ImPACTS Outpatient Improvement Collaborative Manual of Operations (MOO)

Hello, and welcome to the ImPACTS Outpatient Improvement Collaborative!

The goal of ImPACTS is to improve the quality of care delivered to acutely ill and injured children whenever and wherever it is needed.

Outpatient offices and general pediatricians are often a vital link in the continuum of pediatric acute care required to achieve this goal. This continuum includes home, outpatient offices, emergency medical services, emergency departments, and in-patient care.

The specific aim of the current project is to improve adherence to the AAP office-based readiness guidelines by 10% in six months.

This collaborative involves individuals/teams with a shared interest in improving pediatric acute care working together in a structured program with ongoing interactions and shared resources, tools and experiences. Members of the collaborative learn from and with each other as they work together towards a shared goal. This collaborative is coordinated by a central hub/PI that will support hubs (academic medical centers) working together with spokes (pediatric offices).



We are grateful for your team’s plan to participate as a hub. As a hub you will collaborate with a minimum of two pediatric outpatient spokes in a six-month structured collaboration. The five phases of this collaborative are: 1) recruitment: engaging an office/forming a partnership/designating a project champion, 2) baseline office visit: pediatric readiness measurement (simulation and survey), 3) report-out: data and development of action plan(s) for improvement developed with practice champion and leadership, sharing of resources—, 4) monthly check-ins and sharing of resources/experiences, 5) final office visit: pediatric readiness measurement (simulation and survey). Our hope is that the relationships formed during the structured 6 month collaboration will continue beyond these initial 5 phases.

This manual of operations is intended as a guide to help your team understand the intended structure of the collaborative, serving as an explanation and reference for you while planning and conducting this project. We recognize that each site has individual needs and that one size may not fit all.

We ask that if you have questions, feedback on this document and/or deviate from the intended structure described here that you notify the core team as soon as possible. As an improvement collaborative, we have the opportunity to adapt our methodology based on your experiences and feedback.

Again, thank you for joining this project and for taking interest in improving the care of acutely ill children, no matter where they are.

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Introduction & Background

 ImPACTS was created initially as a group working to improve the acute care of pediatric patients in the community hospital setting, where systems are often not well prepared and experienced with these patients. Our vision is that acutely ill and injured children deserve the highest level of care, wherever and whenever it is needed. The ImPACTS Outpatient project is a next step in our mission to measure and improve the care of acutely ill children, focused on the most common emergencies that a pediatric primary care provider is likely to encounter in their practice.

 Pediatric primary care providers serve as a vital link in the continuum of care for sick children. Acutely ill children often present to their primary care providers as an initial point of contact with the medical system, likely due to the long-standing relationships and the trust that is built between families and their pediatricians. Because of this, the AAP has created guidelines for pediatric practices to help them be better prepared to care for these children. This project works to improve adherence with these guidelines, and bases interventions on objective data from actual pediatric emergencies that occur in the office setting.

Recruitment

Multiple different approaches can be used to recruit spokes to participate in this collaborative. There is no one size fits all strategy, and it often boils down to relationships, persistence and lots of communication with the spoke sites (emails, phone calls, conference calls).

This collaborative is a substantial “ask” for many practices. We have found that it is best to spend time engaging sites in understanding what they are committing to and finding a good match for your team. If a site is not ready to commit to all aspects of the program we suggest exploring other sites in your region. When a site is not ready to participate it can be frustrating for both the spoke and hub.

To participate the spoke site is required to sign a letter of commitment signed by the practice lead nurse and physician stating: the name of the pediatric champion(s), their intent to host two in-situ measurement sessions and participate in ongoing improvement activities over the six-month period.

Here are some of the approaches that have been used by ImPACTS

* Working with hospital/academic center liaisons who are often in contact with practices in the surrounding communities
* Relying on pre-existing relationships with practices in the community that academic centers may already be working with
* Personal connections and colleagues from training practicing in the area (ex: a pediatrician who completed residency at your site)
* Emailing or cold-calling practice managers of primary care practices that have had a challenging case/transfer in the past few months

Your Initial Conversation

 This is your chance to sell the project. Be enthusiastic and let the practice know how excited you are! The most difficult part was getting in the door and the fact that you’re at this point means that they’re already at least somewhat interested. This is a good time to introduce the project, your team, and the goals of this project, to measure pediatric primary care practices’ preparedness for emergencies and improve upon it.

