A QUALITATIVE COLLABORATIVE FOR REDUCING EXCESSIVE VARIABILITY IN INFANT SEPSIS EVALUATION (PROJECT REVISE) FACT SHEET

The management of fever in infants has been a topic of much ambiguity for decades. The American Academy of Pediatrics Value in Inpatient Pediatrics (VIP) Network, an established inpatient pediatric quality improvement (QI) network, seeks to build a national QI collaborative designed to improve and standardize care for febrile infants between the ages of 7 to 60 days. This QI effort will provide inpatient and emergency department physicians with education about evidence-based best practice, strategies for implementation, and tools to bring about sustainable change (including a mobile-application under development). Providing multi-disciplinary teams with quality improvement education and tools specific to the management of children with fever will increase compliance with the evidence-based clinical practice guideline and thereby decrease overuse of non-evidence-based therapies and tests.

The specific aim of the project is to:

- Decrease admissions for infants presenting to ED’s with fever who are at low risk of bacterial infection
- Decrease variation in care of febrile infants presenting to the ED and/or hospital
- Decrease length of stay for infants admitted to the hospital with fever
- Decrease use of unnecessary chest x-rays in the care of febrile infants

Project REVISE includes the following goals:

1) Reduce length of hospitalization for infants who are hospitalized to <30 hours for infants who are low risk and <42 hours for infants who are not low risk (80% target allows for infants who are ultimately diagnosed with bacterial infection as well as extenuating circumstances (e.g., parent couldn’t pick up until after work))
2) Increase the percent of hospitalized infants who are hospitalized appropriately (90% target)
3) Increase the percent of infants who have a UA performed via any method of collection on the first day of encounter (95% target)
4) Decrease the percent of infants who get a CXR within 24 hours of presentation without documented respiratory symptoms (10% target)
5) Increase use of recommended empiric antibiotic regimens within 24 hours of presentation (90% target allows for infants who have labs suggestive of resistant infections)

The AAP Quality Improvement Innovation Networks’ (QuIIN) infrastructure, members of the VIP Network, and AAP Section of Hospital Medicine members will collaborate using the Quality Improvement Data Aggregator (QIDA). Measure implementation at participating sites will include establishment of a baseline performance followed by collaborative process improvement with aims to improve performance. Tools to facilitate change strategies will be developed and uploaded on a secure website, and a listserv will be developed to facilitate communication between sites. Regular reports will be generated to monitor improvement during the project period.

While the goals for the project are based on individual chart review, it is the hope that systems will be put into place to positively impact all pediatric patients admitted with fever.

Participating Hospitals
As mentioned above, each participating hospital will have a core improvement team, consisting of two co-leaders; one physician hospitalist leader and one emergency department physician leader. At least 3 core members that are recommended to be on a team including these co-leaders and an infectious disease physician, nurse, other clinical staff and/or a pharmacist. Multidisciplinary teams are encouraged. All other clinicians in the hospital are encouraged to participate in the project at the local level, but will not have the same responsibilities as the core improvement team. These other clinicians will be involved in the use and testing of the tools, as well as providing patient charts for review by the core improvement team.

Participating individuals (as part of the core improvement team) will work over the course of the 12-month action period (part of the overall 18-month project with pre and post work) to implement and test strategies in infant fever management. To participate in this project, core improvement team members will need to attend at minimum an orientation webinar, six up to 90-minute educational webinars and submit pre- and post- project surveys. Team members will need to complete a pre- and post-survey and complete an electronic monthly chart review form and periodic online narrative progress report.

The orientation webinar will outline the expectations and next steps of the project, as well as outline the timeframe and framework of the project tasks. Educational webinars will address quality improvement (QI) basics and how to use the Model of Improvement in the hospital setting for implementing process changes; include a review of the evidence for best practices in infant fever care; and an introduction, overview and discussion of the tools included in the change package or resource guide. Following the conclusion of the data collection period, hospital team members will participate in a final educational webinar regarding keeping the quality improvement gains and exchanging ideas on the next steps for infant fever care quality improvement for the hospital. The sequence of project events for involvement is highlighted at a high-level in the chart below as well as the expectations of participants.

Highlights of Project Timeline for Participating Hospitals and Team Members

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<tr>
<td>• Form core improvement team and determine roles of each member</td>
<td>• Gain hospital leadership buy-in to project participation</td>
<td>• Participate in up to 10 periodic learning session webinars</td>
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<td>• View recorded informational webinar (link above)</td>
<td>• Obtain local IRB approval (if necessary)</td>
<td>• Collect monthly data for 12 months between December 2016 – November 2017</td>
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<td>• Complete project application between September 9 - October 7th (or until 100 eligible hospital teams are identified – whichever comes first)</td>
<td>• Sign Consent Form</td>
<td>• Test changes using PDSA cycles</td>
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<td>• Participate in orientation webinar</td>
<td>• Provide feedback on tools</td>
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<td>• Watch data entry webinar offered by QIDA (required for Group Administrator)</td>
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<td>• Submit 12-month retrospective baseline data in QIDA (representing September 2015 – August 2016 charts)</td>
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<td>• Complete Pre-project survey</td>
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<td>• Participate in 1-2 webinars (QI Basics and Introduction to the Change Package)</td>
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Hospital Site Selection
All applications received will be reviewed by the project leader and select members of the Expert Group, which is comprised of pediatricians with training and experience in pediatric hospital medicine, intensive care, and emergency medicine. Members of the expert group all have experience guiding previous pediatric quality improvement projects and advanced training in quality improvement methodology. Up to 100 pediatric hospital teams will be selected, representing a diversity of geographical locations, hospital settings (urban, rural, suburban), hospital size, and hospital type. An emphasis will be placed on recruiting hospitals that traditionally do not have access to quality improvement resources and technical assistance.

