What is the Public Asking About: A Content Analysis of Hepatitis Related E-mail Inquiries Sent to CDC’s Public Inquiry System
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Background
The Center for Disease Control’s (CDC) Division of Viral Hepatitis (DVH) is the nation’s lead agency for the prevention and control of viral hepatitis. One mission of the DVH is to provide scientific and technical guidance regarding prevention, surveillance, vaccination, and testing of all types of viral hepatitis. One of many strategies to achieve this goal is the use of CDC’s inquiry system, CDC-INFO, which supports a toll free telephone number, 1-800-CDC-INFO, and email system, cdcinfo@cdc.gov. Operated under contract, CDC-INFO was designed as CDC’s single consolidated source of scientific information in English and Spanish and provides standardized health information on over 400 health and safety topics, 24 hours a day, seven days a week to consumers, healthcare providers, and professionals who telephone or e-mail CDC-INFO. Viral hepatitis content has been supported by the CDC-INFO system since 2007, resulting in approximately 16,000 telephone and email inquiries.

Objective
To assess knowledge and understanding of viral hepatitis, a content analysis was conducted on the source, nature, and content of e-mail inquiries received in 2008 by the Centers for Disease Control and Prevention’s public inquiry system, CDC-INFO.

Methods
To analyze CDC-INFO inquiry data, a content analysis was conducted on a systematic sample of 20% of the e-mails received during 2008. To ensure standardized coding of each e-mail inquiry, a coding schema was developed, pretested, and revised before being applied to the sample of 911 e-mails. Two independent coders coded the e-mail content for date of inquiry, primary hepatitis type(s), e-mailers role (e.g., general public, healthcare professional), main question, and primary email content. Cohen’s Kappa Coefficient yielded inter-rater agreement coefficients ranging from 0.76 to 0.99.

Results
Results revealed most inquiries were from the public, followed by approximately one-third of which were from health professionals.

E-mailer’s Role/Profession

<table>
<thead>
<tr>
<th>Role/Profession</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Professional</td>
<td>14%</td>
</tr>
<tr>
<td>Public</td>
<td>52%</td>
</tr>
<tr>
<td>Other Professional/Unknown</td>
<td>34%</td>
</tr>
</tbody>
</table>

The most frequent topics of inquiry from both the public and health professionals focused on human transmission and immunization, while health professionals also frequently asked about serology. Public inquiries focused equally on hepatitis B and hepatitis C. Surprisingly, only about 10% of the health professional inquiries focused on hepatitis C, which is by far the most common type of viral hepatitis in the United States.

E-mail inquiries from the public represented a wide variety topics and showed lack of awareness and misconceptions. While the complexity of the health professionals’ questions varied, a large percentage of questions showed gaps in knowledge.

Conclusions
The results of the analysis were used to understand knowledge levels of various audience segments and help determine specific content areas in need of further education. E-mail inquiries from the public generally showed a lack of awareness and considerable misinformation. Health professionals’ inquiries were only slightly more aware and informed, but still showed surprising gaps in knowledge.

The content analysis also revealed common misconceptions, questions, and areas of confusion held by target audiences that will guide the development and improvement of training, education, and intervention strategies implemented by CDC or CDC grantees. Interestingly, many of the inquiry topics were addressed on CDC’s website, and it is unclear whether CDC-INFO users did not know about the website before using CDC-INFO or if they knew, did not access the website, or did not find the information they were seeking.

Next Steps
The findings from this study are being used to guide CDC in the next stage of planning its social marketing campaigns designed to promote education and awareness in both the general public and health professionals. Given the results of the content analysis, CDC is conducting additional formative research to further understand the needs of both the public and health professionals. Since knowledge levels may be lower than anticipated, CDC will develop a social marketing campaign designed to raise basic knowledge prior to embarking on more ambitious behavior change efforts with health professionals and populations at risk for viral hepatitis.

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