 We suggest that you set up a time and date to follow up with the practice either in person or via teleconference at the end of your meeting, or shortly after via email. This meeting can be in person or using zoom or other web-based teleconferencing resources and should include at minimum the practice manager, though including physician and nurse leadership is very helpful. ImPACTS is available to support setting these meetings up for your site if needed.

 DURING THE MEETING

This meeting typically should be scheduled for approximately 30-45 minutes in total. During this meeting we begin the formulation of an ongoing relationship with these community providers. It is important to discuss the specifics of the program including goals, objectives, staff and room needed for sim, and equipment needed during the session. Specific details for the day of the sim can be found in the equipment list (appendix) and scenario documents. The main points include:

•Designation of a Practice Champion (often the practice manager) to serve as a liaison for the site. This person is the individual that you will be in direct contact with to ensure all the logistics of the simulation day are in order. You should attain this individual’s email address and direct phone number.

•Staff expected to participate in the simulation should mimic the site’s normal staff patterns. This includes any front office staff that may help in emergency situations.

•Location of the in-situ simulation will be in an exam room and/or waiting room, thus best mimicking actual emergency situations.

•Duration of the day: Approximately 2 hours. Readiness checklist, introductions, prebrief, two sims (10 min each) plus 20 min debriefs for each scenario.

•Understanding that practices will be expected to demonstrate the availability of equipment and supplies they have on hand, but that any needed items will be replaced by the ImPACTS team to prevent practices from incurring any supply/equipment related costs due to this study.

•Fake medications and necessary equipment will be brought by the ImPACTS team. These medications and equipment will be as similar to the office equipment as possible.

•Lastly, it is important to solidify a session date and starting time of the ImPACTS session during this meeting.

A link to a document helping to outline this meeting is found here: <https://www.impactscollaborative.com/impactsoutpatienthubresources>

Meeting Follow-Up

 After the meeting, emails should be sent to those in attendance and especially to the designated Champion. The email reconfirms the date and time of the sim and should include the “Sign-up Sheet” document as an attachment. One month to three weeks before the day of simulation a follow-up email should be sent to the Champion ensure enough staff will be present for the day of the session and reconfirmation of the use of appropriate rooms. This email should also address any last minute questions the site may have.

In some instances there is poor communication with the community site for various reasons. During this instance, individuals other than the Champion is contacted to ensure the session day is still being conducted. 1-2 days before the simulation, contact the Champion. Answer any last minute questions and concerns. We also ensure that the Champion or another staff member would be able to meet us an hour before the simulation session start time to introduce us and show us where to set up the equipment.

Conducting the Readiness Survey

The champion, or someone designated by the champion, should walk with a hub team member and identify all the items on the checklist. It is not enough that they simply state that they have the item or medication, but must show it to you to confirm that they a)know where it is, and b)know how to get to it easily and quickly. It is also important that all equipment and medications are not expired, as this is a common problem identified at many practices. We suggest taking pictures of their equipment and supplies including how the materials are organized. This can be used to contrast with an example of how they can be organized efficiently that you will provide during the report-out.

After completion of the checklist, let the champion know they will be notified of their performance with the report-out that will occur two weeks after the simulation date.

**ImPACTS Outpatient Project Summary**

AGENDA (Total time 120 minutes)

1. **Introductions (0-10 minutes)**
	1. Who we are: A team from the Children’s Hospital working with pediatric offices to improve preparedness for emergencies. Our group is part of a national collaborative, ImPACTS, aiming to improve pediatric acute care. Introduce yourself and team
	2. Who are you: names/experience
	3. The learning objectives are that after this session you will be able to
		1. Describe the initial approach (first 5 min) to two common emergencies
		2. Recognize/locate the equipment required for an office emergency
		3. Demonstrate skill in the use of the emergency equipment available
		4. Locate the existing policies/guidelines for emergencies in this office
2. **Agenda/overview (10-15 minutes).** We will start with a group discussion about your experiences with emergencies. Next, we will conduct two simulations. During these simulations your team will use local equipment, guidelines and resources to initiate and escalate care. Each simulation will be followed by a debriefing discussion facilitated by our team. We will end with another group discussion to determine future directions for improving your offices preparedness.
3. **Group discussion (15-25 minutes)**
	1. ASK about real stories/experiences from the team with office emergencies: what is the last emergency you had in your office

what do they think are the most common emergencies, what do they worry about?