A physician must lead the project core improvement team. Applicants are expected to have identified a team and documented in the application the commitment of the senior leadership to support this project.

If selected, all core improvement team members will be asked to sign a consent form and the physician leader will be asked to join the Quality Improvement Innovation Networks (QuIIN), a program of the American Academy of Pediatrics. Joining QuIIN is free and easy
Participation in this nationally recognized project would provide many benefits to involved teams:

**Benefits of Participation**
- Test strategies for improving infant fever care with patients aged 7 – 60 days (completed)
- Work with colleagues from around the country in a quality improvement learning collaborative
- Learn from national experts, including coaching from hospitalists with content expertise throughout a 12-month action/intervention period, and receive ongoing support for improvement
- Receive American Board of Pediatrics or American Board of Emergency Medicine Part 4 Maintenance of Certification credit (if approved)

**Specific Expectations**
As part of the QI project, it is important for a hospitalist to identify a core improvement team to lead the improvement efforts in the hospital. These team members are considered QI project participants as they are the individuals who will communicate with the Expert Group on a regular basis, are responsible for the data collection/entry, and will participate in education webinars with other hospital core improvement teams. They also relay information back to others in the hospital so that improvements to the system can be made. These team members will be consented to participate in the QI project and complete the duties outlined below.

Each participant on the core improvement team will:
- _Physician leader only:_ serve as Local Leader in the attestation process required by the American Board of Pediatrics (ABP) for Part 4 Maintenance of Certification or American Board of Emergency Medicine Includes providing each hospitalist and/or EM physician, respectively, interested in participating for MOC credit a document describing the requirements of their participation, monitoring physician participation, and attesting that they met the project’s completion criteria.
- Obtain buy-in from hospital leadership to support the Project REVISE (administration, IT, etc.)
- Determine if local IRB approval and/or a data sharing/transfer/use agreement is required (in addition to the AAP approved protocol that will be provided) and contact AAP/QuIIN staff to work through that process (if needed)
- Remit $750 USD for participation in the project
  - Once the attached consent form is received by the AAP, an invoice will be generated and e-mailed to you within approximately 2 weeks.
  - Teams are expected to remit the payment in full ($750 USD) following instructions detailed on the invoice within 90 days of receiving it.
  - If there are outstanding circumstances causing your team to miss this 90 day deadline, please contact the project leader Eric Biondi (Eric.Biondi@URMC.Rochester.edu) or AAP QuIIN Staff, Faiza Wasif (fwasif@aap.org or 847/434-7806) within 30 days of receiving the invoice.
  - If no communication takes place and a team has not remitted the payment in full within 90 days of receiving the invoice, the team may be dropped from the collaborative.
- Complete pre-work activities (over a 2-month time) including:
  - Complete pre-project survey (via SurveyMonkey)
  - Participate in an orientation webinar as well as a pre-recorded webinar regarding chart data entry into the online Quality Improvement Data Aggregator (QIDA) for “Group Administrators.”
  - Participating in a learning session/webinar on QI methods or on infant fever management background and evidence-based management depending on gaps in personal knowledge base.
- Devote necessary resources and time to testing and implementing changes over the specified intervention period, while collecting data from a minimum of 24 or maximum of 240 charts during the 12-month intervention phase (representing monthly data between December 2016 – November 2017) and a 12-month baseline phase (representing data in 12 monthly cycles between September 2015 – August 2016)
- Learn the Model for Improvement and implement Plan, Do, Study, Act (PDSA) cycles.
- Make appropriate changes in the structure of how inpatient infant fever care is delivered to patients.
- Regularly collect and submit clinical measurements pertinent to the aims of the project.
  - 1-2 core team members identified as a Group Administrator will enter chart review data into QIDA retrospectively from September 2015 – August 2016 in 12 finite month-by-month data cycles
- Enter data each month for 12 months during the intervention phase (between December 2016 – November 2017). Chart review will be completed using the AAP Quality Improvement Data Aggregator (QIDA).
- Test innovations in care delivery to improve care of infants with fever.
- Share lessons learned and problem-solve with other participating hospitals through a dedicated project e-mail listserv.
- Use e-mail and the Internet on a regular basis for ongoing support, information, and communication among hospital teams.
- Participate in periodic learning session webinars
Complete a post-project survey at the end of the project
Participate in a project wrap-up/sustainability webinar

All physicians in the hospital are encouraged to participate in this project by using the tools and strategies identified and providing charts for review. If the project is approved for MOC Part 4, physicians who would like to claim credit (including those not identified on the core improvement team), must meet the criteria established by the AAP and the minimum standards set by the ABP for all QI projects outlined below.

