

USE OF POISON CENTER DATA ASSESSMENT REPORT 2012

**Council of State and Territorial Epidemiologists
In collaboration with:
American Association of Poison Control Centers
Centers for Disease Control and Prevention
Poison Center and Public Health Collaborations Community of Practice**

Authors (in alphabetical order)

Kristina W. Kintziger, PhD, Florida Department of Health
Kimberly Miller, Council of State and Territorial Epidemiologists
Erin Simms, MPH, Council of State and Territorial Epidemiologists
Martha Stanbury, MSPH, Michigan Department of Community Health
Sharon M. Watkins, PhD, Florida Department of Health

Version: July 3, 2013

Table of Contents

List of Tables.....	3
Executive Summary.....	4
Introduction.....	5
Methods.....	5
<i>Assessment Development and Administration.....</i>	<i>5</i>
<i>Development of Interactivity Score.....</i>	<i>5</i>
<i>Statistical Analysis.....</i>	<i>6</i>
Results.....	6
<i>Overview of Respondents.....</i>	<i>6</i>
<i>No Collaboration between DOH and PCC.....</i>	<i>7</i>
<i>Overview of Established DOH-PCC Relationships.....</i>	<i>7</i>
<i>Characteristics by Type of State PCC Coverage.....</i>	<i>9</i>
<i>States with one PCC inside the state.....</i>	<i>9</i>
<i>States with one PCC outside the state.....</i>	<i>9</i>
<i>States with multiple PCCs.....</i>	<i>10</i>
<i>Comparisons.....</i>	<i>10</i>
<i>Characteristics by Level of Interactivity among Established DOH-PCC Relationships.....</i>	<i>11</i>
<i>Characteristics by Number of PCC Capacities/Services Available.....</i>	<i>11</i>
<i>Characteristics by Types of Communication among Established DOH-PCC Relationships.....</i>	<i>12</i>
<i>Characteristics by Types of Data Access among Established DOH-PCC Relationships.....</i>	<i>12</i>
Strengths and Limitations.....	12
Recommendations.....	13
References.....	14
Tables.....	15
Appendix A.....	30

List of Tables

Table 1. Interactivity Score Weighting Scheme for Question 7 and Results.....15

Table 2. Overview of the Characteristics of DOH-PCC Relationships.....16

Table 3. Number of Capacities or Services Provided by PCC to DOH.....19

Table 4. Mechanisms for Data Sharing between DOH and PCC.....20

Table 5. Characterization of DOH-PCC Relationships by Type of State PCC Coverage.....21

Table 6. Characterization of DOH-PCC Relationships by Level of Interactivity.....24

Table 7. Characterization of DOH-PCC Relationships by Number of Capacities/Services Provided by PCC.....27

Table 8. Type of Data Available by Level of Collaboration between PCC and DOH.....28

Executive Summary

The Council of State and Territorial Epidemiologists in association with the Centers for Disease Control and Prevention and American Association of Poison Control Centers—via the Poison Center and Public Health Collaborations Community of Practice—conducted an assessment of epidemiology programs in the 50 US states, Washington DC, and five large cities to describe current relationships between health departments and poison centers nationwide, including barriers to successful collaborations. Fifty-four of the 56 agencies responded. Fifty-three of the 54 health agency reported current collaborations with their local poison control center(s).

Characteristics of these health department-poison center relationships varied greatly in terms of the number and types of poison center services or capacities¹ available, the type of data access available to health agencies, and the level of interactivity between the agencies. The most common poison control center (PCC) coverage situation is having a single PCC serving the entire state or jurisdiction, reported by 60.38% of respondents. Eleven of the 53 respondents with current PCC collaborations (20.75%) have a high level of interactivity with their poison control centers and 15 (28.30%) have a low level of interactivity, although only five respondents (9.43%) reported *minimal* contact between agencies. Of note, having a greater number of PCC services/capacities available to the health agency is associated with higher interactivity between the two agencies.

More than half of respondents reported periodic contact and collaboration on public health issues, poison control data provided intermittently or as needed, and automated public health alerts shared between the two agencies. The most common PCC services provided to health agencies are disaster/surge capability/support and reportable illness notification. About a third of respondents have ongoing special projects involving their PCCs.

The majority of respondents indicated that the primary barriers between health agencies and poison control centers are lack of dedicated funding and information technology limitations. All respondents acknowledged the importance of poison control centers to public health in their state or local jurisdiction. Based on findings, 'best practices' for partnerships and communications between these agencies are needed to ensure continued and improved collaborations.

¹ In this PCC assessment and in this document, the term capacities was used to broadly include activities and capabilities (scope of services).

Introduction

The American Association of Poison Control Centers (AAPCC) represents 57 poison centers nationwide, which, on average, receive almost 11,000 calls each day. The purposes of these calls range from information-gathering to reporting human or animal illnesses or adverse exposures. The AAPCC collects data on all calls and maintains a nationwide surveillance database, the National Poison Data System (NPDS).¹ Many of the calls made to poison centers relate to areas of public health concern, such as food poisoning or potentially toxic occupational or environmental exposures. The data reported to poison centers on such calls could provide vital information to public health officials and health departments. For example, these data could be used to enhance or support ongoing public health surveillance or alert authorities to emerging public health issues for which no established public health surveillance system is available.

Recognizing the importance of collaborations between public health and poison centers, the Council of State and Territorial Epidemiologists (CSTE)—in association with the Centers for Disease Control and Prevention and AAPCC via the Poison Center and Public Health Collaborations Community of Practice—sought to characterize current relationships between health departments and poison centers nationwide to identify factors that hinder and that promote successful collaborations. CSTE and the AAPCC worked together to design two assessments—one for state, territorial, and local health departments, and one for national poison centers. The results of the health department assessment have been de-identified and are presented in this report. Results and analysis of the combined AAPCC and CSTE assessments will be available in late 2013.

Methods

Assessment Development and Administration

Questions were initially developed by a workgroup of poison center directors to assess current collaborations between poison control centers (PCCs) and departments of health (DOHs) nationwide by collecting information on the types of interactions (e.g. phone contact, service provision), subjects of interaction (e.g. illness reporting, emergency planning), organization of programmatic and fiscal relationships, and extent and modes of data sharing. This assessment was first distributed by AAPCC to its membership. Next, CSTE adapted the assessment for distribution to its membership; among other things, adding questions to solicit DOH views on the importance of and impediments to public health agency-PCC interactions. The CSTE assessment was pilot tested in three states and one city. Final assessment questions were administered via email, using Survey Monkey[®], to state epidemiologists in all 50 states and representatives of health departments in Washington, DC, and the five largest US cities (based on population estimates). Data were collected from May 1 to May 16, 2012. State epidemiologists and local representatives were requested to have the assessment completed by the person in their department deemed most knowledgeable about the jurisdiction's poison centers. The final assessment, with skip patterns, comprises Appendix A.

Development of Interactivity Score

The level of interactivity between the DOH and its PCC(s) was an important issue of interest for this assessment.

We determined interactivity based on responses to Question 7. Question 7 asks, “How would you classify the level of interactivity between your health department and your poison center(s)?” The nine available response options (not counting an open-ended *Other* option) address the level of phone and email contact, exchange of public health alerts, frequency of service provision, collaboration during disasters, and type and frequency of data access. Multiple responses were permitted. To characterize the degree of interactivity, we developed a weighted summary score based on the level of interactivity of each option compared to others. For example, real- or near real-time data upload ranked higher—i.e., more interactive—than intermittently provided data. Responses received a weight between one and four points (Table 1), and the points were summed to provide a single score for each respondent. Responses are reported by quartile, with scores of 1-7 points classified as *low* interactivity, 8-10 points as *some* interactivity, 11-13 points as *moderate* interactivity and 14-19 points as *high* interactivity.

Several other questions in the assessment dealt with matters that could be related to interactivity. We considered developing an interactivity score based on a combination of these questions. As discussed in the *Strengths and Limitations* section, only Question 7 was used in the interactivity score due to inconsistencies in responses or limited interpretability of available responses with respect to interactivity.

Statistical Analysis

All assessment responses were subjected to univariate and bivariate analyses, stratified by covariates of interest. Fisher’s exact tests were conducted on all stratified analyses due to the small number of respondents. Frequencies and percentages, along with Fisher’s exact p-values, are reported. All analyses were conducted using SAS v9.3 (SAS Institute; Cary, NC) using an alpha of 0.10. The criterion for our Type 1 error was relaxed due to the small number of responses on this assessment. Variables of interest included type of PCC coverage, presence and types of existing collaborations, level of interactivity between DOH-PCC, DOH programs with access to PCC, number and type of available capacities and services, special projects, program with overall responsibility for DOH-PCC collaboration, and types and methods of PCC data access. Additional variables were related to perceived barriers to DOH-PCC collaborations. Specific covariates were stratified by the following: type of state PCC coverage (Table 5), level of interactivity (Table 6), number of services (Table 7), and types of communication and data access in established DOH-PCC relationships (Table 8).

