



PHOTO COURTESY BILL WOOD

# HALL OF FAME SKILLS

## MAINTAINING ESSENTIAL COMPETENCIES THROUGHOUT YOUR CAREER

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### Crack ... crack ... crack!

In the distance, with the grass finely manicured like a new haircut, the sun is shining high overhead and batting practice is underway on the field. Basic skills are being practiced, but they're being practiced by world-class athletes. Baseball players—preparing for the Major League Baseball (MLB) All-Star Game or a regular season game—are swinging the bat as well as throwing and catching balls. Their practice preserves muscle memory, further refines hand-eye coordination and maintains the all-important basic skill set that allows them to perform their jobs.

Day in and day out, baseball legend Cal Ripken Jr. practiced for and played in 2,632 consecutive games, which is known as “The Streak.” Ripken, who was inducted into the National Baseball Hall of Fame this month, was a model of consistency in his major league career. He had more than 3,000 hits, with a 0.276 average, and powered in 1,078 extra base hits—including 431 home runs.

Contributing to his reliable stats was his consistent routine. In a nearly identical fashion every day, he prepared to play ball by going through many of the same drills learned in Little League. Like many successful individuals—including our colleagues in EMS—Ripken established a positive reputation through diligence.

There's a notable difference, however, between professional baseball players and EMS providers (aside from the fame and wealth). When was the last time you had batting practice?

## MINOR LEAGUES

Our system of initial EMS education often seems to be focused on preparing us for the test. Finite hours are available in the classroom, lab and clinical settings to transfer a great deal of information into the student's mind. Instructors must first teach the basics of being an EMT or a paramedic and then cover a little bit of everything, ranging from the ordinary to the exceptional. In addition, state and national organizations often set minimum-hour requirements, which are considered bare minimums as various agencies compete to recruit quality graduates from certificate and degree programs.

Continuing education (CE) should expand our knowledge base and is essential in our continued development as prehospital providers. However, it's equally important for providers to maintain the basic skills we learned in our initial training. From as early as the 1980s, studies have suggested that our skills rapidly deteriorate over time. One early study of first responders, EMTs and paramedics showed that although didactic (or classroom) knowledge was retained by providers, basic skill proficiency declined by more than 50% within two years.<sup>1</sup> Further, it has been shown that highly technical skills decline the fastest.<sup>2</sup>

Another problem instructors regularly face is that students complain that they're required to participate in CE classes that cover material they think they already know. Frontline providers consider CE sessions to be "sleep sessions," or blocks of downtime when job tasks don't have to be performed. They frequently state, "I learned this material in class. Why do I need to hear it again?"

Although the resistance may be because providers feel they truly know the material, it may also stem from a fear of being corrected in front of their peers. But this thought process goes against all the other re-evaluations and reassurances we make every day. How many crews would start a shift with a portable radio that wasn't fully charged, a used oxygen tank that wasn't checked or a nearly empty fuel tank in the ambulance? Along with our tools that must be recharged, our skills, too, must be refreshed. In this case, it means continual practice and assessment of the skills we need the most. Marilyn Grey, school psychologist and author, says "having it all together is like eating once and for all." Unfortunately, many of us seem to think we have it all together when, in reality, taking a refresher course is like daily practice for baseball players.

## SPRING TRAINING

When discussing the practice of basic skills, the obvious issue of opportunity arises. As many studies on prehospital skills have pointed out, the decreased opportunity to practice skills in the field may correlate with overall skill decline.<sup>4-6</sup> Adding to the difficulty of practicing skills is the diminishing number of hospitals that allow EMS providers access to operating rooms. This means some paramedic students may graduate without having experienced any "live" intubations, and seasoned providers might have limited circumstances for skill practice and assessment during their careers.

Roy Yamada, MD, FACEP, points out that we can practice skills in ways that don't require hospital privileges. Yamada, who serves as the medical control physician for the north Texas division of PHI Air Medical, as well as medical director for two college EMS programs and multiple fire departments, recently said at a first responder meeting for a local medical direction group that his college students don't practice on patients during clinical rotations. "You perform on patients; you practice on manikins."

