APA's 12th Annual Quality Improvement Conference
Friday, April 28, Washington, DC

	Topic	Presenter(s)
7:00 – 8:00 am	Breakfast/Posters	
8:00 – 8:50 am	Keynote: Unequal Treatment's Unfinished Business for Kids	Deena Chisolm, PhD
8:50 – 9:00 am	Break	
9:00- 10:40 am	**Breakout Sessions 1**	
	Fundamentals of QI-Part 1	Nina Dadlez, MD, MSc Kaitlyn Philips, DO
	Statistical Process Control for Quality Improvement: Challenging Cases and How to Approach Them	Munish Gupta, MD Heather Kaplan, MD, MSCE Michael Posencheg, MD
	Geospatial Analytics: Bringing Place to Pediatric Research, QI, and Population Situational Awareness	Andrew Beck, MD, MPH Zoabe Hafeez, MD Molly Krager, MD
	Health Equity and Quality Improvement: Data Driven Strategies and Ethical Consideration	K. Casey Lion, MD, MPH Michelle-Marie Pena, MD Victoria Reichman, MD, MPH
	Moving From Quality to Value in Your Improvement Work	Lilliam Ambroggio, MPH, PhD Leigh-Anne Bakel, MD, MSc Mark Brittan, MD, MPH Jill Cotter, MD Justin Lockwood, MD, MSCS Michael Tchou, MD Amy Tyler, MD, MSCS Kaitlin Widmer, MD
	Be the Change: Incorporating Change Management into your QI Study Design for Sustainable Results	Jess Hart, MD, Daniel Hyman, MD Katherine Pumphrey, MD
	How to be a Critical Consumer of QI Research	Alex Kemper, MD, MPH, MS Lawrence Kleinman, MD, MPH
	Interrupted Time Series Analysis	Robert Penfold, PhD
10:40-10:50 am	Break	
10:50-12:30 pm	**Breakout Sessions 2**	
	Fundamentals of QI-Part 2	Nina Dadlez, MD, MSc Kaitlyn Philips, DO
	Introduction to Qualitative and Mixed Methods in Implementation and QI Research	Clarissa Hsu, PhD Sarah Ronis, MD, MPH
	Diagnostic Errors and Patient Safety	Patrick W. Brady, MD, MSc Prashant Mahajan, MD, MPH, MBA Trisha Marshall, MD, MSc Michael Rinke, MD, PhD

	I like it because I made it -Using THEORY to Improve Generalizability and Get your QI published!	Lisa Awe, MD Matthew Garber, MD Linh Nguyen, MD
	Why Should You Care About Implementation Science? Advancing Quality Improvement with Implementation Science	Lilliam Ambroggio, MPH, PhD Leigh-Anne Bakel, MD, MSc Mark Brittan, MD, MPH Jill Cotter, MD Justin Lockwood, MD, MSCS Michael Tchou, MD Amy Tyler, MD, MSCS Kaitlin Widmer, MD
	Learning about Safety from the Diverse Voices of our Patients and Families	Naomi Bardach, MD, MAS Alisa Khan, MD Glenn Rosenbluth, MD Anjana Sharma, MD
	The Role of Social Determinants in Centering Equity in QI Research	Kierra Barnett, PhD, MPH Deena Chisolm, PhD Mattina Davenport, PhD Andreas Teferra, PhD
	Managing Teams, Meetings, and Change: Concrete tools to help you achieve your goals	Chisom Agbim, MD Sandra Spencer, MD Irina Topoz, MD
12:30-12:45 pm	Break & Pick Up Boxed Lunch	
12:45-1:30 pm	**Best Abstracts**	

Breakout Sessions 1
The Fundamentals of QI – Part 1
Nina Dadlez, MD, MSc, and Kaitlyn Philips, DO
This introductory course is appropriate for those participating in or planning quality improvement/patient safety projects, but who have little to modest experience or training in QI science. There are no course prerequisites. This course will include a survey of common over-arching QI methodologies (e.g. lean engineering, the model for improvement, process control), specific QI strategies (e.g. standardization, error-proofing, checklists, iterative PDSAs), issues around quality measures (e.g. outcome measures, process measures, balancing measures), and a very brief introduction into a couple of broad but related concepts (e.g. scoping, high reliability organizations, safety culture). Small groups will work through example quality/safety problems, explore possible QI approaches, plan interventions, and interpret mock data. Participants will be encouraged to see how particular problems may suggest very fitting QI approaches, just as a particular QI approach may suggest very fitting analytic methods (covered by many of the other break-out sessions).

