CPB FMEA #16: Perfusionist’s inability to deal with fear in a stressful situation.

The AmSECT Safety Committee

Contributor: Gary Grist

Friends-

We have looked at a lot of technical failures recently. So I thought we could address something less defined; fear. From my very first day on the job as a perfusionist until I retired, I have always felt some apprehension every time I sat behind the pump. Despite my years of experience, I was always aware that something could happen with which I might not know how to deal. And I admit that I have been stressed many times during difficult cases. During difficult cases when things were going wrong, I became anxious. But I don't think that I ever tipped over into panic.

Two things that really frightened me were cocky surgeons and cocky students. Over confidence can kill a patient just as much as an air embolus. Working with a know-it-all can impair a perfusionist's ability to prevent or mitigate a critical situation.

On the other hand, an experienced perfusionist relayed a story to me about a perfusion student she was working with who could not focus on the CPB process and was failing. She explained to the student to think of CPB as a sports game like football. Four quarters with specific tasks to be performed in each quarter. In this way the student could focus on the task at hand in each quarter and not worry about later tasks in other quarters.

I wrote this FMEA to describe the type of fear a perfusionist might experience with the primary management solution of focusing on the task at hand. There is also a risk that stress can mentally and physically injure a perfusionist who doesn’t deal with it effectively. Are you on antidepressants, antihypertensives or taking proton pump inhibitors?

This is just my approach, but I am more than willing to listen to someone else's approach to this problem. And don't say that you have no experience with fear. We all have. I think that a fearful perfusionist is a risk to the patient. So I am writing this FMEA in recognition of that risk.

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FAILURE:

Perfusionist’s inability to deal with fear in a stressful situation.

EFFECT:

1. Inability to make correct decisions or take effective action due to fear.
2. A delay or failure to communicate critical information.
3. Indeterminate risk to patient welfare.

CAUSE:

1. Even an experienced perfusionist can feel a level of fear caused by a set of circumstances that develop

beyond his or her control.

1. Fearful intimidation develops between experienced and less experienced team members.
2. Fear has four increasing levels of severity:
3. Apprehension is the controllable worry about a future mishap.
4. Stress is a state of mental, emotional or physical tension that requires a mental, emotional or physical adjustment or response.
5. Anxiety is an uncomfortable nervousness involving self-doubt about one’s actions to control an imminent event or an uncertain outcome.
6. Panic is a surge of overwhelming fear causing unthinking or irrational behavior.

PRE-EMPTIVE MANAGEMENT:

1. Obtain the proper educational preparation and training prior to beginning a stressful situation.
2. Do not attempt a specific task unless properly trained and qualified.
3. During training or orientation and with a competent mentor, expose the student or inexperienced perfusionist to as many difficult situations as possible.
4. Emphasize multitasking, developing organizational skills, improving communication skills and teaching team work building.
5. Maintain up-to-date and readily available P&P and surgeon preference manuals for all procedures.
6. Perform frequent skills checkoff for emergent procedures.
7. Perform annual competency review.
8. Maintain up-to-date continuing education and evidence based practice.
9. Provide strong clinical sites for training programs.
10. Maintain the mental and emotional preparation that anticipates difficulty prior to a situation becoming stressful; i.e., have good situational awareness.
11. Emergency situations pose the greatest risk of fear because there is less time for preparation, less resource staff availability and often occur during off-hour periods.
12. Have support personnel available whenever possible.
13. Consult with experienced perfusionists prior to beginning a known stressful situation whenever possible. (\*If there are no support personnel or experienced perfusionists available for consultation increase the Harmfulness RPN to 3.)
14. Implement routine team training to prevent intimidation issues and teach ways to handle bullying from other team members.
15. Avoid all unnecessary distractions, i.e., cell phone calls, loud music and excessive jocularity.
16. Have stress management resources available for a holistic approach to maintaining long term mental and physical health for team members. (\*\*Fear and insecurity may be hidden by the facade of confidence, making self-fear more difficult to detect with an RPN of 4, low.)

MANAGEMENT:

1. Focus on the immediate task at hand particularly in a rapidly developing or explosive situation.
2. Prioritize other tasks as they develop.
3. Get support personnel help for an objective assessment of the situation before panic sets in.
4. Try to physically complete the task even if it is with detailed instructions from support personnel. Completing a stressful task can be valuable experience.
5. Post-traumatic stress disorder therapy should be available if needed for the perfusionist or other team members, particularly if the patient experiences an adverse outcome.

RISK PRIORITY NUMBER (RPN):

A. Severity (Harmfulness) Rating Scale: how detrimental can the failure be:

1) Slight, 2) Low, 3) Moderate, 4) High, 5) Critical

(The problems that this failure causes are usually 1, slight. However if the perfusionist is working alone without help, the Harmfulness RPN should be increased to 3, moderate.)

B. Occurrence Rating Scale: how frequently does the failure occur:

1) Remote, 2) Low, 3) Moderate, 4) Frequent, 5) Very High

(This occurs very infrequently. So occurrence should be 1, low.)

C. Detection Rating Scale: how easily the potential failure can be detected before it occurs:

1) Very High, 2) High, 3) Moderate, 4) Low, 5) Uncertain

(This problem can be very easy to detect if a perfusionist is honest with himself or herself; a detection RPN of 1, very high. \*\*However fear and insecurity may be hidden by the facade of confidence, making self-fear more difficult to detect or an RPN of 4, low.)

D. Patient Frequency Scale:

1) Only a small number of patients would be susceptible to this failure, 2) Many patients but not all would be susceptible to this failure, 3) All patients would be susceptible to this failure.

(All patients are at risk. So the Patient Frequency RPN should be a 3.)

Multiply A\*B\*C\*D = RPN. The higher the RPN the more dangerous the Failure Mode.

The lowest risk would be 1\*1\*1\*1\* = 1. The highest risk would be 5\*5\*5\*3 = 375. RPNs allow the perfusionist to prioritize the risk. Resources should be used to reduce the RPNs of higher risk failures first, if possible.

(The total RPN for this failure is1\*1\*1\*3 =3. However if the perfusionist is working alone and is over confident the RPN would be 3\*1\*4\*3 = 36.)