* 1. Training of staff in your group
1. **Simulation Orientation (25-35 minutes)**
2. **Simulation ASTHMA** (35—45 min) - see below for details
3. Simulation ASTHMA debrief (45-65 min)-
4. Simulation SEIZURE (65-75) - see below for details
5. Simulation SEIZURE debrief (75min-105 min)- see below for details
6. Group discussion/wrap up (105-120 min)
	1. **Link back to real life/get excited for future/remind them of report out**
	2. Resources protocols at reception area and telephones, Documentation forms
	3. Summative feedback from participants- what can we do better.
	4. Ideas for continued training: More simulations, Scavenger hunt for equipment

SKILLS: BVM, compressions, OPA, NPA, nebs, MDI,

* 1. Obstacles to pediatric emergency care

**SIMULATION ORIENTATION**

*This is an opportunity for us to practice patient care, teamwork and communication in a safe and supportive environment using simulated patients. Mistakes will happen and help us to identify areas for improvement.*

**Basic Assumption**: We believe that everyone participating in this program is intelligent, capable, cares about doing their best and wants to improve

* 1. *The simulated patient has limitations- please do your best to “suspend disbelief” and act as you would with a real patient and family. There will be a family member played by XX and a simulated patient in each scenario. The only thing simulated in this scenario is the manikin. They are in their home environment so nothing else is “pretend”.*

**Identify resources** –function in everyday roles, follow protocol to call whomever would normally be called and use your equipment. Additional participants can be provided observer roles (i.e. What did you observe about the initial assessment? Communication– closed loop, SBAR, repeat back?

**SIMULATOR ORIENTATION**

 turn on healthy child, show coughing, heart sounds, lung sounds, also describe what it CAN NOT DO (pulses, seizures, pupils, Tms). Show where to auscultate and palpate things. **Receive information** (including physical exam) only by doing what you normally would do- no monitors. Remind them to use THEIR supplies and resources. If additional resources or staff is required requests should be made to the facilitator. Ask family member questions as you would normally do, verbalize phone calls or other actions.

*NOTE: During these simulations and debriefings our team will collect information that will be used to provide feedback on performance. After this session we will use this information to collaborate with your team in initiating efforts to improve pediatric emergency preparedness in your office.*

**ASTHMA SIMULATION**

**SCENARIO OVERVIEW**

A 7-year-old boy presents to your clinic for a visit today. Upon routine nursing assessment, the nurse discovers the patient is in respiratory distress. The nurse is expected to assess the patient, call the provider and provide a situational briefing. The provider is expected to apply a structured method for initial data gathering (eg: SAMPLE History and ABCDE Physical). The nurse and provider are expected to deliver initial care for general respiratory distress (oxygen via facemask/nasal cannula, check emergency equipment) and worsening status asthmaticus (back to back albuterol).

When escalating to second line therapies, the team is expected to call 911. Upon arrival of EMS, the provider or nurse will provide them with a situational briefing in SBAR format.

**Pre-brief/Initial information:**

* The nurse will begin the scenario in the patient room.
* The provider will begin the scenario outside of the patient room.
* The simulation team will be in the patient room with the manikin sitting on/laying on the exam table. One member of our team will be the embedded participant (EP) and play the part of the parent.
* REMINDER: The purpose of this session is for practice-based learning and improvement. We will reflect on your teams performance, identify strengths, deficiencies in a debrief after the session.
* **Start/End of scenario: T**he scenario begins in the exam room with the nurse assessing the patient. The scenario ends when EMS arrives- and facilitator acts as EMS ask for handoff from the team.

**SCENARIO PROGRESSION**

All information provided by facilitator only if participants perform the actions required to obtain it in real life

| **SEGMENT/ TIMING** | **MANIKIN** | **PARTICIPANT ACTIONS** |
| --- | --- | --- |
| **INITIAL ASSESSMENT**4 MINUTES | **VITAL SIGNS**T 37.2HR 140RR 30BP 96/60SpO2 90% RA**PHYSICAL EXAM** “It’s hard to breathe”Speaking in 1-2 word sentencesPoor air entry bilaterallyBiphasic wheezing diffuselyProlonged expiratory phaseSubcostal, intercostal retractionsCapillary refill 2 secondsNasal congestion | **ASSESSMENT*** Check consciousness/ breathing/ color (PALS) or pediatric assessment triangle
* Primary assessment (ABCDE): See PE
* Obtain SAMPLE History:

-SIGNS/SX: increasing work of breathing, last Albuterol 2 puffs with spacer 1 hour ago-ALLERGIES: NKDA-Flovent 110 mcg-PMH: Mild persistent asthma poorly controlled -LAST MEAL: Ate breakfast-EVENTS: Increasingly more difficult to breathe* Secondary assessment/ head-to-toe exam
* Respiratory exam after each intervention

