

One example is a helicopter governor failure. The governor is a mechanical device that maintains a set engine speed by controlling fuel flow. The governor is directed by a computer.

In the simulation, the instructor disconnects the computer, requiring the pilot to manually control the fuel flow with the throttle to maintain the proper rotor blade speed. If the speed gets too low, the rotor won't generate enough lift to keep the helicopter airborne. If the speed gets too high, the centrifugal force can rip the blades from the helicopter.

Without the computer, the throttle also loses its precision and "becomes very touchy," as Ayubi described it.

The throttle is a rotating cylinder attached to the end of the left-hand control stick, called a collective. Moving the stick up or down changes the pitch of the rotor blades. Stick up, helicopter climbs. Stick down, helicopter descends. Turning the cylinder increases or decreases fuel flow and that controls rotor speed.

With a broken computer, the pilot transitions from one movement with the left hand that automatically controls fuel and pitch, to two movements with the left hand to adjust fuel and pitch. "It's a kinesthetic challenge," said Ayubi.



CBP pilots in an A-Star helicopter conduct training exercises at CBP's National Air Training Center in Oklahoma City.

Be polite, but cautious

Instructors emphasized treating citizens with respect, but never letting your guard down.

Take pilot certificate inspections. During his training, Chad Smith, an air interdiction agent with 19-years of law enforcement experience, approached the pilot, played by a municipal SWAT (special weapons and tactics) officer. The pilot is standing next to a static Cessna aircraft.

Observing Smith is instructor Mike Tully and James Wilson, an attorney and instructor. Their critique helps agents perfect their skills for approaching an aircraft.

"How are you today?" said Smith, walking toward the aircraft. "Great day to be flying, isn't it?"

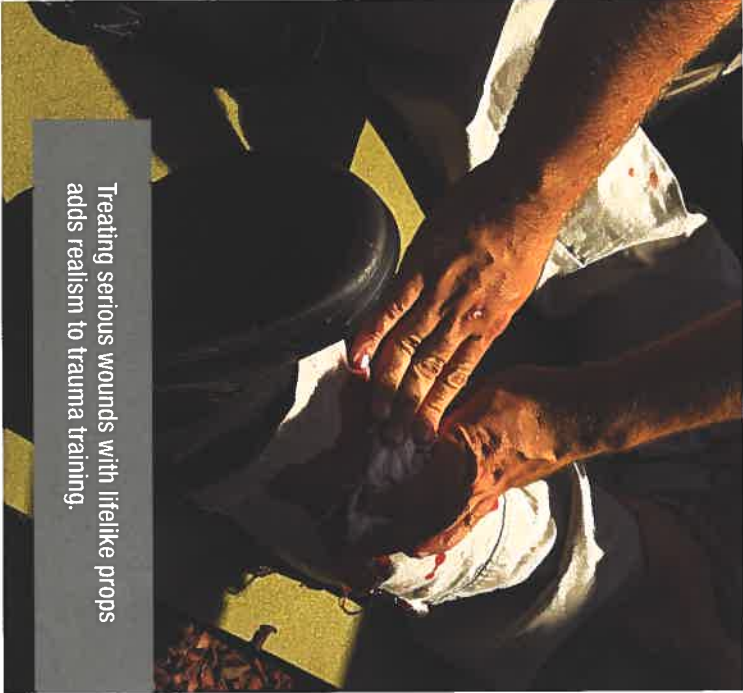
Smith asked to see the pilot and medical certificates. The pilot asked why. He hesitated. He resisted Smith's disarming demeanor, but handed the documents to Smith.

Smith then asked to inspect the aircraft's registration and airworthiness certificates, usually stored in a plastic sleeve near the floor by the pilot's seat.

"Could you please move back to the tail?" Smith first asked, striving to keep a safe distance from the pilot. The pilot grants permission for Smith to inspect inside the aircraft.



Using a static Cessna aircraft on a simulated airport tarmac makes inspecting pilot certificates seem more real.



Treating serious wounds with lifelike props adds realism to trauma training.

Smith reviewed the documents, finds them satisfactory and the inspection is complete.

Tully and Wilson then debriefed Smith on the legal and tactical considerations during pilot certificate inspections. Tully suggested Smith could have improved his safety by standing diagonally from the pilot when the documents are handed to him, known as a bladed stance.

They explained, for instance, that holding a conversation with the pilot not only helps build rapport but could reveal a higher level of suspicion to search further. "Just remember," Tully concluded. "You're still a cop. You're going to be polite, but you're going home safely."

There's also a crash scenario, complete with frantic cries for help and police actors who simulate serious injuries. Agents reviewed how to assess injuries and stabilize the victim. "What are we looking to do?" instructor Craig Ilsechner coached one group as they ready a tourniquet. Each victim presents a different calamity.