Reviewer's report

Title: Linking public health agencies and hospitals for improved emergency preparedness: North Carolina’s public health epidemiologist program

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Reviewer: Cynthia Lucero

Reviewer's report:

The authors present a descriptive study which outlines the services and value of a North Carolina program which places public health epidemiologist in the largest hospitals in the state to improve communication and emergency preparedness/response between hospitals and local health departments. Communication issues between health departments and healthcare facilities has long been a problem and the program described here represents an innovative and practical solution to bridging this gap and provides value to all institutions involved. The program is unique and I believe this article will be of interest to readers. Overall the paper is well written and well organized.

Discretionary Revisions:

I believe the primary limitation of the paper is that it relies on perceived value of the program. The paper would be much stronger if the authors could include some concrete figures to demonstrate the impact of the program. For example, in the results the authors mention that PHEs detect and investigate unusual cases or clusters of communicable disease. How many of these cases or clusters have been investigated by PHEs since the inception of the program (or even describe over a one year period, the average number of investigations performed by PHEs)? Similarly, it would be valuable if you could describe the number of clusters/outbreaks investigated by PHEs that would have been missed or where there would not have been sufficient resources available to hospital staff to investigate. This would provide an even stronger case for the value of the program. The authors also mention in the results, that active surveillance (such as performed by PHEs in this program) has been shown to enhance completeness of communicable disease reporting (examples being hepatitis and salmonella). Can the authors provide any analysis of specific communicable disease cases reported to the health department before and after the beginning of the program to provide evidence that PHEs in this program contributed to improved communicable disease reporting? For example, did the number of salmonella cases reported increase significantly after the PHE program? Do the health departments’ track the contributors of communicable disease reports and can you provide any figures on the average number of cases contributed by PHEs annually?

Additional specific comments:

1. Background, Paragraph 4: The authors mention that PHEs were placed in the
“state’s largest hospitals”. Does this included Veterans Affairs and/or Dept. of Defense facilities? If not, then this statement should be changed to “state’s largest non-federal hospitals”.

2. Background, general: The authors may also wish to include that the PHE program serves to “develop a communications infrastructure to facilitate and ensure the timely dissemination and transfer of information between the healthcare and public health sectors” as described in the HHS Pandemic Influenza Plan. See: http://www.hhs.gov/pandemicflu/plan/sup3.html

3. Results, Paragraph 1: Can you further describe the background/training/experience of the PHEs? Do they have experience/training in public health, infection control, disease surveillance, nursing, microbiology, etc? What was the skill set required/desired for these positions?

4. Results, Section “Services provided by PHEs”, Paragraph 2: Mentions that PHEs use North Carolina’s syndromic surveillance system. Please provide additional detail here. Is this NC DETECT or another system? Did the PHEs receive specific training on using this system?

5. Discussion, general: Can you include any comments in the discussion as to how or whether there is a role for the PHE program staff to contribute to public health meaningful use requirements for North Carolina hospitals by facilitating transmission of syndromic surveillance, reportable laboratory results or immunization data to local health departments?

6. Discussion, general: Do the PHE currently interact or do you see a role for them to interact with Long Term Care, Subacute/Rehab or Ambulatory Care Centers (including surgical centers) affiliated with the hospitals where they serve? Many outbreaks (norovirus, respiratory illnesses, scabies, etc.) and infection control issues (injection safety, issues with reprocessing reusable medical equipment) occur in these settings and as you mention the infection control staff in the hospital is primarily concerned with HAIs and inpatient settings so these are areas where PHE staff could be a particularly valuable resource.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.