CUSP Tool: Learning from Defects

WHAT IS A DEFECT?

A defect is any clinical or operational event or situation that you would not want to happen again—an unsafe condition, a patient fall, a venous thromboembolism, a medication error, a surgical site infection, wrong-site surgery, missing equipment, nursing time spent away from the bedside, etc. Anything that might lead to preventable patient harm can be considered a defect.

HOW THIS TOOL CAN HELP

This tool provides a structured approach to help your teams identify system factors that contribute to defects, plan improvements, and sustain those improvements. Because this tool helps you to look at defects at a systems level, the solutions you create are more likely to be lasting ones.

FOUR BASIC QUESTIONS

Whether your team uses this tool or develops its own tool, you should ask these four basic questions when considering a defect.

1. What happened?
2. Why did it happen?
3. How will you reduce the risk of the defect happening again?
4. How will you know the risk is reduced?

WHO SHOULD BE USING THIS TOOL?

Your core CUSP team (CUSP Facilitator, CUSP Champion, Unit Manager, Provider Champion, Senior Executive) may guide the use of this tool, but everyone on the unit can and should participate in the process of learning from defects.

CHECKING YOUR ASSUMPTIONS

One of the strengths of a CUSP approach is that CUSP meetings bring a diverse group of team members together. But don't assume that everyone at the table is as familiar with the details of a defect as you are.

- Not familiar with the context of a defect being discussed? Don't hesitate to ask basic questions!
- Well-versed? Take the time to describe a defect so everyone can help you see aspects of a defect you may not have appreciated before.

Don't hesitate to take a walk around the unit to see where the defect occurs (there may be multiple spaces implicated) and remember to talk to your frontline staff to understand the defect better.

Let's take a look at our four basic questions now. The tables in this tool will guide your team as you consider these questions.

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1. WHAT HAPPENED?

Select a defect to learn from. Put yourself in the place of those involved – and in the middle of the events associated with the defect as they were unfolding (or as they typically unfold). After you've talked to frontline staff, consider:

- Who was involved?
- What actions occurred?
- What were care team members thinking and feeling? (Are there perceived benefits or rewards for certain actions? Perceived pain points?)
- What were patients thinking and feeling?
- What was happening at the same time?
- What happened that had a good outcome?
- What happened that had a bad outcome?
- What tools or technologies were being used and how were they being used?

TIP: *Take time to listen. Seek to understand rather than to judge. Ask clarifying questions and follow-up questions.*

At your CUSP team meeting, develop an understanding of the defect. Consider using visualization tools, role playing, and other techniques that can make the defect real.

One approach: Use whiteboards and/or flip charts as you capture the answers to the questions above. Try drawing the steps of the process that may have been involved. What decisions do people make at different steps? Where do they tend to go wrong? To go even deeper, sketch the interactions and movements of care team members, patients, and materials (e.g., equipment, medications, etc.) while the event was occurring.

TIP: *Remember that while a process map can get at workflow issues, it won't get at values, attitudes, and beliefs impacting a defect. Thinking about the "people side" of a defect is critical to understanding how to create lasting change.*

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2. WHY DID IT HAPPEN?

Contributing factors from all levels of your healthcare system impact care delivery and, ultimately, patient outcomes. What factors impacted your defect? Some examples are identified below. (If you are a CUSP Facilitator or CUSP Champion, consider modifying the examples, to include ones that would resonate with your teams.)

CONTRIBUTING FACTORS	EXAMPLE OF FACTOR	INCREASED THE HARM OR RISK FOR HARM?	DECREASED THE HARM OR RISK FOR HARM?	REVIEWED AND N/A
Patient and/ or Family Characteristics	Patient was acutely ill or agitated *(Elderly patient in renal failure, secondary to congestive heart failure.)*	☐	☐	☐
	There was a language barrier *(Patient did not speak English)*	☐	☐	☐
	Patient and/or family member characteristics relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
Task Factors:	There was a protocol available to guide therapy	☐	☐	☐
	Lab results were not available when care decision was needed	☐	☐	☐
	Task factors relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
Caregiver Factors:	A provider was overly tired	☐	☐	☐
	Caregiver factors relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

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CONTRIBUTING FACTORS	EXAMPLE OF FACTOR	INCREASED THE HARM OR RISK FOR HARM?	DECREASED THE HARM OR RISK FOR HARM?	REVIEWED AND N/A
Team Factors	Verbal & written communication during care was clear	☐	☐	☐
	Team members were not comfortable speaking up	☐	☐	☐
	Team factors relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
Knowledge & Skills Factor	Members of the care team find the protocol confusing	☐	☐	☐
	Knowledge & skills factors relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
Technology factors (consider software, hardware, medical devices, etc.)	Computer shut down in the middle of provider's order entry.	☐	☐	☐
	Provider checked to make sure order was recorded	☐	☐	☐
	Technology factors relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

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CONTRIBUTING FACTORS	EXAMPLE OF FACTOR	INCREASED THE HARM OR RISK FOR HARM?	DECREASED THE HARM OR RISK FOR HARM?	REVIEWED AND N/A
Local Environment	There was adequate equipment and it was working properly	☐	☐	☐
	A nurse was caring for more patients than usual because another nurse went home sick.	☐	☐	☐
	What aspects of the local environment contributed to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
Institutional Factors	There were limited personnel available for urgent tests	☐	☐	☐
	Institutional factors relevant to your defect?			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
Other Factors	(See contributing factors that don't quite fit the system factors identified in this table? List them here)			
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

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Additional/supplemental approaches: As you write down or discuss contributing factors, try to go deeper. For example, you might use a **"5 Why's"** approach.

