

# EMT Just In Time Training Modules, COVID-19

## Module B: Quality Improvement & Monitoring Tools

 **MODULE LENGTH**

60 mins

### LEARNING OUTCOMES

1. Recognise the importance of quality of care mechanisms as applied to EMTs in the COVID response
2. Apply basic tools for promoting improvements in the quality of care provided
3. Describe key considerations for sending and receiving EMT staff during COVID operations

### MODULE OVERVIEW

	Topic	Method	Time
1	Introduction	Presentation	3 min
2	The problem of unsafe care and why it matters for EMTs	Wall chart activity	15 min
3	What can an EMT do to improve quality care for COVID-19 patients?	Brainstorming activity	15 min
4	Learning fast to improve running PDSA cycles	Presentation and discussion	15 min
5	Checklist for organizing deployments of staff in the context of COVID-19	Presentation	10 min
6	Summary	Presentation	2 min

### **MATERIAL & EQUIPMENT**

Audiovisual

Flipcharts and colorful markers: one set per table

Post its

Participants should be sitting in groups of 4-6

### **SUPPORT DOCUMENTS**

Open WHO Quality Improvement Module (to be published soon)

#### **PDSA cycles:**

Institute for Healthcare Improvement. Quality Improvement Essentials Toolkit. Cambridge (MA): IHI;2017. Available at [www.ihl.org](http://www.ihl.org)

Checklist for Deploying/Receiving EMTs in COVID 19

See: 'Additional References' section below

### MODULE PURPOSE

Every year millions of patients suffer unnecessary harm worldwide, not from their underlying conditions, but from care that was supposed to help them. These failures are rarely the result of individual actions, but of poorly designed systems and processes. The need for quality improvement (QI) processes does not diminish during times of pandemic. More than ever, EMTs should take concrete steps in ensuring care provided during operations doesn't cause further harm and suffering to the affected communities.

The purpose of this module is twofold: (a) to raise awareness about issues regarding quality of care and patient safety, how these are relevant even in COVID situations and everyone's responsibility; (b) to present a set of basic tools that EMTs can use to address failures in the processes of providing care to COVID affected communities.

The tools have been adapted from standard ones widely used by healthcare systems and facilities in different resource settings. It is intended primarily for a target audience of team leaders/deputies and unit managers responsible for overseeing quality of care systems. Elements of the module can also be taken and incorporated into Just In Time training activities for the benefit of all team members.

