OBJECTIVES/SPECIFIC AIMS: To build a multi-site de-identified database of female adolescents, aged 12–21 years (January 2011–December 2012), and their subsequent offspring through 24 months of age from electronic health records (EHRs) provided by participating Community Health. METHODS/STUDY POPULATION: We created a community-academic partnership that included New York City Community Health Centers (n = 4) and Hospitals (n = 4). The Rockefeller University, The Sackler Institute for Nutrition Science and Clinical Directors Network (CDN). We used the Community-Engaged Research Navigation model to establish a multi-site de-identified database extracted from EHRs of female adolescents aged 12–21 years (January 2011–December 2012) and their offspring through 24 months of age. These patients received their primary care between 2011 and 2015. Clinical data were used to explore possible associations among specific measures. We focused on the preconception period and gestational period, including pediatric visits up to 24 months of age. RESULTS/ANTICIPATED RESULTS: The analysis included all female adolescents (n = 122,556) and a subset of pregnant adolescents with offspring data available (n = 2917). Patients were mostly from the Bronx; 43% of all adolescent females were overweight (22%) or obese (21%) and showed higher systolic and diastolic blood pressure, blood glucose levels, hemoglobin A1c, total cholesterol, and triglycerides levels compared with normal-weight adolescent females (p < 0.05). This analysis was also performed looking at the nonpregnant females and the pregnant females separately. Overall, the pregnant females were older (mean age = 18.3) compared with the nonpregnant females (mean age = 16.5), there was a higher percentage of Hispanics among the pregnant females (58%) compared with the nonpregnant females (43.9%).

There was a statistically significant association between the BMI status of mothers and infants’ birth weight, with underweight/normal-weight mothers having more low birth weight (LBW) babies and overweight/obese mothers having more large babies. The odds of having a LBW baby was 0.61 (95% CI: 0.41, 0.89) lower in obese compared with normal-weight adolescent mothers. The risk of having a preterm birth before 37 weeks was found to be neutral in overweight/obese adolescent mothers compared with normal-weight adolescent females (p < 0.05).

A mixed-methods evaluation to improve sustainability of community health coalition partnerships, activities, and impact on county-level health
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OBJECTIVES/SPECIFIC AIMS: Community health coalitions (CHC) aim to improve local cultures of health, health behaviors, and health outcomes. However, challenges sustaining partnerships and activities limit CHC impact. Traditional CHC evaluations survey members about perceived effectiveness, failing to capture underlying network structures and community health outcomes. Thus, we applied a mixed-methods evaluation in eight rural Indiana CHC, triangulating social network analysis (SNA), conducted in 2017; function, effectiveness Self-Assessment Survey (CSSA), conducted in 2017; and latest county health statistics (2015–2016) to assess existing CHC building efforts, inform best practices, and facilitate the adoption of evidence-based programming. METHODS/STUDY POPULATION: Across the eight rural Indiana CHC, relationships between the three evaluation components were analyzed using Pearson’s correlations. We are now collaborating with Public Health–Nutrition–Community Health Coordinators to scale up evaluation efforts throughout Indiana. RESULTS/ANTICIPATED RESULTS: CHC effectiveness was positively correlated with the average number of connections CHC members held in the network (mean in-degree) and negatively correlated with the presence of a network broker (eigenvertex centrality). However, effective leadership was positively correlated with opioid deaths and treatment, food insecurity, smoking during pregnancy, lack of healthcare coverage, and fair/poor health status, and negatively correlated with preterm care. Effective operating norms was positively correlated with smoking during pregnancy and preterm births, and negatively correlated with prenatal care. Effective action outcomes was positively correlated with opioid deaths and treatments, smoking during pregnancy, preterm births, and fair/poor health status, and negatively correlated with respondents reporting they had no personal doctor. DISCUSSION/SIGNIFICANCE OF IMPACT: Interestingly, CHC effectiveness was positively correlated with poor county health outcomes related to infant well-being. Thus, CHC may develop in counties with a high unmet need for effective pregnancy and infant services. Alternatively, the prevalent CHC focus on obesity prevention may eclipse programmatic efforts to improve infant well-being. Longitudinal evaluations and scaling up evaluation efforts across Indiana are being pursued to clarify trajectories and inform best practices, which in turn should provide recommendations for network structures to improve CHC effectiveness and county health.