**AAP-Established Minimum Criteria for Participation**
The project requires physician participation for 10 months and submission of 12 months of retrospective baseline data (total project approximately 18 months with pre and post work over 6 months and 12-month intervention/action period). Physicians must:
- ✓ Lead the implementation for the Reducing Excessive Variability in Infant Sepsis Evaluation (REVISE) core changes for 10 months and submission of 12 months of retrospective baseline data (total project period is approximately 18 months with pre and post work over 6 months)
- ✓ Provide direct or consultative care to patients as part of the project
- ✓ **Physician Leaders:** Engage in at least 6 meetings that can be learning session webinars or conference calls/webinars where collaborative data are reviewed or plans for new improvement activities are made.

**Other participating physicians:** Attend at least 6 meetings at which collaborative data are reviewed and plans for improvement activities are made (can be local team meetings, conference calls/webinars, or learning sessions)
- ✓ Collect and submit data on a subset of patients as defined by the project
- ✓ Review monthly run charts for 10 months during intervention phase
- ✓ Implement change package ideas/tools designed to improve infant sepsis care

**ABP Minimum Standards for Participation for All QI Projects**
- Provide direct or consultative patient care in the improvement project
- Complete 1 or more tests of change to improve care
- Collect, submit and review data in keeping with the project’s measurement plan
- Collaborate actively by attending at least 6 project meetings
- Maintain active in the project for the minimum duration required by the project (minimum criteria established by AAP)
- Complete participation under current ABP certificate or MOC cycle

Data Sharing and Reporting
As part of the quality improvement project, participants will share data with project participants and leadership. This will allow hospitals to learn from one another and share strategies and barriers. QuIIN Expert Group members (consisting of AAP staff and expert leaders) will have access to the identifiable (by hospital) data from the chart reviews and pre- and post- project surveys allowing them to identify areas of need and provide ongoing assistance throughout the project. Finally, hospital team members may choose to share data with other hospital staff (that are not consented) during calls if they feel it will be beneficial (although this is not required).

For quality improvement purposes between hospitals, run chart data will be aggregated by hospital. In addition, hospitals will be identified by code in communication for quality improvement purposes between each participating hospital. Each participating team will be able to use the secure password protected QIDA system to view reports of their hospital’s aggregate data, as well as aggregate data from other hospitals. **Data collected will not include protected health information.** Data will be stored on a secure network with password protection. Project data will be stored for up to seven years in the QIDA system, but once a project closes, only AAP QIDA staff will have access to the data.

For research and publications that may result from this work, individual hospital data or anecdotal stories will not be identifiable. If hospital data is presented, each hospital will receive an ID code in the report. Should hospitals be easily identifiable by their demographics (i.e., only one rural hospital or only one academic/university affiliated hospital with pediatric beds), data based on those demographics will not be presented in the publications or with the public. For instance, there will need to be three or more hospitals in any demographic group to report project data from that group in a publication or in any way to the public. Potential publications may include a conceptual model of key barriers and potentially useful strategies that emerged from this project. No patients or hospital staff will be identified in any report or publication about this study. Hospital names will only be used in the acknowledgement section of any potential publication.

**Institutional Review Board (IRB)**
Project REVISE has received approval from the AAP Institutional Review Board. No identifiable protected health information is being collected for this project; therefore, HIPAA authorization will not be needed from patients in order for your hospital to participate.
Note: your hospital or healthcare system may also require IRB approval and/or a data sharing/transfer agreement. Often, the information supplied in the AAP IRB Application will be applicable to your hospital IRB application as well and/or the AAP IRB approval may be sufficient. If not, the AAP IRB application will be provided so that it can be adapted to meet your needs; a copy of the AAP IRB will be made available upon your request. Feel free to e-mail Faiza Wasif at fwasif@aap.org to obtain a copy.

Application Checklist

☐ Please review the following documents:
  - Fact Sheet and Timeline
  - Electronic Application (https://www.surveymonkey.com/r/ProjectREVISERecruitment)

☐ After reviewing the above materials, please submit the electronic application as soon as possible (due by 5pm CT on Friday, October 7th or until 100 eligible hospital teams are identified – whichever comes first). Applications will be reviewed on a rolling basis during the recruitment period. Notifications will be sent out at once in mid to late October.

☐ If you are interested in obtaining a letter of support from the Project REVISE leadership that can be shared with the leadership at your organization, please contact Faiza Wasif (fwasif@aap.org), with this request.

☐ Upon our receipt of your application materials, the application will be reviewed. Once project teams have been selected, we will contact you to welcome your team to the project by mid to late October.

☐ Please do not hesitate to contact Faiza Wasif, MPH QuIIN: fwasif@aap.org or 847/434-7806.

We look forward to working with you soon!