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Healthcare Provider Knowledge and Attitudes Regarding Reporting Diseases and Events to Public Health Authorities in Tennessee

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Abstract

Context—In the United States (U.S.), state laws require healthcare providers to report specific diseases and events to public health authorities, a fundamental facet of disease surveillance. However, reporting by providers is often inconsistent, infrequent and delayed.

Objective—To examine knowledge, attitudes, and practices regarding and understand current barriers to provider disease reporting.

Design—A cross-sectional study was conducted via an anonymous, standardized electronic survey.

Setting—The survey was conducted at Vanderbilt University Medical Center, a large, tertiary academic medical center in Nashville, Tennessee.

Participants—Healthcare providers in four specialties (internal medicine, pediatrics, obstetrics-gynecology and emergency medicine).

Main Outcome Measure(s)—Knowledge of and attitudes regarding provider reporting of diseases to public health authorities in Tennessee.

Results—The majority of providers acknowledged they cared for patients with reportable diseases (362/435, 83.2%) and believed that it was their responsibility to report to public health

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Conflicts of Interest: None

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Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

authorities (429/436, 98.4%); however less than half had ever reported a case (206/436, 47.2%). The median percent correct on the knowledge assessment of Tennessee reportable diseases and conditions was 81.3% (Interquartile Range [IQR] 68.8–87.5). Providers cited a lack of knowledge of which diseases are reportable (186/429, 43.3%) and the logistics of reporting (153/429, 35.7%) as the primary barriers for compliance.

Conclusions—Most providers acknowledged they cared for patients with reportable diseases and believed they had an obligation to report to public health authorities. However, a lack of knowledge about reporting was frequently described as a limitation to report effectively. Many knowledge deficits were significantly greater among residents than other providers. The policy and practice implications of these findings include a demonstrated need for education of providers about disease reporting as well as development of more convenient reporting mechanisms. Fundamental knowledge of reportable disease requirements and procedures is critical for participation in the broader public health system.

Introduction

Disease surveillance is a core tenet of global public health systems. At its most basic definition, surveillance is the “ongoing and systematic collection, analysis, and interpretation of outcome-specific data for use in the planning, implementation, and evaluation of public health practice”.¹ In most countries, reporting of certain diseases, conditions and outbreaks by physicians or other healthcare providers is a fundamental facet of disease surveillance programs. In the United States (US), state laws require healthcare providers to report specific diseases and conditions to public health authorities.² In Tennessee, state law mandates that, “all healthcare providers and other persons knowing of or suspecting a case, culture, or specimen of a reportable disease or event shall report that occurrence to the Department of Health in the time and manner set forth by the Commissioner in the List.”³ Annually, the Tennessee Department of Health sends standard mail to all licensed providers in the state with updated reporting requirements and procedures. To report, providers are instructed to submit the Notifiable Disease Report Form (PH-1600) via standard mail or fax.⁴

However, reporting by healthcare providers is often inconsistent, infrequent and delayed. Disease-specific studies have demonstrated that providers generally contribute fewer than 30% of all reported cases.^{5–7} In addition, provider reporting lags days to weeks behind laboratory reporting.^{7–9} Past studies have demonstrated widely variable results in physician knowledge about specific diseases and their reporting requirements. Sexually transmitted infections, HIV, and diseases recognized as highly communicable (i.e. severe acute respiratory syndrome [SARS], tuberculosis or meningococcal disease) tended to be commonly recognized as reportable, whereas hospital acquired infections, enteric diseases, viral diseases, or vector-borne diseases were much less commonly identified, although results varied greatly between studies.^{10–14} Other studies have identified barriers to physician reporting, with respondents citing burdensome and time-consuming reporting procedures, or concerns about patient privacy as common themes.^{15–17} Some of the most concerning data has revealed that some physicians have little to no awareness that they have

an obligation to report, or believe that this responsibility belongs to other members of the healthcare team, although much of these data are from several decades ago.^{6,10,13}