A multi-stakeholder analysis on preparing future pediatricians to improve the mental health of children
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OBJECTIVES/SPECIFIC AIMS: (1) Develop a concept map of ideas from diverse stakeholders on how to best improve training programs. (2) Assess the degree of consensus amongst stakeholders regarding importance and feasibility. (3) Identify which ideas are both important and feasible to inform policy and curricular interventions. METHODS/STUDY POPULATION: Concept mapping is a 4 step approach to data gathering and analysis. (1) Stakeholders [pediatricians (peds), MH professionals (MHPs), trainees, parents] were recruited to brainstorm ideas in response to this prompt: “To prepare future pediatricians for their role in caring for children and adolescents with mental and behavioral health conditions, residency training needs to...” (2) Content analysis was used to edit and synthesize ideas. (3) A subgroup of stakeholders sorted ideas into groups and rated for importance and feasibility. (4) A large group of anonymous participants rated ideas for importance and feasibility. Multidimensional scaling and hierarchical cluster analysis grouped ideas into clusters. Average importance and feasibility were calculated for each cluster and were compared statistically in each cluster and between subgroups. Bivariate plots were created to show the relative importance and feasibility of each idea. The “Go-Zone” is where statements are feasible and important and can drive action planning. RESULTS/ANTICIPATED RESULTS: Content analysis was applied to 497 ideas resulting in 99 that were sorted by 40 stakeholders and resulted in 7 clusters: Modalities, Prioritization of MH, Systems-Based, Self-Awareness/Relationship Building, Clinical Assessment, Treatment, and Diagnosis Specific Skills. In total, 216 participants rated statements for importance, 209 for feasibility; 17% MH, 52% peds, 35% trainees. There was little correlation between importance and feasibility for each cluster. Compared with peds, MHPs rated Modalities, and Prioritization of MH higher in importance and Prioritization of MH as more feasible, but Treatment less feasible. Trainees rated 5 of 7 clusters higher in importance and all clusters more feasible than established practitioners. DISCUSSION/SIGNIFICANCE OF IMPACT: Statements deemed feasible and important should drive policy changes and curricular development. Innovation is needed to make important ideas more feasible. Differences between importance and feasibility in each cluster and between stakeholders need to be addressed to help training programs evolve.

An application of the payback framework to evaluate the outcomes of pilot projects supported by the Georgia Clinical and Translational Science Alliance from 2007 to 2014
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OBJECTIVES/SPECIFIC AIMS: We will use a structured evaluation framework, the payback framework, to document the outcomes of 15 case studies of pilot projects supported by Georgia CTSA from 2007 to 2014. METHODS/STUDY POPULATION: We will use a case study approach including bibliometric analyses of publications associated with the selected projects, document review (e.g., investigator curriculum vitae, biannual project reports) and investigator interviews. RESULTS/ANTICIPATED RESULTS: We will document outcomes in 5 “payback categories”: (1) knowledge, (2) research targeting, capacity...
building, and absorption, (3) policy and product development, (4) health benefits, and (5) broader economic benefits. DISCUSSION/SIGNIFICANCE OF IMPACT: This study will aid in characterizing the returns resulting from this research funding and identify its strengths and weaknesses. This study will inform our understanding of the diversity and breadth of outcomes resulting from Georgia CTSA-supported research, and the value pilot projects provide to clinical and translational science and the broader community.

