AAP INFECTION PREVENTION AND CONTROL QUALITY IMPROVEMENT CHANGE PACKAGE

American Academy of Pediatrics
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Project ECHO®

PROJECT FIRST LINE
CDC's National Training Collaborative
for Healthcare Infection Prevention & Control
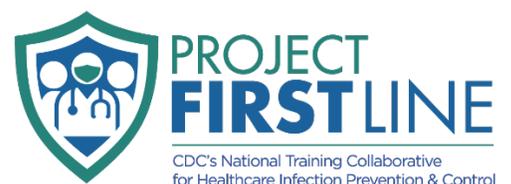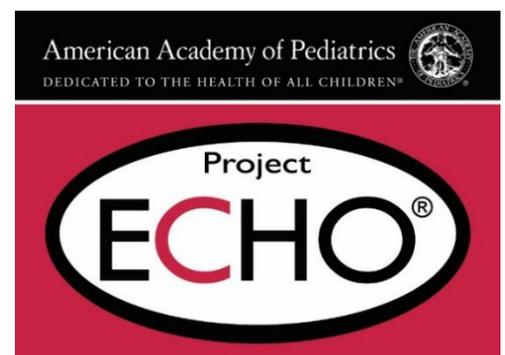
WELCOME

Greetings!

The American Academy of Pediatrics (AAP) is thrilled to share with you a suite of infection prevention and control related quality improvement resources from the AAP Infection and Prevention and Control Quality Improvement ECHO (Extension for Community Health Care Outcomes) program (AAP IPC QI ECHO)! Project ECHO is a telementoring program designed to create communities of learners by bringing together primary care practices and an expert team using didactic and case-based presentations, fostering an "all teach, all learn" approach. Practices who participated in the AAP IPC QI ECHO demonstrated improved knowledge, skills and self-efficacy around infection prevention and control strategies to mitigate infection transmission utilizing quality improvement strategies in the practice setting.

In the following change package, materials from the *American Academy of Pediatrics Infection Prevention and Control Quality Improvement ECHO* are shared for pediatric practices to repurpose for their own quality improvement projects to help improve IPC practices.

Sincerely,

AAP Project Firstline Staff

CONTENTS

PROJECT FIRSTLINE

Project Firstline is a Centers for Disease Control and Prevention (CDC) national health care workforce infection prevention and control training collaborative. As a Project Firstline partner, the AAP serves as a virtual training center on infection prevention and control.

Project Firstline aims to educate all US **health care workers** with the foundational understanding of infection prevention and control (IPC) to protect the nation from infectious disease threats, such as COVID-19 and other infectious diseases. The AAP is one of several partners in this initiative.

As a Project Firstline partner, the AAP serves as a virtual training center on infection prevention and control. The goal of the center is to expand and strengthen the capacity, collaboration, and coordination of pediatric health care providers during the ongoing response to COVID-19, and to improve the health of all children and their families. This training center includes educational materials, collaborative learning opportunities and clinical practice enhancements.

Visit the AAP Project Firstline website for a suite of infection prevention and control resources: www.aap.org/projectfirstline.

Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC) to provide infection control training and education to frontline healthcare workers and public health personnel. AAP is proud to partner with Project Firstline, as supported through Cooperative Agreement CDC-RFA-OT18-1802. CDC is an agency within the Department of Health and Human Services (HHS). The contents of this product do not necessarily represent the policies of CDC or HHS and should not be considered an endorsement by the Federal Government.

HOW TO USE THIS CHANGE PACKAGE

We recommend that a physician champion create an interdisciplinary team (physicians, nurses, medical assistants, practice administrator, etc.) to discuss the aspects of infection prevention and control that need the most improvement in your practice. A "current state" workflow or process map can help your team identify areas that need improvement.

Your team will create focus and alignment by answering the three fundamental questions from the Institute for Healthcare Improvement's Model for Improvement (page 5):
1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in improvement?

The answers will help your team determine quality improvement aims (question 1) and related measures (question 2). Then, you can select specific interventions from the change package (question 3) that your team can test through Plan-Do-Study-Act cycles to see if they help your team accomplish its aim. The change package is meant to be a **menu of options** from which practices can select specific interventions to improve infection prevention and control strategies. ***The interventions are not required to be implemented all at once.***

PROJECT CHECKLIST

Getting started:
- Form your practice interdisciplinary team (ideally, this will include everyone from your practice; clinicians, medical assistant, nurses, social workers, front desk staff, infection preventionist, etc)
- Identify the measures you and your health care team want to focus on
- Select who on your health care team will be the dedicated observer for data collection
- Select who on your health care team will enter data into the data visualizer **(Appendix G).**
- Determine the timeline for your QI project, including:
  - Beginning and end dates
  - Deadlines for viewing lecture recordings related to your measures (this can be individually, as a team through a lunch and learn, etc).
  - If/when you want cases due to review at team meetings
  - Consistent dates/times for data collection
  - Timing of periodic meetings with your team to review the data and develop and discuss PDSAs
  - Deadlines for data entry (consider when the monthly team meetings will be held)

Each Month:
- Collect observational data

- Participate in practice team meetings and create Plan-Do-Study-Act (PDSA) each cycle
- Present case and PDSA during team meetings

End of Project:
- Review data in full to determine if any improvements were made
  - Were the PDSA's successful?
  - Did any opportunities arise to make sustainable changes/improvements with policies or procedures?
  - Do you want to continue tracking these measures long term?

PRACTICE TEAM MEETINGS

A core tenant of quality improvement is having a full team invested, committed and ready to do the work. As you're thinking about implementing this QI project, consider who from your practice team you will need to engage:
- Primary care physician,
- Medical assistant,
- Nurse,
- Front desk staff,
- Practice manager,
- Care Coordinator,
- Social worker,
- Family partner,
- Others?

Practices teams are encouraged to meet at least once per month to review observational data and to brainstorm ways to improve that will be implemented via PDSA cycles.

Change ideas focus on starting with a small test (do) and assessing the results (study). For example, starting with one change, with one pediatrician, for one patient and studying the results. If a positive result, continue testing the change with more pediatricians over longer time periods. If the change result is negative, try to figure out why and continue to adapt and test to find positive changes.