In 2000, the Centers for Disease Control and Prevention (CDC) began funding states to plan and implement integrated electronic systems for disease surveillance.¹⁸ Recent advances and support for programs such as electronic laboratory reporting and syndromic surveillance have further strengthened disease surveillance systems independent of provider reporting.^{19–23} Despite this shift in surveillance strategy, reporting by physicians continues to be an important resource for public health. Some reportable diseases and conditions, such as Guillain-Barré syndrome, toxic shock syndrome, acute hepatitis C, or neonatal abstinence syndrome (NAS), cannot be diagnosed by laboratory testing alone. Other conditions, such as suspected Ebola, measles or anthrax, are of such tremendous importance to public health that immediate notification by providers is critical.⁷

Few recent studies have attempted to quantify healthcare provider's knowledge about reportable disease requirements or understand barriers to provider reporting in the U.S. The objective of our study was to assess knowledge of providers in a tertiary care center regarding their role in reporting diseases required by the Tennessee Department of Health. We aimed to address knowledge, attitudes and practices about providers' duty to report, which diseases are reportable in the state of Tennessee, the mechanism for providers to report, and the appropriate time frame for reporting. We also attempted to identify both logistical and behavioral barriers to provider reporting in the hopes of identifying areas for future intervention.

Methods

Study Population

We conducted a cross-sectional survey of healthcare providers in four specialties (internal medicine, pediatrics, obstetrics-gynecology and emergency medicine) at Vanderbilt University Medical Center (Nashville, TN), a large, tertiary academic medical center. Internal medicine, pediatrics and obstetrics-gynecology were selected as they are the predominant primary care specialties at this institution, and emergency medicine was selected due to its important role as a front-line specialty. A link to an anonymous, standardized electronic survey was sent via institutional electronic mail (email) to all healthcare providers (i.e. attendings, house staff and mid-level care providers) included on administrative email lists for each of the selected specialty departments. The survey was available online from April 2014 through June 2014 and survey invitees received one reminder email requesting their participation. Survey participants were given the option of entering their email address into a drawing for a \$50 gift card after completion of the survey. No identifiable information was collected. The Vanderbilt Institutional Review Board determined that this study did not constitute human subjects research. The CDC classified these activities as public health non-research (HSR#2016031501).

Survey Development

The survey was created after a literature review and the development of study objectives. Questions were modeled after those found in similar previously published studies. Pilot testing was performed with a small group prior to survey dissemination to ensure adequate comprehension of question and answer choices.

Data Collection

The survey included thirty-three multiple-choice questions assessing knowledge of and attitudes regarding reporting diseases to public health authorities in Tennessee. Three questions asked basic demographic information regarding specialty and level of training. Seven asked general knowledge questions regarding scope of practice and the familiarity with reportable disease requirements. The largest section of questions asked providers to correctly identify seventeen distinct diseases and conditions as reportable or not within Tennessee. The remaining questions were standard multiple-choice questions assessing providers' opinions about mechanisms and time frames for disease reporting, and barriers to and concerns about reporting.

Study Definitions

Results were stratified by responders' primary specialty: internal medicine, pediatrics, obstetrics-gynecology or emergency medicine. Providers were given the opportunity to identify a subspecialty (either pulmonary / critical care, infectious disease, cardiology, endocrinology, dermatology, nephrology, rheumatology, hematology / oncology, gastroenterology / hepatology, or other). Responses of "unsure" were considered a response of "no".

Statistical Analyses

Data analyses were performed using Epi Info™ 7.1.5.2 (Centers for Disease Control and Prevention, Atlanta, Georgia) and OpenEpi® 3.03a (Atlanta, Georgia). Pearson's Chi-Square test and Fisher's exact tests were used to compare categorical variables as appropriate. All p-values were two sided and considered statistically significant if <0.05 . Percent correct on the reportable disease knowledge assessment was reported with median and interquartile range (IQR) because these data were not normally distributed.

Results

Baseline Characteristics of the Study Population

Of 1,741 invited participants, 436 (25.0%) responses were received. The highest response rate was from the department of pediatrics (138/362, 38.1%) and the lowest was from the department of emergency medicine (18/104, 17.3%). The highest overall number of responses was from the department of internal medicine (224/1161, 19.3%). Most of the respondents were attending physicians (209/436, 47.9%) and house staff (residents: 116/436, 26.6%; fellows: 74/436, 17.0%) (Supplemental Digital Content Table 1).