Assessing research impact: It takes a team
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OBJECTIVES/SPECIFIC AIMS: Dissemination of research findings through the published literature is a complex but critical part of the scholarly communication process. Additionally, this time point on the translational spectrum is a key objective of the National Clinical Association for Advancing Translational Sciences (NCATS). Tracking the dissemination of research outputs can be difficult to identify and evaluate. The purpose of this case study was 2-fold: (1) identify tools and resources available freely to the public and through university subscriptions used to assess research output, and (2) compare the effectiveness of these tools at tracking output at different levels of granularity. METHODS/STUDY POPULATION: The authors, Spectrum staff (D.A.) and School of Medicine librarian (M.B.), attended webinars hosted by other Academic Medical Center libraries conducting work on impact tracking and learned from vendor product managers about available tools and resources during on-site campus visits. Publications from Stanford’s Clinical and Translational Science Award (CTSA) were used to track the diffusion of research outputs (e.g., number of citations, document types, research areas, relative citation ratio, CTSA collaboration) via library subscription services (e.g., Web of Science and Scopus) and freely available tools (e.g., iCite and PubMed). RESULTS/ANTICIPATED RESULTS: The authors found certain tools were more inclusive in retrieving grant funded research outputs. For example, in the case of U1 grant (UL1TR001085, UL1TR000993, UL1R002574), at a gran-tlevel output, there were discrepancies in the number of publications retrieved: (1) PubMed found 644 outputs; (2) Web of Science found 497 outputs; and (3) Scopus found 190 outputs. After de-duplication, the search across Web of Science (WoS), Scopus, and PubMed yielded 899 publications. In total, 389 outputs were unique to PubMed; 165 were unique to WoS; and 90 were unique to Scopus. Future analysis will be conducted to identify the source of unique outputs from each database (e.g., conference proceeding, specific journals). Additional analysis based on other units of research outputs (e.g., author-level outputs and article-level outputs) are expected to yield similar discrepancies. DISCUSSION/SIGNIFICANCE OF IMPACT: Citation analysis is a valuable method of assessing research output and, to a lesser extent, research impact in a given field. It can help investigators illustrate qualifications for undertaking new projects, highlight collaborations across schools and departments, justify a grant renewal, and/or highlight accomplishments for promotion. However, systematic and comprehensive evaluations are needed in tandem with citation analysis/bibliometric analysis to assess the translation and uptake of research outputs and activities that result in research impact. Furthermore, both investigators and staff need adequate time and training to process research outputs/activities and to effectively organize them in easily understood visualizations.

Balancing patient-centeredness and patient safety in the hospitals: The case of pain care and patient satisfaction
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OBJECTIVES/SPECIFIC AIMS: This study seeks to understand the relationship between opioid prescribing and patient satisfaction among non-surgical, hospital-ized patients. As part of this study, we qualitatively examined challenges in delivering safe and patient-centered care through voices of physicians, and nurses. METHODS/STUDY POPULATION: We collected data through in-person inter-views using semi-structured guides tailored to the informant roles. Study participants came from 1 healthcare system located in a mid-Western state. Each interview lasted 30–45 minutes, was audio-recorded with consent, and transcribed for analysis. Two researchers each coded 17 transcripts for discussions around patient-centeredness (including patient satisfaction, patient experiences), and patient safety for hospitalized patients experiencing pain. Analysis followed a general inductive approach, where researchers identified themes related to the research questions using an open coding technique. They discussed and reached consensus on all codes, and extracted several preliminary themes. The analysis was supported by NVivo software. RESULTS/ANTICIPATED RESULTS: The following themes emerged: (1) complex decision-making process to prescribe opioids for hospitalized patients; (2) the role of objective findings in prescribing decisions; (3) lacking a process in prescribing opioids; (4) balancing patient-centeredness and patient safety for selected populations; (5) opioids are the predominant medications for pain care. DISCUSSION/SIGNIFICANCE OF IMPACT: Clinicians’ decision to prescribe opioids for nonsurgical hospitalized patients is based on multiple factors, including patient’s condition, patient’s preference for pain medications, or standard hospital’s pain care regimen. Interventions that improve clinicians’ ability to prescribe opioids may be needed to improve delivery of patient-centered and safe pain care.

Cost effectiveness analysis of operative Versus antibiotic management for uncomplicated appendicitis
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OBJECTIVES/SPECIFIC AIMS: (1) Evaluate the relative incremental cost-effectiveness [cost per quality-adjusted life year (QALY) gained] of antibiotics, laparotomy, and laparoscopy for the initial treatment of uncomplicated appendicitis. (2) Determine the incremental cost-effectiveness of each treatment strategy, by age, namely in pediatric patients, adult patients, and geriatric patients. (3) Use deterministic and probabilistic sensitivity analyses to assess the robustness of our findings when varying multiple model parameters.

METHODS/STUDY POPULATION: Study Population and Analytic Approach: The population under analysis is a simulated population of those aged 1–90 diagnosed with uncomplicated appendicitis with computed tomography (CT) in the emergency department. Pregnant women and those younger than 1 year old were excluded from our analysis. We simulated our population through a Markov state-transition simulation model. Using this model, we estimated the lifelong costs and effects on QALYs from the use of antibiotics, laparotomy, and...