exposure and CMV Seroprevalence in Botswana: No Associations with 24-Month Growth and Neurodevelopment

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Background. HIV-exposed but uninfected (HEU) children are at increased risk for poorer growth outcomes compared with HIV-unexposed/uninfected (HUU) children. Mechanisms underlying the poorer growth and delays in development of HEU children compared HUU children are not fully understood. We sought to define the relationship between child CMV status and HIV- exposure status and determine if a correlation existed between CMV status and growth (and neurodevelopmental) outcomes by 24 months of age in Botswana.

Methods. We used existing data and samples from the observational Botswana Tshipidi study, pregnant women living with HIV (WLHIV) and those without HIV, as well as their infants were enrolled and followed prospectively through 2 years post-partum. We tested 18-month child plasma samples from all available children for anti-HCMV IgG. We evaluated the association between positive (vs. negative) child CMV status at 18 months, and child growth, using the World Health Organization's Growth Standard adjusted for age and sex and neurodevelopment at 24 months of age, using the Bayley Scales of Child Development (BSID) III.

Results. Of 317 children tested for CMV IgG at 18 months, 215 (67.8%) tested positive. Significantly higher proportions of HUU children had positive CMV serology (82.6%) compared with HEU children (47.4%, $P < 0.01$); 96.7% of HUU vs. 10.5% of HEU children breastfed. Child CMV infection was not associated with head circumference, weight-for-age, weight-for-height, nor height-for-age z-scores at 24 months. BSID III scores in receptive and expressive language, fine and gross motor, and cognitive domains at 24 months of age also did not differ by child CMV status.

Conclusion. We observed high rates of CMV seropositivity in 18-month-old children in Botswana with significantly higher CMV seropositivity among HUU children likely owing to breastfeeding. Positive CMV serostatus was not associated with child growth or neurodevelopmental outcomes at 24 months.

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2530. TACO Tuesday as a Medical Education Tool

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Background. Novel strategies in medical education including the flipped classroom, test-enhanced learning, and gaming have proven to be effective for preclinical learners but little is known about their efficacy in post-graduate education. We implemented an educational tool in our Infectious Diseases (ID) Fellowship Training program called TACO (To Assess Cognitive Operations) Tuesday that utilizes aspects of the flipped classroom, test-enhanced learning, and gaming to improve ID fellow engagement, satisfaction, knowledge retention, and board examination preparation in association with a weekly ID core didactic curriculum.

Methods. One to three multiple choice clinical vignettes were emailed to ID fellows the day prior to their weekly didactic lecture. The first fellow to answer all questions correctly was the winner for the week. The correct answer choices along with detailed rationales were distributed to all fellows at the end of the week. After one year of using this educational tool, we surveyed fellows to evaluate its impact on their engagement with the weekly didactic sessions, self-perception of content retention, and sense of preparation for the ID board examination.

Results. We had a response rate of 82% with 9 of 11 fellows polled participating. Of those, two-thirds attempted to answer the multiple-choice questions prior to lecture and most (77%) reviewed the correct answer choices and rationales weekly. All participants felt the educational tool helped improve their engagement with the lectures and half felt it increased overall satisfaction with their educational experience. The majority felt the tool increased content retention and their level of preparation for the ID board examination. Implementation of this tool was associated with a higher mean IDSA in-training examination score compared with scores from the previous year (518 vs 469).

Conclusion. ID fellows found that an educational tool utilizing a flipped classroom, test-enhanced learning, and gaming in association with a weekly core didactic curriculum increased their engagement, satisfaction, knowledge retention, and board examination preparation. Future studies will investigate the impact of this tool on knowledge retention and ID board examination scores within our institution as well as across institutions.

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2531. Using Peer-to-Peer Education to Increase Awareness and Uptake of HPV Vaccine Among Chinese International Students

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Background. There are more than one million international college students in the United States. The University of Southern California hosts about 5,000 Chinese International