Delays in the diagnosis of genetic syndromes are common, particularly in low and middle-income countries with limited access to genetic screening services. This study aimed to develop and evaluate a machine learning-based screening technology using facial photographs to evaluate a child's risk of presenting with a genetic syndrome for use at the point of care. The authors found that this genetic screening technology could support early risk stratification at the point of care in global populations, which has the potential accelerate diagnosis and reduce mortality and morbidity through preventive care.
Assessment of Rural-Urban and Geospatial Differences in Perceived Handgun Access and Reported Suicidality Among Youth in Colorado
Spark, TL; Wright-Kelly, E; Ma, M; James, KA; Reid, CE; Brooks-Russell, A
JAMA Network Open

Suicide is the second leading cause of death in adolescents, with firearms the most common method, especially in rural communities. Identifying where to target lethal means safety interventions could better leverage limited resources. The purpose of this study was to understand the associations of rurality, school-level prevalence of easy handgun access, and suicidality measures in Colorado youth, to explore spatial distribution of school-level measures, and to identify communities with high prevalence of both easy handgun access and suicidality. This cross-sectional study used data from the 2019 Healthy Kids Colorado Survey, an anonymous cross-sectional school-based survey conducted at 256 participating Colorado high schools. The study findings suggest that rural-remote communities in Colorado may benefit most from interventions focused on limiting youth access to handguns when youth are in crisis, with some communities at especially high risk. Spatially referenced data may improve targeting interventions to where they are needed most.

Simulated driving performance among daily and occasional cannabis users
Brooks-Russell A; Brown T; Friedman K; Wrobel J; Schwarz J; Dooley G; Ryall KA; Steinhart B; Amioka E; Milavetz G; Wang GS; Kosnett MJ
Accident Analysis & Prevention

Daily cannabis users develop tolerance to some drug effects, but the extent to which this diminishes driving impairment is uncertain. This study compared the impact of acute cannabis use on driving performance in occasional and daily cannabis users using a driving simulator. Driving performance among adults age 25 to 45 with different cannabis use histories were included in this study. Direct contrasts between the occasional users and daily users in standard deviation of lateral placement were not statistically significant. Daily users drove slower after cannabis use as compared to the occasional use group and non-users. The study results do not conclusively establish that occasional users exhibit more driving impairment than daily users when both smoke cannabis ad libitum.

Australian smokers' experiences and perceptions of recessed and firm filter cigarettes
Wakefield, MA; Dunstone, K; Brennan, E; Vittiglia, A; Scollo, M; Durkin, SJ; Hoek, J; Thrasher, J; Hatsukami, D; Benowitz, N; Samet, JM
Tobacco Control

While cigarette filter modifications have long been used to increase product appeal and assuage health concerns, tighter marketing restrictions, including plain packaging, have further spurred the growth of filter variants. This study explored and assessed experiences and perceptions of smokers who had tried and/or currently use recessed filter cigarettes (RFCs) and firm filter cigarettes (FFCs). Exploratory focus groups and a separate survey of Australian smokers were conducted in 2018 and 2019. Smokers in both studies believed these filters may reduce harm and that FFCs increase appeal. RFCs and FFCs undermine plain packaging legislation, which aims to reduce appeal and minimise misperceptions about the relative harms of different tobacco products. Like other filter modifications, these filter variants should be disallowed.
The objective of this study was to evaluate the quality of a multiyear linkage between the Colorado all-payer claims database (APCD) and the Colorado Central Cancer Registry. Data sources included secondary 2012-2017 data from the APCD and the Colorado Cancer Registry. This was a descriptive analysis of the proportion of cases captured by the linkage in relation to the cases reported by the registry. Ninety-three percent of records of the 146,884 patients in the registry were successfully matched. APCD-registry linkages are a promising source of data to conduct population-based research from multiple payers. However, not all payers submit claims, and the quality of the data may vary by state.

Hepatic Fat in Early Childhood Is Independently Associated With Estimated Insulin Resistance: The Healthy Start Study
Cohen, CC; Perng, W; Sundaram, SS; Scherzinger, A; Shankar, K; Dabelea, D
Journal of Clinical Endocrinology & Metabolism

Fatty liver disease is a common metabolic abnormality in adolescents with obesity but remains understudied in early childhood. The objective of this study was to describe hepatic fat deposition in prepubertal children and examine cross-sectional associations with metabolic markers and body composition. Data were from 286 children ages 4 to 8 years old in the Healthy Start Study, a longitudinal prebirth cohort in Colorado. Assessments included magnetic resonance imaging to quantify hepatic and abdominal fats, fasting blood draws to measure metabolic markers, and air displacement plethysmography to measure body composition (fat mass and fat-free mass). While hepatic fat was low in children 4 to 8 years old, it was independently associated with estimated insulin resistance and exhibited sex-specific associations with glucose and triglycerides, suggesting hepatic fat may be an early indicator of metabolic dysfunction in youth.
Pathways Through Which Health Literacy Is Linked to Parental Oral Health Behavior in an American Indian Tribe
Brega, AG; Johnson, RL; Schmiege, SJ; Wilson, AR; Jiang, LH; Albino, J
Annals of Behavioral Medicine