**INTERVENTIONS:*** Obtain Vital Signs
* Oxygen applied and administered
* RN or MA calls MD and conveys concerns
* Escalation: Calls second provider & MA or RN
* Back to back Albuterol 5 2.5 mg then 2.5 mg
* NPO
* Recognizes worsening clinical status despite interventions and calls 911

**CLINICAL REASONING*** Differential diagnosis of worsening hypoxia in status asthmaticus
* Escalate treatment by calling EMS

**COMMUNICATION STRATEGIES*** SBAR handoff concerning patient’s condition between Office staff and EMS
 |
| **WORSENING RESPIRATORY DISTRESS** 6 MINUTES | **VITAL SIGNS:**T 37.5 HR 160RR 44BP 90/56O2 Sat 85% RA (with 20% cyanosis)if no intervention, 90% on nebulizer, 96% if nebulizer with oxygen**PHYSICAL EXAM:**Poor air entryMinimal wheeze (due to poor air entry)Intercostal and subcostal retractions notedProlonged expiratory phase**EMS ARRIVAL:** (if available) |

**Asthma FACILITATOR DEBRIEFING GUIDE**

THREE PHASES: REACTIONS, ANALYSIS, SUMMARY

1. Learning Climate: We’re seeking opportunities to learn. Things that went well and things we wish went differently- those are opportunities. Safety – Must voice concerns and praise. Must voice them respectfully. Brings forth systems improvement. Expectations: Everyone’s contributions are what make this a useful experience--- My role is to facilitate, not lecture.

3. Reactions-- How do you feel after participating

4. Analysis- Can someone from the group summarize the case?

STATE Learning Objectives –

(1) Recognize a deteriorating patient using a structured approach (ABCDE, SAMPLE)

(2) Implement initial management of respiratory distress (to include use of office equipment, resources, and policies and procedures)

(3) Escalate management of worsening status asthmaticus (to include accessing Emergency Medical Services (EMS))

(4)Apply communication strategies to ensure safety in a high risk situation (SBAR, closed loop communication)

Report objectives from checklist- Stress rapid identification/stabilization (First 5 minutes), Location of resources **(review office based equipment)**, What do you have, where is it, how do you use it (do you have a code cart, how is it organized/maintained what do you need to buy)

**DIRECT DISCUSSION TO LEARNING OBJECTIVES**

**LEARNING OBJECTIVE#1: Assess a deteriorating patient using a structured approach (ABCDE, SAMPLE History)**

Is your system prepared to care for a deteriorating patient?

What helped and what hindered that process?

**What was your initial impression of the patient?**

 Airway: Phonating, maintainable

 Breathing: Poor air entry bilaterally, retractions, speaking in 1-2 word sentences

 Circulation: Tachycardia for age, initial wide pulse pressure then hypotensive

 Disability: Normal mental status, normal dextrose

 Exposure: Febrile, No rash

**Describe how you would obtain a focused history on a decompensating patient if you had none: (SAMPLE)**

 **S**igns and symptoms

 **A**llergies

 **M**edication

 **P**ast medical history

 **L**ast meal

 **E**vents leading up to deterioration (ED events/ previous treatments given)

**LEARNING OBJECTIVE #2: Implement initial management of respiratory distress**

**When you discovered that this patient had respiratory distress, what were your initial interventions?**

**What interventions should you be prepared to deliver based on your initial assessment?**

Common management strategies:

Airway: Comfortable position to open airway, nasal/ oral airway, look for foreign body (no blind finger sweep), suction

Breathing: Oxygen face mask, airway meds

Circulation: Capillary refill and blood pressure

**LEARNING OBJECTIVE# 3: Implement initial management of a patient with status asthmaticus and worsening respiratory distress**

**We know that his respiratory distress was worsening due to status asthmaticus. What alternate etiologies did you consider?**

* Refractory asthma
* Pneumothorax
* Pneumonia
* Foreign body
* Anaphylaxis

**What were your goals of therapy for this patient? How did you accomplish them?**

**IMPROVE VENTILATION**

Short acting beta agonist

Consider Epipen administration (if available).

Engage observer by asking to review their impression of interventions undertaken.