Results

Overview of All Respondents

Of the 56 health departments invited to complete the assessment, 54 (96.43%) did so. One state and one local health department did not complete the assessment.

The primary respondents in 21 responses (38.89%) were state epidemiologists, including acting and deputy state epidemiologists (Question 1). The primary respondents for all remaining responses were staff located in various health department programs. Twenty-seven responses (50.00%) were completed by a single respondent (Question 2).

The majority of respondents (n=33, 61.11%) reported that there was one PCC located within the state (Question 3). The remaining respondents reported having multiple PCCs available (n=10, 18.52%) or one PCC serving their state but located outside of the state (n=11, 20.37%). In total,

53 of the 54 respondents (98.15%) indicated that their DOH collaborates with the PCC in some capacity (Question 4).

No Collaboration between DOH and PCC

One respondent indicated that their DOH had no collaboration with the single PCC located in the state (Question 4). This lack of interaction/collaboration was attributed solely to the lack of funds available to institute a contract with the PCC (Question 5 and 17). However, this DOH is very willing to establish a working relationship with the PCC (Question 6), would be very likely to collaborate with its PCC if all technological and financial limitations were removed (Question 14), and would be very likely to call the PCC for discussion on public health issues (Question 15) and vice versa (Question 16). Notably, this respondent reported that the PCC was indispensable to public health in the state (Question 18), despite there being no formal, established collaboration. Further, this respondent believes the relationship between PCCs and DOHs should be strengthened nationally (Question 19) and would be interested in any funding opportunities available to establish collaboration (Question 20). The respondent noted, ‘Our PCC always expresses concern about limited funding and have repeatedly requested funding from the DOH. This funding would go into providing support to the PCC and also to link their data to our current syndromic surveillance system (Question 21). We provided some funding to our PCC a few years ago but could not sustain it’ (Question 22).

Overview of Established DOH-PCC Relationships

Table 2 provides an overview of DOH-PCC relationships among the 53 respondents with active collaborations (where Question 4 = Yes). The most common situation involves a single PCC located within the state (n=32, 60.38%). About half of respondents (n=26) reported that individual programs within the DOH maintain their own relationships with PCCs. The remaining respondents either didn’t know how DOH programs interact with PCCs (n=2) or reported that one program is the lead contact (n=25), most commonly preparedness programs (Question 11). Respondents commonly cited specific DOH departments, such as infectious disease or environmental health, as having direct contact with PCCs. Fewer than 15% of respondents reported that immunization and maternal and child health programs interact with PCCs (Question 8). Programs listed by respondents as having interactions with PCCs, but not included in assessment options, were occupational health, injury prevention, state laboratory, emergency medical, and mental or behavioral health programs.

Respondents could choose multiple items in order to characterize the relationship between their DOH and PCC in Question 7 (Table 1). Over half of respondents reported periodic contact and collaboration on public health issues, data provided intermittently or as needed, and automated public health alerts shared between the two agencies. One-third to one-half of respondents reported intermittent service commitment; on-going, consistent services provided; automated upload of PCC data on real/near real-time basis; and active PCC membership on DOH teams or committees. Finally, less than 10% of respondents (n=5) reported minimal contact between agencies.

Using the weighting scale for Question 7 (defined in the methods section), we classified respondents as having *low*, *some*, *moderate*, or *high* interactivity with their PCCs (Table 1). Fifteen respondents (28.30%) were classified as having *low* PCC interactivity. Of the respondents in this group, 60.00% reported that their PCC relationship involves ‘periodic phone/email contact on public health issues,’ and none reported active PCC membership on DOH committees. Of the 11 respondents (20.75%) classified as having *high* PCC interactivity,

over 50% reported interaction in seven of the nine categories of collaboration. Those respondents classified as having *moderate* to *high* levels of DOH-PCC interactivity (n=26, 49.06%) were more likely to indicate collaboration during disasters, exchange of public health alerts, provision of on-going and consistent services, and active PCC memberships on DOH committees. Having real- or near real-time data was most commonly reported among those with *high* interactivity.

DOH respondents were also asked to identify the capacities² and services provided by their PCC(s) (Question 9, Table 2) and to specify whether the services provided are currently funded or have been in the past. Due to inconsistencies in the way this question was answered (e.g. respondents noting both *currently funded* and *funded in past* instead of choosing only one funding option, per instructions), we report the results from the 53 respondents based on any response—*provide service, currently funded, and/or funded in past*—for each service listed under this question. Responses were highly varied, with the two most common capacities or services indicated being *disaster/surge capability/support* (58.49%) and *reportable illness notification* (50.94%). Other common categories selected relate to adverse event/incident reporting; surveillance or monitoring of public health issues (general, substance abuse, occupational health, and food- or waterborne disease); education; and chemical, biological, radiological, and nuclear (CBRN) terrorism preparedness. In addition to the specific options listed in Question 9, respondents also mentioned their PCC's role monitoring reports of exposure to lead (n=4), arsenic (n=3), mercury (n=2), carbon monoxide (n=5), drugs (n=2), and aquatic toxins/harmful algae blooms (HABs) (n=2).

Only three respondents (5.66%) indicated that their PCCs provide the majority of the 22 capacities and services listed in Question 9 (21 specific options and *Other*). The largest proportion of respondents (n=19, 35.85%) reported that their PCC provides their DOH with between five and nine specific services. Four (7.55%) reported that their PCC provides only one capacity or service to their DOH (Table 3).

Eighteen respondents (33.96%) indicated that they were involved in special projects with their PCC (Question 10; Table 2). These special projects involved a wide range of topics: evaluation (e.g., risk assessments, state preparedness laws), focused research (e.g., addressing occupational health indicators, GIS/mapping, pesticides), communications (e.g., trainings, public messaging, social media), response/monitoring of designer and prescription drugs, and disaster monitoring.

In all, 86.79% of respondents receive data or case reports from their PCC (Question 12, Table 2). Of the 46 respondents who reported receiving data from the PCC, the majority indicated that PCC data is provided by either formal (41.30%) or informal (58.70%) request of health department staff (Question 13). Additionally, 24 respondents (52.17%) reported that they receive real- or near-real time data (options A and B for Question 13) via direct access to NPDS or via regular uploads to DOH servers (Table 4). [Of note, there was a minor discrepancy between responses to Question 13 (n=24) and Question 7 option H (n=26) with regards to real/near-real time access.]

Finally, the majority of respondents seemed to recognize the importance of a strong partnership between DOHs and PCCs. Fifty of the 53 respondents (94.34%) noted that the PCC is *indispensable* or *useful* to public health in their jurisdictions and the remaining (Three

² In this PCC assessment and in this document, the term “capacities” was used to broadly include activities and capabilities (scope of services).

respondents answered *Don't know* (Question 18). Most indicated that their DOH would be *very likely* to interact with the available PCC if all barriers were removed, and this interaction would likely go both ways between the DOH and PCC (Questions 14-16, Table 2). Additionally, the majority of respondents indicated that the relationships between DOHs and PCCs should be strengthened nationwide (Question 19). The most important barrier to improved collaborations is a lack of dedicated funding to establish and support such an interface (Question 17). Other barriers noted by respondents include limited expertise from both agencies, limited understanding of benefits or importance of a collaboration, political challenges, cumbersome data access (with more automated access needed), poor quality or low volume of data, and staff limitations and shortages.

More than 85% of respondents would be interested in funding opportunities that would enhance current relationships between the DOH and PCC in their jurisdiction (Question 20). A variety of uses of this potential funding were noted: enhancement of existing services (e.g., outbreak detection, surveillance systems, data sharing, prevention messaging, providing staffing support for analysis or other needs), building new relationships (e.g., establishing joint committees, co- or cross-training between agencies, co-planning, community outreach), establishing new capabilities (e.g., expanding to new DOH departments, including new data points in PCC system), and improving the timeliness of data sharing and reporting.

Characteristics by Type of State PCC Coverage

Of the 53 DOH respondents reporting an established relationship with their PCC(s), 32 (60.38%) reported having just one PCC located within the state, 11 (20.75%) reported having one PCC located outside the state, and 10 (18.87%) reported having multiple PCCs serving the DOH (See Table 2, Question 3). Characteristics of the DOH-PCC relationship were examined within each of these three PCC coverage situations (See Table 5).

