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Recruiting Primary Care Physicians for Bioterrorism and Public Health Surveillance

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Abstract

A web-based demographic survey's compliance and the amount of effort and resources required to recruit clinicians for a short-term infectious disease sentinel surveillance project were compared in this study between three physician groups. Prior to a surveillance project, we recruited Wisconsin clinicians to participate in a demographic survey via email, phone, or fax from a primary care practice-based research network (PBRN), an influenza sentinel clinician program, and a state academy of family physicians. Through the use of Zoomerang, questionnaires were developed and distributed to participants.

Introduction

Emerging infections may necessitate the rapid development and implementation of discrete periods of time in defined geographical locations of surveillance activities. In addition, new requirements for infectious disease surveillance have emerged as a result of the recent focus on bioterrorist incidents [1]. Surveillance systems need to be extremely sensitive and able to detect diseases related to bioterrorism in a timely manner in order to mitigate the potential negative effects that covert bioterrorism could have on health and the economy. However, efforts to increase sensitivity and timeliness may compromise specificity, resulting in excessively high rates of false positive detection, public panic, and associated expenses. Sentinel surveillance, in which context-sensitive interpretation of medical data is carried out routinely in primary care medicine, is one potential solution. Infectious disease surveillance can be broken down into three broad categories [2]. Specific diagnoses or collections of signs or symptoms are frequently monitored with mechanistic surveillance, such as electronic monitoring of administrative databases for diagnostic codes or composites of codes. Typically, laboratory surveillance focuses on particular etiologic pathogens. A physician or other health care provider reports clinical events to a central agency as part of surveillance. Sentinels either report presenting symptoms laboratory use, or other aspects of clinical care to identify cases based on established clinical criteria. Through clinician involvement and contextual relationships, case identification is improved. Additionally, it has been demonstrated that clinicians' active participation has a significantly higher rate of case identification than passive reporting. Sensitivity, timeliness, and accuracy are characteristics of sentinel surveillance [3]. However, there are issues with the recruitment, cost, and retention of sentinels that make this type of surveillance susceptible to limitations. In a previous study, the benefits of using existing clinician networks to speed up outbreak response were mentioned. One motivation for participating in sentinel surveillance has been identified as the generalist physicians' desire to actively participate in public health [4]. However, no specific studies have addressed the recruitment of primary care clinicians for sentinel surveillance directly.

Project sentinel surveillance

Responses to bioterrorism could benefit from the use of such protocols. Clinicians were recruited to take part in future surveillance activities without being told specifically what conditions were being monitored.

Recruitment methods

WREN clinicians who participated in WISCP were assigned to the WREN group. The first steps in the recruitment process were weekly phone calls, voicemail messages, or messages left at the front desk of the clinic [5]. We sent an email shortly after the initial phone contact to explain the surveillance project and the eligibility requirements for a $100 incentive payment for their participation. We asked the directors of WISCP and WAFP to appeal directly to their membership in order to enrol the required number of participants.

Response time to the consent and demographic survey

WREN clinicians had a median return time of 6.5 days, while WAFP clinicians had a median return time of 8.0 days. All WISCP consents were returned in 36 days, whereas the WREN and WAFP groups received them in 72 days. We found a huge contrast in the quantity of updates expected to get assents among gatherings [6]. WISCP clinicians required the fewest reminders, and initial non-responders only required one reminder to be fully adhered to. WAFP and WREN participants, on the other hand, required more reminders. In order to obtain signed consents, we sent four or more reminders to 6.7% of WAFP and WREN participants. When it came to completing the demographic questionnaire, all three groups performed similarly, with approximately fifty percent completing it within seven days [7]. With the exception of three WAFP clinicians who did not complete the questionnaire, we received demographic information from all participants within fifty days. Neither the length of time it took for respondents to respond to the demographic questionnaire nor was the frequency with which they required reminders found to differ between groups.

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Discussion

Efforts to quickly and effectively build sentinel surveillance networks are crucial to public health in this era of increased interest in emerging infections and significant threats from biological terrorism [8]. The process of establishing a functioning sentinel surveillance network in Wisconsin was the subject of this study. A practice-based research network and an existing influenza sentinel surveillance network were the two groups of clinicians that were the focus of the study, which was also intended to identify any potential differences between them. In this study, it took an average of three hours per participant to recruit clinicians for a sentinel surveillance project. However, there were differences in effort between groups. This is in line with our prediction that each group's recruitment success and timeliness would differ [9]. We anticipated that WREN and WISCP, both clinician networks, would respond more quickly to requests for participation than would non-affiliated clinicians as represented by the general WAFP membership. This is due to their experience responding to data collection protocols that go beyond those typically associated with standard patient care. We were of the opinion that members of the WAFP group would be less likely than members of the other two groups to have a complete comprehension of the research procedure and the amount of time required for data collection efforts. As a result, they might continue to believe that they are simply too busy to take part in surveillance activities. Lastly, given that this was a WREN study, we anticipated rapid recruitment among the organization's members. WREN members whether they were willing to participate or not, responded more quickly than WISCP and WAFP, as we anticipated. Additionally, WREN members were more likely to accept our invitation to participate, which contributed to our high recruitment efficiency.

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