A key strategy for implementing a QI project is to schedule recurring and consistent team meetings. See below for tips from the AAP Practice Management website that describes how to implement team meetings and huddles.

- **Practice Management**
  - Implementing Team Meetings and Huddles
    - A team huddle is a short (10 minute) daily standup to review the day clinically and identify challenges to optimize supply and demand.
    - A team meeting is used to plan your practice QI changes.
      - Optimally, you will identify and plan your quality improvement change in a meeting and then remind the team about your plan and identify any issues in the huddle.

QUALITY GAP

Due to the rapidly changing landscape of health care guidance during the COVID-19 pandemic, specifically around infection prevention and control (IPC), many primary care clinicians may not know what the most up to date best practices, guidelines and procedures, or practice improvements are for recognizing and mitigating infection in the practice setting.

Additionally, pediatric-specific clinical infection prevention and control guidance is limited. The guidance that does exist may not be applicable across diverse clinician types, practice settings, and communities served.

Proper IPC protocols can mitigate the risk of infection transmission, improving safety for clinicians, their teams, patients, and families.

Pediatric practice teams implementing their own quality improvement projects should identify and address their own quality gaps by collecting their baseline data, comparing their data to their self-identified goals, implementing tests of change, and reviewing data on an ongoing basis to determine if improvements are being made.

QUALITY IMPROVEMENT

Quality improvement is "a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community" (Accreditation Coalition Workgroup, June 2009).

The AAP utilizes the Institute for Healthcare Improvement (IHI) Model for Improvement, which is a *systematic approach for planning, testing, evaluating, and applying changes in processes and systems of care.*

PROCESS OF IMPROVEMENT
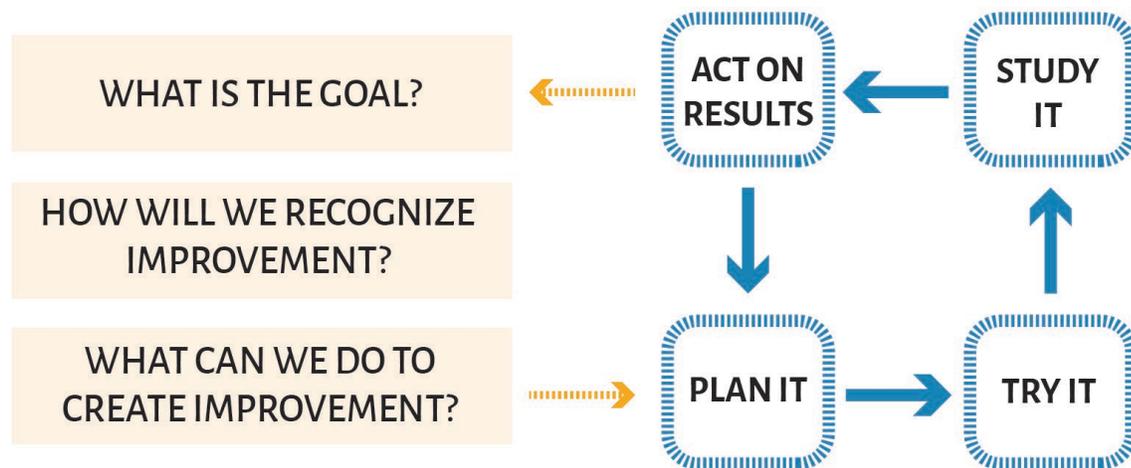
QUALITY IMPROVEMENT TOOLS

While AAP QI projects primarily utilize Plan, Do, Study, Act cycles to implement small tests of change, there are many other QI tools that can help your team identify root causes and potential solutions. An overview of each QI tool will be provided below:

- Plan, Do, Study, Act
- Cause-and-Effect/Fishbone
- Process Flow Chart
- Five Whys

PLAN, DO, STUDY, ACT (PDSA)

Plan	• Define the question you want to answer; make predictions.
	• Describe the test plan – who, what, when, where.
	• Establish what data you need to collect.
Do	• Carry out the change or test.
	• Collect data.
	• Describe observations, including unanticipated.
Study	• Analysis of data.
	• Summarize what was learned; reflect upon this.
Act	• Based on the summary – what are the next steps?
	• Adopt/Adapt/Abandon.

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

Act → Plan

Study → Do
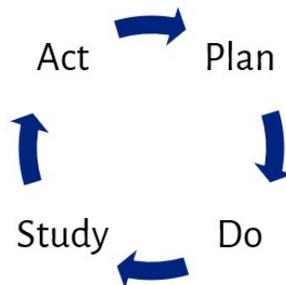
The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement; 2003. (Available on www.IHI.org)

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See Appendices I-M for examples of PDSAs

CAUSE-AND-EFFECT/FISHBONE

The Cause-and-Effect diagram (commonly referred to as a **Fishbone** diagram), is a method of structured brainstorming to identify root cause. It is an improvement tool, conducted in groups, that helps identify what changes you can test to improve a process or outcome.

- — Effect, Outcome or Dependent (What is the problem?)
- — Uses categories and hierarchies
  - ▪ Causes, Controls or Inputs
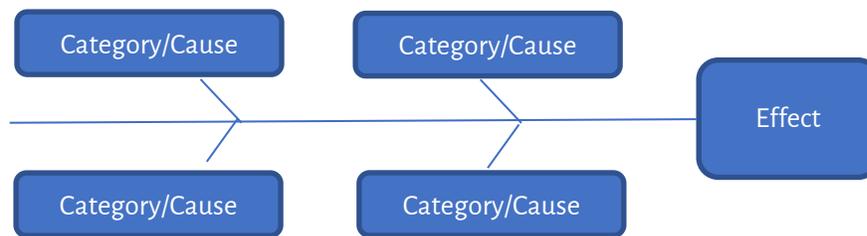
Cause-and-Effect diagram in practice:

1. First you want to identify the outcome or problem you want to change

2. Next brainstorm and identify the categories and causes that will affect the outcome

3. The process of categorization can be helpful to break down a complex problem

4. You can view the problem from various perspectives to identify root causes
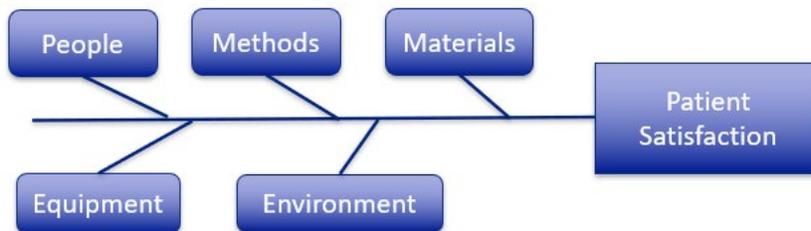
See Appendix N for an example Cause-and-Effect Diagram

PROCESS FLOWCHART

Process Flowcharts are also known as process mapping. They are a visual depiction of the way a process ***actually*** works.
- Steps are shown as boxes of various kinds with order being shown by connecting the boxes with arrows
- It is important to set clear start and end points to keep the process map within scope
- Operational definitions need to be set

Using a flowchart has a variety of benefits:
- Clarify complex processes
- Identifies steps that do not add value to the patients and staff
  - (Delays, unnecessary work, duplication, added expenses, breakdowns in communication)
- Helps team members gain a shared understanding of the process and use this knowledge to collect data, identify problems, focus discussions, and identify resources
- It serves as a basis for designing new processes

See Appendix O for an example Process Flowchart

FIVE WHYS

The Five Whys analysis technique focuses on a problem by asking multiple "Why?" questions or "What caused this problem?" to identify the root cause
- When asking the questions, include team members with personal knowledge of the processes and systems involved in the problem being discussed
- This technique works well if the problem is simple
  - The more complex the problem, the more likely it will take further analysis to reach the root cause

See Appendix P for an example Five Whys

PROJECT DETAILS

Your practice team will select the timeframe for the QI project. Below are sample timelines and curriculum outlines based on your needs.

SAMPLE TIMELINE

September 2022
- Review QI Change Package in full
- Create and onboard interdisciplinary team
- Select measures to focus on
- Determine your project timeframe and draft a schedule for data collection, monthly meetings, lunch and learns, etc

October 2022 - May 2023
- Collect observational data (baseline)
- Conduct monthly observational audits
- Facilitate lunch and learns with the brief curriculum videos
- Facilitate monthly team meetings to review data and discuss
- Develop and implement monthly PDSA Cycles as a team
- Test changes to improve IPC protocols in practice

June 2023
- Share practice outcomes with team
- Share and discuss lessons learned
- Determine plan for continuing QI work

Timeline considerations:
- How many measures are you focusing on?
- Will you host lunch and learns for your team to watch the lecture recordings? Are there already staff meetings scheduled that can be leveraged for this purpose?
- What is your staff capacity for data collection and PSDA implementation?
- Are there holidays in your proposed timeframe that may affect your meeting schedule?

CURRICULUM

AAP Infection Prevention and Control Quality Improvement ECHO lecture recordings are available for viewing with your team during your QI project. The lecture topics should focus on the QI measures that you will be collecting. A sample schedule of how to implement this with your practice team is below.

Note: you can refine this schedule based on the lecture topics that pertain to your selected QI measures.

SAMPLE CURRICULUM SCHEDULE 1		
Session	**Date**	**Topic**
1	October 12, 2022	[Maximizing Office Efficiencies to Reduce Transmission During Respiratory Season](#)
QI 1	October 26, 2022	Q & A for data collection/reporting; review QI tools; model PDSA presentation/discussion
2	November 9, 2022	[Practice Policies and Education for Mitigation](#)
QI 2	November 23, 2022	Review aggregate data; PDSA discussion
3	December 14, 2022	[Hand Hygiene/Cleaning and Disinfecting](#)
QI 3	December 28, 2022	Review aggregate data; PDSA discussion
4	January 11, 2023	[Risk Communication](#)
QI 4	January 25, 2023	Review aggregate data; PDSA discussion
5	February 8, 2023	[Infection Control Practices Before, During, and After Administering Vaccines](#)
QI 5	February 22, 2023	Review aggregate data; PDSA discussion
6	March 8, 2023	[Telehealth Triage: A Tool for Preventing Disease Transmission](#)
QI 6	March 22, 2023	Review aggregate data; PDSA discussion
7	April 12, 2023	[The Physical Environment](#)
QI 7	April 26, 2023	Review aggregate data; PDSA discussion
8	May 10, 2023	[Where We Are Now: Lessons Learned During the COVID-19 Pandemic](#)
QI 8	May 24, 2023	Review aggregate data; PDSA discussion

SAMPLE CURRICULUM SCHEDULE 2		
Session	Date	Topic
1	December 14, 2022	Hand Hygiene/Cleaning and Disinfecting
QI 1	December 28, 2022	Review aggregate data; PDSA discussion
2	February 8, 2023	Infection Control Practices Before, During, and After Administering Vaccines
QI 2	February 22, 2023	Review aggregate data; PDSA discussion
3	May 10, 2023	Where We Are Now: Lessons Learned During the COVID-19 Pandemic
QI 3	May 24, 2023	Review aggregate data; PDSA discussion

CASE PRESENTATION FORM

Members of your health care team are encouraged to submit a de-identified case presentation related to a de-identified patient, or health care system-related case during the program.

The case presentations serve as a tool to educate providers on how to respond to potential exposure, how to educate patients and families on mitigation of transmission, and more. The presentation is typically **5 minutes long**.

Team members are encouraged to complete a case form for discussion during the monthly QI team meetings.

Refer to **Appendix A** for the case presentation form template. The template has been developed to guide the development of an organized case presentation that includes all of the core elements necessary to stimulate meaningful feedback and discussion.

DATA COLLECTION

Each month (or other determined timeframe), practices will:

- Conduct an observational audit on a consistent date (3rd Tuesday of each month, 15th of each month, etc) for the first 15 patient encounters for patients 0-21 of age who present at the practice. ***Note: 15 encounters is the recommended minimum to report on***
- Conduct a Plan-Do-Study-Act (PDSA) cycle
- Talk through a de-identified case that a practice team member has brought to the group for discussion

Broad Collaborative Aim:
- Participating practice teams will improve knowledge, skills and self-efficacy around infection prevention and control strategies to mitigate infection transmission utilizing quality improvement strategies in the practice setting.

