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Making Syndromic Surveillance Relevant and Valuable for Emergency Managers

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Objective

Identify and document strategies that enhance the value of syndromic surveillance (SyS) data and information for the response, recovery, mitigation and preparedness needs of local and state emergency management professionals in the U.S.

Introduction

Intense stress can severely degrade one's ability to process and utilize new kinds of information [1]. This psychological phenomena may partially explain why epidemiologist are challenged to communicate and establish the value of SyS information with emergency management professionals (EMPs). Despite the timely and useful insights that SyS data and methods can provide, it is very difficult to convey what these data are when EMPs and epidemiologists are working to make intense, highly-scrutinized and high-consequence emergency decisions. If state and local authorities want emergency plans and responses that benefit from the powerful insights that SyS can provide, epidemiologists need to learn how to best report information and establish a strong rapport before emergencies strike. Over the past ten months, ISDS's NSSP's Syndromic Surveillance and Public Health Emergency Preparedness, Response and Recovery (SPHERR) Committee has worked to identify gaps, potential best practices, document use cases, and identify tools for integration of SyS data in EM activities. During SPHERR practice exchange meetings, SyS professionals have consistently cited effective communication between SyS staff and emergency preparedness staff as a top priority in integrating SyS more fully into all phases of emergencies.

Methods

Participants will engage in an interactive and guided discussion that identifies and documents effective strategies and tools to communicate SyS information in ways that provide EMPs with useful, actionable and valuable insights. As a prompt and further framing device, examples or use cases will be gathered from participants based on health conditions of interest; i.e., Infectious Disease, Environmental Exposures, Injury, Mental Health Conditions, Health Care Utilization, and Exacerbations of Chronic Disease Conditions [4]. Examples presented or discussed by SPHERR will also be used as prompts. The authors will use grouping and appreciative inquiry techniques to facilitate this round table discussion, and document the lessons learned. The discussion will inquire and analyze communication methods that participants use, or plan to use for conveying relevant SyS insights to EMPs during each phase of the emergency management cycle. Examples by preparedness phase are included below.

During the preparedness phase, establishing SyS/Emergency management relationships can identify ways in which SyS information can address gaps in emergency management capabilities. Ongoing relationships and inclusion of SyS information in exercises helps ensure that this information is incorporated and effectively utilized in emergency management.

During the response, SyS data can be used to monitor changes in the number of emergency department (ED) visits, increases in emergency-related syndromes, timing of impacts to EDs, and relative impact by geographical location of EDs. Displacement of populations during mass-care events can also be examined.

Conducting surveillance for emergency-related key-words in ED reports can facilitate targeted surveillance for outcomes of interest. SyS data can also be used to screen for potential cases of disease, so that interventions can be targeted effectively. Example use cases of how SyS information has informed event responses will be discussed.

During recovery from the emergency, SyS data can be used to track population displacement, as populations return to the area affected by the emergency. It can also be used to track ED visits, to determine when/if they return to pre-event levels. Secondary effects of the emergencies (such as carbon monoxide poisoning, flood-water contaminated food, HazMat events or suicidal ideation/attempts) can also be examined.

SyS data can help in mitigation activities to prevent emergencies, reduce the chance of their occurrence, or reduce their damaging effects by monitoring ED data for patterns of syndrome presentations, or clusters of syndromes which could indicate a potential outbreak or event of public health significance. For diseases with typical seasonal patterns, SyS data can be used as an indicator of the beginning of the season, so that public health disease prevention messages and other interventions can be timed more effectively. Historical SyS data can also be examined to identify patterns of presentations that occurred before an outbreak is recognized, to increase the index of suspicion for these patterns in future surveillance.

Results

At the end of the discussion, roundtable participants will possess a matrix of strategies and tools that they can customize to better utilize SyS in have tools and templates customized to communicate the value of SyS information in addressing hazards, vulnerabilities and threats faced by their communities.

Conclusions

Integration of SyS data into a highly functioning surveillance system facilitates rapid identification and characterization of potential threats, enhances health and medical situational awareness and increases the evidence base for making emergency management decisions.The importance of integrating surveillance data into emergency management and of effective and timely communication of this data to enhance situational awareness and share surveillance information with emergency managers has been repeatedly cited in both CDC Guidance and in after-action reports for real-world events. This roundtable will help ensure that participants have the knowledge to effectively communicate SyS to EM personnel and ensure that this potentially life-saving information is integrated into all phases of emergency management.

Acknowledgement

Thank you to the membership of NSSP's Syndromic Surveillance and Public Health Emergency Preparedness, Response and Recovery (SPHERR) Community of Practice.

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