**What were the most difficult parts of implementing your plan?**

**LEARNING OBJECTIVE #4: Use communication strategies to ensure safety in high risk situations (SBAR, closed loop communication, validate and verify)**

**Situational Briefing for Escalation to EMS**

* Situation – Including any abnormality in Airway, Breathing, Circulation, Disability (Neuro exam)
* Background – Includes key elements of “SAMPLE” history
* Assessment – Includes stability, differential diagnosis for problem, and leading diagnosis for current problem
* Recommendation – Includes disposition to stabilize in the office or call 911

**5. Summary- take home points for future, areas for improvement.**

**SEIZURE CASE**

**SCENARIO OVERVIEW**

A 5yo boy presents with his caregiver to the clinic for a sick visit. While waiting in the waiting room the child begins to seize and the caregiver calls out for assistance. Office staff calls for help, and it is determined that the patient is having a generalized tonic/clonic seizure. The role of the nurse includes: assessing the patient, to call for the provider, give a situational briefing, and ensure the patient’s safety. The provider will then apply a structured method for initial data gathering (eg: SAMPLE History and ABCDE Physical) and initiate treatment. After delivering initial care to the seizing patient, to include positioning, oxygen via NC, facemask or NRB, pulse ox, and suction, the team will escalate to second line therapies (medications if available), and call 911. Upon arrival of EMS a situational briefing in SBAR format by the provider or nurse will ensue.

**Pre-brief/Initial information:**

* The nurse will begin the scenario in the patient room.
* The provider will begin the scenario outside of the patient room.
* The simulation team will be in the patient room with the manikin sitting on/laying on the exam table. One member of our team will be the embedded participant (EP) and play the part of the parent.
* REMINDER: The purpose of this session is for practice-based learning and improvement. We will reflect on your teams performance, identify strengths, deficiencies in a debrief after the session.
* **Start/End of scenario: T**he scenario begins in the exam room with the nurse assessing the patient. The scenario ends when EMS arrives- and facilitator acts ase EMS ask for handoff from the team.

**SCENARIO PROGRESSION**

All information provided by facilitator only if participants perform the actions required to obtain it in real life

| **SEGMENT/ TIMING** | **Manikin** | **PARTICIPANT ACTIONS** |
| --- | --- | --- |
| **INITIAL ASSESSMENT**5 MINUTES | **VITAL SIGNS**T 37.2HR 120RR 16BP 98/62SpO2 97% RA**PHYSICAL EXAM** Patient unresponsive, pupils reactiveTonic/clonic movement of all extremities notedClear and equal breath soundsCapillary refill 2 secondsMucus membranes pink, warm and dry | **ASSESSMENT*** Check consciousness/ breathing/ color (PALS) or pediatric assessment triangle
* Primary assessment (ABCDE): See PE
* Provide safe environment
* Obtain SAMPLE History:

-SIGNS/SX: c/o not feeling well, tired, no appetite-ALLERGIES: NKDA-Meds: none-PMH: Not feeling well last night and this am, not acting himself-LAST MEAL: Ate very little breakfast-EVENTS: Patient not feeling well last night, and again this am, general malaise, kept home from daycare.* Secondary assessment/ head-to-toe exam

**INTERVENTIONS:*** RN or MA calls MD and conveys concerns
* Provide safe environment for patient
* Oxygen adjunct applied
* Suction brought to bedside
* NPO
* Escalation: Calls second provider/RN
* Obtains Vitals (pulse ox, HR, RR)
* Administer meds if available and calls 911

**CLINICAL REASONING*** Seizure with unknown etiology

**COMMUNICATION STRATEGIES*** SBAR handoff concerning patient’s condition between Office staff and EMS
 |
| **SEIZURE CONTINUES**5 MINUTES | **VITAL SIGNS:**T 37.5 HR 140RR 18BP 88/50O2 Sat 88% RA (with 30% cyanosis), 96% on oxygen **PHYSICAL EXAM:**Patient unresponsiveTonic/clonic movement of all extremities continuesSkin and mucus membranes paleCap refill 2 secondsRR shallow**EMS ARRIVAL:** (if available) |

**Seizure FACILITATOR DEBRIEFING GUIDE**

THREE PHASES: REACTIONS, ANALYSIS, SUMMARY

1. Learning Climate: We’re seeking opportunities to learn. Things that went well and things we wish went differently- those are opportunities. Safety – Must voice concerns and praise. Must voice them respectfully. Brings forth systems improvement. Expectations: Everyone’s contributions are what make this a useful experience--- My role is to facilitate, not lecture.
2. Reactions-- How do you feel after participating
3. Analysis- Can someone from the group summarize the case?