Improvement Goals to consider:
- Practices will increase positive-screened patients receiving guidance on isolation or quarantine and strategies for mitigation of transmission by 10%
- Practices will increase health care providers cleaning hands before <u>and</u> after patient contact by 10%
- Practices will increase the number of clinic rooms disinfected between sick-patient visits by 10%
- Practices will increase the number of vaccine vials cleaned with antiseptic wipe and allowed to completely dry before use by 10%
- Practices will increase the number of patients completing infection prevention and control satisfaction survey by 30%

OBSERVATIONAL AUDIT

Teams will track measures through observational audits to ensure that the changes made have a positive impact and contribute to progress toward improvement goals. **The paper observational audit check sheets that can be used to capture the data needed for the QIDA data collection tool can be found in Appendix C.**

Conduct monthly observational audit on a consistent date (3rd Tuesday of each month, 15th of each month, etc) for the first 15 patient encounters for patients 0-21 of age who present at the practice.

SAMPLE DATA COLLECTION CALENDAR

Data Cycle	Month of Audit (Report observational audits conducted during time period listed below)	PDSA Worksheet
1 (Baseline)	**October 1 through October 31, 2022**	**November 5, 2022**
2	November 1 through November 30, 2022	December 5, 2022
3	December 1 through December 31, 2022	January 5, 2023
4	January 1 through January 31, 2023	February 5, 2023
5	February 1 through February 28, 2023	March 5, 2023
6	March 1 through March 31, 2023	April 5, 2023
7	April 1 through April 30, 2023	May 5, 2023
8	May 1 through May 31, 2023	June 5, 2023

MEASURES

The quality improvement measures listed below were developed and implemented in the AAP Infection Prevention and Control ECHO. For your practice QI project, you can select any of the measures from the list below, or develop your own.

#1: PRACTICE IPC POLICY AND EDUCATION

Measure Definition	% of patients who test positive [*on respiratory virus screener*] that are provided with guidance on isolation or quarantine and strategies for mitigation of transmission.
Numerator	(x) Total number of patients screened positive that are provided with guidance on isolation and strategies for mitigation of transmission.
Denominator	(y) Total number of patients screened positive in dedicated time frame

#1a: PRACTICE IPC POLICY AND EDUCATION

Measure Definition	Does the **practice** have a policy to identify the adequate PPE inventory? Yes No

#2: HAND HYGIENE

Measure Definition	% of health care providers cleaning hands before <u>and</u> after patient contact.
Numerator	(x) Total number of health care providers observed cleaning hands before <u>and</u> after patient contact.
Denominator	(y) Total number of patient visits in dedicated time frame

#3: ENVIRONMENTAL DISINFECTING

Measure Definition	% of sick-patient rooms disinfected between visits. *Disinfected defined as using chemicals to kill germs on surfaces or objects, not just using soap and water to clean the environment.

Numerator	(x) Total number of clinic rooms disinfected between sick-patient* visits.
	*Sick-patient defined as potential positive for respiratory illness
Denominator	(y) Total number of sick patient visits in dedicated time frame

#4: PREP OF VACCINE VIALS

Measure Definition	% of vaccine vials appropriately cleaned before use.
Numerator	(x) Total number of vaccine vials cleaned with antiseptic wipe and allowed to dry completely before use.
Denominator	(y) Total number of vaccine vials used in the dedicated time frame

#5: PATIENT SURVEY

Measure Definition	% of patients completing survey to provide feedback on office cleanliness/staff hygiene
Numerator	(x) Total number of patients surveyed
Denominator	(y) Total number of patients seen in dedicated time frame

RESOURCES

American Academy of Pediatrics

- [COVID-19 guidance for Pediatricians](#)
- [EQIPP Modules](#)
- [AAP Connecting with the Experts: A COVID-19 Townhall Series](#): Archived live video conferences on COVID-19 from AAP experts.
- [AAP Pediatrics OnCall Podcast](#): COVID Q & A with CDC's Dr Michael Bell (Episode 42)
- [Practice Management Tips:](#) Suggestions for managing a practice in an efficient and safe manner during the COVID-19 pandemic.
- [Children and COVID-19 Vaccination Trends](#): Drawn upon data posted by the Centers for Disease Control and Prevention, the AAP is tracking the progress in vaccinating US children under 18 years of age, full report provided.
- [Caring for Children and Youth With Special Health Care Needs During the COVID-19 Pandemic:](#) Guidance designed to minimize the risk of infection while meeting the ongoing needs of CYSHCN during the pandemic. (2/28/2022)
- [Family Presence Policies for Pediatric Inpatient Settings During the COVID-19 Pandemic:](#) Guidance on family presence policies developed to support family-centered care for all children and particularly for children with special health care needs, including those with disabilities, medical complexity, and serious illness. (12/1/2021)
- [Guidance on the Use of Personal Protective Equipment (PPE) for Pediatric Care in Ambulatory Care Settings During the SARS-CoV-2 Pandemic](#): Guidance for mitigating the risk of infection for all who work or receive care in pediatric ambulatory settings, including the appropriate use of personal protective equipment (PPE) along with consistent and effective infection prevention and control practices. (1/19/2022)
- [Face Masks](#)**:** Guidance for pediatricians when counseling families about the universal use of cloth face coverings by children 2 years of age and older and the adults with whom they interact. (6/30/2022)
- [Guidance on Providing Pediatric Well-Care During COVID-19:](#) Guidance on the continued provision of health care, specifically well-child care and timely immunizations, for newborns, infants, children and adolescents during the COVID-19 pandemic. (1/6/2022)
- [Interim Guidance on Supporting the Emotional and Behavioral Health Needs of Children, Adolescents, and Families During the COVID-19 Pandemic](#): Guidance on the emotional and behavioral health challenges that have been acutely exacerbated by the COVID-19 pandemic. (12/9/2021)