Statistical Process Control for Quality Improvement: Challenging Cases and How to Approach Them
Munish Gupta, MD, Heather Kaplan, MD, MSCE, MMSc, and Michael Posencheg, MD

As the use of SPC has become more prevalent, there has been increased recognition of situations where the basic SPC charts are not effective and more advanced or specialized SPC approaches are required. For those who already have a basic understanding of control charts, we will use practical examples to review some more advanced SPC approaches. Topics will include approaches to highly skewed continuous data, use of charts that are sensitive to small changes (CUSUM/EWMA charts), methods for addressing covariates (rational subgrouping), and special situations when count data should be considered continuous data.

Geospatial Analytics: Bringing Place to Pediatric Research, QI, and Population Situational Awareness
Andrew Beck, MD , Zoabe Hafeez, MD, Molly Krager, MD
In this workshop, attendees will have the opportunity to learn about geospatial analytics and geographic information systems (GIS). The presenter will discuss ways in which population health data can be critically appraised for use. Special attention will be paid to place-based "geomarkers" that can be used to inform population health strategies aimed at achieving better, more equitable child health outcomes. Attendees will hopefully leave with identified ways in which geospatial analytics can be used for population health research, QI, and situational awareness.

Health Equity and Quality Improvement: Data-Driven Strategies and Ethical Considerations
K. Casey Lion, MD, MPH, Michelle-Marie Pena, MD and Victoria Reichman, MD, MPH
What every implementer needs to know: Healthcare disparities remain pervasive, despite growing efforts to address them through research, policy, and QI, and many well-intentioned interventions may either maintain or inadvertently worsen existing disparities or create new ones. In this interactive session, we will discuss the mechanisms by which that can happen and techniques for evaluating the impact of an intervention on disparities. Led by experienced health disparities researchers and through small-group exercises using example cases and participants' own projects (ongoing or planned), we will explore the ways in which the underlying process or system, the intervention itself, or the context can contribute to improving, maintaining or worsening disparities, and how to optimally design interventions and evaluations with that in mind. If the group is interested, we can also discuss issues in evaluation design for interventions explicitly aimed at reducing disparities, including study design, qualitative data collection, community engagement, and contextual factors. This session will be relevant for anyone conducting QI interventions or QI research who does not wish to contribute to disparities, as well as those who are explicitly interested in reducing them.

Moving from Quality to Value in your Improvement Work
Lilliam Ambroggio, MPH, PhD, Leigh-Anne Bakel, MD, Mark Brittan, MD, MPH, Justin Lockwood, MD, MSCS, Michael Tchou, MD, Amy Tyler, MD, MSCS, and Kaitlyn Widmer, MD
In this interactive workshop, attendees will learn a meaningful approach to incorporate high-value care into their improvement projects. The workshop will provide attendees with fundamental concepts that define high-value care and will use highly-interactive small group breakout sessions to discuss how to incorporate the concept of value into every stage of improvement work: project planning, measure selection, and intervention implementation. Project examples from the workshop leaders own experiences will be provided, but attendees will be encouraged to bring their own projects to discuss. Discussion will be guided by a Value Improvement Toolkit with templated examples for attendees to use as they plan their own approach to a value improvement project. The toolkit will also include links to high-value care training and resources that are available. Attendees will leave with key tools for designing value improvement projects and an enhanced understanding of how to focus on value can positively impact the overall quality and cost of the healthcare system.

Be the change: Incorporating Change Management into your QI Study Design for Sustainable Results
Jess Hart, MD, Daniel Hyman, MD, and Katherine Pumphrey, MD
In healthcare, there are many reasons why quality improvement initiatives fail to achieve their goals. One of the most common causes is leaders failing to consider the changes being asked of their colleagues, and subsequently, failure to systematically plan for change management and sustainability. In this workshop, we will outline a framework for change management, describe approaches to understand and address resistance to change, and partner with attendees to incorporate a change management framework into their quality improvement study design to increase the likelihood of project success and sustainable change.

