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**The Centers for  
Medicare &  
Medicaid Services  
(CMS) Emergency  
Preparedness  
Resource Inventory  
(EPRI) Pilot Project  
Evaluation Report**

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# List of Acronyms

<b>Acronym</b>	<b>Meaning</b>
AHRQ	Agency for Healthcare Research and Quality
AAR/IP	After Action Report/Improvement Plan
ASPR	Office of the Assistant Secretary for Preparedness and Response
CMS	Centers for Medicare & Medicaid Services
EPRI	Emergency Preparedness Resource Inventory
GAO	U.S. Government Accountability Office
HAvBED	National Hospital Available Beds for Emergencies and Disasters System
HPP	Hospital Preparedness Program
HHS	U.S. Department of Health and Human Services
IT	Information Technology
NDMS	National Disaster Management System
RO	Regional Office
SA	State Survey Agency



# I. Executive Summary

The U.S. Government Accountability Office (GAO) recommended in a June 2005 report that, as a part of establishing a 21st century information technology (IT) surveillance system, every State health department/agency should establish integrated systems between States/agencies that are interoperable between jurisdictions and agencies, providing rapid sharing of health care provider and patient/resident census data with health officials to ensure effective management of resources and a prompt response. This functionality would be especially critical during a large-scale disaster, such as a bioterrorist attack or pandemic flu outbreak. The movement toward electronic health records also provides us with the opportunity to improve access to integrated, interoperable IT systems.

Following the devastation that occurred during Hurricane Katrina and its effects on health care providers, the Centers for Medicare & Medicaid Services (CMS), in September 2007, issued instructions to the State Survey Agencies (SAs) regarding new system requirements to track and issue electronic reports to their CMS Regional Office (RO) regarding the status of all health care providers affected during an emergency. These instructions were repeated in September 2008, reiterating that these SA system requirements are to be fully implemented by July 2009. The specific data elements to be reported cover three categories:

- ***Provider contact information*** – provider’s name, CMS Certification Number (CCN), provider type, address (street, city, ZIP Code, county), and current emergency contact name and their contact information (telephone number, alternate number [e.g., cell phone], e-mail address).
- ***Provider status*** – provider operational status (i.e., evacuated, closed, damaged), for-profit/not-for-profit/government agency status, provider census, available beds, emergency department contact information (name, telephone number, FAX number) if different than provider contact information, emergency department status (if applicable), loss of power, and provider unable to be reached.
- ***Provider plans*** – estimated date for restored operations, source of information, date of the operational status information.

Recognizing that most SAs do not have existing systems with this capability, CMS established an Interagency Agreement with the Agency for Healthcare Research and Quality (AHRQ) to modify and pilot the Web-based Emergency Preparedness Resource Inventory (EPRI) system, developed by their contractor Abt Associates. EPRI already contained many of the capabilities that SAs would need to send emergency requests to providers and compile responses. The overall purpose of the pilot was to design a cost-effective, user-friendly system—dubbed CMS EPRI<sup>1</sup>—that SAs may voluntarily use to meet their provider tracking and reporting requirements. Three SAs—California, Nevada, and Wisconsin—agreed to participate in the pilot.

To guide development of the CMS EPRI system, a pilot workgroup was formed with Department of Health and Human Services representation from the CMS Central and ROs, AHRQ, and the Office of

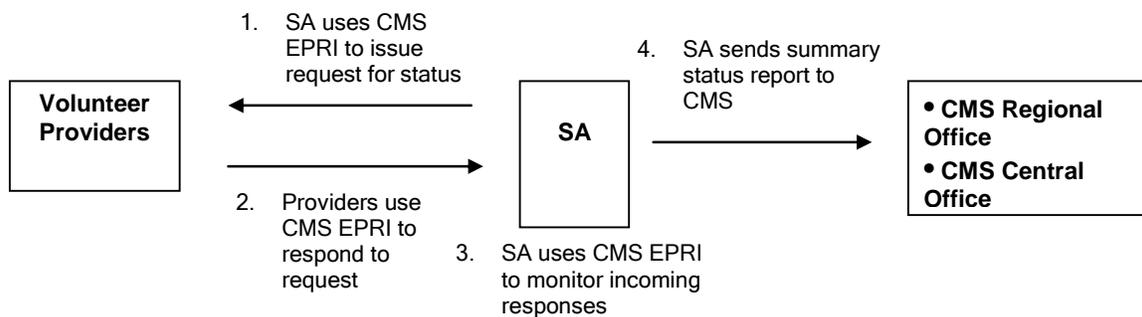
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<sup>1</sup> Any future version of CMS EPRI will have a different name to avoid confusion with the EPRI system.

the Assistant Secretary for Preparedness and Response (ASPR); and the California, Nevada, and Wisconsin SAs. Regular teleconferences were held with the workgroup to review draft designs and offer suggestions for improving the CMS EPRI system during the development process. Volunteer providers of all types were also recruited to participate in the pilot testing phase of this project.

Exhibit 1 depicts the emergency request and response process used in the pilot test. During the pilot test, each of the three participating SAs sent two emergency requests for status information via the CMS EPRI to emergency contact persons at the volunteer providers. The contacts were notified via e-mail to log into the CMS EPRI and provide their status data. SA staff were able to monitor responses and compile a summary report containing all of the response data. In total, 35 providers received two requests and 29 (83 percent) responded to at least one request.<sup>2</sup> The pilot test results indicate that the providers found the CMS EPRI to be effective and easy to use. They relayed that it took approximately 10–15 minutes to gather the necessary information and respond to the emergency request. Following the testing in the three pilot States, After Action Reports/Improvement Plans (AAR/IPs) were completed, containing all of the comments from the participants.