Centers for Disease Control and Prevention

- [Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19)](#)
- [PPE Burn Rate Calculator](#)
- [Interim Guidance for Routine and Influenza Immunization Services During the COVID-19 Pandemic](#)

- [Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States](#)

- [Maximizing Fit for Cloth and Medical Procedure Masks to Improve Performance and Reduces SARS-CoV-2 Transmission and Exposure](#)

- [Caring for Someone Sick at Home](#)

- [Coronavirus Disease (COVID-19) and Breastfeeding](#)

[Project Firstline](#)

Quality Improvement

- **American Academy of Pediatrics**
  - [Process Improvement Workflow Template](#)
  - [Quality Improvement in the Pediatric Practice](#)
  - [Quality Improvement Resources](#)

- **Institute for Healthcare Improvement**
  - [Cause and Effect Diagram and Tools](#)
  - [Flowchart Diagram and Tools](#)
  - [Quality Improvement Essential Toolkit](#)
  - [Seven Popular Improvement Tools](#)
  - [Use Daily huddles to Make Improvement Stick](#)
    - *Many organizations use huddles during care transitions. But the daily huddle can do much more. These brief stand-up meetings give teams a way to actively manage quality and safety*

- **National Institute for Children's Health Quality**
  - [QI Tips: A Formula for Developing a Great Aim Statement](#)

- **Webinars:**
  - Measure What Matters: Advancing Multidisciplinary Care Coordination in Primary Care Settings. Faculty slides as well as recordings for both webinars are [available here.](#)

APPENDIX A: CASE FORM

Instructions:
The submission of cases for presentation and discussion is completely optional. You may welcome cases that involve patient care as well as process and/or policy-related cases.

What Information Should Be Included in a Case Presentation?
If you are asking a question about a patient, it is critical to preserve patient confidentiality at all times during case presentations. **No identifiable information should be mentioned or shown during case presentations (ie, name, birthdate, etc).**

What Cases Should I Present?
For this topic, you may choose to present a process (clinic, hospital, or health system-based) case or a de-identified patient case.

1. **Does your organization have a current infection prevention and control policy that includes COVID-19 procedures?**

   ☐ Yes
   ☐ No

This case represents a question or challenge related to: (check all that apply)
☐ A. Managing a patient. *If checked, complete portion A of this form*
☐ B. Process/policy. *If checked, complete portion B of this form*

A. Managing a patient
Please share the following information for your patient case you are describing:

---

1. **What is your reason for presenting this case? In other words, what questions would you like the group to help you answer about this case?**

---

2. **What is the patient's gender identity?**
   a. Male
   b. Female
   c. Transgender man/trans man/female-to-male (FTM)
   d. Transgender woman/trans woman/male-to-female (MTF)
   e. Genderqueer/gender nonconforming neither exclusively male nor female
   f. Decline to answer
   g. Additional gender category (or other): Please specify
3. **What is the patient's age?**
4. **What is the patient's race?**

     a. White
     b. Hispanic or Latino
     c. African American
     d. Native American
     e. Asian/Pacific Islander
     f. Multiracial
     g. Decline to answer

5. **What is the patients' living situation?**
     a. Patient lives with both parents
     b. Patient lives with one parent
     c. Patient lives in multigenerational household (parents, grandparents, aunts, etc)
     d. Patient lives alone
     e. Patient lives with spouse and/or kids
     f. Unsure
     g. Other:

6. **What type of housing does the patient reside in?**
     a. Single family home
     b. Apartment
     c. Townhome/condo
     d. Multi-family home
     e. Unsure
     f. Other:

7. **Does the patient have a special health care need that may make intervention more difficult?**
     a. No
     b. If yes, please describe:

Please describe the main points of your case (include how you have already handled the case, if applicable, and what disruptions occurred as a result):

1.

2.

3.

4.

Please share any related policy/procedures related to this case:

B. Process/policy
Please share the following information for your process/policy-related case you are describing:

---

1. **What is your reason for presenting this case? In other words, what questions would you like the group to help you answer about this case?**

2. **What policy relates back to your case?**

---

3. **What is your practice size? (Describe number of providers, administrative staff)**

Please describe the main points of your case (include how you have already handled the case and what disruptions occurred as a result):

1.

2.

3.

4.

APPENDIX B: DATA COLLECTION TOOL

1. How many patients screened positive [*on current respiratory virus triage screener being utilized, see Appendix G for sample*], that are provided with guidance on isolation and strategies for mitigation of transmission? _____
   a. How many patients were screened in the dedicated time period? _____

1a. Does the **practice** have a policy to identify the adequate PPE inventory? ☐Yes ☐No

2. How many health care providers were observed cleaning their hands before <u>and</u> after patient contact? _____

   a. How many total health care providers were observed in the dedicated time frame? _____

3. How many sick-patient rooms were disinfected between visits? _____
   a. How many total sick-patient visits were there in the dedicated time frame? _____

4. How many vaccine vials were cleaned with an antiseptic wipe and allowed to dry completely before use? ____
   a. How many vaccine vials were used in the dedicated time frame? _____

5. How many patients completed the patient satisfaction survey? _____
   a. How many patients were seen in the dedicated time frame? _____

APPENDIX C: OBSERVATIONAL AUDIT CHECK SHEETS

OPTION 1

Project Name: _____

Initial of Data Recorder: _____

Location: _____

Data Collection Dates: _____

Positive Screened Patient provided with guidance on isolation and strategies for mitigation of transmission	Day of the Week							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Visit 1								
Visit 2								
Visit 3								
Visit 4								
Visit 5								
Visit 6								
Visit 7								
Visit 8								
Visit 9								
Visit 10								
TOTAL								

*Utilize multiple pages, if needed.

Project Name: _____

Initials of Data Recorder: _____

Location: _____

Data Collection Dates: _____

# of clinic rooms disinfected between sick-patient visits	Day of the Week							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Visit 1								
Visit 2								
Visit 3								
Visit 4								
Visit 5								
Visit 6								
Visit 7								
Visit 8								
Visit 9								
Visit 10								
TOTAL								

*Utilize multiple pages, if needed.