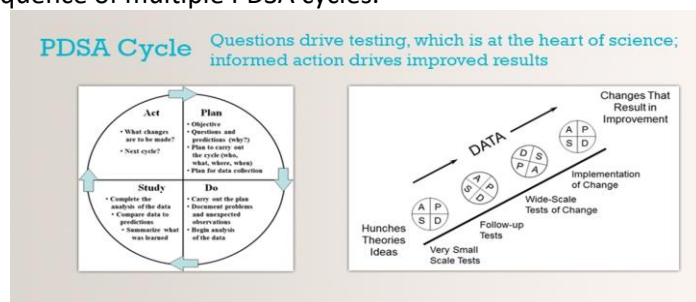
## MODULE ACTIVITIES

Topic	Method	Notes for delivery
Introduction (3 mins)	Presentation	<ul style="list-style-type: none"> <li>- Slides 1-2. State session learning outcomes and explain the purpose of the module.</li> <li>- Slide 3. State that providing quality care is an EMT guiding principle and that it matters even more so in crisis situations, like COVID-19. This session is about raising awareness and connecting clinicians with quality improvement tools to help them improve care provided to patients.</li> <li>- The Classification and Minimum Standards for EMTs (a.k.a. Blue Book) states in the first guiding principle, which is on Quality Care that: the EMT provides safe, timely, effective, efficient, equitable and people centred care<sup>1</sup>. These attributes or dimensions encompass the definition of quality in healthcare</li> <li>- Trainer can choose to define quality in healthcare and each one of its attributes if he/she thinks group is unfamiliar with the concepts.               <ul style="list-style-type: none"> <li>o “Quality is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”<sup>2</sup></li> <li>o Care should be<sup>3</sup>:                   <ul style="list-style-type: none"> <li>- Safe: avoiding harm to people for whom care is intended,</li> <li>- Timely: reducing waiting times and sometimes harmful delays for both those who receive and those who give care</li> <li>- Effective: providing evidence-based healthcare services to those who need them</li> <li>- Efficient: maximizing the benefit of available resources and avoiding waste</li> <li>- Equitable: providing care that does not vary in quality on account of age, sex, gender, race, ethnicity, geographic location, religion, socioeconomic status, linguistic or political affiliation</li> <li>- People-centred: providing care that responds to individuals’ preferences, needs and values</li> <li>- Integrated: providing care that is coordinated across levels and providers and makes available the full range of health services throughout the life course</li> </ul> </li> </ul> </li> <li>- Wrap up the introduction by stating that these attributes are valid especially in an EMT setting as described in the EMT Guiding Principles.</li> </ul>
The problem of unsafe care and why it matters for EMTs? (15 min)	Wall Chart Activity	<ul style="list-style-type: none"> <li>- Slides 4 – 7. Short presentation on definition of harm.</li> <li>- Trainer mentions that as discussed in the previous section, care should be safe, in other words, we should avoid harm to people for whom care is intended<sup>3</sup>. The focus is unnecessary harm associated with healthcare: any physical, psychological or social harm that is a result of healthcare provision AND not the patient’s underlying disease or injury<sup>4</sup>.</li> </ul>

		<ul style="list-style-type: none"> <li>- Unsafe care is a global public health concern, as millions of patients suffer harm each year. Trainer can pick some data about the burden of harm at WHO Patient Safety Fact Sheet, available at: <a href="https://www.who.int/features/factfiles/patient_safety/en/">https://www.who.int/features/factfiles/patient_safety/en/</a></li> <li>- Slide 7. Trainer invites groups to reflect if the burden of harm is different in an EMT setting through participation in the wall chart activity.</li> <li>- Activity instructions: Groups draw a stick figure on a flipchart, then write/draw the forms of harm that can happen while caring for COVID-19 patients. Each harm should be written on a separate card. Trainer should give an example to start the groups off e.g. wrong medication given to a patient leading to an adverse reaction; misidentification of patient lab specimen leading to wrong diagnosis, failure to recognize a patient with shortness of breath due to COVID-19 leading to delays in care, patient is unable to follow prescription after discharge due to abbreviations or issues regarding language</li> <li>- To debrief: Each group presents their harms in plenary, moving their cards to a central wall chart with a larger stick figure. All the cards from each of the groups should be reflected on the chart; similar ideas can be clustered together. Trainer facilitates a plenary discussion which explores the similarities and differences between the groups and keeps them focused on what really matters: the person receiving care.</li> </ul>
<p>What can an EMT do to improve quality care for COVID-19 patients? (15 min)</p>	<p>Brainstorm activity</p>	<ul style="list-style-type: none"> <li>- Slides 9 – 10. Activity: Trainer asks groups to select one harm from the wall chart activity and brainstorm change ideas on how to solve that issue. Trainer should warn groups to avoid ideas that are “more of the same”, like more people, more equipment...and focus on the ones that alter the way the work/process is performed, have a lasting impact and produce visible results. For example: screen febrile patients in parallel; move stations of triage settings close together so staff doesn't need to walk much, have order-sets ready for lab tests of suspect cases, etc. Each idea should be written on a separate card.</li> <li>- To debrief: Each group presents their improvement ideas in plenary moving their card to the central wall, placing them on top the referring harm. Alternatively, trainer allows groups to rotate around to learn and share ideas to solve the harms.</li> <li>- Trainer highlights that improvement requires change but not all changes are improvements, that's why we need to test ideas before adopting them, to learn and check if they are really fit for purpose.</li> </ul>
<p>Learning fast to improve: running PDSA cycles (10 mins)</p>	<p>Presentation and discussion</p>	<p>Presentation:</p> <ul style="list-style-type: none"> <li>- Slide 11. Trainer presents brief concepts and steps of running PDSA (Plan-Do-Study-Act) cycles. <b>PDSA cycles</b> <sup>5,6</sup> <u>What are PDSAs cycles?</u> PDSA cycles are a tool to build knowledge about a change through trial and learning. It helps to learn if a change idea produces improves in care or not. It can be used to develop, test and implement ideas in any care setting (or even in non-care settings too!).</li> <li>- Slides 12-16. <u>What are the main steps of PDSA cycles?</u> PDSA cycles have 4 steps <b>PLAN</b> the test (what idea are you testing?), make your <u>predictions</u> (what do you think will happen when you test that</li> </ul>