States with one PCC inside the state

Of the 32 states with one PCC within their state, more than half characterized their interactivity between the DOH and PCC as *periodic phone/email contact on public health issues* (75.00%), *collaboration with PCCs during disasters when requested* (65.63%), and *automated upload of PCC data on real/near real time basis* (53.13%). Most of these “single state PCC” respondents (56.25%) are classified as having a *moderate* (31.25%) to *high* (25.00%) degree of DOH-PCC interactivity. Preparedness, infectious disease, and environmental health programs are the most common DOH departments interacting with the PCC. The most commonly reported capacities/services provided by the PCC include disaster/surge capability/support (65.63%), reportable illness notification (59.38%), real-time PCC data transmission (53.13%), and CBRN terrorism preparedness/support (53.13%). More than two-thirds of respondents (68.75%) reported between five and 14 available PCC services/capacities; and almost half (46.88%) reported involvement with special projects with their PCC. Virtually all “single state PCC” respondents (93.75%) indicated that the DOH would be *very likely* or *likely* to call the PCC to discuss a public health issue or threat. (Just one respondent noted that the DOH would be *somewhat likely* to call the PCC for discussion, and one answered *Don't know*.) The most common barriers to DOH-PCC collaboration reported by states with one PCC available are *lack of dedicated funding to establish and support such an interface* (71.88%) and *IT limitations between DOH and PCC data management systems* (40.63%). All but one “single state PCC” respondent indicated that the PCC is either *indispensable* (62.50%) or *useful* (34.38%) to the public health of the state/jurisdiction.

States with one PCC outside the state

Eleven respondents (20.37%) reported having an out-of-state PCC serving their state; that is, the only PCC available to these respondents is physically located outside state boundaries. (Those PCCs also serve the states in which they are located). These 11 “out-of-state PCC” respondents most commonly characterized their interactivity with the PCC as *PCC data provided to DOH on an as-needed basis* (81.82%), *periodic phone/email contact on public health issues* (63.64%), *ongoing, consistent services* (54.55%); and *collaboration during disasters when requested* (54.55%). Over half of these 11 respondents (54.55%) are classified as having *low to some* DOH-PCC interactivity, although more than a third (36.36%) had *moderate* interactivity. Infectious disease programs and state epidemiologists/designees are the most common users of the PCCs. Over half of respondents reported the following PCC capacities/services: hazardous materials incidence reporting (81.82%), public health calls after hours (63.64%), public health calls during day hours (54.55%), consultation/reporting for lab data (54.55%), food/waterborne disease calls (54.55%), CBRN terrorism preparedness/support (54.55%), and public health education (54.55%). Many respondents (36.36%) reported between five and nine PCC capacities/services available, while 18.18% reported two to four capacities services available and 18.18% reported between ten and 14 capacities/services available. Most “out-of-state PCC” respondents are either *very likely* (27.27%) or *likely* (54.55%) to call their available PCC to discuss a public health issue or threat. Lack of funding and IT limitations are the most common barriers cited to establishing or expanding the DOH-PCC interface for this group as well. Again, virtually all respondents (ten of 11) considered the PCC *indispensable* or *useful* to the public health of the state.

States with multiple PCCs

Ten (18.52%) states reported having multiple PCCs within their state. Health departments in these states most commonly characterized their interactivity with PCCs as *automated/manual public health alerts between the agencies* (80.00%), *periodic phone/email contact* (70.00%), *automated upload of PCC data on a real/near real-time basis* (60.00%), *intermittent service commitment* (50.00%), and *collaboration during disasters when requested* (50.00%). Over half of these “multiple PCC” respondents are classified as having *low* (30.00%) to *some* (40.00%) DOH-PCC interactivity. Preparedness programs are by far the most commonly reported users of PCCs in this type of coverage situation, cited by 90.00% of “multiple PCC” respondents. The most common PCC capacities/services provided to the DOH in states with multiple available PCCs are *disaster/surge capability/support* (60.00%), *pesticide surveillance/monitoring* (50.00%) and, the most frequent response, *other services* (70.00%)—including activities related to chemical agents, provision of annual data summaries, state notifiable disease reporting, outbreak notification, and reporting of aquatic toxins and HAB-related illness. Most “multiple PCC” respondents (70.00%) reported between two and nine PCC services available, and 30.00% of these respondents reported special projects with their PCCs. Most respondents (60.00%) indicated the DOH would be *very likely* to call the PCC to discuss a public health issue or threat. Barriers to DOH-PCC collaboration in “multiple PCC” states include lack of dedicated funding (90.00%) and lack of familiarity with the available data and its uses (50.00%). Nine of ten “multiple PCC” respondents described the role of the PCC as *indispensable* or *useful* to public health in the state/jurisdiction.

Comparisons

Stratifying assessment questions by type of state PCC coverage yielded few statistically significant differences (See Table 5) and little difference in overall DOH-PCC interactivity levels.

States with access to only an out-of-state PCC were more likely to report having PCC data available intermittently/as-needed ($p = 0.04$) and less likely to have a preparedness program communicating with their PCC ($p = 0.09$) than states with other coverage types. However, these states were more likely to report having the following services available compared to states with other coverage types: hazardous materials incidence reporting ($p = 0.04$), public health calls after hours ($p = 0.08$), public health calls during the day ($p = 0.02$), and consultation/reporting for lab data ($p < 0.01$).

“Multiple PCC” states tended to report fewer PCC services available than other coverage types, though this difference was not significant. “Multiple PCC” respondents were more likely to report PCC capacities/services that were not listed on the assessment than were respondents with other coverage types ($p < 0.01$). These *other services* include writing guidelines for chemical agents, outbreak reporting, and aquatic toxin/HAB reporting. Most respondents reporting ongoing special DOH-PCC projects have a single PCC available within their state ($p < 0.01$). Additionally, DOH respondents with one or multiple PCCs within the state were more often *very likely* to call their PCC for discussions on public health issues or threats, compared with DOH respondents with one PCC available outside of the state ($p = 0.03$). Respondents with multiple PCCs were more likely to report *lack of familiarity with the data* than other respondents ($p = 0.08$).

Characteristics by Level of Interactivity Among Established DOH-PCC Relationships

Stratifying data by level of interactivity yielded only a few statistically significant differences (Table 6). Respondents with *moderate to high* DOH-PCC interactivity were significantly more likely to report involvement with special projects with their PCC ($p = 0.08$) than those with *low to some* interactivity levels. Those with *low* interactivity were significantly less likely to report that their DOH would be *very likely* to call their PCC to discuss a public health issue or threat ($p = 0.09$) than those with all other interactivity levels. Those with *moderate to high* interactivity were more likely to report that DOH staff use a web portal to access PCC data ($p = 0.01$) and more likely to report that they request PCC data via formal mechanisms ($p = 0.01$) than those with *low to some* interactivity (Question 13). Those with *low* interactivity were more likely to report that lack of a central point of contact within their DOH is a barrier to collaborating with their PCC ($p < 0.01$). Finally, those with *some* and *high* levels of activity were more likely to report that they would be *very likely* to agree to use PCC data if all barriers were removed.

Though not statistically significant, those with *high* interactivity levels were more likely to report that individual DOH programs maintain their own relationships/contracts with the PCC, rather than having one program serve as the lead relationship broker for the entire health agency. Those with *low, some, and moderate* interactivity levels were similar to each other in their Question 11 responses, with a slightly greater proportion of respondents in these categories reporting one program serves as the lead PCC relationship broker. Respondents with *moderate to high* interactivity levels were more likely to report that their PCC would be *very likely* to call the DOH to discuss public health issues. Respondents with *low* interactivity were less likely to report receiving data and/or case reports from PCCs than those with other interactivity levels; again, this difference was not significant. Finally, the majority of all respondents, regardless of interactivity level, recognized that DOH-PCC relationships should be strengthened, and would be interested in funding opportunities to strengthen them.

In general, those with lower levels of DOH-PCC interactivity were more likely to report only periodic contact with PCCs, were more likely to report having multiple PCCs available within their state/jurisdiction, and were far less likely to report consistent services and active

collaborations/partnerships. These DOHs reported fewer special projects with the PCC, but still frequently reported having real-time or near real-time access to information from PCC data systems. In contrast, those with higher levels of DOH-PCC interactivity were more likely to report having ongoing and consistent services and collaborations, including special projects. Real-time or near real-time data access was commonly reported among those with the highest level of interactivity, but not for those with *moderate* interactivity.

Characteristics by Number of PCC Capacities/Services Available

Examination of certain DOH-PCC relationship characteristics by total number of PCC capacities/services available to respondent DOHs (Table 7) reveals some important differences. First, the number of services/capacities available to DOHs from PCCs is significantly greater for those scored as having higher DOH-PCC interactivity ($p = 0.10$). As the number of capacities/services increases, so does the likelihood of collaboration/communication between PCCs and certain DOH programs, such as chemical disease surveillance ($p = 0.01$), epidemiology ($p = 0.09$), and children/maternal health and medical services ($p = 0.08$). Finally, those respondents who reported having more PCC capacities/services available were more likely to report that their PCC would be *likely* or *very likely* to call the DOH to discuss public health issues or threats ($p = 0.01$).