**Exhibit 1: CMS EPRI Emergency Request and Response Process**



**Implementation Options**

CMS and AHRQ have worked closely with ASPR in the development of the CMS EPRI in order to design a system that has the potential to minimize duplicative data entries and is compatible with the National Hospital Available Beds for Emergencies and Disasters (HAvBED) system. While many technical and policy decisions have yet to be made, the work is well underway. The HA vBED system was also developed by AHRQ, and it tracks hospital available bed data during an emergency. All States are participating in ASPR’s Hospital Preparedness Program (HPP) and use either the HA vBED system or a comparable State-based system that meets the HA vBED reporting requirements for the HPP.

<sup>2</sup> Because volunteer providers in the pilot test were under no obligation to respond to CMS EPRI requests and because the requests did not involve an actual emergency, no conclusions should be drawn from the pilot test response rate regarding the extent to which providers will respond during actual emergencies.

Currently, States that do not have IT systems capable of tracking and reporting on the status of all provider types during an emergency have the following options to meet the forthcoming CMS reporting requirements: 1) expand an existing system that collects some portion of the required data on some provider types; 2) create a new system that includes all provider types and collects all the operational status elements; or 3) continue to use a State-based hospital tracking system (if one exists), and create a new system to collect operational status data from other provider types.

If the CMS EPRI system is provided to States for use on a voluntary basis for meeting the forthcoming reporting requirements, they would have an additional option. The CMS EPRI could be offered to the States in four different ways:

1. ***State-based system (download from CMS Web site).*** A State, if it decides to use the CMS EPRI, downloads the system from a CMS Web site, installs it on a State Web server, and sets up the system (creates passwords, loads provider data files, establishes policies and procedures for using it, etc.).
2. ***State-based system (download from contractor Web site).*** A State, if it decides to use the CMS EPRI, either 1) downloads CMS EPRI from a third-party Web site, installs it on a State Web server, and sets up the system or 2) hires a contractor to host and set up the system for them.
3. ***National system (CMS-administered).*** CMS hosts and administers the CMS EPRI on a CMS Web server. States voluntarily sign up to use the system.
4. ***National system (contractor-administered).*** A contractor hosts and administers the CMS EPRI on a third-party Web server. States voluntarily sign up to use the system.

With all four options, a State would issue requests to a set of providers potentially affected by an emergency for operational status data, monitor provider responses to the requests, and compile summary reports of status data to the CMS RO. The options differ in terms of who is responsible for hosting, setting up, and administering the system. Two options would create a State-based CMS EPRI system; the other two options create a single, national CMS EPRI. With the two State-based options, there would be an independent CMS EPRI system and database for each State choosing to use the system. Under the two national system options, there would be one single system and database shared by all the States choosing to use the CMS EPRI.

The two State-based and two national system options differ in terms of cross-State data sharing and aggregation procedures, ease of maintainability and system expansion, and implementation timeframe. With the State-based options, if CMS wished to compile a summary report for more than one State, it would need to be compiled outside of the CMS EPRI by combining data from multiple data sources. A national CMS EPRI could have built-in multi-State reporting capabilities. Similarly, issuing upgrades (for example, additional data elements) under the State-based approach is more complicated compared to the national approach because of the multiple installation sites. The disadvantages of the national CMS EPRI approach are higher costs and longer implementation period. For the pilot test, a State-based architecture was developed and used. Additional development and testing would be needed to create and implement a national CMS EPRI system.

## Next Steps

In April 2009, CMS, AHRQ, and Abt Associates, on behalf of AHRQ, presented the results of the pilot project to the State SAs at the annual CMS Leadership Summit, including a description of the three pilot States' experiences and the system design and functionality. CMS requested that each SA complete a questionnaire regarding their current provider tracking system capability and interest in using the CMS EPRI system to meet the CMS provider status reporting requirements. The questionnaire results would help CMS determine the most effective system implementation approach.

As of summer 2009, all 54 States, territories, and the District of Columbia have submitted their questionnaires detailing their current system functionality and interest in using the CMS EPRI system to track the status of providers during a wide-scale emergency. The results indicate:

- 42 SAs plan to use the CMS EPRI system to meet their provider tracking and reporting requirements
- 3 SAs requested additional system information before making a final decision
- 9 SAs plan to use their State-based systems, which are being modified to gather the necessary data to meet the CMS provider tracking and reporting requirements

As a result of the States' high interest in using the CMS EPRI system, CMS determined the national system implementation approach, as described above, would be the most effective option. ASPR also strongly supports the national system approach and has expressed interest in collaborating with CMS to use the system to increase health care provider situational awareness during national level disaster response operations.

CMS is currently in the process of establishing a contract to complete the national system implementation phase and targets completion by late fall 2009.

To avoid confusion with AHRQ's main EPRI system, CMS will be issuing a new title during the national system implementation and will no longer refer to the system as the "CMS EPRI," the name dubbed during the pilot period.