STATE LEARNING OBJECTIVES

* Assess a deteriorating patient using a structured approach (ABCDE, SAMPLE History)
* Implement initial management of a pediatric patient experiencing a seizure (to include use of office equipment, resources, and policies and procedures)
* Implement escalation measures for a pediatric patient experiencing a prolonged seizure (to include accessing Emergency Medical Services (EMS))
* Apply communication strategies to ensure safety in a high risk situation (SBAR, Closed loop communication)

Report objectives from checklist- Stress rapid identification/stabilization (First 5 minutes), Location of resources **(review office based equipment)**, What do you have, where is it, how do you use it (do you have a code cart, how is it organized/maintained what do you need to buy)

**LEARNING OBJECTIVE #1: Assess a deteriorating patient using a structured approach (ABCDE, SAMPLE History)**

**What was your initial impression of the patient?**

 Airway: open with potential for compromise

 Breathing: Slow

 Circulation: Tachycardia for age

 Disability: unresponsive

 Exposure: afebrile

**Describe how you would obtain a focused history on a decompensating patient if you had none: (SAMPLE)**

 **S**igns and symptoms

 **A**llergies

 **M**edication

 **P**ast medical history

 **L**ast meal

 **E**vents leading up to deterioration (ED events/ previous treatments given)

**LEARNING OBJECTIVE #2:** **Implement initial management of a pediatric patient experiencing a seizure (to include use of office equipment, resources, and policies and procedures)**

**When you discovered that this patient was having a seizure, what were your initial interventions?**

**What interventions should you be prepared to deliver based on your initial assessment?**

Common management strategies:

Airway: Suction at the bedside

Breathing: Oxygen (NC, Mask, NRB)

Circulation: Capillary refill

Position patient to ensure patient safety

**LEARNING OBJECTIVE# 3: Implement escalation measures for a pediatric patient experiencing a prolonged seizure (to include accessing Emergency management systems (EMS)**

**What were your goals of therapy for this patient? How did you accomplish them?**

Monitor length of seizure

Provide safe environment

Administer oxygen to ensure adequate oxygenation

Consider medication interventions

Transport patient to a higher level of care

Engage observer by asking to review their impression of the interventions undertaken

**What were the most difficult parts of implementing your plan?**

**LEARNING OBJECTIVE #4: Apply communication strategies to ensure safety in a high risk situation (SBAR, closed-loop communication)**

**Situational Briefing for Escalation to EMS**

* Situation – Including any abnormality in Airway, Breathing, Circulation, Disability (Neuro exam)
* Background – Include key elements of “SAMPLE” history
* Assessment – Includes stability, differential diagnosis for problem, and leading diagnosis for current problem
* Recommendation – Includes disposition to stabilize in the office or call 911

Prep for Simulation Day

Preparation for simulation day takes time and organization. We tend to prep 2 days before the event, giving us enough time to add any additional equipment if forgotten. Unfortunately, we do not own a mobile RV or commercial vehicle for travel, we rely on our own vehicles to get us to and from sites. It is also important to pack all necessary equipment for the simulation as the goal is to require practices to use any of their own equipment, only demonstrate is availability. **We have the team retrieve their actual equipment (do not open or use) so we can give them credit for having the equipment and provide them with the same equipment that we packed.** A list of all the essential equipment for the day is included in the appendix.

\*Also ensure that you have the correct address to the Practice!

Day of Simulation

Plan to arrive approximately one hour before the session start time to meet staff, setup the equipment, and organize the room. Practices often will be behind with patients or work, so you may need to be flexible with your start and end times.

Computer is placed out of the way, usually in a corner of the room. This area is used by the person who would be running the simulator and the individual providing direct real-time information to the team, e.g. lab values and physical assessment cues.

The iPhone or iPad running the B-line application is placed in a location to allow best vantage of the patient. The device is ideally angled above the patient location to capture all hands-on activity on the simulator, ideally above the foot of the patient. We also suggest that you bring a charger or external back-up battery for your device, in case the device’s battery dies during the simulation day. Record the simulations and the debriefing content on the same video file for ease of upload to the B-line server.

Documents including the sign-in sheet and AV consent form are generally signed and collected during the introduction and pre-brief.

Pre-brief and embedded participant scripts are in the appendix to help guide you. Cases and data collection sheets are all available under the “Resources for Hubs” section of the ImPACTS Outpatient website <https://www.impactscollaborative.com/impactsoutpatienthubresources> Password: ImPACTSsim

Here are some tips:

• The project summary document above has an outline regarding the day’s timeline and important points to cover.

