

DR. JOHN HICK

---

## Preparing and Functioning in a Pandemic

**NARRATOR:** Dr. John Hick, associate medical director of emergency medicine at Hennepin County Medical Center in Minneapolis, Minnesota, recently spoke at a conference of the Association for Professionals in Infection Control and Epidemiology about allocating scarce hospital resources in pandemic situations. In this podcast, he discusses the importance of well-thought-out and practiced incident management plans to effectively treat surging numbers of patients in pandemic situations.

**INTERVIEWER:** How prepared do you think most hospitals are for a pandemic, and where would you like to see them be?

**J. HICK:** I don't think in some ways that we can ever be prepared 100 percent for the worst pandemic that could occur. I think that is fallacy. I think that hospitals for one don't have the resources available to purchase the ventilators, even to purchase the N95 masks that would be necessary to get through a true pandemic of the magnitude we saw in 1918. On the other hand, I think a lot of hospitals are much, much better off than even they were a few years ago as far as putting the hospital in a position to think about those tough decisions, being able to have a system in place to make those tough decisions. We have had much, much more discussion in the past few years about triage, and crisis standards of care, and I think those things all contribute to better preparedness for these kinds of events. We would hope that the pandemic that would be the next to come would be a mild pandemic such as the last few pandemics that have occurred, and not one as severe as 1918. But you never know, and I think we need to be prepared to do the best we can to protect our health care workforce, and know we will have to have some adaptive strategies for whatever comes.

**INTERVIEWER:** I know that when a pandemic strikes there are a lot of things that need to be done, but if you had to boil that down into what are some of the most important things that hospitals need to have in preparation for a pandemic, what would you say those are?

**J. HICK:** If you don't have good incident management and the ability to look forward a day, or two days, or a week and say, "we know what is coming, by the time this gets here will we have adequate masks; will we have adequate resources; if not can we get them; have we stockpiled ahead of time?" And then really having the foresight to think through how can we cope with what might be an

overwhelming amount of patients, an overwhelming surge of patients. There are really a number of things you can do as far as core strategies to adapt to a situation where you really are out of resources or short of resources. You can prepare; so basically stockpiling masks, stockpiling morphine and sedative medications, and things that can be done very inexpensively. You can substitute, so you can substitute one class of drugs for another without any loss of efficacy. Sometimes you can substitute a much cheaper version than you would normally use with very little loss of efficacy. You can adapt; you can use anesthesia machines to provide mechanical ventilation for example. And then getting on to strategies we don't like to do as much, we can reuse a lot of the equipment that we use in the hospital on a daily basis. It is just that manufacturers don't have any incentive to go through that process with the FDA but you can reuse a lot of things and at the end the toughest decisions come around reallocation decisions. Do we actually need to take somebody off (a) ventilator to give that to somebody who has a much better prognosis? The implementation of all of those strategies really requires that you have good incident management in place and the people who are willing to take a hard look at these issues and say we need to start conserving oxygen, we need to start providing some of these adaptive strategies, we need to stockpile these drugs, and really look at all those things as possibilities if you get into an event.

**INTERVIEWER:** When you talk about the risks of not being prepared, are you speaking... obviously patient safety and human lives is the biggest risk...but I presume that there are some legal risks associated with that as well.

**J. HICK:** Certainly. I think risk obviously is a bit in the eye of the beholder, and at the bottom line, people care about tragedies not necessarily from the number of dollars spent, or property damage, it really comes down to how many people were injured or killed. We want to make sure we minimize that loss of life, but at the same time we do so in a way that allows the health care facilities to operate safely, that they are not contaminated by chemicals or radioactive elements, that our staff aren't harmed by infectious agents, that we don't wind up taking a facility out either by flooding or any unforeseen...I am sorry, or forcing consequences that we could have mitigated ahead of time; we want to keep the health care infrastructure intact. We want to keep it safely operating so we can offer the best chance of good outcomes for the patients that are affected by the disaster.

INTERVIEWER: Infection control is difficult under normal circumstances. Where does it rate in importance during a pandemic situation?

J. HICK: Controlling infection during a pandemic still has a lot of relevance, in that we still want to make sure that our providers are taking the precautions; but it does really require a graded plan, so that from epidemiology and other standpoints you are very concerned about being extremely careful about limiting contact with individual cases, and tracking those cases and exposures. Once you get to an overwhelming number of patients, you can't cohort anymore. You have to wear your personal protective equipment essentially all the time, because you are not sure who is infectious and who isn't. So the thrust of infection control really changes from an epidemiologic case finding – worker protection when they are just in an immediate area – to really a much, much broader context but it is no less important. I think that is really the key message is the infection control practitioners and hospital planners need to provide for that graded response. How do we deal with one patient; 10; 100; 1000; whatever it is that the hospital can possibly manage?