

An Analysis of the Challenges and Possible Solutions for Dog Bite Injury Surveillance

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Objective

To give an overview of the challenges facing dog bite injury surveillance as well as identify some potential solutions for improving surveillance mechanisms.

Introduction

Injuries from dog bites affect approximately 4.7 million Americans per year,¹ causing significant societal impact. Currently dog bites are the third leading cause of homeowner insurance claims, and are estimated to cost the insurance industry \$489 million annually.² When insurance costs are coupled with hospitalizations and lost productivity, dog bites are estimated to cost the United States \$2 billion/year.³ However, the true impact of dog bite injuries remains unknown since discrepancies exist in the number of dog bite injuries being found by various mechanisms,⁴ and many bites may actually go unreported.⁵ In order to evaluate the true impact of dog bite injuries, the limitations of current surveillance methods must first be delineated and understood.

Methods

A review was conducted of the various surveillance methods for analyzing dog bite injuries. These methods include using the National Electronic Injury Surveillance System (NEISS), hospital discharge data, insurance claims data, and bite data collected by local jurisdictions. The techniques were categorized according to data type and a conceptual map was created to determine areas where surveillance might fail to capture cases as well as mechanisms for how discrepancies in data reporting might occur.

Results

Improvements have been made in the surveillance of bite injuries, such as better data collection in cases of dog bite related fatalities and wider utilization of hospital discharge data to evaluate injuries. However, these mechanisms only capture a portion of dog bite injuries and by themselves are inadequate to provide the data necessary to ascertain the characteristics and impact of dog bite injuries. Furthermore these two methods may not correlate since victims of dog bite related fatalities who never receive medical services would not be captured in hospital discharge data. Additionally cases who do not access medical services in a traditional way can fail to be captured by these methods. According to public health regulations, dog bite injuries are required to be reported to the local health department. However, there is no nationwide standard reporting form for collecting information nor are there guidelines on the utilization of the data that is collected. The majority of jurisdictions have developed their own reporting form, and the type of information collected as well as what is done with the data can vary widely. Thus although dog bite report forms have the potential to be ripe for data analysis, they are underutilized due to in-existent or inaccessible information.

Conclusions

Current surveillance methods are inadequate to ascertain the true impact of dog bite injuries. Better surveillance systems which are able to capture a larger breadth of reports while collecting pertinent

information are needed. Possible solutions include a nationwide standardized form, a repository for the data, inclusion of dog bite injuries in current or developing disease surveillance systems, and an increased focus on reporting dog bite injuries.

Keywords

dog bite injuries; surveillance; disease surveillance systems; dog bites

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