How to be a Critical Consumer of QI Research
Alex Kemper, MD, MPH, MS and Lawrence Kleinman, MD, MPH
The rapid increase in publications related to quality improvement reflects the recognition of its importance and advancements in methods. How can a reader critically appraise these publications and use these findings to advance a quality-improvement research agenda or use publications to directly improve quality within their local environment? This session will use recent examples of publications across the field of quality improvement to illustrate how to assess validity and extract useful lessons. Through small-group interactive exercises, participants will apply principles of critical appraisal to published QI research to draw meaningful information from the peer reviewed literature. This session will also illustrate how to develop habits to stay on top of the QI-related peer-reviewed literature and organize QI-focused journal clubs.

Interrupted Time Series Analysis
Robert Penfold, PhD
Interrupted Time Series (ITS) analysis is the strongest quasi-experimental design for evaluating natural experiments. This session focuses on the use of ITS to measure changes in outcomes over time associated with program implementation or policy changes. Topics will include: when to use an ITS design, strengths and weaknesses of the approach, "real world" enhancements to the design, comparison to statistical process control, and implementation of ITS in SAS and STATA. Participants will also review and critique examples of published pediatric research using ITS.

Breakout Sessions 2
The Fundamentals of QI – Part 2
Nina Dadlez, MD, MSc and Kaitlyn Philips, DO
This introductory course is appropriate for those participating in or planning quality improvement/patient safety projects, but who have little to modest experience or training in QI science. The only course prerequisite is The Fundamentals of QI – Part 1 workshop. This course will include a survey of common over-arching QI methodologies (e.g. lean engineering, the model for improvement, process control), specific QI strategies (e.g. standardization, error-proofing, checklists, iterative PDSAs), issues around quality measures (e.g. outcome measures, process measures, balancing measures), and a very brief introduction into a couple of broad but related concepts (e.g. scoping, high reliability organizations, safety culture). Small groups will take example quality/safety problems, explore possible QI approaches, plan interventions, and interpret mock data. Participants will be encouraged to see how particular problems may suggest very fitting QI approaches, just as a particular QI approach may suggest very fitting analytic methods (covered by many of the other break-out sessions).

Introduction to Qualitative and Mixed Methods in Implementation and QI Research
Clarissa Hsu, PhD and Sarah Ronis, MD, MPH
Numbers alone may not tell the full story regarding the successes and challenges of an intervention or program being implemented. This session will provide an overview of qualitative and mixed methods research. Participants will review the epistemological foundations and relative strengths of qualitative vs. quantitative approaches, explore some common approaches to qualitative research methods, and become conversant with strategies for integrating quantitative and qualitative data. Using case examples, participants will explore how qualitative and/or mixed methods can enhance implementation and QI research, and assess which approaches might be most appropriate for specific QI research questions.

Diagnostic Errors and Patient Safety
Patrick W. Brady, MD, MSc, Prashant Mahajan, MD, MPH, MBA, Trisha Marshall, MD, MSc, and Michael Rinke, MD, PhD
Diagnostic errors are common in children, causing appreciable morbidity, mortality and medico-legal costs. The study of diagnostic errors and resulting diagnostic-related harm remains in its infancy despite being included in the original IOM report *To Err is Human* and the 2015 NASEM *Improving Diagnosis in Health Care* report. This session will describe the current state of science on the epidemiology of diagnostic error and harm in pediatrics and work with participants to identify novel and valid ways to measure and identify these errors in their own contexts. We will use the current state of science to frame the discussion and have participants develop a set of potential interventions to reduce diagnostic errors in their own contexts via research and implementation science methodologies.

