Editorial

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Community Ebola Care Centers: What can We Learn from their Experiences?

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Abbreviations

CDC: Centers for Disease Control and Prevention; EVD: Ebola Virus Disease; PPE: Personal Protective Equipment; PUI: Patient Under Investigation

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Ebola preparedness in the United States escalated soon after the West African epidemic became increasingly apparent during 2014. Published experiences with the first Ebola patients cared for in the United States added greatly to our understanding of this illness in developed countries [1-3]. It also lead to preparedness recommendations for care processes for the emergency department and assessment and treatment centers, and for training and implementing appropriate leadership structure [4-7]. Information was provided to clinicians at meetings such the 2014 Annual Meeting of the American College of Chest Physicians [8]. A survey of infectious disease physicians conducted in October- November 2014 indicated most health care institutions were actively engaged in Ebola preparedness [9], and a survey of hospital epidemiology professionals during October 2014 suggested that extraordinary resources were being devoted to Ebola planning, to the point of diverting resources from routine activities [10].

By December 2014, thirty five US hospitals had been designated as Ebola treatment centers [11], and further preparedness undertaken with a tiered approach to patients under investigation (PUI) [12, 13]. However, there is little published information on the level of preparedness of these centers and on their experiences when patients were admitted to them to rule out Ebola virus disease (EVD).

Unity Hospital, a part of Minnesota's Allina Health system, is a designated community Ebola treatment center in a suburb of Minneapolis [11], and has admitted eight Ebola "rule-out" patients. Unity is adjacent to a large West African immigrant diaspora, and preparedness activities included designating a unit with the appropriate physical space and negative air flow requirements; establishing an onsite point of care lab dedicated for Ebola testing only; training providers, nurses, lab technicians, and other appropriate personnel in appropriate personal protective equipment (PPE) technique; and establishing many standard processes. We were also fortunate to have benefitted from a Center for Disease Control and prevention (CDC) site assessment.

Unity's first high risk patient started with a Minnesota Department of Health phone call notifying us to prepare for a potentially "wet" Ebola rule out. The unit was opened, and preparations made to accept the patient. Though an experienced volunteer staff felt confident in their abilities, it was reassuring to have the support and professionalism of the Minnesota Department of Health staff, onsite from the outset and most of the first night. Also supportive was Unity's hospital presidents' words of encouragement before patient arrival.

The admission went as expected, but with subsequent issues encountered as with any new process. The procedure for performing X-rays was refined the first night. There was no procedure for safely using a stethoscope, with subsequent purchase of a blue tooth stethoscope. The patient finally did rule out for EVD, and was ultimately discharged.

Two of the eight rule-outs, including the patient discussed above, each lasted 48 hours, and required full Ebola isolation. Challenges included identifying the professional staff providing the care, planning appropriate nurse staffing levels, and developing a safe emergency department to intensive care unit transfer process. Additionally, the role of infection prevention staff evolved into that of safety officer for monitoring "real time" the integrity of our care processes. We worked with the other Minnesota centers to address ethical issues involved in Ebola care, also subsequently addressed in the literature [14-16]. Overall a sense of increasing confidence evolved in our ability to safely and effectively deliver this level of care.

Other Ebola community care centers likely have had similar

experiences, but with virtually no published data it is difficult to validate their level of preparedness, and document lessons learned. If an Ebola epidemic occurred involving more than a few cases, would these units be ready for this challenge, and what capacity would they have to provide care?

Among the most important priorities in disaster preparedness is to learn from actual experiences [17, 18], and these Ebola rule out patients afford an important research opportunity. Investigating it would require an active effort and leadership from the disaster preparedness community with support from federal, state, and possibly local health authorities. Recommendations for approaching this project include a structured survey sent to each of these centers, with perhaps a follow up face-to-face meeting to share the more extensive experiences in depth, which could then be published. It is certainly not too late to learn from our community Ebola treatment centers' experience.

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