Perceptions of School and Health Department Emergency Preparedness Collaboration

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Abstract

Background: School systems often have the vital responsibility of protecting students during emergency situations. Collaborations with the local health department (LHD) can be invaluable in helping schools effectively fulfill this responsibility.

Purpose: An evaluation of existing organizational collaborations is needed to describe attitudes toward current efforts and to form recommendations for enhancing the effectiveness of future joint programs.

Methods: Questionnaires regarding perceptions of existing collaborations were distributed to a sample of LHDs and schools districts in spring and summer 2011. Participant responses from each organization were paired on jurisdictional area, forming 25 paired observations. Analyses were conducted in early 2012. Descriptive statistics of selected variables were computed and differences between paired LHD and school district responses were analyzed.

Results: Results showed that school districts and LHDs both rated engagement between organizations in emergency preparedness as extremely important. Each gave high ratings on success and satisfaction of current efforts. Organizations had significant differences in ratings measuring their agreement with specific collaboration drawbacks.

Implications: These results suggest the potential for extended and enhanced collaborations, although future programs might be most effectively implemented when tailored to limit the perceived drawbacks of individual organizations. Continued and improved collaborations between school districts and their local health departments will help to increase the school systems’ abilities to adequately prepare for and respond to the needs of the children they serve in the event of an emergency.

Keywords

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INTRODUCTION

The vast proportion of children and adolescents throughout the U.S. spend a large amount of time within school systems on any given day. With such an immense and vulnerable population, effective strategies must be in place to address both daily health needs and any needs that may arise during a public health emergency, such as a natural disaster or infectious disease outbreak. While schools have a responsibility to protect this vulnerable population, they must rely on collaborations with other organizations, including health departments on a local, state, or federal level. Collaborations with the local health department (LHD) can be valuable tools in improving performance in emergency response activities within school systems, although a study conducted by the Government Accountability Office found that fewer than half of school districts collaborated with their LHD when developing their emergency plan.1–3

To our knowledge, no research has been previously conducted examining the structure and efficiency of public health emergency response collaborations between LHDs and school systems. Conducted as part of a larger study aimed at fostering preparedness collaborations between these organizations, this analysis focuses on the perceptions of collaborative efforts between LHDs and school districts from the same jurisdictional area. An examination of attitudes toward existing public health collaborations between these organizations is necessary to describe important components of current efforts and make recommendations for developing strong and effective future collaborations.

METHODS

To conduct the assessment, participation was enlisted from LHDs and school districts throughout the country. A stratified random sample of 750 LHDs from members of the National Association of County and City Health Officials was first obtained, based on the size of jurisdiction served, grouped as small (<25,000 people); medium (25,000–249,999 people); and large (250,000+ people).4 One public school district identified from the U.S. Department of Education National Center for Education Statistics was then randomly chosen within the jurisdictional area of each of the 750 LHDs.5 Invitation letters for participation were sent in Spring 2011 to LHD directors and school district Emergency Response Coordinators. Instructions were included asking the individual responsible for emergency preparedness and response at each organization to complete a questionnaire regarding the current nature of public health emergency preparedness and response collaborations between their corresponding LHD and school district. Participant responses were collected electronically using Snap Survey Software v10.0 in spring and summer 2011. A total of 159 responses were received from LHDs and 76 from school districts, representing response rates of 21.2% and 10.1%, respectively. A total of 25 jurisdictions that provided responses from both the LHD and school district were identified. These matched pairs represent the sample used for analysis.

Statistical analyses were performed on unweighted data from the 25 pairs of LHDs and school districts using SAS v9.2 in early 2012. Analyses focused on questionnaire variables of interest regarding perceived success, satisfaction, importance, and drawbacks of collaborative efforts between the two organizations, with specific questions listed in Tables 1 and 2. Descriptive statistics of select variables were tabulated and compared. Wilcoxon signed rank tests were used to describe differences between LHD and school district responses to variables designed using a Likert scale, as data were ordinal and normality in either population was not assumed.
Table 1. Perceptions of emergency preparedness collaborations between paired health departments and school districts (N=25)

<table>
<thead>
<tr>
<th>Question</th>
<th>Local health department</th>
<th>School district</th>
<th>Wilcoxon signed rank test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/n Median IQR</td>
<td>N/n Median IQR</td>
<td>p-value</td>
</tr>
<tr>
<td>How important is engagement between organizations?®</td>
<td>25 5 5–5</td>
<td>25 5 4–5</td>
<td>0.092</td>
</tr>
<tr>
<td>How successful have joint efforts been?®</td>
<td>21 4 4–4</td>
<td>23 4 3–4</td>
<td>0.998</td>
</tr>
<tr>
<td>How satisfied are you with joint efforts?®</td>
<td>21 4 4–4</td>
<td>22 4 3–4</td>
<td>0.999</td>
</tr>
</tbody>
</table>

*Joint efforts refer to collaborations between the local health department and school district in public health emergency preparedness and response

Importance, success, and satisfaction scores were rated on a Likert scale from 1=Not at all important/successful/satisfied to 5=Extremely important/successful/satisfied

IQR, Interquartile range

Table 2. Perceived drawbacks of emergency preparedness collaborations between paired health departments and school districts (N=25)