The majority of providers routinely cared for patients with reportable diseases in their scope of practice (362/435, 83.2%) (Table 1). Providers who said they cared for patients with

reportable diseases were more likely to be resident (113/116, 97.4%) than attending physicians (163/209, 78.0%, $P < 0.001$), fellows (57/74, 77.0%, $P < 0.001$), nurse practitioners/physician assistants (NP/PA) (23/28, 82.1%, $P = 0.008$) or registered nurses/licensed practical nurses (RN/LPN) (6/9, 66.7%, $P = 0.005$). They were also more likely to be infectious diseases subspecialists (35/36, 97.2%) compared to all other subspecialists combined (170/234, 72.6%, $P < 0.001$). The providers surveyed understood that it was their responsibility to contact public health about reportable diseases and events (429/436, 98.4%). However, less than half had ever reported a case to public health (206/436, 47.2%). Providers who had reported a case to public health were more likely to be attending physicians (126/209, 60.3%) compared to resident physicians (32/116, 27.6%, $P < 0.001$), or an infectious diseases subspecialist (27/36, 75.0%) compared to all other subspecialists (110/234, 47.0%, $P = 0.002$).

The majority (356/429, 83.0%) of providers were aware of the Tennessee state law mandating provider reporting, however fewer than half (202/429, 47.1%) were aware of the reportable disease list and required timeline. Providers who were aware of the reportable disease list and timeline for reporting were more likely to be attending physicians (110/206, 53.4%; $P < 0.001$), or fellows (37/73, 50.7%, $P = 0.02$) compared to resident physicians (38/114, 33.3%). Approximately one-third (74/206, 35.9%) of attending, and therefore licensed, providers recalled receiving communication from the Tennessee Department of Health regarding updates and changes to the reportable disease list.

Providers identified themselves as the best-suited member of the healthcare team to contact public health about a patient with a reportable disease (141/409, 34.5%), closely followed by infection control (113/409, 27.6%) and the laboratory (82/409, 20.1%) (Table 2).

Approximately half of providers (201/409, 49.1%) felt that the best time to contact public health about a patient with a reportable disease was when the diagnosis was laboratory confirmed, and only 20.5% (84/409) believed they should contact public health when the diagnosis was suspected. Providers identified knowledge deficits regarding which diseases are reportable (186/429, 43.3%) and the appropriate mechanism for submitting a report (153/429, 35.7%) as contributing to incomplete or delayed reporting. Similarly, when asked about their primary concerns about disease reporting, providers cited a lack of knowledge about which diseases are reportable (156/409, 38.1%) and the burdensome logistics of submitting a report (116/409, 28.4%). Most preferred secure email (109/409, 26.7%) or web-based forms (232/409, 56.7%) to report cases of disease, as compared to fax, phone, or standard mail (68/409, 16.6%).

The median percent correct responses on the knowledge assessment of reportable diseases and conditions in Tennessee was 81.3% (IQR 68.8–87.5). The median percent correct among those who believed providers have a responsibility to report was 81.3%, however the median percent correct among those who believed that providers do not have a responsibility to report was 62.5%. The majority of providers correctly identified communicable diseases such as measles (395/411, 96.1%), tuberculosis (400/411, 97.3%), HIV (309/411, 75.2%), pertussis (363/411, 88.3%) and outbreaks or clusters of disease (389/411, 94.7%) as reportable (Supplemental Digital Content Table 2). Only about half of providers correctly identified non-communicable diseases such as ehrlichiosis (201/411, 48.9%), neonatal

abstinence syndrome (234/411, 56.9%), and carbon monoxide poisoning as reportable (231/411, 56.2%). Neonatal abstinence syndrome was correctly identified as reportable by 54.8% of obstetrician-gynecologists (17/31) and 63.4% of pediatricians (83/131). Of the pediatricians surveyed, 77.1% (101/131) correctly identified blood lead levels as reportable. Middle East Respiratory Syndrome (MERS) was correctly identified as reportable by 81.5% (335/411) of all providers and by 72.2% (13/18) of emergency medicine physicians.

Discussion

This survey of 436 healthcare providers at a large, tertiary academic medical center provides an updated assessment of healthcare provider knowledge and beliefs regarding reportable disease requirements. The survey population was composed of providers in primary care and “front-line” specialties (e.g., emergency medicine). In this study population, the majority of providers surveyed felt they cared for patients with reportable diseases and believed they had an obligation to report to public health authorities (98.4%). Furthermore, providers identified themselves as the best suited to report to public health authorities (34.5%), above infection control (27.6%) and the laboratory (20.1%). Despite providers’ self-perceived duty to report to public health authorities, fewer than half (47.2%) had ever reported a case.