5 WHYS

Why 1. Why did this contributing factor occur?

Why 2. Why did "Why 1" occur?

Why 3. Why did "Why 2" occur?

Why 4. Why did "Why 3" occur?

Why 5. Why did "Why 4" occur?

MAKE IT VISUAL

If your team used a drawing to illustrate what happened, consider going back to it. Look for weaknesses in your processes (redundant steps?) and/or the way your workspaces are set up. What about the people side of the defect? Can you identify where the pain points are?

THINKING ABOUT CULTURE

Are there aspects of your patient safety culture that promote doing the wrong thing or engaging in a risky workaround? What might your team do to build a stronger safety culture?

TIP: *Getting to the bottom of why something happened might take a whole meeting or more than a meeting. It might also take some additional fact-finding. Divide and conquer and have those doing the fact-finding report back to the group. But don't forget to make action items and ownership of those actions clear and set expected due dates for reporting back.*

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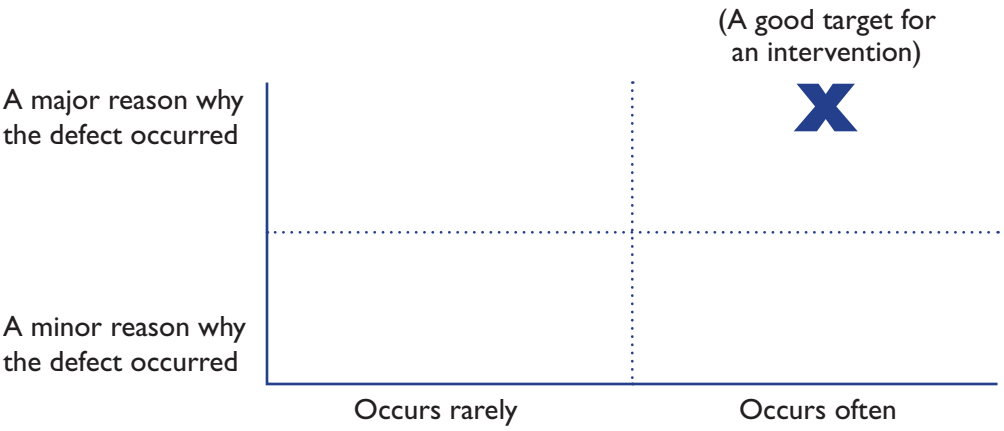
3. HOW WILL YOU REDUCE THE LIKELIHOOD OF THIS DEFECT HAPPENING AGAIN?

PICK A CONTRIBUTING FACTOR YOUR TEAM WOULD LIKE TO ADDRESS FIRST.

In selecting a contributing factor, consider its impact on causing the defect, and whether the factor occurs rarely or has a likelihood of occurring again (e.g., if a provider response contributed to the defect, was it a typical event or one that occurs relatively often?).

AN APPROACH

Draw a grid and ask team members where they'd place a contributing factor on the grid.



Create choices: Brainstorm possible interventions

Use a whiteboard or flipchart, markers, and/or post-its to brainstorm interventions. This is a whole team activity!

TIP: *Take advantage of your diverse team!*

- *Don't forget to tap into your Senior Executive's big picture view of the organization and knowledge of resources*
- *Take advantage of your CUSP Facilitator's connections to other CUSP teams*
- *Reach out to frontline staff with particular insight into the defect*

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Make choices: Select your intervention

Have your team vote on its favorite solutions. Consider rating solutions based on their ability to address the defect most directly and their feasibility.

Weaker	Intermediate	Stronger
Telling someone to be more careful	*Eliminating or reducing distractions*	*Making a process or device "mistake proof"*

TIP: *Not all interventions are created equal.*

REMEMBER THE PEOPLE SIDE OF THE INTERVENTION

Who has influence and impact when it comes to making sure your intervention will succeed? Are they likely to support or resist your intervention?

Consider stakeholders with influence and impact who might resist your project. Create an action plan to get them on board.

STAKEHOLDER	ACTION PLAN TO ENGAGE HIM OR HER	WHO IS THE LEAD ON THIS ACTION PLAN?	FOLLOW-UP DATE FOR LEAD TO REPORT TO GROUP.

TIP: *Engagement is hard! While you may want to divide and conquer, when your leads report, use the wisdom of your diverse team to help them solve problems.*

BE CLEAR AND TRANSPARENT

Make sure the details relating to the intervention are spelled out and understood by everyone so that the intervention is carried out consistently.

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4. HOW WILL YOU KNOW THE RISK IS REDUCED?

A quick way to measure success is to ask your frontline staff to rate your intervention. But ideally, you want a strategy that will also help you to sustain your intervention if it's working to correct a defect.

AN APPROACH:

- Identify how you will measure success
- Put an audit plan in place to track that measure (the plan should include a way to feed data back to your group and an agreed-upon approach to monitor the measure)
- Review your audits and adjust your intervention as needed. (This may require thinking about defects again. Learning from defects is a continuous process as is the need to engage frontline staff!)

YOUR PLAN	MEASURE OF SUCCESS	WHO MEASURES AND HOW OFTEN?	WHERE RECORDED	FOLLOW-UP DATE	CORRECTIVE ACTION

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