His assertion reaches beyond students learning a skill set and applies to active providers. Yamada requires his paramedics to practice the order for rapid sequence induction (RSI) five times at the start of every shift to maintain their RSI knowledge base and increase their psychomotor skills for introducing an endotracheal tube into a patient's airway.

Many educators and providers in the Dallas/Fort Worth area credit improved intubation success rates to Yamada's aggressive approach to daily education. Because paramedics operating under Yamada's license are able to successfully intubate and confirm airways for their patients, those EMS agencies rarely use rescue airways. In addition, many agencies have paramedics compete against one another in speed and difficulty with airway manikin simulations to further practice airway management skills. The manikin may start on a table in a normal classroom configuration but quickly becomes suspended upside-down to simulate vehicle collisions or is placed in other difficult configurations.

Ray Fowler, MD, FACEP, another dedicated EMS medical director, agrees with Yamada's approach. Fowler, deputy medical director for the Dallas Biotel System, notes that "if a paramedic is not intubating once per month or once per quarter, they need to be doing regular manikin practice to maintain that very critical hand-eye coordination." This concept is significant because, as Fowler notes, few paramedics in the urban setting have the opportunity to intubate a patient more than once per year. He adds that "training on human simulators is essential" to maintain skill proficiency and doesn't have to be expensive.

"Practicing advanced skills doesn't require [high-tech simulators]; it can be done with IV arms and airway management trainers," says Brett Galbreath, a lieutenant with a southeast Fort Worth (Texas) fire



PHOTO: JEFFREY MAYES

**Studies show that basic skill proficiency declines by more than 50% within two years, a clear indication of the need for continual skill practice.**

department. "The bells and whistles are nice, but I can make my training dollar go a lot further with some more basic devices and get similar results." Echoing this statement is the move by the American Heart Association (AHA) to endorse such product lines as CPR Anytime, which includes a CPR manikin and retails for approximately \$30.

## INDIVIDUAL COACHING

As stated earlier, many providers don't participate in CE because they fear peer judgment about their skills and/or instructor criticism. Few instructor programs factor this into adult-education models and challenge students in a "psychologically safe" environment.<sup>3</sup>

Many instructors attempt the "sandwich approach" to correction: Positives are outlined first, followed by a note on needed corrections.

Then additional compliments “sandwich” the conversation in closing in order to de-emphasize the student’s actual failure. Although this approach may provide a psychologically safe environment and avoid hurt feelings and distant relationships between educators and students, it does little to encourage the psychomotor or critical-thinking skills necessary for the provider to care for patients in a safe and effective manner.

To address the issue of patient safety while protecting the student’s self-esteem, you can use the “debriefing with good judgment” method, which uses both advocacy and inquiry.<sup>3</sup> This approach suggests pairing the advocacy of underlying objective criteria—such as ventilating a patient or stopping bleeding—with an inquiry to determine how the student frames the problem in terms of their knowledge and previous experience.

This approach is designed to reduce the “noise” created by judgmental debriefings after medical simulations and also to avoid the ambiguity of nonjudgmental approaches when students aren’t clear on the objectives they should have met. The key to this kind of debriefing is that the instructor clearly talks about their expectations for performance and then tests this belief system against that of the student to determine if they have similar views of “objective” truth.<sup>3</sup>

## FRANCHISE IMPROVEMENTS

Garland (Texas) Fire Department (GFD) is one agency that’s actively working to enhance skill retention among its providers. Located in northeast Dallas County, GFD ran nearly 20,000 total calls in 2006. Under the leadership of EMS Coordinator Warren Porter, the department is improving its skill retention program to overcome the skill degradation that occurs with time.