idea?) ; make plans to carry out the test (who will do it, when, where, how); what data do you need to collect in order to know if your predictions were right or wrong? **DO** the test (carry out the plan and collect data) ; **STUDY** (compare the test results with your predictions, what did you learn?) and **ACT** based on what you have learned and plan the next (see next item) . Possible actions include: adapt the change and test it again; keep the change as it is and test it in different conditions (i.e night versus day shift) or increase scale of the test (i.e from 1 to 3 patients) or adopt the change making it part of the routine work (but only after having tested it under different conditions!). Avoid implementing changes before testing them.

- Slide 17. Planning sequential PDSA cycles: PDSAs should start small, i.e. test an idea with one patient, one nurse, one shift. As you learn about what works and what doesn't, you can scale up the test (i.e: test the change with 3 nurses) and/or change conditions (i.e test the change during the night shift instead of during the day). By doing multiple cycles sequentially with different scales and conditions, you will build knowledge and gain confidence that the change idea you are trying is able to produce improvements.
- The figure below shows on the left a depiction of the 4 main steps of a PDSA cycle with key questions for each one and on the right a sequence of multiple PDSA cycles.



Source: <https://www.apweb.org/>

- Slides 18-22. Trainer then gives an example of an idea to improve triage of COVID-19 patients.
  - o You are part of an EMT that has deployed to XXX to provide care for COVID-19 patients. After a week of operations, you receive an increasing number of complaints regarding waiting times, both from the local communities and health authorities. After collecting and analyzing data, you realize that patients wait on average an hour from arrival at facility until triaged by a healthcare professional. Being aware that unnecessary delays might be harmful, you and your team decide to act. After brainstorming a couple of ideas, you decide to try one out using PDSA cycles
    - **PLAN:** What change idea are we testing? We are testing putting a sheet of paper at the wall of the triage room containing a colorful depiction of the steps a nurse/healthcare professional needs to follow when triaging a suspect COVID-19 patient. In simple terms, we are putting a drawing on the wall with a set by step on how to triage a patient.

- What do we think it will happen if we try this idea? Triage will be faster and more reliable; staff will not need to worry about memorizing every item
- What is our plan? Paul will write on a sheet of paper a step by step guidance for triaging suspect COVID-19 patients and will stick it to the wall in the front of the triage desk. Nurse Marie will test it with the first patient she triages tomorrow. She will also track on a stopwatch how many minutes triage takes and will share her impressions with Paul about the tool
- **DO:** Test went as planned. Nothing unexpected happened.
- **STUDY:** What happened? Compare the results to your initial prediction. It took Marie 75 seconds longer than usual to triage the patient. The font size on the step by step was too small for Marie to read, it was also too high in the wall and she found there was too much information. However, she felt more confident in not having to remember by heart every single step in triaging suspect COVID-19 patients. *“Sometimes I am so tired after triaging patients for hours and hours that my mind just goes blank and I forget to check the respiratory rate. Having a reminder in front makes it easier to do the right thing!”*
- **ACT:** What will you do next? Reflect on the learnings and act based on that. Paul we will increase font size and make a cleaner version. He will also hang it not so high in the wall. Marie will test it again this afternoon with 2 patients.
- Slide deck contains also an example of multiple PDSA tests conducted by an EMTs that the trainer can discuss as well. It shows the strategy of changing scale and scope of tests.

- Importantly, the trainer now leads a discussion on how PDSA can be applied to EMT operations during the COVID response. For example:
  - By testing ideas at small scale and learning if they work/don't EMTs minimize risk of wasting scarce resources
  - PDSA cycles can be used to test any of the ideas to solve the harms identified on the first and second activities. Ex: decrease waiting times for triage, increasing reliability of pulse oximeter monitoring
  - If participants are clinicians, trainer could use the following analogy: ***Running PDSAs is like treating a patient!*** For example: *a patient presents with low O2 saturation at pulse oximetry. You decide to administer supplemental O2 via nasal cannula because you believe it will increase O2 levels. After a while, you re-evaluate the patient to check if pulse oximetry has improved, upon realizing it hasn't, you decide to increase the number of liters per minute and re-evaluate again after a short period of time. You've just run a PDSA!*