## II. Project Goals, Background, and Origin

The U.S. Government Accountability Office (GAO) recommended in a June 2005 report that, as a part of establishing a 21st century information technology (IT) surveillance system, every State health department/agency should establish integrated systems between States/agencies that are interoperable between jurisdictions and agencies, providing rapid sharing of health care provider and patient/resident census data with health officials to ensure effective management of resources and a prompt response. This functionality is critical during a large-scale disaster, such as a bioterrorist attack or pandemic flu outbreak. The movement toward electronic health records also provides us with the opportunity to improve access to integrated, interoperable IT systems.

Following the devastation of Hurricane Katrina and its effects on health care providers, the Centers for Medicare & Medicaid Services (CMS), in September 2007, asked the State Survey Agencies (SAs) a series of questions to learn their current capability to track the status of health care providers that were affected during an emergency. The results of this survey indicated that, while some States had robust provider reporting and tracking systems, most did not—especially for long-term and chronic care providers. (See Appendix A for survey findings.)

CMS needs this critical data to effectively monitor the ability of affected providers to continue to provide services that meet their Medicare and Medicaid conditions of participation (CoP), while ensuring the health and safety of patients and residents. CMS also uses this operational status data to help make recommendations to the U.S. Department of Health and Human Services (HHS) regarding the need to declare a public health emergency.

CMS launched a wide-scale emergency preparedness initiative for the purpose of improving coordination and collaboration with the SAs, health care providers, and their partners. While SAs understood the need for timely provider operational status reports during an emergency, they also voiced their concern regarding their experiences in receiving multiple requests for similar data from various HHS agencies during an emergency and the strong potential for time-consuming and duplicative data entries by SAs and provider staff in multiple systems during an emergency situation. CMS assured the SAs that they would collaborate with other HHS agencies and operating divisions to minimize the potential for duplicative data reporting in other systems (e.g., the National Hospital Available Beds for Emergencies and Disasters [HAVBED] system, National Disaster Management System [NDMS], etc.).

While researching strategies to assist SAs in establishing systems for electronic reporting of provider status data, CMS learned about a Web-based resource inventory tool called the Emergency Preparedness Resource Inventory (EPRI) that the Agency for Healthcare Research and Quality (AHRQ) had developed. States, counties, or regions can download the EPRI software free of charge from the AHRQ Web site and use EPRI to compile an inventory of critical resources needed for responding to emergencies. EPRI could also be used to query resource owners in a specified area to determine which resources are currently available. AHRQ was also in the process of upgrading EPRI, via a contract with the original designer of the EPRI system, Abt Associates.

To learn more about EPRI, a CMS representative attended an EPRI advisory panel meeting in February 2007. CMS and AHRQ began discussing possible strategies for using the EPRI system, as

it soon became clear that there was significant overlap between EPRI's capabilities and the SA affected provider status reporting requirements that CMS planned to establish.

In September 2007, CMS issued the FY 2008 *Survey and Certification Mission Priority Document (MPD)*, with new instructions for SAs to establish a system with the capability to track the status of all affected health care providers during an emergency and issue electronic reports to their CMS Regional Office (RO). In September 2008, these instructions were also included in the FY 2009 MPD, reiterating that the SA provider tracking and reporting systems are to be in place by July 2009. The specific data elements to be reported cover three categories:

- ***Provider contact information*** – provider's name, CMS Certification Number (CCN), provider type, address (street, city, ZIP Code, county), and current emergency contact name and their contact information (telephone number, alternate number [e.g., cell phone], e-mail address).
- ***Provider status*** – provider operational status (evacuated, closed, damaged), for-profit/not-for-profit, government agency status, provider census, available beds, emergency department contact information (name, telephone number, FAX number) if different than provider contact information, emergency department status (if applicable), loss of power, and provider unable to be reached.
- ***Provider plans*** – estimated date for restored operations, source of information, date of the operational status information.

In May 2008, CMS and AHRQ established an Interagency Agreement, and the CMS EPRI Pilot Project was launched. The pilot project was led by the CMS Survey and Certification Group. Abt Associates was tasked to modify and pilot test the EPRI tool to determine whether the system could be used to meet the SAs' forthcoming affected provider reporting requirement. It was agreed that for the duration of the pilot, the modified system (named the "CMS EPRI"<sup>3</sup>) would be hosted on Abt's Web site, as CMS systems were not configured to support the necessary supporting software.

The overall goal of the pilot was to create a user-friendly, cost-effective system that SAs may voluntarily use to track and report the operational status data on all health care providers that are affected during an emergency. Within that overall goal, there were three pilot test objectives:

- Adapt the EPRI tool to meet the specific needs of the CMS Central and ROs, SAs, and health care providers to meet the CMS reporting requirement;
- Obtain feedback on the usability of the CMS EPRI system, including procedures for sending and responding to emergency requests; and
- Send two SA emergency status requests to providers with instructions to log into CMS EPRI and respond to the request, in order to test the overall model for sending and responding to an emergency request.

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<sup>3</sup> Any future version of CMS EPRI will have a different name to avoid confusion with the EPRI system.

### III. Preparation for the Pilot Test

To meet the pilot test objectives, a number of tasks were undertaken, including recruiting State SAs and health care providers of all types to participate in the pilot, obtaining clear definitions from CMS system experts regarding the requested data elements, modifying the EPRI tool in collaboration with a variety of stakeholders, conducting the pilot test in the recruited States, and completing AAR/IPs.