The department identifies high-risk/low-frequency skills and compares those with what’s actually performed by the department’s nearly 200 paramedics and at what frequency per individual each month. What results from this evaluation process are discussions within the medical control team, including whether a provider is considered “proficient” in a particular skill if they perform it successfully a certain number of times per month. The goal is to hone training evaluations to a personal level as much as possible, instead of having a blanket requirement—such as asking to see “X” skill

regardless of how many times that person has performed that skill in a month or year.

For BLS skills, Garland evaluates each person over a two-year period. The department uses the NREMT-Basic skill sheets as a readily available tool to validate proficiency.

A few absolute skills, which are considered very high risk, are evaluated regardless of the number of times performed. For ALS, this classification is based on the National Standard

Curriculum (EMT-P) psychomotor objectives per chapter and then by whether the skill is high or low risk. High risk is defined as possibly interfering directly with the patient's ABCs (e.g., needle decompression to allow breathing). Low risk is defined as not directly interfering with the patients' ABCs (e.g., IV line access).

"It is absolutely critical that high-risk procedures, such as endotracheal intubation, be submitted for rigorous CQI [Continuous Quality Improvement] review," says Fowler, who works with GFD. This CQI review would provide for better patient care. In addition, strategies for remediation of providers with lower skill competence can be developed.

GFD initiated changes when EMTs and paramedics began completing mega-code simulations on the Laerdal SimMan appropriate to their level of certification. These evaluations used the AHA evaluation criteria. The mega-code was based on tests participants completed prior to participating in the mega-code station. If they were found to be proficient with the pre-test, they went directly to a more intensive mega-code. If they weren't as proficient, they were assigned to participate in a less strenuous initial mega-code, after which their performance was reviewed and they progressed to the more intensive mega-code.

In the end, all providers were tested against the more strenuous mega-code, and the department reported good results from its crews' knowledge and skill demonstrations. Perhaps more important, because of the evaluation design the session was well received



PHOTO JULIE MACIE

**One recommended approach in skill maintenance is to perform on patients and practice on manikins.**

by the crews. In the mega-code evaluation, unit and crew integrity were maintained because educational staff felt it would be more realistic and would foster a team dynamic during the mega-code.

#### STAT SHEETS

Documenting performance assessments and the validity of your assessment mechanisms is as important as the training itself. The legal doctrine of *respondeat superior*, from the Latin for "let the master respond," dictates that departments and agencies responsible for EMS and training should be keeping track of their training activity.

Tracking can take many forms. Some agencies maintain two- or four-year training files that correspond with the student's certification period so that when recertification occurs, a ready source of material is available that documents CE hours earned in the appropriate areas as well as skills verification. Rather than reinventing the wheel, it may be easiest for your agency or training officer to use your state form or the National Registry forms to document skill performance. The NREMT has already validated the steps necessary to establish an IV line or intubate a patient, so why develop a second document?

#### CONCLUSION

Just like you prepare your vehicle at the beginning of each shift, skills practice must be part of your daily schedule. "It's got to be part of the routine and providers have to have the responsibility to practice, because it will show up in the work delivered," says George Smithwick, EMS training and continuous

quality assurance manager for the Dallas/Fort Worth International Airport Department of Public Safety.

EMS is similar to baseball in terms of the need to constantly practice the basics. When reduced to its main elements, baseball is a set of motor skills—batting, catching, throwing and running. Likewise, our core skill set in EMS doesn't need to be overcomplicated. Although practicing airway management skills every shift or once a month may seem like overkill, regular “batting practice” is important for long-term success.

Whether our role is student, provider or educator, we should remember that many of the skills necessary to deliver prehospital care involve both motor skills and mental activity. As Charles Skinner, a clinical educator for PHI Air Medical in Texas, puts it, “Psychomotor skills ... are not high-level brain functions; they are psychomotor, and repetition is the key to successful performance.”

Skill retention requires discipline and effort. With this mindset, your performance will be worthy of a hall of fame, just like that of baseball's Iron Man, Cal Ripken Jr. [JEMS](#)

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