The providers we surveyed overwhelmingly believed they have an obligation to report to public health and that they are the best suited members of the healthcare team to do so. Past studies have raised concerns about providers’ attitudes towards disease reporting and even suggested implementation of a reward/penalty system to improve compliance.^{14,16} However, our study reinforces past findings that providers’ substantial knowledge deficits regarding which diseases are reportable are a primary barrier to reporting.^{13,16} While the median score on the knowledge assessment was 81.3%, there were many specialty-specific knowledge deficits that were concerning. Only 77.1% of pediatricians correctly identified blood lead levels as reportable, even though they are the primary medical specialty performing this testing. Similarly, less than two-thirds of obstetricians-gynecologists and pediatricians (54.8% and 63.4%, respectively) correctly identified neonatal abstinence syndrome as reportable, despite being the only specialties involved in the recognition and treatment of this condition which has reached epidemic levels in Tennessee.³⁰ MERS was correctly identified as reportable by only 72.2% of emergency medicine providers. This is worrisome as this disease can be highly communicable, as illustrated in the outbreak of MERS in the Republic of Korea where five patients, deemed superspreaders, accounted for 83.2% of transmission events within healthcare facilities, with much of the transmission occurring in emergency rooms.²⁴

In our study, many of these knowledge deficits were significantly greater in residents than in other healthcare providers. While this is at least partially attributable to residents’ in-training status, it also raises concerns about a fundamental lack of education addressing public health concepts. There is no nationwide requirement for medical schools or graduate medical education programs to instruct students and trainees on the public health system and reportable disease requirements; and any knowledge that is provided is highly variable between institutions. Recently, some medical schools have developed innovative curricula to integrate public health content into the standard medical school curricula; however, we have

anecdotally learned of others abandoning previously established public health content in favor of more research and elective training for students.²⁵ Some institutions have taken steps to integrate public health themes into all four years of medical education, discussing topics including: the role of the physician in the public health system (including reporting of infectious diseases, filling out death certificates and office infection-control practices), the public health system and basic concepts of applied public health practice (including general functions and powers of local, state, and federal health agencies), basic epidemiology and biostatistics, and healthcare policy.²⁶ While it is likely that medical students who graduate from such a program have a much more complete understanding of the public health system and its interaction with clinical medicine, very few institutions utilize such a comprehensive approach to their students' education. More broadly, public health content could be included in continuing medical education (CME) or Maintenance of Certification (MOC) programs, which are required in many states and specialties for providers to maintain state licensure and board certifications.

In Tennessee, as in other states, state law mandates that healthcare providers "knowing of or suspecting a case, culture, or specimen of a reportable disease or event shall report that occurrence to the Department of Health".³ While most providers surveyed were aware of the state law, less than half were aware of the required timelines, which differ substantially depending on the disease or condition. To keep providers updated on changes to the reportable disease requirements and timeline, the Tennessee Department of Health sends a paper letter to all licensed providers annually, however only about one-third of licensed providers surveyed acknowledged receiving such communication. This is concerning because it may indicate that health departments' outreach activities have limited ability to give providers basic foundational knowledge about reportable disease requirements and update providers about emerging public health threats in a timely and effective manner. Alternate methods of communication, such as email, or required web-based trainings, may improve health department communication with providers and basic provider knowledge.

Providers identified themselves as the best suited member of the healthcare team to report a disease to public health. However, less than a quarter recognized that they should call public health upon suspicion of the diagnosis. Past studies have highlighted this knowledge gap and hypothesized that it could be due in part to providers being fearful of making a mistake if the diagnosis is uncertain.¹⁶ Providers play a critical role in alerting public health to diseases of potential public health importance; a reporting delay secondary to providers waiting for laboratory-confirmation could have a substantial public health impact by permitting further spread of a highly communicable disease. In addition, there are multiple diseases and conditions which can only be reported by a provider (in our assessment: neonatal abstinence syndrome, pediatric influenza deaths, carbon monoxide poisoning, and disease outbreaks), as there are no confirmatory laboratory tests available. While these conditions are in the minority (16 out of 121 reportable conditions in Tennessee are reportable only by the provider), many of them are of extreme public health importance.⁴ This critical concept was well illustrated during the fungal meningitis outbreak associated with contaminated steroid injections in 2012.^{27,28} Follow-up studies have demonstrated that prompt provider notification of public health and aggressive public health action averted several hundred more cases of meningitis and over one hundred more deaths.²⁹