CMS recruited three States to participate in the pilot—California, Nevada, and Wisconsin. HHS representatives were also recruited to participate in the pilot, including staff from AHRQ, CMS Central and ROs, and the Office of the Assistant Secretary for Preparedness and Response (ASPR) Central Office and Regional Emergency Coordinators. These representatives, along with staff from the three pilot States, formed a 25-person workgroup that was involved throughout the pilot testing period (see Table 1).

**Table 1: Federal and States Agencies Represented in the CMS EPRI Pilot Workgroup**

Federal Agencies
AHRQ Public Health Emergency Preparedness Research Program
ASPR Office of Preparedness and Emergency Operations
ASPR/Chicago Regional Office
ASPR/Seattle Regional Office
CMS Central Office/Office of Operations Management
CMS Central Office/Survey and Certification Group
CMS/Chicago Regional Office V
CMS/San Francisco Regional Office IX
State Agencies
California Department of Public Health, Licensing and Certification Program, Emergency Preparation and Disaster Response Section
Nevada Department of Health and Human Services, Nevada State Health Division
Wisconsin Department of Health Services, Division of Quality Assurance; Bureau of Technology, Licensing & Education, and Division of Public Health, Wisconsin Hospital Preparedness Program

Formation of the CMS EPRI Pilot Workgroup early in the project was critical to help guide development of CMS EPRI system and prepare the three SAs for the pilot testing. While the overall system requirements were clear, there were numerous possible ways to implement the tracking and reporting requirements. The system had to enable 1) SA staff to send emergency requests to a group of affected providers, 2) providers to respond to the request, and 3) SA staff to produce reports detailing the reported data. The workgroup provided important feedback and suggestions during the development phase in the summer and fall of 2008.

During this development period, a series of biweekly teleconferences were held with the workgroup. These teleconferences afforded opportunities to provide feedback on alternative system designs, so that a more carefully crafted design could be presented to the health care providers once they were recruited for the pilot. Nine teleconferences were held with the workgroup members prior to the pilot testing in the three States. Abt prepared screen shots of possible system designs and presented them to workgroup members during the teleconferences. This was an iterative process, and participants were encouraged to give suggestions and comments, many of which were incorporated into CMS

EPRI. For example, under the assumption that some data elements would not change from one emergency request response to the next, it was suggested that the providers' operational status and bed availability data be retained and displayed for subsequent status requests during the emergency event. This key suggestion was included in the final design and resulted in easing the data entry burden for providers.

In parallel with the biweekly workgroup teleconferences, Abt pre-populated the CMS EPRI database with provider data from the CMS Certification and Survey Provider Enhanced Reports (CASPER) database for the three pilot SAs. For each provider, this data set contains the provider's name, address, provider type, ownership type (for profit, not-for-profit, government agency), CMS Certification Number (CCN), National Provider Information (NPI), and total bed count. Abt augmented these data elements with the geographic coordinates (i.e., latitude and longitude) of each provider, which were obtained by using a public Web site that "geocodes" addresses. Geographic coordinates are useful in the CMS EPRI because they allow emergency requests to be sent to providers within a certain distance of a city. For example, SA staff in California could specify that an emergency request be sent only to selected providers within 50 miles of San Francisco.

A final preparation step prior to the pilot test was to recruit health care providers of all types in each of the three States to volunteer and participate in the system testing. CMS, SA staff, and National and State provider associations collaborated in this effort, emphasizing the need to have participation from multiple provider types (e.g., acute care, long-term care, chronic care, etc.). It should be noted that the CASPER data set did not include an emergency contact person for the provider (i.e., the person who would receive the emergency request message from the CMS EPRI) and their e-mail address. This information subsequently had to be obtained from all volunteer providers and entered into the CMS EPRI system.

Table 2 lists the volunteer health care providers from each State who participated in the CMS EPRI Pilot.

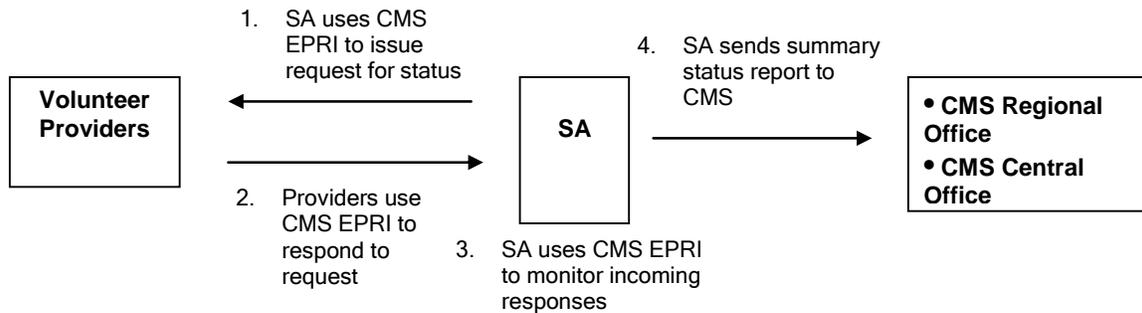
**Table 2: Providers Participating in the CMS EPRI Pilot Test**