<p>Checklist for organizing deployments of staff in the context of COVID-19 (10 min)</p>	<p>Presentation</p>	<ul style="list-style-type: none"> <li>- Slide 23. EMT staff has supported provided surge response to COVID-19 either nationally or internationally as many health systems and facilities are overwhelmed. Such activities, if not well planned, might represent a risk of harm to patients and staff. Differences in infrastructure, equipment, care processes, language and culture can be a challenge for both team and host facility.</li> <li>- With the aim of reducing errors and increasing staff safety and wellbeing, the EMT Secretariat is developing a checklist for organizing and receiving deployments in the context of COVID-19. The main focus is on international EMTs but there are elements and measures that national teams might find useful too</li> <li>- Checklist is aligned with topics in the Classification and Minimum Standards for EMTs. It includes sections: regarding documentation, training, staff safety, security &amp; wellbeing, key processes and language and brings recommended set of measures for monitoring.</li> <li>- Checklist focuses on the “staff” element of an EMT given the characteristic of the COVID-19</li> <li>- EMT management should use the checklist as a tool when planning a deployment of staff. It provides guidance and reminders about the critical aspects to be considered for a safe deployment both from staff and patient perspectives. It is not an auditing tool.</li> </ul>
<p>Summary (2 mins)</p>	<p>Presentation</p>	<p>Slides 24-25.</p> <p>Wrap-up the dialogue.</p> <p>Summary of key points, referring to the harms specific to EMT operations during the COVID-19 response, and the practical tools and options for how teams can address those.</p>

## ADDITIONAL REFERENCES

1. WHO. Classification and Minimum Standards for Foreign Medical Teams in Sudden Onset Disasters. Geneva: WHO, 2013
2. Institute of Medicine. Crossing the quality chasm: a new health system for the 21st century. Washington (DC): National Academies Press;2001
3. WHO. Handbook for National Quality Policy and Strategy. Geneva: WHO;2018
4. WHO. Conceptual Framework for the International Classification of Patient Safety. Geneva: WHO;2009
5. Langley et al. The Improvement Guide. A practical approach to enhancing organizational performance. San Francisco: Jossey-Bass;2009
6. Provost L, Murray S. The Healthcare Data Guide. Learning from Data for Improvement. San Francisco: Jossey Bass; 2011.

## PDSA WORKSHEETS

The use of PDSA worksheets helps team develop the discipline of going through all the steps systematically, below there are two possible options for teams to choose.

### Simplified worksheet for monitoring multiple PDSA cycles.

PDSA Cycle n°	PLAN			DO	STUDY	ACT
	<b>Idea</b> What change idea are we testing?	<b>Prediction</b> What do we think will happen when we test this idea?	<b>Planning</b> How will the test be conducted? What data are we collecting? <i>Note the start and end date of your PDSA cycle</i>	<b>Conduct the test.</b> Did something unexpected happen?	<b>What where the results?</b> Compare the test results with your predictions. Summarize learning.	<b>What our actions will be based on what we have learned?</b> <i>(Choices include adopt, abandon, adapt or increase scale/change scope of test)</i> <b>What is our next PDSA cycle?</b>
1						
2						
3						
4						
5						

Adapted from different sources including material from the Institute for Healthcare Improvement; Langley G et al. The Improvement Guide. A practical Approach to Enhancing Organizational Performance. San Francisco: Jossey-Bass;2009 and material shared by Ademir Petenate

## Standard PDSA form



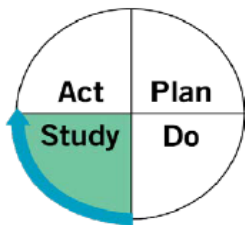
**Plan:** Plan the test, including a plan for collecting data.

- State the question you want to answer and make a prediction about what you think will happen.
- Develop a plan to test the change. (Who? What? When? Where?)
- Identify what data you will need to collect.



**Do:** Run the test on a small scale.

- Carry out the test.
- Document problems and unexpected observations.
- Collect and begin to analyze the data.



**Study:** Analyze the results and compare them to your predictions.

- Complete, as a team, if possible, your analysis of the data.
- Compare the data to your prediction.
- Summarize and reflect on what you learned.



**Act:** Based on what you learned from the test, make a plan for your next step.

- Adapt (make modifications and run another test), adopt (test the change on a larger scale), or abandon (don't do another test on this change idea).
- Prepare a plan for the next PDSA.