<table>
<thead>
<tr>
<th>Question</th>
<th>Local health department</th>
<th>School district</th>
<th>Wilcoxon signed rank test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N Median IQR</td>
<td>N Median IQR</td>
<td>p-value</td>
</tr>
<tr>
<td>How have the benefits of participation in joint efforts compared with the drawbacks?**</td>
<td>25 4 4–5</td>
<td>25 4 4–5</td>
<td>0.844</td>
</tr>
<tr>
<td>Level of agreement with the following drawbacks:**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our staff feels overworked</td>
<td>25 4 3–4</td>
<td>25 3 3–4</td>
<td>0.326</td>
</tr>
<tr>
<td>Combined efforts are underappreciated</td>
<td>25 3 2–3</td>
<td>25 2 1–3</td>
<td>**0.014</td>
</tr>
<tr>
<td>Our organization expends scarce resources participating in joint efforts</td>
<td>25 4 3–5</td>
<td>25 3 2–3</td>
<td>**0.041</td>
</tr>
<tr>
<td>There is a lack of direction from the leadership or staff to facilitate the joint efforts</td>
<td>25 2 2–3</td>
<td>25 1 1–2</td>
<td>**0.038</td>
</tr>
<tr>
<td>It is difficult to maintain joint efforts between organizations</td>
<td>25 3 2–3</td>
<td>24 1 1–2</td>
<td>**0.026</td>
</tr>
</tbody>
</table>

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**Scores rated on a Likert scale from 1=Drawbacks greatly exceeded the benefits to 5=Benefits greatly exceeded the drawbacks

**Scores rated on a Likert scale from 1=Strongly disagree to 5=Strongly agree

IQR, Interquartile range
RESULTS

Of the 25 paired LHDs and school districts, 68% reported serving rural areas, with 84% serving medium, 12% serving small, and 4% serving large jurisdictional areas. Results regarding perceived importance, success, and satisfaction of collaborations are presented in Table 1. Both LHDs and school districts had high median ratings for the importance of engagement between organizations in public health emergency preparedness and response, as well as perceived overall success and satisfaction of current joint efforts. No significant differences were found between pairs of LHD and school district responses for perceived importance, success, or satisfaction of collaborations ($p=0.092$, $p=0.998$, and $p=0.999$, respectively).

Results regarding perceived drawbacks of collaborations are presented in Table 2. When queried about overall benefits versus drawbacks of participating in joint efforts, both LHDs and school districts agreed that the benefits outweighed the drawbacks on average, based on the defined scale. Differences between organizations were not found to be significant ($p=0.844$). Respondents were also asked about their level of agreement with specific drawbacks of organizational joint efforts. Differences in agreement scores between LHD and school district responses were found to be significant on variables regarding the expense of scarce resources in joint efforts, a lack of direction from leadership/staff in facilitating joint efforts, underappreciated efforts, and difficulties in maintaining joint efforts, with LHD respondents reporting higher levels of agreement with each of these drawbacks.

IMPLICATIONS

As public health preparedness in school systems relies on assistance from outside organizations, the perceived importance of collaborative efforts by both LHDs and school districts is critical for effective implementation and sustainment of programs. Recognition of this importance can be used as encouragement and motivation for both organizations to focus the necessary resources for continued success in collaborative efforts. Perceived importance, however, might not directly correspond to actual engagement in collaborations. Previous research has shown a lack of sufficient emergency preparedness in U.S. schools, possibly indicating the misuse or absence of effective collaborative efforts. The potential discrepancy between attitudes and actions regarding collaborations is a significant topic requiring further study. High median ratings for perceived success and satisfaction of current collaborations were reported by both organizations. Successful existing efforts can be used as models to design future preparedness programs, increasing the potential for effective implementation.

Results suggest that participants from both organizations perceive the overall benefits of collaborations to exceed any existing drawbacks, although differences were found between organizations regarding opinions on several specific drawbacks. Further examination of the reasons LHDs were more likely to report higher levels of agreement with these potential drawbacks is needed. This information can be useful for designing collaborative efforts focused on minimizing these drawbacks to encourage effective, sustaining program implementation. Greater focus on maintaining health department support, potentially through more cohesive leadership and staff incentives, could increase the likelihood of collaboration success.
The sampling procedure was designed to produce a nationally representative sample of LHDs. Sample and questionnaire designs allowed for direct comparison of responses between LHDs and school districts, although the relatively small number of total paired observations did not allow for the performance of more complex statistical analyses and might preclude the ability to generalize to all U.S. districts. Further study with an expanded sample would be useful in corroborating results and enhancing the generalizability of conclusions.

This study provides insight into the current nature of the relationship between LHDs and school districts. Results can be utilized in development and implementation of enhanced collaborative efforts in public health preparedness between these organizations. There is great potential for continuing and improving joint efforts, although future collaborations must be designed to minimize any perceived drawbacks to be as efficiently and successfully implemented as possible.

### SUMMARY BOX

**What Is Already Known About This Topic?** Collaborations with the local health department can be invaluable in helping school districts more effectively protect students during emergency situations. Underutilization of collaborations between these organizations may indicate the potential for strengthening and expanding current efforts.

**What Is Added by This Report?** Results from this study suggest that both organizations perceive public health preparedness collaborations as important, currently successful, and satisfying, although differences were observed between local health department and school district responses regarding perceived drawbacks of collaborations.

**What Are The Implications for Public Health Practice, Policy, and Research?** Both organizations recognize the importance of collaborations, indicating a strong potential for continuing and expanding joint efforts. Successful existing collaborations can be used as models in designing future programs, although perceived drawbacks in current collaborations may indicate the potential for improvement in future joint efforts.
REFERENCES