<b>Provider Participants</b>		
<b>State</b>	<b>Provider Type</b>	<b>Provider Name</b>
<b>California</b>	Hospital	Alameda County Medical Center
	Hospital	Barton Memorial Hospital
	Hospital	San Ramon Regional Medical Center
	Hospital	Scripps Health
	Hospital	St. Joseph's Hospital
	Hospital	Sutter Roseville Medical Center
	Skilled Nursing Facility Skilled Nursing Facility Skilled Nursing Facility	John C. Fremont Healthcare District, Ewing Wing Manor Care of Palm Desert Stonebrook Healthcare
<b>Nevada</b>	Assisted Living Facility	Atria Summit Ridge
	Assisted Living Facility	Merrill Gardens
	Home Health Agency	Caring Nurses, Inc.
	Hospice	Nathan Adelson Hospice
	Hospital	Progressive Hospital
	ICF/MR	Danville Services of Nevada, LLC
	Skilled Nursing Facility Skilled Nursing Facility	Manor Care Reno TLC Care Center
<b>Wisconsin</b>	Assisted Living Facility	Assisted Living Services-Heritage at Deer Creek
	Assisted Living Facility	Morning Star
	Assisted Living Facility	Valley VNA
	Assisted Living Facility	Creative Community Living Services
	Hospital	Affinity Health System-Mercy Medical Care
	Hospital	Aspirus Wausau Hospital
	Hospital	Ministry Health Care, St. Joseph's Hospital
	ICF/MR	Mendota Mental Health Institute-Central Wisconsin Center
	Skilled Nursing Facility	Clearview Long Term Care and Rehab
	Skilled Nursing Facility	Extencicare Corporation
	Skilled Nursing Facility	Hillview Nursing Home
	Skilled Nursing Facility/Nursing Facility	LindenGrove-Waukesha
	Skilled Nursing Facility	Mount Carmel Health and Rehab
Skilled Nursing Facility	Park Manor	
Skilled Nursing Facility	Park View Health Center	
Skilled Nursing Facility	Ridgewood Care Center	
Skilled Nursing Facility/Assisted Living	Sheboygan Senior Community	

The pilot testing was divided into three phases. In Phase I, the volunteer providers were issued a common CMS EPRI username and password and asked to log in and try responding to emergency requests that Abt had sent. In Phase II, the pilot SA staff were asked to practice creating and sending emergency requests (that did not generate actual e-mails to providers). Finally, in Phase III, SA staff sent emergency requests on two successive days to the participating providers in their State. For each request, CMS EPRI sent an e-mail to the selected providers' emergency contact person, with

instructions to log into CMS EPRI and respond to the request using the provider's actual operational status and bed availability data. Exhibit 2 depicts the emergency request and response process used in the pilot test.

### Exhibit 2: CMS EPRI Emergency Request and Response Process



A one-page evaluation document was prepared for each of the three phases. The Phase I document addressed the ease of logging into CMS EPRI, using the Web site to respond to a request, the meaning of the emergency status data elements, and logging out of the system. The Phase II document asked SA staff about their experiences with logging into the system, creating provider groups, sending emergency requests to providers, and logging out of the system. The Phase III document contained the same questions as described for Phase I. Providers were also asked to offer suggestions for improving CMS EPRI after each phase. All provider comments on the evaluations were included in the AAR/IPs (see Participant Feedback Summary, Appendix D.)

Teleconferences were also held following each phase to further solicit comments and suggestions on how to improve CMS EPRI.

Appendix B of this report contains several system screen shots that provide an overall view of CMS EPRI's features and capabilities. CMS EPRI has three types of users, each of which has access to different system features.

- **Providers** can log into the CMS EPRI, see a list of outstanding emergency requests that have been sent to them, and then respond to an outstanding request. They can also view previously submitted responses to requests.
- **SA staff** can log into the CMS EPRI, see a list of outstanding emergency requests that have been sent to a subset of providers (e.g., one request might have been sent to all providers in the State, while another might have been sent to just hospitals in a particular county). For each request, the SA can see the number of responses that have been received, the specific data elements submitted by any given provider, and a summary report (exportable to a spreadsheet) with all data elements from all the responding providers. In addition, SA staff can create new emergency requests and view/update information about any provider (e.g., the name, e-mail, or phone number of the emergency contact person at a provider). Finally, the SA user can enter data on behalf of a provider, which would occur if the provider were to provide a response via telephone.

- *The system administrator* (a role that Abt played during the pilot testing exercises) can perform all the functions that SA staff can, as well as create user accounts. Designated CMS Central and RO staff, as system administrators, have the capability to review provider's responses, run affected provider reports, etc. In the pilot, each provider's login and password was designed to be their assigned CCN. User accounts were also created for SA staff.

As noted earlier, members of the CMS EPRI Pilot Workgroup contributed to the design of the system during the summer and fall of 2008. For example, the SAs suggested using the providers' CMS Certification Number (CCN) as the providers' login and password to access the CMS EPRI secure Web site, and to include the login and password in the emergency request message to the provider. As the CMS EPRI is only used during emergencies, it was important to make this process as simple as possible for the providers. In addition, the system was further modified after the Nevada and Wisconsin pilot test (but before the California pilot test) based on feedback received from the participating SAs, State Public Health Agencies, and provider staff. Modifications and enhancements made during this period included:

- Development of separate emergency request response pages for hospitals and other provider types.
- The ability to send emergency requests to two different e-mail addresses affiliated with a provider.
- The ability to respond to emergency requests in alternate methods (e.g., BlackBerry, etc.).
- Improved data validation and error checking on the data entry page, including the addition of a calendar user interface to specify date fields.
- Fixing technical glitches identified by Nevada and Wisconsin participants that were not fixed during the Nevada and Wisconsin pilot test.

