Why aren't there any human doctors in Star Wars?

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A droid can treat a Lightsaber wound, but can it feel your pain? Credit: JD Hancock, CC BY

Though set "a long time ago in a galaxy far, far away," it isn't hard to see in the Star Wars films a vision of our own not so distant future. But Anthony Jones, a physician with a long background in health care technology development, sees the Star Wars vision of medicine's future as sheer fantasy. Specifically, he is struck by the dearth of doctors – at

least human ones. "In Star Wars," he says, "there are no people practicing medicine. Caring for patients seems to have been taken over by machines."

And Jones is no Luddite. Until recently he was vice president for patient care and monitoring solutions at Philips Healthcare, where he was helping to shape the future of health care technology. But watching Star Wars has helped him realize that, no matter how sophisticated technology becomes, there is no substitute for the human touch. No droid, no matter how dexterous, can offer human compassion. It might be able to store and process more medical information, but only people can offer a truly sympathetic ear.

Jones is enough of a Star Wars aficionado to know what he is talking about. Consider the end of Episode V, when Darth Vader amputates the hand of his son, Luke Skywalker, with his Lightsaber. When Luke's harrowing escape ends in rescue, says Jones, "He is outfitted with a new cybernetic hand by an android surgeon." Or think of Episode III, when Padmé Amidala gives birth to Luke and his twin sister, Leia. Says Jones, "The delivery and her subsequent death are overseen by a midwife droid." Likewise, after Darth Vader's body is ruined in his duel with Obi-Wan Kenobi, droids fit his body with cybernetic limbs.

From George Lucas' point of view, the choice to replace human doctors with droids is not difficult to fathom. It adds to the futuristic aura of the saga. And Star Wars is populated by a vast array of species, whose very different biologies would be difficult for any human physician to master. Unlike today's doctors, medical droids probably wouldn't complain about escalating productivity demands, clunky hospital information systems and declining rates of payment.

Doctor droids, but human pilots?

Jones points out another oddity: "Why would Lucas have machines caring for patients yet retain human beings in the pilot seats of military spacecraft?" he asks. "Machines would offer reaction times and targeting far superior to any person." Today we are moving in this direction through the use of drones in warfare, though humans remain in control. Star Wars defenders might respond that it is not technology but trust in the Force that ultimately determines the outcome of battles. "Yet," Jones asks, "why wouldn't the Force play an equally important role in caring for seriously injured and dying patients?"

Droids won't be replacing doctors any time soon, but that doesn't mean that technology don't have a place in medicine. Jones points out that there plenty of technological advances that could help doctors (the human kind) improve patient care.

One such advance is a wearable device that can track a variety of patient health data remotely. "Instead of coming in to the office," Jones says, "a patient with advanced lung disease such as chronic obstructive pulmonary disease (COPD) will be able to stay at home while a doctor reviews data on physical activity, respiratory function and sleep quality. Such information will be very useful in designing more personalized care plans and intervening sooner when problems develop to prevent the need for hospitalization."

Another innovation Jones touts is a camera and computer software package that can monitor a patient's vital signs from across a room, without ever touching them. "Patients who arrive in the emergency room will be assessed right away for heart rate, respiratory rate, temperature, and blood oxygen saturation. Such technology will ensure that very sick patients get immediate care, and the advantages during a flu pandemic or Ebola outbreak go without saying."

A third is a combination of a wearable brain-wave detecting device and

computer software that will enable patients to control the cursor of a computer not using their hands or even eye movements but directly with their brains. "Simply by thinking of it," Jones says, "even patients with paralyzing conditions such as spinal cord injuries or ALS (Lou Gehrig's disease) will be able to control a wheelchair or turn the temperature in a room up or down."

A droid can't feel your pain

So will advancing technology mean that someday you'll see a primary care droid instead of making an appointment with a human doctor? Watching Star Wars, Jones predicts that the health care providers of the future will continue to emerge from medical and nursing schools, not from android factories. "But there will be a difference," he says. "The students of the future will spend less time cramming their heads full of information, instead focusing on the psychology of illness. Someday soon we will realize that their most important contribution is often to empathize with patients."

Doctors can let the new technology collect information and vital signs, while emphasizing and enhancing the empathetic and intuitive parts of medicine that will always be the domain of humans.

"There is no doubt that technological innovations will continue to improve health care in dramatic ways," says Jones. "But when you are sick you are also scared. And at least for the foreseeable future, there is no way that technology can substitute for a real human being, someone who feels what you are feeling."

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