Characteristics by Types of Communication among Established DOH-PCC Relationships

Whether DOH-PCC contracts are coordinated through one designated DOH program or through individual DOH programs (Question 11) makes no significant difference in the level of interactivity (Question 7), types of DOH programs with existing PCC relationships (Question 8), number of PCC capacities/services available to the DOH (Question 9), direction of communication (Questions 15 and 16), or type of data access (real-time versus non-real-time, Question 13). Respondents with the highest levels of interactivity were slightly more likely to report that DOH-PCC communication is handled by individual departments/programs than by a single responsible party (72.73% vs. 27.27%, respectively; $p = 0.59$). Interestingly, those reporting a greatest number of PCC capacities/services available were more likely to report that DOH-PCC relations are coordinated by one DOH program than by multiple individual departments (75.0% vs. 25.0%, respectively; $p = 0.24$).

In cases where one designated DOH program serves as the PCC relationship broker, the most frequently cited program is public health preparedness. Of the 13 jurisdictions using public health preparedness programs as the lead PCC contact, five have *low* DOH-PCC interactivity, five have *some* interactivity and three have *moderate* interactivity. In contrast, in the 14 jurisdictions reporting other lead PCC contacts, 50.00% have *low* ($n=3$) to *some* ($n=4$) DOH-PCC interactivity and 50.00% have *moderate* ($n=4$) to *high* ($n=3$) interactivity.

Eight of the 13 states that have tapped public health preparedness programs to coordinate PCC relations (61.54%) reported lack of access to real-time or near real-time PCC data, while only five (35.71%) of those reporting other departmental leads ($n=14$) lack such access. Of note, real-time PCC data access is reportedly available in all states that have designated epidemiology programs as the chief DOH PCC relationship broker.

Characteristics by Types of Data Access among Established DOH-PCC Relationships

Based on their responses to Question 13, DOH respondents were categorized as either having *real-time access* to PCC data (the first two response options) or *no real-time access* to PCC data (the last three response options) (See Table 8). No respondent chose *Don't know* for this question. DOH respondents with real-time data access (24 of 46 respondents or 52.17%) are more likely to have at least one PCC located within the state, while those with a PCC outside the state are more likely to have no real-time access ($p = 0.02$). Those respondents with *low*, *some*, and *high* levels of interactivity were slightly more likely to report real-time data access, though this finding is not significant. No differences in data access were found based on DOH program communication with PCCs, the number of PCC services/capacities available, or direction of communication. Those respondents who indicated DOH involvement in special projects with their PCC are slightly, though not significantly, more likely to have real-time data access than respondents not involved in special PCC projects ($p = 0.29$).

Strengths and Limitations

This national assessment was conducted to characterize DOH-PCC relationships nationwide. All 50 states and six large jurisdictions were invited to participate, and 54 responded, yielding a 96.43% response rate and nationally representative data for analysis. Assessment questions covered many important aspects of DOH-PCC relationships, including types of communication, data sharing, and available PCC capacities/services.

There are a few potential limitations of note. First, the assessment was sent to state epidemiologists (or their equivalent in large jurisdictions) and was completed by this person or their designee(s). Respondents were asked to work with the DOH staff most knowledgeable about DOH-PCC interactions and available PCC services. However, the individuals who completed the assessment varied, with varying degrees of subject matter knowledge; some (up to six) respondents answered *Don't know* to some assessment questions.

Second, a few questions solicited inconsistent responses, particularly Question 9, which asked respondents to identify currently available PCC capacities/services and to indicate whether these services are currently funded *or* were funded in the past. Due to the number of ambiguous responses regarding the funding situation, we chose not to use the funding data from Question 9 in our analyses.

Finally, we based the interactivity score on only one question, Question 7, instead of on several questions—7, 8 and 9—as originally intended. Question 9 was excluded due to the ambiguities mentioned above, and Question 8 (pertaining to the number and type of programs communicating with the PCC) was deemed an uncertain measure of interactivity. This uncertainty may be give that highly efficient or comprehensive PCC service provision may lead to fewer, not more, program communications or that PCCs communicating with one or two DOH programs may be able to provide more and diverse services for these programs..

Despite these possible limitations, assessment results provide the first baseline data for evaluating—and ultimately improving—DOH-PCC relationships.

Recommendations

Assessment results document the varied nature of DOH-PCC collaborations across the country. Most respondents reported an established DOH-PCC relationship, regardless of PCC coverage type. Having a greater number of PCC services/capacities available to the DOH is associated with higher interactivity between the two agencies. Although level of interactivity did not vary

significantly by type of program lead (e.g., preparedness and other programs), having the DOH program lead located in epidemiology was associated with real time data access. However, having real-time or near real-time PCC data access was not necessarily indicative of the high level of interactivity. Interactivity between a DOH and PCC comprises more than data access; regular communications, collaborations, and special projects are key to robust DOH-PCC relations. Some of these enhanced activities, collaborations, and communications (such as active participation on DOH) are possible regardless of whether data exchange occurs in real time or intermittently.

Yet, even health departments with the highest levels of DOH-PCC interactivity reported impediments to maintaining or enhancing the inter-agency relationships, most commonly funding and IT limitations. Given recent cutbacks in federal and state public health funding, it is important to target resources to the most cost-effective public health activities, including maintenance of mutually beneficial partnerships. Where existing resources are inadequate to promote DOH-PCC relationships, it is imperative to identify new funding sources.

Adequate funding is also critical to support a state-of-the-art IT infrastructure. Both health departments and PCCs depend upon electronic data to collect and disseminate critical public health information. With a growing number of data sources—such as electronic laboratory reports, electronic medical records, and the new health information exchanges—the demand on existing IT systems is increasing. Moreover, many current DOH and PCC systems are sub-optimal, requiring substantial modification to accommodate standardized public health messaging. A long-term IT investment will enhance public health surveillance and DOH-PCC information exchange, as well as other vital public health activities.

Health departments nationwide recognize the importance of PCCs to public health. ‘Best practices’ for DOH-PCC partnerships and communications may facilitate inter-agency data sharing and disease reporting, and thereby contribute to improved public health outcomes—the ultimate goal for both DOHs and PCCs.

References

1. The American Association of Poison Control Centers. Available at: www.aapcc.org. Accessed on 02/16/2013.

Table 1. Interactivity Score Weighting Scheme for Question 7 and Results¹

Question 7	Weight	How would you classify the level of interactivity between your DOH and your PCC?	Overall		Interactivity Levels ² (Question 7, weighted score) ³							
					Low		Some		Moderate		High	
			53	100.00	15	28.30	12	22.64	15	28.30	11	20.75
		N	%	N	%	N	%	N	%	N	%	
A	1	Minimal phone/email contact; discussions as needed on emergency issues/alerts only	5	9.43	2	13.33	1	8.33	2	13.33	0	-
B	1	Periodic phone/email contact on public health issues	38	71.70	9	60.00	9	75.00	10	66.67	10	90.91
D	2	Intermittent service commitment	18	33.96	4	26.67	2	16.67	7	46.67	5	45.45
F	2	Collaboration with PCCs during disasters when requested	32	60.38	3	20.00	6	50.00	12	80.00	11	100.00
G	2	PCC data are provided to DOH on an as-needed, or intermittently scheduled basis	27	50.94	5	33.33	6	50.00	10	66.67	6	54.55
C	3	Automated/manual public health alerts from DOH to PCC or PCC to DOH	27	50.94	4	26.67	6	50.00	9	60.00	8	72.73
E	3	Ongoing, consistent services provided	24	45.28	4	26.67	4	33.33	8	53.33	8	72.73
H	4	Automated upload of PCC data on real/near real time basis	26	49.06	3	20.00	8	66.67	6	40.00	9	81.82
I	4	Active membership on DOH planning or mitigation teams or committees	20	37.74	0	-	3	25.00	9	60.00	8	72.73

¹Out of 53 respondents with active collaborations between DOH and PCC.

²Quartile 1 (Low) ranged from 1-7 points; Quartile 2 (Some) from 8-10 points; Quartile 3 (Moderate) from 11-13 points; and Quartile 4 (High) from 14-19 points.

³Options chosen by ≥ 50% of respondents are highlighted in red text.

Abbreviations: DOH = department of health; PCC = poison control center.

