Physician pushes for improved Ebola care

Canadian critical care physician Robert Fowler, a clinical lead in the Ebola outbreak for the World Health Organization (WHO), is on a mission to change the way Ebola patients are cared for. Fowler told *CMAJ* that supportive care, including intravenous fluids, could drop the mortality rate of the disease to "much less than it's ever been," but he's fighting an uphill battle against doctors who disagree.

The problem, Fowler says, is "folks who've been around for a while with Ebola who say, 'You know, our goal is not to treat these people, it's to try to keep them comfortable because there's really no specific treatment'."

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To stave off death from severe dehydration, patients with Ebola need fluids and electrolytes.

In an article on the *New England Journal of Medicine* website Sept. 25, Fowler and others who are treating patients with Ebola wrote, "Intravenous catheters, fluids, and electrolyte replacement are readily available but thus far are being used much too sparingly."

Patients with Ebola have a fever and serious gastrointestinal symptoms. "They can't eat or drink, they're vomiting, they have diarrhea," Fowler says. To stave off death from severe dehydration, they need fluids and electrolytes.

But others in the field think this plan may be overly ambitious. "While this is a great treatment plan which should be done everywhere it is possible, it is not possible in a lot of the worst affected areas because of a lack of resource persons and infrastructure," Clement Adebamowo of the Institute of Human Virology in Abuja, Nigeria, wrote *CMAJ* by email.

Putting an intravenous line into a patient with Ebola is not a simple process. Health care workers are physically hampered by their double layers of gloves and by the need to move quickly because within an hour they will overheat in their personal protective equipment suits, with core temperatures topping 40 degrees celsius.

Fowler concedes that this is problematic. On a ward with three doctors treating 60 patients, "You go in, you put in three IVs, and there's your hour gone and you've got 57 more patients!" Fowler says, but adds that patients accept that.

"As soon as you put an IV into one person and you give them fluids, everybody sees that and they say, 'I want a drip too!' " he says. "They're asking me every day for a drip, and I say, 'You don't need one, you're getting better now, you can eat and drink,' and they say, 'No, I want a drip.' They equate it with: you're giving me active treatment and you don't just let me sit here."

Fowler and Windsor, Ontario, physician Tim Jagatic, a volunteer with Médecins Sans Frontières, both worked at an Ebola treatment centre in Conakry, Guinea, last March, giving intravenous fluids to patients who could not drink, and using portable venous blood gas analyzers, such as i-STAT handheld labs, to track patients' electrolytes.

The mortality rate at the Conakry facility was around 30%–35% and at the country's other clinic in rural Gekadou the rate was in the 80%–85% range, Fowler says. "And there were a lot of things which were probably different, but a 50% difference?"

Several factors favoured survival in Conakry says Jagatic, including the fact that patients were more likely to seek treatment early in the course of the disease. But Fowler, who is an epidemiologist at Toronto's Sunnybrook Hospital, believes a major factor was that the Geckadou patients were not getting IV fluids and doctors weren't using portable labs. This type of care has not been part of the usual response to Ebola. It is impossible in some places, such as Monrovia, Liberia, where the health care system is overwhelmed, but Fowler says it "is totally achievable" in many places in Guinea and Sierra Leone.

In August, Fowler and others called for "a paradigm shift in care delivery and outcomes," for patients with Ebola, stressing the need for "more aggressive" treatments in an article in the *American Journal of Respiratory and Critical Care Medicine*.

"The question is, how comfortable are people going to be getting a bit more aggressive," says Jagatic, who is not a coauthor on the article. He agrees more invasive therapies are feasible and should be pursued.

Ebola treatment centres are often called isolation centres because of the need to prevent the spread of disease, but at meetings in West Africa, Fowler has pushed to replace the term. When he hears it used, he tries to "respectfully rename it in the next sentence and say, 'It's a treatment centre, the goal here is to get people in so that they can get care.'"

— Miriam Shuchman MD, Toronto, Ont.

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