Health literacy (HL) is the ability to find, understand, evaluate and put information to use to improve decision making and, ultimately, improve health and quality of life. Parents with limited HL are less likely to follow recommended parental oral health behaviors. This study tested a theoretical framework designed to clarify mechanisms through which HL may influence parental oral health behavior. The framework proposed that HL: (a) has a direct effect on parental oral health knowledge, beliefs (i.e. self-efficacy; perceived susceptibility, severity, benefits, barriers), and behavior; (b) influences beliefs indirectly through knowledge; and (c) influences behavior indirectly through knowledge and beliefs. The authors found that HL exerted an indirect effect on parental oral health behavior, with knowledge, self-efficacy, and perceived barriers being the primary constructs linking HL to behavior.

Body Composition, Anemia, and Kidney Function among Guatemalan Sugarcane Workers
Krisher, L; Butler-Dawson, J; Schlosser, K; Asensio, C; Sinibaldi, E; Yoder, H; Dexter, L; Daily, M; Pilloni, D; Cruz, A; Jaramillo, D; Newman, LS
Nutrients

Rates of anemia among agricultural workers, who are also at risk for kidney injury and chronic kidney disease of unknown cause (CKDu), are unknown. This study evaluated body composition through the sum of three skinfolds among 203 male sugarcane cutters and assessed the relationship of variables related to nutrition, anemia (hemoglobin < 13 g/dL), and elevated hemoglobin A1c (HbA1c & GE; 5.7%) with estimated glomerular filtration rate (eGFR) using linear regression. The study provided a description of findings, and results will inform future studies examining the role of anemia in the evaluation of CKDu and interventions to improve nutrition for workers in low-resource settings.

Health impacts of a randomized biomass cookstove intervention in northern Ghana
Abdo, M; Kanyomse, E; Alirigia, R; Coffey, ER; Piedrahita, R; Diaz-Sanchez, D; Hagar, Y; Naumenko, DJ; Wiedinmyer, C; Hannigan, MP; Oduro, AR; Dickinson, KL
BMC Public Health

Household air pollution (HAP) from cooking with solid fuels has adverse health effects. REACCTING (Research on Emissions, Air quality, Climate, and Cooking Technologies in Northern Ghana) was a randomized cookstove intervention study that aimed to determine the effects of two types of improved biomass cookstoves on health using self-reported health symptoms and biomarkers of systemic inflammation from dried blood spots for female adult cooks and children, and anthropometric growth measures for children only. The authors found that the REACCTING intervention did not substantially improve the health outcomes examined here, likely due to continued use of traditional stoves, lack of evidence of particulate matter emissions reductions from improved stoves, and mixed results for HAP exposure reductions.
**Maternal depression trajectories and child BMI in a multi-ethnic sample: a latent growth modeling analysis**

Farewell, CV; Donohoe, R; Thayer, Z; Paulson, J; Nicklas, J; Walker, C; Waldie, K; Leiferman, JA

*BMC Pregnancy and Childbirth*

Perinatal (antenatal and postpartum) depression impacts approximately 12% of mothers. Perinatal depression can impact everyday functioning for mothers, and the relationship with, and development of, their children. The purpose of this study was to investigate depression trajectories from the antenatal period through 54-months postpartum and associations with child body mass index at 54-months postpartum. The authors' findings imply that both the physical and mental health of mothers during pregnancy may be important indicators of child growth and development outcomes. Early intervention directed towards women who have even mild depression scores during pregnancy may promote healthy child development outcomes. Additionally, given the heterogeneity of depressive symptoms over time seen in this study, multiple assessment periods across the postpartum period may be valuable to adequately address and support maternal mental health.

**Awareness of Age-Related Change as a Behavioral Determinant of Survival Time in Very Old Age**

Kaspar R; Wahl H; Diehl M

*Frontiers in Psychology*

Although research on the association between subjective views of aging (VOA) and survival is scarce, more negative VOA have been found to be associated with increased all-cause mortality, even after controlling for possible confounders. Longitudinal studies on the predictive association of VOA with survival in individuals aged 80 years or older are, however, very limited. Thus, the aim of this study was to link adults' awareness of age-related change (AARC), a multidimensional measure of adults' subjective VOA, to survival time across a 3.5-year observation interval in advanced old age. To put the AARC construct in context, the study also considered related psychosocial concepts (i.e., perceived control and appraisal of life) essential for coping with late-life challenges as potential behavioral predictors of longevity. Results showed that loss-related VOA indicated increased risk to survival, whereas gain-related VOA were predictive of longer survival. Both perceived age-related losses and perceived age-related gains exerted a significant independent effect on late-life mortality over and above socio-demographic background characteristics, perceived control, engagement with life, as well as health status. These findings suggest that the multidimensional examination of very old adults' VOA may help to better understand successful longevity in the Fourth Age.