California providers also made a number of recommendations for improving the system, which will be considered for implementation once it is determined whether the CMS EPRI system should be offered as an option to SAs to meet the forthcoming reporting requirements. These recommendations include:

- Categorize long-term care available beds, rather than only specifying the total number of available beds.
- Add the capability to "cc" individuals on emergency response requests and responses.
- Have the time stamp on emergency status responses reflect the provider's time zone.
- On the hospital data entry page, alert the provider if the number of total available beds does not equal the sum of the available bed categories.

- On the hospital data entry page, add the data element “Patient Holding for Admission” and data elements that distinguish between Total Licensed/Certified Bed and Total Available Beds.
- On the data entry page, add a text box for providers to enter the name of an alternate contact in their facility.
- Allow providers to edit submitted responses within a few hours of the time the response was sent.
- Incorporate text messaging into CMS EPRI, and have text messages notify providers that an emergency status request has been sent.
- Have CMS EPRI send confirmation e-mails to providers indicating that their status updates have been received.
- Change the Census data element on the data entry screen to indicate “Current Census of Total Maximum Capacity.”
- Change the name of the “CMS EPRI” system to eliminate confusion between AHRQ’s current EPRI system.

## IV. Pilot Test Results and Findings

The pilot test with Nevada and Wisconsin began on November 19, 2008, and ended on December 17, 2008. The California pilot test began on January 21, 2009, and ended on February 5, 2009. As noted in the previous section, the key event in the pilot test was when each SA sent emergency requests on two successive days to the participating providers in their State. As shown in Table 3, a high percentage of the participating providers responded to the requests: 6 of the 8 (75 percent) Nevada providers, 15 of the 18 (83 percent) Wisconsin providers, and 8 of the 9 (89 percent) California providers responded to at least one of the two requests that they received. The SAs did not complete any follow up activities with the providers to request completion of the operational status data entries. It should be noted that volunteer providers in the pilot test were under no obligation to respond to CMS EPRI requests, and the requests did not involve an actual emergency. As a result, no conclusions should be drawn from the pilot test response rate regarding the extent to which providers will respond during actual emergencies.

**Table 3: Pilot Test Participation**

Participation in CMS EPRI Pilot Test				
	Nevada	Wisconsin	California	Total
Number of providers who participated in Pilot Tests	8	18	9	35
Percentage of providers who responded to at least one request	75%	83%	89%	83%
Total number of evaluation documents submitted	4	14	14	33 <sup>4</sup>

Providers submitted a total of 33 evaluation documents. On these evaluations, as well as during the debriefing teleconferences, providers repeatedly indicated that the system was easy to use and was not overly burdensome. To understand how long it would take providers to respond to an emergency request, providers were asked to input “real” operational status and available bed data during the pilot tests. Providers from Nevada and Wisconsin pilot tests conveyed that it took about 10–15 minutes to gather data and reply to a request, and providers in California stated that response time took approximately 10 minutes. One provider from California was “able to complete the data entry in under 5 minutes.” Participants conveyed that CMS EPRI enables them to respond to requests easily and quickly.

The submitted evaluations from both pilot tests revealed that providers found the CMS EPRI “simple” and “straightforward.” Providers appreciated that the CMS EPRI hyperlink, their user ID, and password were all included in the e-mails they received from the system alerting them that an emergency request had been issued. One provider who participated in the Nevada and Wisconsin pilot test stated that, “As long as log-in ID and password are included with the request” there was “no problem anticipated” with logging into the system. Another provider concurred that this step “was

<sup>4</sup> The provider’s identity was not specified on one evaluation document from the Nevada and Wisconsin pilot test. This provider’s response is included in the Total column, but not in either the Nevada and Wisconsin column.

very simple.” In regards to the response process, another provider from California had “no problems filling out the form for any of the questions.” While some providers offered some suggestions for improvement, most providers relayed that it is a “simple” and “user friendly system.” One provider did warn that “[s]implicity will be the key to getting the information you want if it ever becomes necessary.” SA and provider staff also felt that the CMS EPRI was a valuable tool for tracking and reporting the status of providers affected by an emergency. One provider commented that CMS EPRI would provide useful information for non-affected providers regarding potential alternate care sites. Overall, the system was well received by providers and SA staff.

A complete listing of providers’ and SA staff’s comments is available in the After Action Report/Improvement Plan Summary (see Appendix C).

## V. Implementation Options

CMS and AHRQ have worked closely with ASPR in the development of the CMS EPRI system in order to design a system that has the potential to minimize duplicative data entries and is compatible with the National Hospital Available Beds for Emergencies and Disasters (HA<sub>v</sub>BED) system. While many technical and policy decisions have yet to be made, the work is well underway. The HA<sub>v</sub>BED system was also developed by AHRQ, and it tracks hospital available bed data during an emergency. All States are participating in ASPR's Hospital Preparedness Program (HPP) and use either the HA<sub>v</sub>BED system or a comparable system that meets the HA<sub>v</sub>BED reporting requirements for the HPP.