Project Name: _____

Initial of Data Recorder _____

Location: _____

Data Collection Dates: _____

Health care providers observed cleaning hands before and after patient contact	Day of the Week							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Visit 1								
Visit 2								
Visit 3								
Visit 4								
Visit 5								
Visit 6								
Visit 7								
Visit 8								
Visit 9								
Visit 10								
TOTAL								

*Utilize multiple pages, if needed.

Project Name: _____

Initial of Data Recorder: _____

Location: _____

Data Collection Dates: _____

Vaccine vials cleaned with antiseptic wipe and allowed to dry completely before use	Day of the Week							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Visit 1								
Visit 2								
Visit 3								
Visit 4								
Visit 5								
Visit 6								
Visit 7								
Visit 8								
Visit 9								
Visit 10								
TOTAL								

*Utilize multiple pages, if needed.

Project Name: _____

Initial of Data Recorder: _____

Location: _____

Data Collection Dates: _____

Patient Satisfaction Survey Completed	Day of the Week							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Visit 1								
Visit 2								
Visit 3								
Visit 4								
Visit 5								
Visit 6								
Visit 7								
Visit 8								
Visit 9								
Visit 10								
TOTAL								

*Utilize multiple pages, if needed.

OPTION 2

Month: _____

Date of Recorder Initials: _____

Encounter	Measure 1: Positive-screen patient provided guidance on isolation and strategies for mitigation of transmission?	Measure 2: Clinic room *disinfected* between sick-patient visits	Measure 3: Health care providers observed cleaning hands before <u>and</u> after patient contact	Measure 4: Vaccine vials cleaned with antiseptic wipe and allowed to dry completely before use	Measure 5: Patient survey provided
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

APPENDIX D: PDSA FORM

Improvement Planning Worksheet

AIM

Describe the aim of this project. What are you trying to accomplish? Every aim will require multiple small tests of change.

IDEA

Describe the proposed test. What performance gap will it address? What idea will you test? What barriers will you need to overcome?

Performance gap	Idea for test	Barriers

MEASURES

What is the **desired goal** that will close the performance gap? Describe the specific measures that will determine a successful outcome for the test.

PLAN

Describe your plan for change. List the tasks and tools needed to perform the test. Predict what will happen when the test is carried out.

Tasks and Tools	Predicted Outcome
Who:	
What:	
When:	
Where:	
How:	
Tools:	

DO

Try your change with a few patients over a short period of time. Collect data that can be measured. Describe what happened when you ran the test.

STUDY

Did the change result in the desired improvement? Describe how the measured results compare to the predicted outcome.

ACT

Describe how you will modify the plan in the next test cycle based on "learnings" from this cycle. Or, describe a new idea to test to help you achieve your aim.

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APPENDIX E: PATIENT SATISFACTION SURVEY INSTRUCTIONS

Infection Prevention and Control Patient/Family Survey

Practice Instructions

Background: Infection prevention and control (IPC) strategies help prevent the spread of infectious diseases (COVID-19, flu, respiratory illness, etc). IPC strategies can include hand hygiene, cleaning and disinfecting, and personal protective equipment including masks, gowns, and gloves.

Purpose: This survey is part of a quality improvement project. Data collected from these surveys will be used to inform improvements of infection prevention and control practices within the health care setting.

Staff Directions:

- All surveys are completely voluntary and anonymous

- The survey should be provided after care is delivered

- For patients 0-17, parents should complete the survey

- For patients 18+, the patient should complete the survey

- Completed surveys can be placed face down in the box labeled IPC Surveys in the lobby

- At the end of each day, practice staff are charged with collecting the surveys from the box and storing them in a secure location for the duration of the program

- All surveys should be destroyed at the conclusion of the project

APPENDIX F: PATIENT SATISFACTION SURVEY

Infection Prevention and Control

Patient/Family Survey

Your child's provider is participating in a project with the [Insert Health Clinic]to help improve infection prevention and control practices. In order to help us, we are asking you to complete this brief survey following the visit with your health care provider today. If you decide to complete this survey, you will be asked to put it in a box in the lobby. This survey is completely voluntary and if you complete this no one will know these answers are yours.

1. **Are you 18 years of age or older?**

   ☐ Yes

   ☐ No (Please <u>DO NOT</u> proceed with this survey)

2. **The cleanliness of the office (waiting area, front desk, exam room) meets my approval**

   1= Completely disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree 5= Completely agree

3. **I welcome my/my child's practice implementing infection prevention and control strategies to reduce the risk of transmission to myself or my child.**

   1= Completely disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree 5= Completely agree

4. **Did you see your/your child's health care provider wash their hands or use hand sanitizer before making contact with you/your child?**

   ☐ Yes

   ☐ No

   ☐ Unsure

5. **Did you see your/your child's health care provider clean the vaccine vial with an antiseptic wipe (cleaning wipe) prior to administration?**

   ☐ Yes

   ☐ No

   ☐ Unsure
   ☐ Not applicable, I did not receive a vaccine during my visit

6. **Is there anything you are concerned about regarding infection prevention and control during today's visit that you would like to share? [open ended question]**

APPENDIX G: SAMPLE PATIENT SCREENER

Instructions: The screener below (specific to COVID-19) provides a list of questions to ask patients before their appointments to ensure spread of infection is mitigated and to allow clinic staff to be properly prepared with personal protective equipment. Please add or remove questions, as appropriate and to fit the current respiratory virus season.

In response to the recent COVID-19 pandemic, and as we ease into cold and flu season, *[Insert health clinic name]* is taking precautions to lessen the spread of infection. All patients must have a screening form complete (to be completed electronically, via phone, or upon arrival).

