

Sterile Cockpit: Limiting Distractions for Patient Safety

By Steve Powell

Early in my career as an airline pilot, I was taught a valuable lesson about how distractions can have disastrous consequences. In 1988, a Boeing 727 full of summer vacationing travelers crashed immediately after takeoff from the Dallas-Fort Worth International Airport killing 14 and injuring 76 passengers and crew. The cause of the crash was linked to the aircraft flaps. Flaps are devices on the trailing edge of the wing that provide the necessary lift for an aircraft during takeoff and landing. If the flaps are not lowered, the aircraft has insufficient lift to remain airborne at slower speeds and will most likely stall and crash like the 727.

So, why didn't the crew lower the flaps before takeoff?

There were three qualified, experienced crew members in that cockpit that day and no one noticed that the flaps were improperly positioned before takeoff. The investigation included a review of the cockpit voice recorder to provide any clues. Additionally, cockpit indicators and the flap handle were checked to ensure there were no possible mechanical failures that would have prevented the proper flap extension. No signs of mechanical failure were indicated as investigators combed the wreckage in the days and weeks that followed. On the other hand, the cockpit voice recorder became the 'smoking gun' for investigators as they replayed the last 15 minutes of conversation among the crew members of the doomed flight.

Recall that this accident occurred before the lockdown days of the cockpit since 9/11. It was then common practice for airline crews to leave the cockpit door open during the taxi for takeoff. The taxi phase is the time when crews start the engines, position switches, and complete the required checklists before takeoff.

During this taxi for takeoff, one of the flight attendants remained in the cockpit and was carrying on a very detailed conversation with the pilots about her social activities from the past night. Much friendly banter was exchanged as the crew became engrossed in the stories being told. The normal flow of checks, actions and procedures was interrupted by the conversation and the flaps were never lowered, nor any checklists ever completed as the crew succumbed to a deadly distraction. The pilots never had a chance without the flaps being lowered as the aircraft stalled shortly after takeoff.

From this accident, the 'sterile cockpit' was created to limit distractions like the nonessential conversation that led to the deadly 727 crash. The sterile cockpit was implemented from pushback from the gate until 10,000 feet altitude on the climb out and from 10,000 feet during the approach and landing. When properly practiced, distractions from nonsafety related activities are minimized. So, why an airplane story for patient safety?

The same deadly opportunities for errors due to distractions are present in healthcare. When your nurse or pharmacist is drawing or filling your medications, are they free from distractions or are they attempting to multi-task with another patient or another medication? Before surgery, is your team focused on the correct site, side, or your unique medication allergy? Are they more

interested in the music selection on the operating room music system or last night's contestants on Idol? Are you the last case of the day or the first?

Could your providers become so distracted that they 'forget the flaps'? Absolutely, they are human! When you observe distractions especially at critical times in your care, you have an obligation and a right to call a safety 'timeout,' and ask for a sterile cockpit for yourself or your loved one. At the same time, be aware of times where you need to limit nonessential conversation while critical steps or actions are in progress related to your care. Don't be the next accident caused by preventable distractions.