Currently, States that do not have IT systems capable of tracking and reporting on the status of all provider types during an emergency have the following options to meet the forthcoming CMS reporting requirements:

- Expand an existing system that collects some portion of the required data on some provider types
- Create a new system that includes all provider types and collects all the operational status elements, or
- Continue to use a State-based hospital tracking system (if one exists), and create a new system to collect operational status data from other provider types.

If the CMS EPRI system is provided to States to use on a voluntary basis for meeting the forthcoming reporting requirements, they would have an additional option.

### Four Possible CMS EPRI Implementation Options

Table 4 summarizes four options for implementing the CMS EPRI, should the system be provided to States to use on a voluntary basis for meeting the forthcoming reporting requirements. With all four options, a State would issue requests to a set of providers for operational status data, monitor provider responses to the requests, and compile summary reports of status data to the CMS RO. The options differ in terms of who is responsible for hosting, setting up, and administering the system. Two options would create a State-based CMS EPRI system; the other two options create a single, national CMS EPRI. With the two State-based options, there would be an independent CMS EPRI system and database for each State choosing to use the system. Under the two national system options, there would be one single system and database shared by all the States choosing to use the CMS EPRI.

*If a State-based CMS EPRI were offered*, States could host the system on their own Web server.<sup>5</sup> Alternatively, States could hire a contractor to host CMS EPRI for them. States would be responsible for setting up their own CMS EPRI system. Set up steps include:

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<sup>5</sup> The hosting requirements are Windows Server 2003 or 2008; IIS 6 or 7; ASP.NET Framework 3.5; and MS SQL Server 2005 or 2008.

- Download the CMS EPRI installation kit from a CMS or a third-party CMS contractor's Web site.
- Pre-load provider data (name, address, provider type, licensed beds) into the CMS EPRI. States could import data from their licensed provider database. An alternate method would be to import the State's provider data from the CMS CASPER system, which was the approach used in the CMS EPRI pilot test.
- Obtain e-mail addresses for emergency contacts (if not included in the licensed provider database), and pre-load into the CMS EPRI.
- Establish policies and procedures for using the system. SAs would need to create policies and procedures, for example when to issue emergency requests to providers and the providers' required reporting time frames.

*If a national CMS EPRI were offered*, the system would be available on the CMS Web site (or a third-party contractor's Web site), and States choosing to voluntarily use the system would merely "sign up."

The two State-based and two national system options differ in terms of cross-State data sharing and aggregation procedures, ease of maintainability and system expansion, and implementation time frame (see table 4). With the State-based options, if CMS wished to compile a summary report for more than one State, it would need to be compiled outside of the CMS EPRI by combining data from multiple State spreadsheets. A national CMS EPRI could have built-in multi-State reporting capabilities. Similarly, issuing upgrades (for example, additional data elements) under the State-based approach is more complicated compared to the national approach, because of the multiple installation sites. The disadvantages of the national CMS EPRI approach are higher costs and a delay in implementation. For the pilot test, Abt developed and used a State-based architecture for the CMS EPRI system. Additional development and testing would be needed to create and implement a national CMS EPRI system.

During the CMS EPRI Pilot Workgroup's final debriefing teleconference, several members strongly endorsed implementation of the CMS EPRI system.

Dennis Tomcyk, with the Wisconsin Division of Public Health stated, "The Wisconsin Hospital Preparedness Program highly recommends the implementation of the CMS EPRI system. Hospitals in FEMA Region V are attempting to achieve interoperability of their alerting and bed reporting systems. Because of significant differences in technology and philosophy, this interoperability may take 2–3 years to achieve. In addition, trying to adapt our own Wisconsin system to mimic the CMS EPRI system would involve a significant financial investment, plus create some privacy issues because there are so many different disciplines using the system. We strongly advise the States to adopt the CMS [EPRI] system due to its efficiency, user-friendliness and low cost of adoption."

**Table 4: CMS EPRI Implementation Options**

<b>Option</b>	<b>Description</b>	<b>Cross-State Data Sharing and Aggregation</b>	<b>System Expansion/ Maintainability</b>	<b>Implementation Time Frame</b>
<b>State-based system (download from CMS Web site)</b>	<p>A State that decides to use CMS EPRI:</p> <ul style="list-style-type: none"> <li>downloads the system from a CMS Web site</li> <li>installs it on a State Web server</li> <li>sets up the system (loads provider data files, establishes user policies and procedures, etc.)</li> </ul>	Accomplished outside of CMS EPRI, via e-mailing spreadsheets	Increased variability as multiple, independent CMS EPRI's are being used	To be determined
<b>State-based system (download from CMS contractor Web site)</b>	<p>A State that decides to use CMS EPRI, either:</p> <ol style="list-style-type: none"> <li>downloads CMS EPRI from a third-party Web site, installs it on a State Web server, and sets up the system</li> </ol> <p>or</p> <ol style="list-style-type: none"> <li>hires a contractor to host and set up the CMS EPRI for them</li> </ol>			
<b>National system (CMS-administered)</b>	<ul style="list-style-type: none"> <li>CMS hosts and administers CMS EPRI on a CMS Web server</li> <li>States voluntarily sign up to use the system</li> </ul>	CMS EPRI would include multi-State reporting capabilities	Reduced variability as single CMS EPRI is being used	To be determined
<b>National system (contractor-administered)</b>	<ul style="list-style-type: none"> <li>A contractor hosts and administers CMS EPRI on a third-party Web server</li> <li>States voluntarily sign up to use the system</li> </ul>			



# I. Next Steps

In April 2009, CMS, AHRQ, and Abt Associates, on behalf of AHRQ, presented the results of the pilot project to the State SAs at the annual CMS Leadership Summit, including a description of the three pilot States' experiences and the system design and functionality. CMS requested that each SA complete a questionnaire regarding their current provider tracking system capability and interest in using the CMS EPRI system to meet the CMS provider status reporting requirements. The questionnaire results would help CMS determine the most effective system implementation approach.