Has the patient or anyone in the household tested positive for COVID-19?	☐ Yes	☐ No
Has the patient or anyone in the household taken a COVID-19 test in the last 14 days?	☐ Yes	☐ No
Does the patient or anyone in the household have any GI symptoms? Diarrhea? Nausea?	☐ Yes	☐ No
Even if you don't currently have any of the above symptoms, has the patient or anyone in household experienced any of these symptoms in the last 14 days?	☐ Yes	☐ No
Has the patient or anyone in the family been in contact with someone who has tested positive for COVID-19 in the last 14 days?	☐ Yes	☐ No
Has the patient or anyone in the family traveled outside the United States in the last 14 days?	☐ Yes	☐ No

Determine as a clinic if the patient's appointment will be rescheduled, moved virtual, or kept as is and shared as an FYI to the providers so they can wear proper PPE.

APPENDIX H: PRACTICE DATA COLLECTION VISUALIZER

In order to visualize whether process improvements are being made, practices can utilize the electronic data collection visualizer. Run charts and tables are pre-populated for each QI measure. **You can customize the document to only reflect the measures that you choose for your QI project**.

To use the electronic data collector and run charts, enter your data per encounter into the respective sheets. The data table is set up for up to 20 encounters and includes 8 cycles to be plotted in the run chart. The data table can be modified to include more than 20 encounters and 8 cycles, or to include fewer than 20 encounters and 8 cycles.

Enter binary (0,1) into the data table for **0 = no and 1 = yes**. Mean scores will be calculated from the data entered in the table and will automatically be calculated into a percentage and plotted in the run chart.

If you are not entering data into the data table directly, calculate your mean score per measure per cycle and enter that into the appropriate cycle in the run chart table (as detailed below). With your mean score per measure, you will see your process variability over time. See instructions below for calculating your mean scores by hand and still utilizing the run chart template in Excel.

Sum up your encounters in which process steps were correctly followed and implemented. For example, if you saw 20 patients and 10 of those encounters were observed correctly disinfecting the environment, your sum would equal 10. You will then calculate your mean, which is the sum divided by your total encounters, in this case sum = 10, total encounters (n) = 20. Your mean score is sum/n, which is 10/20 = 50%. You can then enter 50 into the mean score for the respective cycle or enter it directly into the appropriate cycle in the run chart table.

APPENDIX I: EXAMPLE PDSA #1

Plan: To make sure we are performing proper handwashing and social distancing practices.

Do: Hand out handwashing / social distancing questionnaires to every patient being seen in the office to complete for 3 days (October 14, October 15, and October 18).

Study: Out of 256 patients polled, it was determined that we did not wash hands in the rooms in front of the patients 14 out of 256 times, and we did not practice social distancing 6 out of 256 times.

Act: Educate the physicians and staff on the importance of handwashing before working up each patient, and also, on the importance of practicing social distancing in the office.

APPENDIX J: EXAMPLE PDSA #2

Plan: To ensure all medical students, residents, and faculty are performing proper handwashing techniques.

Do: Observe health care provider hand hygiene performance and survey the health care providers regarding knowledge and awareness of hand hygiene policies and trainings.

Study:

- Only a small percentage of participants were using correct protocol and technique. The majority missed several elements, such as not washing for long enough or not using a towel to turn off the faucet.

- The majority of participants reported that they were never offered any formal education or training on hand hygiene protocols.

- Nearly all participants **did not realize that a clinic policy exists** regarding hand hygiene and that HCPs are required to demonstrate proficiency and are routinely surveyed.

- The majority stated that they never received any feedback on their hand hygiene technique.

- Medical students practiced the best hand hygiene, while residents were slightly worse, and faculty performed the worst. Some opted for gloves and did not practice hand hygiene at all with patient interactions (either alcohol hand-wash or washing with soap and water).

Act:

- Implement designated hand hygiene observer(s) who will randomly survey HCPs and provide them with immediate feedback.

- Create a hand hygiene module that would be part of HCP's onboarding.

- Share what was learned from this experience by writing a blog post for my state AAP chapter to highlight how HCP's can conduct an easy gap analysis in their own settings and how they can use those findings to improve or close the gaps.

APPENDIX K: EXAMPLE PDSA #3

Plan: Implement a patent satisfaction survey to collect feedback around infection prevention and control practices in my health care setting

Do: When the medical assistant (MA) has finished rooming a patient, the MA will provide the patient (or patient's guardian) the patient satisfaction survey, clipboard, and a pen to complete while they wait for the doctor. The MA will provide instructions on how to complete (including the purpose, and where to deposit the completed form in the waiting room before they leave).

Study: During the first week of implementation, only 7 patient satisfaction surveys were collected. It was found that surveys were not being returned or were being returned incomplete.

Act: A laminated flyer will be created for the MA to provide the patients after rooming that will display a QR code for the patient to complete electronically. The laminated flyer will then be disinfected after each visit.

APPENDIX L: EXAMPLE PDSA #4

Plan: Ensure health care providers are properly administering single use vaccine vials

Do: A poster is hung above the counter where vaccine vials are prepped explaining proper vaccine administration protocol

Study: of the 27 vaccine vials used, 24 of them followed the proper administration protocol. The most common step that was missed was allowing the vaccine vial to completely dry before administering

Act: At the next staff meeting, we will provide refresher training to staff reminding that vaccine vials should be cleaned with an antiseptic wipe and allowed to <u>completely dry</u> before use

APPENDIX M: EXAMPLE PDSA # 5

Plan: Identify gaps around cleaning and disinfecting in the pediatric outpatient clinic

Do: Implement a sign in/sign out sheet in each exam room that the MA completes upon rooming a patient and upon prepping the room for the next patient that documents whether the room was cleaned or cleaned AND disinfected.

Study: Over 2 days, 30 patients were seen (12 sick visits and 18 well visits). For all 30 patients, the rooms were cleaned before and after use. Of the 12 sick visits when cleaning and disinfecting were advised, it was self-reported the exam rooms were not disinfected.

Act: We will be including an infographic to be hung directly above the exam room sign in/sign out sheet that outlines when cleaning AND disinfecting is warranted.