Table 2. Overview of the Characteristics of DOH-PCC Relationships¹

Question	Response	N	% ²
3	<i>My state is covered by:</i>		
	One PCC located within my state	32	60.38
	One PCC located outside my state	11	20.37
	Multiple PCCs	10	18.52
8	<i>Within your DOH, which of the following staff/programs communicate with and access the PCC?</i>		
A	Infectious disease program	40	75.47
B	Environmental health program	38	71.70
C	Chemical disease surveillance	28	52.83
D	Preparedness	42	79.25
E	Immunization staff	4	7.55
F	State epidemiologist or designee	30	56.60
G	Children/maternal health programs and medical services	7	13.21
H	Other	18	33.96
9	<i>Indicate the current capacities/services that your PCC provides to your DOH (any response).</i>		
A	Health/Medical information calls	16	30.19
B	Vaccine Information/Adverse drug events reporting	12	22.64
C	Reportable illness notification	27	50.94
D	OTC/Rx Medication adverse drug events	16	30.19
E	Commercial products adverse events reporting	18	33.96
F	Hazardous materials incidence reporting	25	47.17
G	Product support	4	7.55
H	Public health calls after hours	19	35.85
I	Public health calls during day hours	16	30.19
J	Real time PCC data transmission/upload	24	45.28
K	Consultation/reporting for lab data	8	15.09
L	Consults for air/soil/water safety/monitor	11	20.75
M	Natural disaster planning	12	22.64
N	Disaster/surge capability/support	31	58.49
O	Food/waterborne disease calls	23	43.40
P	CBRN terrorism preparedness/support	26	49.06
Q	Substance abuse support/tracking	19	35.85
R	Occupational health surveillance/monitoring	20	37.74
S	Public health education	23	43.40
T	Pesticide surveillance/monitoring	21	39.62
U	Specific agent monitoring	13	24.53
V	Other	12	22.64
10	<i>Is your DOH currently involved in any special projects not previously identified on this assessment with your PCC(s)?</i>		

Question	Response	N	% ²	
	Yes	18	33.96	
	No	32	60.38	
	Don't know	3	5.66	
11	<i>Is there one program with overall responsibility for coordinating contracts or other fiscal arrangements with the PCC, or do each of the programs maintain their own programmatic relationships?</i>			
	Don't know	2	3.77	
	Individual programs maintain their own contacts/fiscal relationship with the PCC	26	49.06	
	One program is the lead	25	47.17	
	<i>Of these, which program leads? (out of 25)</i>			
		Preparedness	13	52.00
		Injury	5	20.00
		Epidemiology	4	16.00
		Other	5	20.00
12	<i>Does your health department access/receive data/case reports from the poison center?</i>			
	Yes	46	86.79	
	No	6	11.32	
	Don't know	1	1.89	
14	<i>If all technological and financial limitations/blocks were removed, how likely would your DOH be to agree to receiving data for use in public health surveillance?</i>			
	Very likely	33	62.26	
	Likely	9	16.98	
	Somewhat likely	10	18.87	
	Unlikely	-	-	
	Don't know	1	1.89	
15	<i>How likely would it be for your DOH to call your PCC for discussion on a public health issue or threat?</i>			
	Very likely	33	62.26	
	Likely	14	26.42	
	Somewhat likely	5	9.43	
	Unlikely	-	-	
	Don't know	1	1.89	
16	<i>How likely would it be for your PCC to call your DOH for discussion on a public health issue or threat?</i>			
	Very likely	32	60.38	
	Likely	12	22.64	
	Somewhat likely	6	11.32	
	Unlikely	1	1.89	
	Don't know	2	3.77	
17	<i>What do you see as impediments to establishing/maintaining/expanding the interface between your PCC and your DOH?</i>			
A	Lack of dedicated funding available to establish and support such an interface	42	79.25	
B	Lack of familiarity with the data and how it may be used to support public health	12	22.64	

Question	Response	N	% ²
C	Political challenges e.g. interpersonal challenges b/w PCC and DOH leadership	8	15.09
D	IT limitations between DOH and PCC data management systems	20	37.74
E	No central point of lead within DOH on this issue	7	13.21
F	Other	14	26.42
18	<i>How would you describe the role that your PCC plays in state and local public health?</i>		
	The PCC is indispensable to the public health of my state/jurisdiction.	30	56.60
	The PCC is useful to the public health of my state/jurisdiction.	20	37.74
	The PCC is neither helpful nor harmful to the public health of my state/jurisdiction.	-	-
	I don't know if the PCC is useful to the public health of my state/jurisdiction.	3	5.66
	The PCC does not participate in the public health of my state/jurisdiction.	-	-
19	<i>Do you believe the relationship between PCCs and DOHs need to be strengthened nationally?</i>		
	Yes	46	86.79
	No	-	-
	Don't know	7	13.21
20	<i>How interested would your DOH be in a funding opportunity to enhance the interface, collaboration, and possibly data sharing with your PCC(s)?</i>		
	Very interested	31	58.49
	Somewhat interested	15	28.30
	Not interested	1	1.89
	Don't know	6	11.32

¹Out of 53 responses with active collaborations between DOH and PCC.

²Options chosen by ≥ 50% of respondents are highlighted in red text.

Abbreviations: DOH = department of health; PCC = poison control center; OTC = over the counter; Rx = prescription; CBRN = chemical, biological, radiological, nuclear; NPDS = National Poison Data System; IT = information technology.

Table 3. Number of Capacities or Services Provided by PCC to DOH¹

Capacities/Services	N	%
1	4	7.55
2-4	13	24.53
5-9	19	35.85
10-14	14	26.42
15-19	1	1.89
20+	2	3.77

¹Out of 53 responses with active collaborations between DOH and PCC.
Abbreviations: DOH = department of health; PCC = poison control center.

Table 4. Mechanisms for Data Sharing between DOH and PCC¹

Question 13	What mechanisms are in place that allow for data supply/sharing of PCC data with your DOH? (Check all that apply)	N	%
A	Online service provides access to NPDS, which allows DOH staff to query/access/analyze their state specific PCC data	14	30.43
B	A proprietary application is utilized to upload poison center data to a DOH server on a regular basis	13	28.26
C	DOH staff utilize a web portal (not NPDS) or client-based application to access PCC data stored on PCC servers	7	15.22
D	Data is provided by poison center staff upon formal request of health department staff, email, or letter	19	41.30
E	Data is provided by poison center staff upon informal request of health department staff	27	58.70
A & B	Real- or near-real time data access	24	52.17
C, D, & E	Other data access	22	47.83

¹Out of 46 respondents who report receiving data (Question 12).

Abbreviations: DOH = department of health; PCC = poison control center.

Table 5. Characterization of DOH-PCC Relationships by Type of State PCC Coverage¹

Question	Response	1 PCC in state		1 PCC out of state		Multiple PCCs		Fisher's Exact p-value ²
		N=32	%	N=11	%	N=10	%	
7	<i>How would you classify the level of interactivity between your DOH and your PCC?</i>							
A	Minimal phone/email contact; discussions as needed on emergency issues/alerts only	2	6.25	2	18.18	1	10.00	0.5467
B	Periodic phone/email contact on public health issues	24	75.00	7	63.64	7	70.00	0.7664
C	Automated/manual public health alerts from DOH to PCC/PCC to DOH	14	43.75	5	45.45	8	80.00	0.1356
D	Intermittent service commitment	9	28.13	4	36.36	5	50.00	0.4007
E	Ongoing, consistent services provided	15	46.88	6	54.55	3	30.00	0.5068
F	Collaboration with PCCs during disasters when requested	21	65.63	6	54.55	5	50.00	0.6257
G	PCC data are provided to DOH on as-needed, or intermittent basis	15	46.88	9	81.82	3	30.00	0.0446
H	Automated upload of PCC data on real/near real time basis	17	53.13	3	27.27	6	60.00	0.2775
I	Active membership on DOH planning or mitigation teams or committees	15	46.88	2	18.18	3	30.00	0.2134
7	<i>Interactivity Score (weighted responses Question 7)</i>							
Quartile 1	Low interactivity	8	25.00	4	36.36	3	30.00	0.6352
Quartile 2	Some interactivity	6	18.75	2	18.18	4	40.00	
Quartile 3	Moderate interactivity	10	31.25	4	36.36	1	10.00	
Quartile 4	High interactivity	8	25.00	1	9.09	2	20.00	
8	<i>Within your DOH, which of the following staff/programs communicate with and access the PCC?</i>							
A	Infectious disease program	26	81.25	8	72.73	6	60.00	0.2943
B	Environmental health program	26	81.25	6	54.55	6	60.00	0.1463
C	Chemical disease surveillance	19	59.38	4	36.36	5	50.00	0.4036
D	Preparedness	27	84.38	6	54.55	9	90.00	0.0937
E	Immunization staff	2	6.25	1	9.09	1	10.00	1.0000
F	State epidemiologist or designee	17	53.13	7	63.64	6	60.00	0.8618
G	Children/maternal health programs and medical services	3	9.38	2	18.18	2	20.00	0.6125
H	Other	12	37.50	2	18.18	4	40.00	0.4810
9	<i>Indicate the current capacities/services that your PCC provides to your DOH (any response).</i>							
A	Health/Medical information calls	8	25.00	4	36.36	4	40.00	0.5370
B	Vaccine Information/Adverse drug events reporting	5	15.63	5	45.45	2	20.00	0.1708
C	Reportable illness notification	19	59.38	4	36.36	4	40.00	0.3497
D	OTC/Rx Medication adverse drug events	7	21.88	5	45.45	4	40.00	0.2623
E	Commercial products adverse events reporting	9	28.13	5	45.45	4	40.00	0.6061
F	Hazardous materials incidence reporting	12	37.50	9	81.82	4	40.00	0.0362