• Have participant introduce themselves, their roles, and levels of experience.

• We like to use the saying, “What happens in Vegas, stays in Vegas.” In other words, what happens in the session stay in the session.

• Be sure to remind participants that this is a learning environment and that they will not be judged. Rather it is a test of the system to inform improvement and ensure that we achieve highest quality care for all children.

• Reiterate that the participants can use all the tools that they would normally use in patient care. Again, we are not testing the participants on how to care for a plastic mannequin, rather we are testing the system that they are working in.

• Review the format of the day. They will go through two simulated patient encounters reflecting the most common emergencies seen in the outpatient setting. A simulation team member will serve as an embedded participant (parent) to help with history. The simulation will be stopped by the simulation team at the end of the scenario. Debriefing of the session lasts about 15-20 minutes post simulated scenario and is a reflection of the performance.

• Mention the importance of “suspending disbelief.” The simulator has limitations but the more the participants put into the scenario and caring for the fake child, the more that will be gained. We mention a “Disney World” story where an older sibling points out all the fake things in the amusement park to the younger sibling. But if you believe and use your imagination, the more enjoyment and the more realism will occur.

• Remind that they are expected to DO, not just SAY what they want. For example, if they want 20cc/kg bolus, a team member needs to place and IV or IO, get the fluid, spike the bag, hook it up to the patient, and administer the fluid. All interventions happen in real-time.

Data Collection During Sim Day

We collect data using video recording of the sessions and in-person data capture. In-person data capture is focused on any variables that are noteworthy (events that may not be able to view on video - like side conversations between team members or equipment sizes). Timing of events and interventions are also important to note. The video is used for general review if any important variables are missed during the session and to review the scenarios to ensure they are conducted the same across all sites and academic centers. The Bline application for iPhone and iPad will be used for video recording.

Data Forms to complete by ImPACTS team member:

* Data Collection forms for each simulation case
* Pediatric Outpatient Readiness Survey (PORS)
* Clinic demographics

Evaluation forms should be distributed to all participating members of the Spoke, and a separate evaluation form should be given to the practice manager/champion facilitating the visit. These forms should be collected prior to leaving after the session is complete.

Data Reporting

 After the simulation day is completed, your data needs to be entered into the central ImPACTS database. For this, we have been using a Qualtrics survey tool located here <https://yalesurvey.ca1.qualtrics.com/jfe/form/SV_5jsXuCc5Lgj3JQh>. The process of using Qualtrics is discussed during the train-the-trainer webinar sessions. The survey is built using the same items on the scenario and readiness checklists. It is important to complete this step as soon as possible **(later that day or the day after)** so the data can be collected and a report-out can be generated from it. An example of the report out is in located here <https://www.impactscollaborative.com/impactsoutpatienthubresources> Password: ImPACTSsim You will need the report-out to provide feedback and select action items with the clinic site in your follow-up visit.

Spoke Follow-up

Keep in mind that the site will be eager to get a response from your team as soon as possible. Once the simulation sessions are over please send the ImPACTS team all data collected including all the collection tools listed above, sign-in sheet, notes, and all videos/audio recordings. Please send to ana.makharashvili@yale.edu. You can expect a detailed report in a Power-Point presentation form within 2 weeks. This report will include performance spider-grams, site metrics, action plans, and a comparison of the site with other clinic sites. Please schedule an in-person or teleconference follow-up meeting 2-4 weeks after the simulation day and include our team in the chain of emails. Ask for the champion and any other physician leadership to be present in the meeting. This follow-up meeting should be scheduled with the clinic site either before or on the simulation day.

Post Session (Report-out) Meeting

Two weeks after the simulation session is the post-session report-out meeting. This meeting should last 30-45 minutes. This is a very exciting time for a discussion of the practice performance and action items for the practice with the goal to improve knowledge, staff awareness, and pediatric outcomes. During this meeting the detailed PowerPoint of the site report-out is to be reviewed. Please allow for the remaining time to answer questions, along with discussing specific methods to improve the site’s overall case scores. Action items will focus on the Pediatric Outpatient Readiness Survey (PORS) items and should include one item from the equipment/supply portion and one item from the plan/protocol portion initially. The PORS can be found here: <https://www.impactscollaborative.com/copy-of-2019-office-preparedness-pr>. Password: ImPACTSsim. There will also be resources made accessible to all participating spoke sites such as example protocols and example equipment organization strategies which can be found here: <https://www.impactscollaborative.com/additional-resources>**.** A recorded example of a report-out session is located here: <https://www.impactscollaborative.com/copy-of-2019-office-preparedness-pr>**.** Password: ImPACTSsim.