Providers described similar themes when asked separately about their primary concerns about disease reporting and barriers to complete and timely reporting. A lack of knowledge about which diseases are reportable was the most common barrier providers identified to complete and timely reporting; however it was also their primary concern about disease reporting overall. While the implementation of medical school, graduate medical education and CME or MOC programs addressing reportable disease requirements and reporting procedures could improve provider knowledge surrounding disease reporting, other potential approaches have yet to be determined. Healthcare providers' surveys, focus groups, or other methods should attempt to identify high yield methods for increasing knowledge to which providers would be receptive (i.e., quick reference guides, mobile applications, electronic health record reminders, etc.).

Burdensome mechanisms for reporting were also identified as both a substantial barrier and a primary concern by providers. Reporting in Tennessee requires a paper form to be printed out and completed, and then mailed or faxed to the health department. However, the majority of providers surveyed (83.4%) preferred web-based, electronic reporting methods over current methods (i.e., telephone, standard mail, or fax). A secure web-based reporting interface or email option may improve provider reporting rates in Tennessee. Recently, some states have created web-based platforms for disease reporting, which are open to infection control professionals and all healthcare providers. While no data has been published on the impact this has had on reporting rates, the Wisconsin Department of Health Services reports that they now receive 75% of disease reports through the Wisconsin Electronic Disease Surveillance System (WEDSS).³¹ While modernizing and streamlining procedures for provider reporting is important, progress is also being made in the area of electronic case reporting (eCR). The overarching goal of eCR is to create a standard electronic infrastructure in order to allow information to flow from clinical electronic health records (EHR) to public health.^{32,33} However, substantial work must still be done to attain the required interoperability to make this process operational and widely used.

This study has several limitations. First, some survey questions required that respondents have at least some background knowledge about reportable disease requirements. Second, the response rate was only 25% which could have led to sampling bias, particularly within groups with lower response rates. It is possible that survey non-responders held more negative attitudes and beliefs toward disease reporting than responders. This could bias our sample towards a group that is more accepting of disease reporting requirements than the overall healthcare provider population. However, conversely, non-responders may be less knowledgeable about disease requirements than responders, falsely elevating the results of the knowledge assessment. While this response rate is low, unfortunately there are limited web-based surveys for comparison in this subject matter area; however it is within the range of other studies utilizing this data collection methodology.^{15, 34, 35} Third, while the survey was pilot tested, no qualitative testing for comprehension was performed. Fourth, the survey was conducted at a large, tertiary academic medical center which makes the results difficult to generalize to providers in other settings (rural, private practice, etc.). Lastly, the survey was conducted in an individual, online setting making it impossible to control for the use of outside resources in the knowledge assessment; therefore these results may overestimate providers' knowledge.

Implications for Policy & Practice

This survey of healthcare providers provides an updated assessment of healthcare provider knowledge and beliefs regarding reportable disease requirements, and numerous implications for policy and practice can be drawn from these results. First, a substantial knowledge deficit regarding which diseases are reportable and required reporting procedures continues to exist among healthcare providers. It is essential that the public health and medical communities work together to establish nationwide medical school and graduate medical education programs, as well as CME or MOC courses, to improve this knowledge deficit. Second, many states, including Tennessee, still require providers to report via standard mail or fax to the health department. The creation of a secure web-based reporting interface or email option could feasibly improve provider reporting rates. In addition, the ongoing development of eCR and other innovative informatics solutions are important in continuing to shift some of the responsibilities of reporting from providers to automated systems.