Question	Response	1 PCC in state		1 PCC out of state		Multiple PCCs		Fisher's Exact
		N=32	%	N=11	%	N=10	%	p-value ²
G	Product support	2	6.25	1	9.09	1	10.00	1.0000
H	Public health calls after hours	10	31.25	7	63.64	2	20.00	0.0821
I	Public health calls during day hours	10	31.25	6	54.55	-	-	0.0183
J	Real time PCC data transmission/upload	17	53.13	3	27.27	4	40.00	0.3467
K	Consultation/reporting for lab data	2	6.25	6	54.55	-	-	0.0009
L	Consults for air/soil/water safety/monitor	6	18.75	3	27.27	2	20.00	0.8907
M	Natural disaster planning	9	28.13	2	18.18	1	10.00	0.5932
N	Disaster/surge capability/support	21	65.63	4	36.36	6	60.00	0.2668
O	Food/waterborne disease calls	13	40.63	6	54.55	4	40.00	0.7360
P	CBRN terrorism preparedness/support	17	53.13	6	54.55	3	30.00	0.4356
Q	Substance abuse support/tracking	11	34.38	4	36.36	4	40.00	1.0000
R	Occupational health surveillance/monitoring	12	37.50	5	45.45	3	30.00	0.8547
S	Public health education	14	43.75	6	54.55	3	30.00	0.5894
T	Pesticide surveillance/monitoring	12	37.50	4	36.36	5	50.00	0.7948
U	Specific agent monitoring	8	25.00	3	27.27	2	20.00	1.0000
V	Other	5	15.63	-	-	7	70.00	0.0003
9	Capacities/Services							
	1	2	6.25	1	9.09	1	10.00	0.3962
	2-4	8	25.00	2	18.18	3	30.00	
	5-9	11	34.38	4	36.36	4	40.00	
	10-14	11	34.38	2	18.18	1	10.00	
	15-19	-	-	1	9.09	-	-	
	20+	-	-	1	9.09	1	10.00	
10	Is your DOH currently involved in special projects not previously identified on this assessment with your PCC?							
	Yes	15	46.88	-	-	3	30.00	0.0050
	No	16	50.00	11	100.00	5	50.00	
	Don't know	1	3.13	-	-	2	20.00	
15	How likely would it be for your DOH to call your PCC for discussion on a public health issue or threat?							
	Very likely	24	75.00	3	27.27	6	60.00	0.0304
	Likely	6	18.75	6	54.55	2	20.00	
	Somewhat likely	1	3.13	2	18.18	2	20.00	
	Unlikely	-	-	-	-	-	-	
	Don't know	1	3.13	-	-	-	-	

Question	Response	1 PCC in state		1 PCC out of state		Multiple PCCs		Fisher's Exact p-value ²
		N=32	%	N=11	%	N=10	%	
16	<i>How likely would it be for your PCC to call your DOH for discussion on a public health issue or threat?</i>							
	Very likely	20	62.50	6	54.55	6	60.00	0.4380
	Likely	7	21.88	4	36.36	1	10.00	
	Somewhat likely	3	9.38	-	-	3	30.00	
	Unlikely	1	3.13	-	-	-	-	
	Don't know	1	3.13	1	9.09	-	-	
17	<i>What do you see as impediments to establishing/maintaining/expanding the PCC-DOH interface?</i>							
A	Lack of dedicated funding available to establish and support such an interface	23	71.88	10	90.91	9	90.00	0.3963
B	Lack of familiarity with the data and how it may be used to support public health	6	18.75	1	9.09	5	50.00	0.0792
C	Political challenges e.g. interpersonal challenges b/w PCC and DOH leadership	5	15.63	2	18.18	1	10.00	1.0000
D	IT limitations between DOH and PCC data management systems	13	40.63	4	36.36	3	30.00	0.9227
E	No central point of lead within DOH on this issue	4	12.50	1	9.09	2	20.00	0.7280
F	Other	9	28.13	1	9.09	4	40.00	0.2870
18	<i>How would you describe the role that your PCC plays in state and local public health?</i>							
	The PCC is indispensable to the public health of my state/jurisdiction.	20	62.50	4	36.36	6	60.00	0.4058
	The PCC is useful to the public health of my state/jurisdiction.	11	34.38	6	54.55	3	30.00	
	The PCC is neither helpful nor harmful to the public health of my state/jurisdiction.	-	-	-	-	-	-	
	I don't know if the PCC is useful to the public health of my state/jurisdiction.	1	3.13	1	9.09	1	10.00	
	The PCC does not participate in the public health of my state/jurisdiction.	-	-	-	-	-	-	

¹Out of 53 responses with active collaborations between DOH and PCC.

²Significant differences at an alpha = 0.10 are highlighted in red text.

Abbreviations: DOH = department of health; PCC = poison control center; OTC = over the counter; Rx = prescription; CBRN = chemical, biological, radiological, nuclear; NPDS = National Poison Data System; IT = information technology.

Table 6. Characterization of DOH-PCC Relationships by Level of Interactivity¹

Question	Response	Interactivity Levels ² (Question 7, weighted score)								Fisher's Exact p-value ³
		Low		Some		Moderate		High		
		N=15	%	N=12	%	N=15	%	N=11	%	
Type/Direction of Communication between DOH and PCC										
10	<i>Is your DOH currently involved in any special projects not previously identified on this assessment with your PCC(s)?</i>									
	Yes	3	20.00	2	16.67	6	40.00	7	63.64	0.0788
	No	12	80.00	8	66.67	8	53.33	4	36.36	
	Don't know	-	-	2	16.67	1	6.67	-	-	
11	<i>Is there one program with overall responsibility for coordinating contracts/fiscal arrangements with the PCC, or do the programs maintain their own programmatic relationships?</i>									
	Individual programs maintain own contacts with PCC	6	40.00	5	41.67	7	46.67	8	72.73	0.5939
	One program is the lead	8	53.33	7	58.33	7	46.67	3	27.27	
	Don't know	1	6.67	-	-	1	6.67	-	-	
15	<i>How likely would it be for your DOH to call your PCC for discussion on a public health issue or threat?</i>									
	Very likely	6	40.00	9	75.00	10	66.67	8	72.73	0.0915
	Likely	4	26.67	3	25.00	4	26.67	3	27.27	
	Somewhat likely	5	33.33	-	-	-	-	-	-	
	Don't know	-	-	-	-	1	6.67	-	-	
16	<i>How likely would it be for your PCC to call your DOH for discussion on a public health issue or threat?</i>									
	Very likely	5	33.33	7	58.33	12	80.00	8	72.73	0.2613
	Likely	5	33.33	3	25.00	1	6.67	3	27.27	
	Somewhat likely	3	20.00	2	16.67	1	6.67	-	-	
	Unlikely	1	6.67	-	-	-	-	-	-	
	Don't know	1	6.67	-	-	1	6.67	-	-	
Type of Data Access										
12	<i>Does your health department access/receive data/case reports from the poison center?</i>									
	Yes	11	73.33	11	91.67	14	93.33	10	90.91	0.1951
	No	4	26.67	1	8.33	1	6.67	-	-	
	Don't know	-	-	-	-	-	-	1	9.09	
13	<i>What mechanisms are in place that allow for data supply/sharing of PCC data with your DOH? (Check all that apply)</i>									
A	Online service provides access to NPDS, which allows DOH staff to query/access/analyze their PCC data	2	13.33	6	50.00	2	13.33	4	36.36	0.1023
B	A proprietary application is utilized to upload PCC data to a DOH server on a regular basis	4	26.67	4	33.33	2	13.33	3	27.27	0.6752

Question	Response	Interactivity Levels ² (Question 7, weighted score)								Fisher's Exact p-value ³
		Low		Some		Moderate		High		
		N=15	%	N=12	%	N=15	%	N=11	%	
C	DOH staff utilize a web portal or client-based application to access data stored on PCC servers	-	-	-	-	3	20.00	4	36.36	0.0115
D	Data is provided by PCC on formal request by DOH	2	13.33	2	16.67	10	66.67	5	45.45	0.0078
E	Data is provided by PCC on informal request of DOH	5	33.33	8	66.67	9	60.00	5	45.45	0.3222
Barriers to Future DOH-PCC Collaborations										
17	<i>What do you see as impediments to establishing, maintaining, or expanding the interface between your PCC and your DOH?</i>									
A	Lack of dedicated funding available to establish and support such an interface	10	66.67	11	91.67	11	73.33	10	90.91	0.3170
B	Lack of familiarity with the data and how it may be used to support public health	3	20.00	2	16.67	5	33.33	2	18.18	0.7793
C	Political challenges e.g. interpersonal challenges b/w PCC and DOH leadership	1	6.67	1	8.33	4	26.67	2	18.18	0.4533
D	IT limitations between DOPH and PCC data management systems	5	33.33	5	41.67	5	33.33	5	45.45	0.9070
E	No central point of lead within DOH on this issue	6	40.00	1	8.33	-	-	-	-	0.0031
F	Other	7	46.67	2	16.67	2	13.33	3	27.27	0.2088
14	<i>If all technological and financial limitations/blocks were removed, how likely would your DOH be to agree to receiving data for use in public health surveillance?</i>									
	Very likely	7	46.67	10	83.33	7	46.67	9	81.82	0.0601
	Likely	6	40.00	1	8.33	1	6.67	1	9.09	
	Somewhat likely	2	13.33	1	8.33	6	40.00	1	9.09	
	Don't know	-	-	-	-	1	6.67	-	-	
19	<i>Do you believe the relationship between PCCs and DOHs need to be strengthened nationally?</i>									
	Yes	12	80.00	10	83.33	14	93.33	10	90.91	0.7449
	No	-	-	-	-	-	-	-	-	
	Don't know	3	20.00	2	16.67	1	6.67	1	9.09	
20	<i>How interested would your DOH be in a funding opportunity to enhance the interface/collaboration/data sharing with your PCC(s)?</i>									
	Very interested	7	46.67	8	66.67	9	60.00	7	63.64	0.8053
	Somewhat interested	5	33.33	3	25.00	4	26.67	3	27.27	
	Not interested	-	-	-	-	-	-	1	9.09	
	Don't know	3	20.00	1	8.33	2	13.33	-	-	

¹Out of 53 responses with active collaborations between DOH and PCC.