I like it because I made it-using THEORY to improve generalizability and get your QI published!!!
Lisa Awe, MD, Matthew Garber, MD, and Linh Nguyen, MD
Systematic reviews of interventions to improve practice have shown that most interventions are effective some of the time, none are effective all of the time, and effects vary from none to large. Applying social theories of change in the design and evaluation of quality improvement projects may make them more effective in improving care, more generalizable to broader settings, and easier to publish. This session is designed for participants who already understand quality improvement basics and want to increase the effectiveness, generalizability, and publication of their projects in high impact journals by using social change theory during design and/or evaluation. This workshop explains the role of social change theory in quality improvement and allows participants to practice applying theories. We will solicit projects from the audience in all stages of completion, ideally as pre-work before the conference. We will give an overview of different types of theory by type and size. We will discuss several specific classic, mid-range theories that have broad applicability to healthcare improvement, and distribute a compendium we created that briefly describes each theory and gives the major references for each. We will share several participant project ideas. We will then break into round table

discussions in which participants will do the following: 1) Select 2 projects to focus on for the discussion 2) Use the compendium to identify theories appropriate for their project, and discuss how the theories can aid in the design and evaluation of the project, 3) Report out summary of discussion to the large group. Participants will then form new small groups and repeat the exercise with another project. We will conclude with a brief wrap up and time to share contact information for participants and facilitators who decide to collaborate on current or future projects.

Why Should You Care About Implementation Science? Advancing Quality Improvement with Science with Implementation Science
Lilliam Ambroggio, MD, Leigh Anne Bakel, MD, Mark Brittan, MD, Justin Lockwood, MD, Michael Tchou, MD, Amy Tyler, MD, and Kaitlin Widmer, MD
This workshop is designed to introduce participants who have some prior experience doing quality improvement work to basic concepts in D&I. Using their own projects (or project ideas), participants will employ familiar QI tools (fishbone diagram and key driver diagram) adapted to incorporate D&I frameworks to identify barriers and facilitators to change in their local setting. Next, participants will practice incorporating implementation outcomes into their QI projects in two ways. Small groups will use implementation outcomes to "study" and decide how to "act" as part of a mock PDSA cycle. Small groups will also practice using the RE-AIM implementation science framework to expand on their 'usual' QI project process, outcome, and balancing measures. Workshop participants will share with the group how their QI projects may be different after using these two concrete strategies for applying D&I frameworks and outcomes to their QI work.

Learning about Safety from the Diverse Voices of our Patients and Families
Naomi Bardach, MD, MAS, Alisa Khan, MD, Glenn Rosenbluth, MD and Anjana Sharma, MD
This workshop is intended for those interested in gathering patient and family observations of care to inform quality and safety efforts, with a specific focus on ensuring equity and representation in those efforts. Workshop leaders will share their experience and learnings from gathering these observations across multiple hospital types (tertiary care and community) and hospital units (medical surgical, hematology-oncology, bone marrow transplant, PICU, transitional unit, NICU, well baby, complex care). The interactive components of the workshop will include small group discussions as well as a planning worksheet to complete over the course of the workshop. The worksheet guides key decision-making processes for tailoring efforts to individual organizations, so participants have a tangible product at the end of the workshop for a potential approach at their home institution. Leaders will also provide examples of implementation workflows from participating units and hospitals for incorporating patient comments into existing hospital safety review processes.

The Role of Social Determinants in Centering Equity in QI Research
Kierra Barnett, PhD, MPH, Deena Chisolm, MD, Mattina Davenport, PhD, and Andreas Teferra, PhD
The impact of social determinants of health (SDH) is well established in the literature, finding that SDH account for nearly 80% of health outcomes. However, few strides have been made in incorporating SDH into pediatric QI research. This workshop will provide a framework on how to include SDH in QI research to center health equity in outcomes metrics. Through small group exercises, participants will explore considerations for: (1) defining the problem and vital contextual factors; (2) using mixed method approaches to better identify the key drivers; (3) understanding the importance of thinking outside of the walls of our health institutions; and (4) defining new measures of success.

Managing Teams, Meetings, and Change: Concrete tools to help you achieve your goals
Chisom Agbim, MD, MSHS, Sandra Spencer, MD, Irina Topoz, MD, Alexandria Wiersma, MD
We work in teams every day: medical teams, resuscitation teams, simulation teams, quality improvement, and research teams. The list goes on and on. We've all been part of highly functioning teams that make the work a joy. But we've also all been part of ineffective teams that struggle to achieve their objectives. How do you avoid poor team dynamics and become a successful team leader? Managing highly functional teams both at the bedside and in meeting rooms is an essential skill not always taught in standard curricula. Understanding change management and the ability to guide teams through change mark an effective team leader. Using quality improvement as a model, we will discuss how team dynamics, meeting management, and preparing our tea m for change leads to success.