Conclusions

Few surveillance systems are as critically important or as timely as an astute healthcare provider contacting public health authorities promptly with suspicion of a public health threat or highly communicable disease. This survey demonstrates the willingness of healthcare providers to report diseases and events to public health. However, there continues to be a considerable knowledge gap for providers regarding which diseases are reportable and the mechanisms by which to report. A greater emphasis on education of providers about disease reporting at all levels, from medical school and early training to veteran providers in practice, is essential. It is extremely important that providers have fundamental knowledge of reportable disease requirements and procedures in order to understand their role and participate in the broader public health system.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Knowledge, attitudes and practices of healthcare providers regarding reporting diseases to public health —
Vanderbilt University Medical Center, Nashville, TN, 2014

Question	Answer Choices	No. (%)
1. Do you evaluate patients with reportable diseases in your scope of practice? *	Yes	362 (83.2)
	No	73 (16.8)
2. Do you think contacting public health authorities about patients with reportable diseases or events is an important responsibility of a healthcare provider?	Yes	429 (98.4)
	No	7 (1.6)
3. Have you ever contacted public health to report a patient with an illness?	Yes	206 (47.2)
	No	230 (52.8)
4. Have you ever contacted public health to report a cluster of illness?	Yes	29 (6.7)
	No	407 (93.3)
5. Before today, were you aware of TN law requiring that "all healthcare providers and other persons knowing of or suspecting a case, culture, or specimen of a reportable disease or event shall report that occurrence to the Department of Health..."?	Yes	356 (83.0)
	No	73 (17.0)
6. Before today, were you aware of the reportable disease list and required timeline for contacting public health authorities about a reportable disease set forth by the Department of Health Commissioner?	Yes	202 (47.1)
	No	227 (52.9)
7. Did you receive communication from the Tennessee Department of Health (either electronic or standard mail) regarding changes in Tennessee's reportable disease list effective January 1, 2015?	Yes	100 (23.3)
	No	329 (76.7)

* Responses of "unsure" were considered a response of "no" (19, 4.4%). For all questions, non-responses were excluded (range 0–6.2%, average 3.1% per question).

Table 2

Healthcare provider attitudes about required reporting — Vanderbilt University Medical Center, Nashville, TN, 2014

Question	Answer Choices	No. (%)
1. Deficits in which of the following knowledge areas may most contribute to incomplete reporting or delays in reporting?	Requirement that providers report	31 (7.2)
	Which diseases are reportable	186 (43.3)
	Requirements for timeliness of reporting	42 (9.8)
	Mechanism for submitting a report to public health	153 (35.7)
	None of these	17 (4.0)
2. In your opinion, when is the best time to contact public health regarding a patient with a reportable disease?	Upon suspicion of the diagnosis	84 (20.5)
	When the patient clearly meets clinical criteria	123 (30.1)
	When the disease is laboratory confirmed	201 (49.1)
	When the patient has begun treatment	1 (0.2)
	When the patient has completed treatment & responded	0 (0.0)
	Never. Reporting should not be required.	0 (0.0)
3. In your opinion, who is best suited to contact public health about a patient with a reportable disease?	Healthcare provider	141 (34.5)
	Laboratory	82 (20.1)
	Infection Control Personnel	113 (27.6)
	Automated (via electronic medical record)	73 (17.8)
	No One. Reporting should not be required.	0 (0.0)
4. If you needed to report a case, who would you contact?	Hospital Infection Control	175 (42.8)
	Local Health Department	133 (32.5)
	State Health Department	94 (23.0)
	Centers for Disease Control and Prevention	5 (1.2)
	Food and Drug Administration	0 (0.0)
	Department of Health and Human Services	2 (0.5)
	No One. Reporting should not be required.	0 (0.0)
5. What method of reporting would be most convenient for you?	Secure email	109 (26.7)
	Secure web-based form	232 (56.7)
	Telephone	62 (15.1)
	Secure fax	6 (1.5)
	Mail	0 (0.0)
6. Reportable diseases have variable time frames for reporting. If you had a reportable disease to submit, how would you determine the required time frame to report?	Discuss with colleague	21 (5.1)
	Discuss with hospital infection control	182 (44.5)
	Call local or state health department	58 (14.2)
	Access local or state department of health website	136 (33.3)
	Review posted reportable disease requirements	12 (2.9)
7. What is your primary concern regarding the notification of a reportable disease to public health	Concerns about violating patient privacy	29 (7.1)
	Not worthwhile if disease is not highly contagious/fatal	8 (2.0)

Question	Answer Choices	No. (%)
authorities?	Reporting procedures are burdensome	116 (28.4)
	Likely that someone else will report	100 (24.4)
	Unsure which diseases are required to report	156 (38.1)

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