²Quartile 1 ranged from 1-7 points; Quartile 2 ranged from 8-10 points; Quartile 3 ranged from 11-13 points; and Quartile 4 ranged from 14-19 points.

Question	Response	Interactivity Levels ² (Question 7, weighted score)								Fisher's Exact p-value ³
		Low		Some		Moderate		High		
		N=15	%	N=12	%	N=15	%	N=11	%	

³Significant differences at an alpha = 0.10 are highlighted in red text.

Abbreviations: DOH = department of health; PCC = poison control center; OTC = over the counter; Rx = prescription; CBRN = chemical, biological, radiological, nuclear; NPDS = National Poison Data System; IT = information technology.

Table 7. Characterization of DOH-PCC Relationships by Number of Capacities/Services Provided by PCC¹

Question	Response	Available Capacities/Services (Question 9 count) ²								Fisher's Exact p-value ³
		Quartile 1 N=17 %		Quartile 2 N=12 %		Quartile 3 N=12 %		Quartile 4 N=12 %		
Interactivity Score	How would you classify the level of interactivity between your DOH and your PCC?									
	Quartile 1 - low interactivity	8	47.06	5	41.67	1	8.33	1	8.33	0.0984
	Quartile 2 - some interactivity	5	29.41	2	16.67	2	16.67	3	25.00	
	Quartile 3 - moderate interactivity	3	17.65	4	33.33	5	41.67	3	25.00	
	Quartile 4 - high interactivity	1	5.88	1	8.33	4	33.33	5	41.67	
8	Within your DOH, which of the following staff/programs communicate with and access the PCC?									
A	Infectious disease program	13	76.47	9	75.00	10	83.33	8	66.67	0.8994
B	Environmental health program	9	52.94	9	75.00	11	91.67	9	75.00	0.1606
C	Chemical disease surveillance	4	23.53	6	50.00	10	83.33	8	66.67	0.0100
D	Preparedness	11	64.71	11	91.67	9	75.00	11	91.67	0.2384
E	Immunization staff	1	5.88	-	-	-	-	3	25.00	0.1056
F	State epidemiologist or designee	6	35.29	7	58.33	7	58.33	10	83.33	0.0864
G	Children/maternal health programs & medical services	1	5.88	2	16.67	-	-	4	33.33	0.0822
H	Other	3	17.65	4	33.33	4	33.33	7	58.33	0.1726
15	How likely would it be for your DOH to call your PCC for discussion on a public health issue or threat?									
	Very likely	9	52.94	7	58.33	10	83.33	7	58.33	0.1429
	Likely	6	35.29	1	8.33	2	16.67	5	41.67	
	Somewhat likely	2	11.76	3	25.00	-	-	-	-	
	Unlikely	-	-	-	-	-	-	-	-	
	Don't know	-	-	1	8.33	-	-	-	-	
16	How likely would it be for your PCC to call your DOH for discussion on a public health issue or threat?									
	Very likely	8	47.06	6	50.00	11	91.67	7	58.33	0.0095
	Likely	6	35.29	1	8.33	-	-	5	41.67	
	Somewhat likely	2	11.76	4	33.33	-	-	-	-	
	Unlikely	1	5.88	-	-	-	-	-	-	
	Don't know	-	-	1	8.33	1	8.33	-	-	

¹Out of 53 responses with active collaborations between DOH and PCC. ²Quartile 1 ranged from 1-4 services; Quartile 2 ranged from 5-7 services; Quartile 3 ranged from 8-10 services; and Quartile 4 ranged from 11-21 services. ³Significant differences at an alpha = 0.10 are highlighted in red text. Abbreviations: DOH = department of health; PCC = poison control center; OTC = over the counter; Rx = prescription; CBRN = chemical, biological, radiological, nuclear; NPDS = National Poison Data System; IT = information technology.

Table 8. Type of Data Available¹ by Level of Collaboration between PCC and DOH²

Question	Response	Real-Time Data		No Real-Time Data		Fisher's Exact
		N=24	%	N=22	%	p-value ³
3	My state is covered by:					
	1 PCC in State	15	62.50	11	50.00	0.0197
	1 PCC outside State	2	8.33	9	40.91	
	Multiple PCCs	7	29.17	2	9.09	
7	How would you classify the level of interactivity between your DOH and PCC?					
	Quartile 1 - low interactivity	6	25.00	5	22.73	0.1705
	Quartile 2 - some interactivity	8	33.33	3	13.64	
	Quartile 3 - moderate interactivity	4	16.67	10	45.45	
	Quartile 4 - high interactivity	6	25.00	4	18.18	
8	Within DOH, which staff/programs communicate with/access the PCC staff for information and data described above?					
A	Infectious disease program	16	66.67	19	86.36	0.1710
B	Environmental health program	19	79.17	15	68.18	0.5077
C	Chemical disease surveillance	13	54.17	14	63.64	0.5616
D	Preparedness	17	70.83	18	81.82	0.4966
E	Immunization staff	2	8.33	2	9.09	1.0000
F	State epidemiologist or designee	11	45.83	14	63.64	0.2528
G	Children/maternal health programs & medical services	1	4.17	4	18.18	0.1783
H	Other	10	41.67	6	27.27	0.3643
9	Indicate the current capacities/services that your PCC provides to your DOH.					
	1-4 services	7	29.17	6	27.27	0.8800
	5-7 services	4	16.67	6	27.27	
	8-10 services	7	29.17	5	22.73	
	11+ services	6	25.00	5	22.73	
10	Is your DOH currently involved in special projects not previously identified on this assessment with your PCC(s)?					
	Yes	11	45.83	5	22.73	0.2945
	No	12	50.00	15	68.18	
	Don't know	1	4.17	2	9.09	
15	How likely would it be for your DOH to call your PCC for discussion on a public health issue or threat?					
	Very likely	16	66.67	12	54.55	0.5371
	Likely	6	25.00	7	31.82	
	Somewhat likely	1	4.17	3	13.64	
	Unlikely	-	-	-	-	
	Don't know	1	4.17	-	-	

Question	Response	Real-Time Data		No Real-Time Data		Fisher's Exact
		N=24	%	N=22	%	p-value ³
16	How likely would it be for your PCC to call your DOH for discussion on a public health issue or threat?					
	Very likely	17	70.83	13	59.09	0.8551
	Likely	4	16.67	6	27.27	
	Somewhat likely	2	8.33	2	9.09	
	Unlikely	-	-	-	-	
	Don't know	1	4.17	1	4.55	
17	What do you see as impediments to establishing, maintaining, or expanding the interface between your PCC and your DOH?					
A	Lack of dedicated funding available to establish and support such an interface	22	91.67	16	72.73	0.1278
B	Lack of familiarity with the data and how it may be used to support public health	4	16.67	5	22.73	0.7178
C	Political challenges e.g. interpersonal challenges b/w PCC and DOH leadership	2	8.33	4	18.18	0.4052
D	IT limitations between DOH/PCC data management systems	7	29.17	8	36.36	0.7549
E	No central point of lead within DOH on this issue	2	8.33	3	13.64	0.6589
F	Other	6	25.00	4	18.18	0.7254
18	How would you describe the role your PCC plays in state/local public health?					
	The PCC is indispensable to the public health of my state/jurisdiction.	16	66.67	11	50.00	0.3695
	The PCC is useful to the public health of my state/jurisdiction.	8	33.33	10	45.45	
	The PCC is neither helpful nor harmful to the public health of my state/jurisdiction.	-	-	-	-	
	I don't know if the PCC is useful to the public health of my state/jurisdiction.	-	-	1	4.55	
	The PCC does not participate in the public health of my state/jurisdiction.	-	-	-	-	

¹Based on Question 13, where real-time data access is based on the options A and B, and non-real-time is based on options C, D, and E.