Monthly check-in Meetings

Monthly check-ins should occur between your team and the practice champion after the initial follow-up visit to assess their progress on addressing action items, and as needed, identify further action items which they can improve upon. These check-ins can take place in person, via email, or via teleconference. We suggest scheduling the next check-in during your prior meeting. You should record the dates of these check-ins and any progress made regarding the spoke’s action items, and send this information to impactsofficeproject@gmail.com for tracking.

Sites may also ask how to continue the outreach program with your team. This is dependent on your bandwidth, protected time, and support on your end. Please be ready for these questions!

Follow-up Simulation Day

After a 6 month period, your team will return to the practice and repeat the entire process over again, hopefully showing improvement in practice readiness and performance!

The same checklists will be utilized again in the follow up simulation at the same office. The presence of the same providers and ancillary staff during the follow up sessions is not necessary, since this program is designed to optimize the overall system of care and not necessarily the individual provider performance.

Resources

1. Necessary/Suggested Supplies and Equipment

-Pediatric oxygen delivery devices

 -cannula

-non-rebreather

-simple mask

-Small volume nebulizer set up

-Albuterol MDI with spacer

-Suction catheter (yankaur or catheters)

-Disposable pulse oximeter

-Ambu with mask of appropriate size for mannequin

-BP cuff

-Duoneb (albuterol/atrovent)

-Diastat

-IV Benzo

-PIV kit with angio

-NS flush

-nasal airway

1. Pre-Brief Script

The pre-briefing serves to both orient participants to the rules and goals of simulation and to (hopefully) relieve any anxiety participants have regarding the simulation experience. The following is not meant to be a rigid script, but more of an outline to ensure content is standard across all centers.

* Welcome and introduction of simulation team, including titles and experience levels
* Introductions from simulation participants including titles and experience in both current role and prior simulations.
* Review goals of the simulation (this is different from objectives) – see scenario
* Remind participants that this is a safe environment, that mistakes are expected, that all of us have the same goals and intentions to take excellent care of patients. All assessment is geared towards improving the system, not individuals, and as such no one is scored or judged individually and everything is kept confidential.
* Introduce suspension of disbelief and capabilities of equipment and manikin. Reiterate that staff function in their normal roles and scope of practice. The only thing simulated is the patient.
* Give participants opportunity to share past experiences with emergencies in the office setting, how they felt, and how well/poorly things went. Use these experiences to relate why this type of practice and assessment is important.
1. EP Script Asthma

The patient is a 7 year old male who is brought in today with difficulty breathing. He was well until last night, when he starting having some coughing. He responded well to albuterol, but continued to need his medication a couple of times overnight. This morning, he continued to have difficulty with coughing and some wheezing. As he had a scheduled well child check this morning anyway, he was brought into the office for evaluation.

When asked about events leading up to the event (SAMPLE):

SAMPLE history:

Signs/sx- difficulty breathing

Allergies- none

Meds- albuterol PRN, Flovent 110 mcg BID

PMH: Mild persistent asthma, poorly controlled, multiple ED visits, no hospitalizations

Last meal: Ate breakfast

Events: Increasing work of breathing, last albuterol 1 hour prior to coming in to office, not working as well anymore

If asked for review of systems:

Cough, difficulty breathing. No fever, vomiting, or diarrhea.

If asked about home environment/social history:

Lives with Mother and Father. In 2nd grade. No other caregivers. No known sick contacts. Family history of multiple family members with asthma.

1. EP Script Seizure

The patient is a 5 year old with no known medical problems. He was well until yesterday when he began complaining that he was not feeling well. Was also acting more tired than usual and did not eat or drink as well as he normally does. Was kept home from daycare this morning and brought in for a sick visit.

When asked about events leading up to the event (SAMPLE):

SAMPLE history:

Signs/sx- patient seizing, complaining of general malaise and loss of appetite over past 24-36 hours

Allergies- none

Meds- none

PMH: no known medical problems

Last meal: ate minimal breakfast

Events preceding- General malaise yesterday and this morning with poor appetite. No known trauma. No recent sick contacts. No abnormal exposures.

If asked for review of systems:

All negative other than listed above in HPI/CC

If asked about home environment/social history:

Lives with Mother and Father. Attends day care. No other caregivers. Mom has no concern of non-accidental trauma. No other medications or illicit drugs in the home. No known sick contacts.