APPENDIX N: EXAMPLE CAUSE-AND-EFFECT/FISHBONE
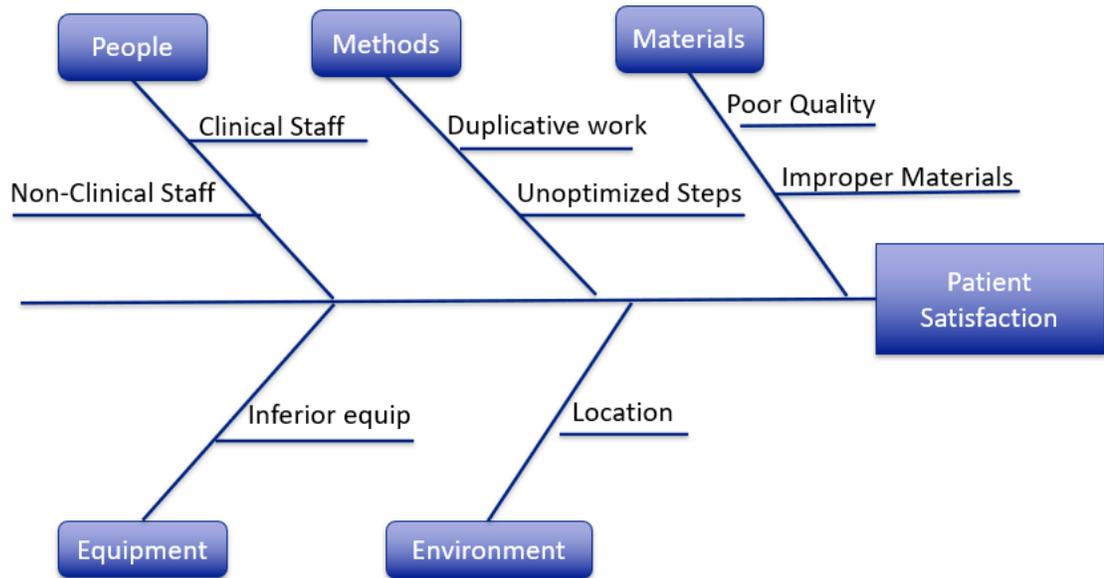
APPENDIX O: EXAMPLE PROCESS FLOWCHART

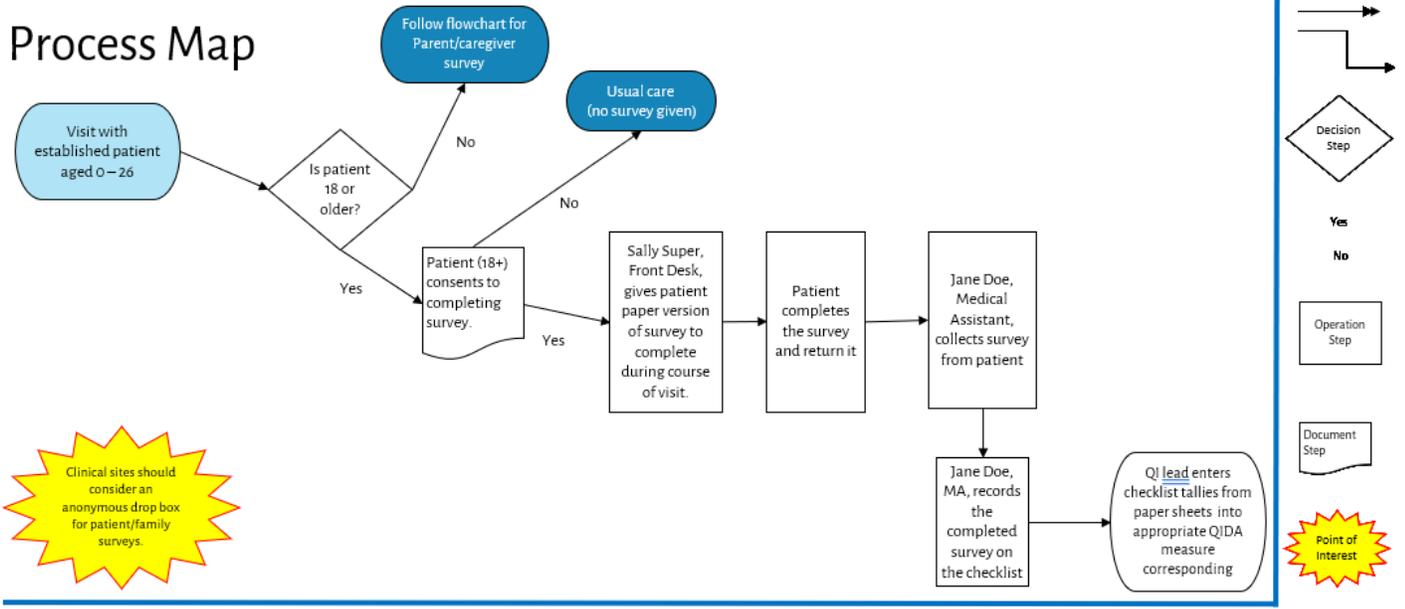|					
Process Name:	Sample Data Collection Process - Primary Care Pediatric Practice				
Date Created:	10/22/2021	**Start Step:**	Patient Visit	**End Step:**	Survey submission to QIDA

Process Map

Visit with established patient aged 0 – 26 → **Is patient 18 or older?**

- No → **Follow flowchart for Parent/caregiver survey**
- Yes → **Patient (18+) consents to completing survey.**
  - No → **Usual care (no survey given)**
  - Yes → **Sally Super, Front Desk, gives patient paper version of survey to complete during course of visit.** → **Patient completes the survey and return it** → **Jane Doe, Medical Assistant, collects survey from patient** → **Jane Doe, MA, records the completed survey on the checklist** → **QI lead enters checklist tallies from paper sheets into appropriate QIDA measure corresponding**

Clinical sites should consider an anonymous drop box for patient/family surveys.

Directions: Drag and drop the symbols on the right to create a process map. Adjust formatting, sizing & swim lanes as needed.

Decision Step

Yes

No

Operation Step

Document Step

Point of Interest

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APPENDIX P: EXAMPLE FIVE WHYS

Health care providers are not washing their hands before AND after patient contact

Why?

Health care providers may think it's excessive

Why?

They don't see it as a way to prevent transmission

Why?

Providers have not had (or have never had) formal infection prevention and control training

Why?

The clinic does not have an infectious disease specialist or someone dedicated to ID training for staff