²Out of 46 responses that indicated 'Yes' on Question 12.

³Significant differences at an alpha = 0.10 are highlighted in red text.

Abbreviations: DOH = department of health; PCC = poison control center; IT = information technology.

Use of Poison Center Data Assessment

CSTE is asking state epidemiologists and representatives of large city health departments to complete this assessment of the relationship between your agency and the poison control center(s) serving your jurisdiction. This assessment is part of a national initiative to improve communication and collaboration between poison centers and local, state and federal public health agencies. The leadership of this initiative includes representatives from CSTE, the American Association of Poison Control Centers (AAPCC), and CDC. The AAPCC has forwarded a similar assessment to their poison control center members. Responses from health departments will be linked to results from poison center(s) serving their state for data analysis. However, in accordance with CSTE policy, identities of individual respondents will be held in complete confidence, and only aggregate assessment results will be included in reports or publications.

Assessment results are expected to indicate the extent of current collaborations, and identify where there are opportunities and barriers to collaboration. These findings should be useful to public health officials and policy makers in developing strategies for improving the partnership between health departments and poison centers including identification of additional functions poison centers could provide, partnerships with new programs within the health department, new methods for data sharing, and best practices.

We ask that you work with program staff in your health department who are most knowledgeable about your poison center (s) to answer all the questions below. Completion of the assessment should take about no more than 25 minutes.

Please submit responses by **May 4, 2012**. Thank you for your support. If you have any questions or concerns, please contact Erin Simms at esimms@cste.org, (770) 458-3811.

*1. Please provide respondent information below.

Name of person completing and submitting response:

Title:

Health Department name:

Email Address:

2. Indicate by job title and program name other individuals who contributed to the responses (e.g. director, environmental health; chief, communicable disease):

*3. My state is covered by: (Choose only one)

- One Poison Center located within my state
- One Poison Center located outside of my state
- Multiple Poison Centers

Please list name of poison center(s).

Use of Poison Center Data Assessment

***4. Does your health department collaborate or interface in any capacity (including receiving data) with your poison center(s)?**

- Yes → skip to Q7
 No
 Don't know → skip to Q12

***5. If your health department does not collaborate/interface at all with your poison center(s), what are the reasons/impediments you believe are interfering with your establishing such an interface? (Check all that apply)**

- Don't have funds to institute a contract
 Management/political decision
 Information technology issues seen as impediment
 Don't see the value of poison center data for our state
 Don't have staff in the health department that would head this effort
 Have tried in past but could not establish an effective collaboration (including personality differences seen as an impediment)
 Other (please list all other reasons)

***6. If your health department does not interface at all with your poison center(s), how willing would your health department be to establish a working relationship?**

- Not interested
 Somewhat willing
 Willing
 Very willing
 Don't know
- } skip to Q14

Please provide reasons for "NOT INTERESTED" or any hesitation in establishing a working relationship.

Use of Poison Center Data Assessment

*7. How would you classify the level of interactivity between your health department and your poison center(s)? (check all that apply)

- Minimal phone/email contact; discussions as needed on emergency public health issues/alerts only
- Periodic phone/email contact on public health issues
- Automated/manual public health alerts from health department to poison center or poison center to health department
- Intermittent service commitment (e.g. active service only when requested during public health emergencies)
- Ongoing, consistent services provided (e.g. handle health department calls consistently; ongoing food poisoning, pesticide, rabies, etc hotline for information, management and tracking)
- Collaboration with poison centers during disasters (poison centers take lead in providing medical/informational disaster support or surge capabilities) when requested
- Poison center data are provided to health department on an as-needed, or intermittently scheduled basis
- Automated upload of poison center data on real/near real time basis
- Active membership on health department planning or mitigation teams or committees
- Other:

*8. Within your health department, which of the following staff/programs communicate with and access the poison center staff for information and data described above? (Check all that apply)

- Infectious disease program
- Environmental health program
- Chemical disease surveillance
- Preparedness
- Immunizations staff
- State Epidemiologist or designee
- Children/maternal health programs and Medical Services
- Other:

Use of Poison Center Data Assessment

***9. Indicate the current capacities/services that your poison center(s) provides to your health department. (In other words, services to the health department over and above service provided to the general public and clinicians as part of their routine poison center activities.) Also, indicate if the health department provides additional funding to the poison center(s) for that service, either currently or in the past (choose only one, either currently funded or funded in the past).**

	Provide Service	Currently Funded	Funded in Past
Health/Medical information calls. Please specify below (AIDS, other medical conditions).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vaccine Information/Adverse drug events reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reportable illness notification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTC/Rx Medication adverse drug events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial products adverse events reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous materials incidents reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health calls after hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health calls during day hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Real time PCC data transmission/upload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultation/reporting for lab data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consults for air/soil/water safety/monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural disaster planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disaster/surge capability/support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food/waterborne disease calls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CBRN terrorism preparedness/support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Substance abuse support/tracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occup health surveillance/monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Use of Poison Center Data Assessment

Pesticide surveillance/monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific agent monitoring. Please specify below (lead, CO, arsenic, etc).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other. Please specify below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If indicated, please specify.

***10. Is your health department currently involved in any special projects not previously identified on this survey with your poison center(s)?**

- Yes
 No
 Don't Know

If yes, please describe:

***11. Is there one program in your health department with overall responsibility for coordinating contracts or other fiscal arrangements with the poison center, or do each of the programs noted above maintain their own programmatic relationships?**

- Don't know
 Individual programs maintain their own contacts/fiscal relationship with the poison center.
 One program is the lead. Name of program:

***12. Does your health department access/receive data/case reports from the poison center?**

- Yes
 No → skip to Q14
 Don't Know → skip to Q14

Use of Poison Center Data Assessment

***13. What mechanisms are in place that allow for data supply/sharing of poison center data with your state(s)/local health department? (Check all that apply)**

- Online, internet based web service provides access to the National Poison Data System (NPDS) which allows department of health staff to query/access/analyze their state specific poison center data.
- A proprietary application is utilized to upload poison center data to a DOH server on a regular basis.
- Health department staff utilize a web portal (not NPDS) or client-based application to access poison center data stored on poison center servers.
- Data is provided by poison center staff upon formal request of health department staff, email or letter.
- Data is provided by poison center staff upon informal request of health department staff.
- Don't know.

***14. If all technological and financial limitations/blocks were removed, how likely would your health department be to agree to receiving data for use in public health surveillance?**

- We are not interested / Unlikely
- Somewhat likely
- Likely
- Very likely
- Don't know

Please provide explanation for "WE ARE NOT INTERESTED / UNLIKELY" or any hesitation in receiving data:

***15. How likely would it be for your health department to call your poison center for discussion on a public health issue or threat?**

- Would never happen / unlikely
- Somewhat likely
- Likely
- Very likely
- Don't know

Please provide reasons for "NEVER HAPPEN / UNLIKELY" or any hesitation in opening a discussion.

Use of Poison Center Data Assessment

***16. How likely would it be for your poison center to call your health department for discussion on a public health issue or threat?**

- Would never happen / unlikely
- Somewhat likely
- Likely
- Very likely
- Don't know

Reasons for "NEVER HAPPEN / UNLIKELY" or any hesitation in opening a discussion:

***17. Please consider all your responses up to this point. What do you see as impediments to establishing, maintaining, or expanding the interface between your poison center (s) and your health department (Check all that apply and provide additional response under other)?**

- Lack of dedicated funding available to establish and support such an interface
- Lack of familiarity with the data and how it may be used to support public health
- Political challenges including interpersonal challenges between poison center and department of health leadership
- Information technology limitations between the health department and poison center data management systems
- No central point of lead within health department on this issue

Other:

***18. How would you describe the role that your poison center plays in state and local public health? (Choose only one)**

- The poison center is indispensable to the public health of my state/jurisdiction
- The poison center is useful to the public health of my state/jurisdiction
- The poison center is neither helpful nor harmful to the public health of my state/jurisdiction
- I don't know if the poison center is useful to the public health of my state/jurisdiction
- The poison center does not participate in the public health of my state/jurisdiction

Other (please describe):

Use of Poison Center Data Assessment

***19. Do you believe the relationship between poison centers and health departments need to be strengthened nationally?**

- Yes
 No
 Don't know

***20. How interested would your health department be in a funding opportunity to enhance the interface, collaboration and possibly data sharing with your poison center (s)?**

- Not interested → skip to Q 22
 Somewhat interested
 Very interested
 Don't know → skip to Q 22

21. If you answered "Somewhat interested" or "Very interested" to the previous question, how would you use this funding opportunity to increase the level of interactivity with your poison center?

22. If there is any additional information you believe is relevant to the discussion of poison center-health department interface, or to your specific situation, we offer the following space to provide additional feedback.