Rabies Program Activity in Georgia & the North Central Health District (NCHD).

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Abstract
Among the North Central Health District’s (NCHD) thirteen counties, the animal bite and rabies data is minimal and it is suspected that underreporting is the reason for such low numbers. Therefore, this capstone endeavors to analyze the reporting data available from the counties within the NCHD and assess the Rabies’ Program educational materials. The intent of this project is to promote higher rates of reporting and collaboration among animal control, veterinarians, physicians, laboratories, and law enforcement agencies within the NCHD. In this paper, by researching the local area in comparison to the state, recommendations could be made in hopes of increasing the rates of reporting within the health district.

Introduction
Rabies is a preventable viral disease transmitted most often through animal bites that caused inflammation of the brain and is fatal if untreated. The reporting and surveillance of animal bites plays an important role in rabies prevention efforts. While Georgia Rabies Control law mandates reporting of animal bites and notifiable diseases by animal control, veterinarians, physicians, laboratories, law enforcement agencies to local health departments, the number of animal bites are often unreported. Therefore, the State Electronic Notifiable Disease Surveillance System (SENDSS) was adopted by all Georgia counties to promote accuracy, follow-up, and cooperation in reporting of animal bite data in 2013. Among the North Central Health District’s (NCHD) thirteen counties, the animal bite and rabies data is minimal and it is suspected that underreporting is the reason for such low numbers. Therefore, this capstone endeavors to analyze the reporting data available from the counties within the NCHD and assess the Rabies’ Program educational materials. The intent of this project is to promote higher rates of reporting and collaboration among animal control, veterinarians, physicians, laboratories, and law enforcement agencies within the NCHD.

Review of pertinent literature has indicated that an abundance of literature pertaining to laboratory and basic epidemiologic research, and vaccine development. However, literature pertaining to rabies control activities and particularly “community-effectiveness of intervention” is indeed limited. Therefore, this paper endeavors to add to the body of research (Zinsstag, 2013).

Methods
Retrospective rabies surveillance and bite reporting data for calendar year 2013 was retrieved from the SENDSS database, while data from calendar years 2010-2012 was retrieved from Georgia Department of Public Health, Environmental Health Section’s Environmental Health Activity Report Database at the state, district, and county levels.

Data was characterized using standardized definitions for complaints, animal-to-human investigations, and vaccine development. However, literature pertaining to rabies control activities and particularly “community-effectiveness of intervention” is indeed limited. Therefore, this paper endeavors to add to the body of research (Zinsstag, 2013).

Limitations
The limitations of this project include constraints on the availability of information. Information was limited due to the accessibility of retrieving the information and time constraints. Also, information concerning compliance among healthcare providers was not able to be ascertained. Therefore, recommendations are based on generalizations and historical information.

Results

Data Analysis
The key indicator for the SENDSS pertaining to Rabies Surveillance is the time period from a bite report Environmental Health personnel and their initiating an investigation. The state has outlined 2 days as the time target period from the filing of the bite report to the investigation (Georgia Department of Public Health, 2012). However, the average time period varies among the counties in the District. Since the widespread implementation of (State Electronic Notifiable Disease Surveillance System(SENDSS), rabies reporting activities in the North Central Health District have been found to be dismal (Tables 18 and 19). Trends in data depict elevated time periods elapsing between the time rabies and animal bite incidents are reported and investigation initiation. It was noted that several complaints were investigated on the same day bite reports were received in order to expedite the investigation process. The REPORT form includes a list of animal exposures and it is suggested due to inadequate animal bite reporting and rabies surveillance.

Assessment of Educational Materials and Outreach
- The rabies educational materials utilized in the North Central Health District consists of the protocol for the District and the educational packet given to the physicians.
- Regarding rabies and bite prevention, there are a few counties that participate in rabies clinics where local veterinarians perform mass vaccinations on a Saturday in more rural areas of the county. The local Environmental Health Specialist participates and may disseminate rabies materials at that clinic. The number of rabies clinics conducted throughout the district is minimal.
- Environmental Health Specialists have participated in community health fairs, and their participation in community health fairs is being promoted as a priority at this time, because of the benefits of being educated in past years at the elementary school level, but has not been facilitated in recent years. Furthermore, no specific curriculum targeted to school-age children was in use.

Table 19. Comparison of Environmental Health Rabies Activity (Bite Data, Mexico, and Notifiable Disease) 2013

<table>
<thead>
<tr>
<th>County</th>
<th>Reports</th>
<th>Investigation</th>
<th>Number of Days</th>
<th>Investigations</th>
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Conclusions and Recommendations
Based on the dismal reporting data within the District, the following recommendations have been made:
- Curriculum utilization or development: Curriculum development or utilization of a pre-existing, evidence-based curriculum could promote the facilitation of education and outreach activities within the District.
- Education: Specific preventive or clinical education efforts should be targeted based on the demographics of bite victims. General education sessions could address the community as a whole.
- Partnerships: Partnerships should be established with universities and institutions of higher learning to assist the District to identify an evidence-based animal bite and rabies prevention curriculum. Further, sustainable, community partnerships are necessary to increase the capacity of the environmental health department to conduct education and outreach activities.
- Further Research: Additional research is needed to examine the attitude toward, and perceptions among, healthcare professionals regarding reporting animal bites. The analysis of emergency room reporting data and symptomatic surveillance may prove to be beneficial in identifying compliance among healthcare providers for reporting animal bites to local environmental health specialists.

References
- Fournier, Y. (2011). All about Rabies!, a comprehensive educational programme. Public Health, Environmental Health Section’s Environmental Health Activity Report Database at the state, district, and county levels.
- Georgia Department of Public Health. (2012). Environmental Health Report Database. Georgia Department of Public Health, Environmental Health Section’s Environmental Health Activity Report Database at the state, district, and county levels.