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Identify, Isolate, Inform: A 3-pronged Approach to Management of Public Health Emergencies

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ABSTRACT

During an evolving public health emergency, a simple algorithm for initial patient identification and management is essential for providers on the front lines. This article recommends a 3-pronged system of *Identify, Isolate, Inform* to describe the actions necessary in the first few minutes of encountering a potential Ebola patient. Application of the “vital sign zero” triage concept of early recognition of potential threats coupled with this novel algorithm will optimize protection of health care workers and the public health while concurrently providing a safe method for individual patient care. (*Disaster Med Public Health Preparedness*. 2015;9:86-87)

Key Words: Ebola, emerging infectious disease, public health emergency, infectious disease medicine

The 2014 Ebola outbreak is a dramatic illustration of the need to apply public health principles in daily emergency care situations. There is no room for error in early identification of patients needing investigation for Ebola infection. A missed case has obvious implications for not only the individual patient, but also for the exposed health care workers and the population at large. Accordingly, identification is the first guiding principle of the algorithm. Prior to any assessment or intervention that requires physical contact with a patient (or potential contact with a patient’s blood or other bodily fluids), first responders and other health care workers must *identify* whether the patient is potentially infected. An assessment of epidemiologic risk factors prior to performing a standard triage exam is essential during a public health emergency.¹ In the case of Ebola, if the patient has not traveled to one of the outbreak countries within the last 21 days nor had contact with a known Ebola patient, further assessment can be performed. Appropriate precautions must still be taken due to the potential for other contagious infectious disease, e.g., Middle East respiratory syndrome coronavirus, tuberculosis, or measles.

Although used in some airports and health care facilities, fever screening alone is inadequate. Patients with Ebola may not initially present with fever, and symptoms can be very mild early in the disease course. In addition, it is difficult to determine the denominator for the number of patients at risk; this will be larger in some communities than others. Particularly during influenza season, many patients will present with fever and some communities may have a

nontrivial number of travelers from the affected regions of West Africa. Aside from health care resources, it could be very frightening for the individual patient who is already sick enough to seek emergency care to be whisked off into isolation by people in moon suits! The bottom line is that fever screening is limited by both false negatives and false positives, with both situations being problematic.

If a potential Ebola patient is identified via epidemiological screening and has suggestive signs and symptoms, the second step in the algorithm is to *isolate*. We must be prepared to isolate patients in every setting where they are identified. This could include the prehospital setting, a clinic or doctor’s office, or a hospital. Exposure to other patients must be avoided. This can be accomplished in many ways, including moving the patient to an alternate care site (such as a tent outside the hospital) or directly to an isolation unit without exposing others.

The final action in the 3-step approach is to *inform*. Depending on the site of patient identification, this would include informing the health department, the hospital infection control, supervisors, and law enforcement. Health care workers must have protocols for who and how to report and 24/7 access to these authorities. Backup systems must be in place for rapid notifications in case appropriate authorities are not immediately available via standard communications methods.

Use of the “vital sign zero” concept,¹ ie, assessing for hazards before approaching a patient, is the first step

in protecting health care providers and the public health. Following this, the 3-pronged algorithm of *Identify, Isolate, Inform* is an easy-to-remember, commonsense approach that puts public health first and foremost on the minds of frontline health care providers. This methodology will assist health care providers to resist the temptation to leap in and perform resuscitation in an unsafe setting.

Identify, Isolate, Inform provides the initial template for an organized approach to a potentially contagious patient, including those who are highly infectious. Multiple essential subgroup steps and responsibilities follow; however, omitting these critical initial public health actions would be analogous to failing to defibrillate a patient in cardiac arrest and expecting subsequent protocols to produce a good outcome. Likewise, failing to don appropriate protective equipment and decontaminate a patient after an organophosphate exposure would risk health care workers becoming patients. With

globalization of health care, this public health paradigm shift is critical if we are to keep the world population safe. The 3 I's are the ABCs of Ebola management.

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