When Perfect Practice Fails

Leaving class the other night I decided to drive home through town. At ten fifteen PM on a school night, the town was going to bed. Traffic on Main Street was dwindling, and I moved quickly – until 12th and Main, that is. Suddenly – brake lights – vehicles were turning left into McDonald's. Waiting for the lane to clear, I looked over at the drive-in and quickly counted seven vehicles in line, waiting to pick up their orders. Moving again, I glanced back to see the three or four cars that I had been waiting on as they joined the line. McDonald's certainly has their business figured out!

Roger Martin writes in *The Design of Business: Why Design Thinking is the Next Competitive Advantage* about a concept called the knowledge funnel. He describes a process for experiencing and processing knowledge. At the top of the funnel is mystery. As we progress deeper into the funnel (learning), we gain insight into the mystery. This is the heuristic stage. In this stage, we are able to see themes in the information and begin making sense of it. We are able to use our knowledge to make better decisions. As we enter deeper into the funnel, ready to come out, we enter the stage of algorithm. In this stage, we understand the data well enough to make processes that move in lock step to reliably produce desired outcomes. Once developed, algorithms require little thinking. Rather, they require using the algorithm perfectly every time to produce consistent results.

McDonald's excels at algorithm. The McDonald brothers explored the mystery of running one successful restaurant by asking how Americans driving around in their cars would like to eat. Then Ray Kroc bought the restaurant, asking how quantities of food could be delivered quickly and consistently. He went on to develop repeatable processes, and the rest is fast food history. We line up at 10 PM to order 1,000 calorie-plus late night "snacks."

What does all of this have to do with EMS education? I argue, quite a bit. In EMS education, we bring students into initial classrooms and inundate them with technical information: signs, symptoms, indications, contraindications, treatments, and more. As they struggle with this, we coach and drill harder until they can apply the information in a repeatable, algorithmic way producing the same results each time. In short, we get them to the point where they know the protocols and procedures needed to pass our exams. We launch them from our programs, reasonably sure that they will pass the state practical and national registry exams.

The question is, is this good enough? The answer is a resounding "NO." This model falls short of what our patients need.

In EMS initial education, we bring students into the class in the mystery phase. We fill them with technical information and move them swiftly into the algorithms. We use this model to quickly produce students who know the standard treatments, processes, and desired outcomes

of emergency medical care. We have confidence that using the algorithms they stand a better chance of passing the state practical test.

I don't know about you, but when I think about finding good food, I don't think of fast food as the option. Fast food is quick and convenient. But for my tastes, fast food falls short on the nutrition and taste scales as compared to food cooked to order. As a fast food business, you can make and sell a lot of food, but you are not going to be meeting the needs of all of your customers. Those with special needs don't fit into your algorithm.

The same logic applies to our education model. We produce a lot of providers who can offer the fast food version of patient care. If the patient matches the algorithms we teach, things generally work out okay. However, if the patient is one of those that didn't read the menu, trouble develops quickly. By taking our students from mystery directly to algorithm, we fail them. Understanding how to assess a patient with the capacity to identify themes and correlations is a key to being able to treat the patients who fall out of the normal. It is also a key to successfully treating patients in mass casualty or other emergency rule situations.

As EMS educators, we should think about how to take students through the heuristic phase of knowing before we begin to introduce algorithms. Some steps to make this happen may include:

1. Be intentional about building thinking exercises into each and every lesson. Using powerful questions to help students think past the obvious.
2. Flip the classroom. Have students be responsible for learning the technical content before they come into the classroom. This allows us to spend time in the heuristic phase of learning without increasing the in-class time spent by students.
3. Be willing to allow differing views into our classrooms. There is more than one way to do much of what we teach. Encouraging this variety is in the best interests of creating thinking providers.
4. Teach current pre-hospital care information, even if it doesn't appear on the National Registry or State practical exams yet. Failing to teach current clinical thinking is a failure to prepare the student to think past the algorithm. What this likely means, is that we need to turn loose of our ACLS, PHTLS, and other canned course crutches. The time and place for these is after we have taught them to think broadly.
5. Avoid the use of state testing materials for practical skills until we are done with class. These tools are not developed with patient care in mind. They are assessment tools used to validate a minimal level of competence.

Vincent Lombardi, the great coach of the Green Bay Packers, once stated, "Perfect practice makes perfect." What is left unsaid is that perfect is an illusion. When we ignore matching the fundamentals with our own observations of themes and relationships between knowledge and real life, the ability to adjust and perform in a complex situation is lost. And that is even further from perfect.

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