As of summer 2009, all 54 States, Territories, and the District of Columbia have submitted their questionnaires, detailing their current system functionality and interest in using the CMS EPRI system to track the status of providers during a wide-scale emergency. The results indicate:

- 42 SAs plan to use the CMS EPRI system to meet their provider tracking and reporting requirements
- 3 SAs requested additional system information before making a final decision
- 9 SAs plan to use their State-based systems, which are being modified to gather the necessary data to meet the CMS provider tracking and reporting requirements

As a result of the States' high interest in using the CMS EPRI system, CMS determined the national system implementation approach (as described in the preceding section), would be the most effective option. ASPR also strongly supports the national system approach and has expressed interest in collaborating with CMS to use the system to increase health care provider situational awareness during a national level disaster response operation.

CMS is currently in the process of establishing a contract to complete the national system implementation phase and targets completion by late fall 2009.

To avoid confusion with AHRQ's main EPRI system, CMS will be issuing a new title during the national system implementation, and will no longer refer to the system as the "CMS EPRI"—the name dubbed during the pilot period.



## VII. Appendixes

Four appendixes are attached:

- A. State Survey Agency Emergency Preparedness IT Capabilities
- B. CMS EPRI Screen Shots
- C. CMS EPRI Pilot After Action Report/Improvement Plan Summary
- D. Participant User Evaluation Feedback Summary



## **Appendix A: State Survey Agency Emergency Preparedness IT Capabilities**

### **Emergency Preparedness Information Technology (IT) Capabilities Survey Summary Report – January 2007**

#### **BACKGROUND**

As a part of the Centers for Medicare & Medicaid Services (CMS) emergency preparedness effort, the Survey and Certification Group (SCG) issued a questionnaire to all 55 State Survey Agencies (SAs) to assess the current capability of their Information Technology (IT) systems for tracking the status of providers during or following a disruptive event. On September 20, 2006, SCG issued S&C Admin Letter 06-24, inviting SAs to complete the CMS Web-based *IT Provider Tracking Capabilities Survey*. The survey was issued shortly after the anniversary of Hurricane Katrina, when memory of that event was still relatively fresh.

#### **METHODOLOGY AND SAMPLE REPRESENTATION**

Thirty-seven States (67 percent) responded to the survey (see Attachment 1 for list of States). Some States submitted multiple responses as their responsibilities are managed by more than one SA. SAs from all 10 CMS Regions were represented to some degree.

Overall, the SAs provided responses that are considered representative of the Nation—a few SAs with large populations, as well as a large number of medium and smaller States, both on the coast and inland. It is noted that responses were received from several SAs that frequently respond to emergency situations, such as Alabama, California, Florida, Georgia, and Texas. Appendix B provides a full list of the SAs that completed the CMS *Emergency Preparedness IT Capabilities Survey*.

#### **SURVEY QUESTIONS**

Survey questions asked about the SA's capability to track provider status regarding details such as:

- Provider status (closed, damaged, evacuated)
- Patient/resident census
- Contact information
- Special patient/resident needs
- Protection of business assets

See Attachment 2 for a full list of the questions included in the CMS *IT Emergency Preparedness IT Capability Survey*.

## **SURVEY RESPONSE SUMMARY**

The following information provides an aggregate summary of the SAs' responses to key questions included in the survey.

### **Ability to submit electronic provider tracking reports**

25 SAs responded that they have the current IT capability (or by another established entity via MOA or contract) to submit electronic data reports to CMS regarding the status of affected providers during an emergency situation.

### **Provider Patients/Resident Census Tracking**

Eleven of the respondents indicated their SA's IT systems are capable of tracking and reporting patient census electronically.

Those who provided a positive response were asked if their IT system tracked census for both regulated and non-regulated provider organizations that might be able to offer medical care during an event. Five SAs indicated that they track both categories of providers.

### **Provider Status Tracking**

A range of 18–28 different SAs (50 percent or more of the 37 respondents) reported the following provider data elements were tracked in their system:

- Provider name
- Unique provider number
- Provider contact name
- Current location (in case they had to relocate)
- Beds in service
- Special assistance requests to governmental agencies
- Facility closed
- Facility evacuated

A range of 11–14 SAs reported IT capability to track the following provider status details:

- Types of services damaged and unavailable to patients/residents
- Status of emergency power
- Status of regular power
- Status of potable water (gallons per person per day)
- Status of food (days)
- Status of medical supply availability

A range of 5–6 SAs reported IT capability to track the following provider status details:

- Number of beds in damaged zone of facility
- Status of medical supply resupply date
- Status of water and food resupply date
- Equipment damaged report
- Damaged equipment estimated repair date

### **Provider Contact Information**

A range of 18–33 SAs responded that their IT systems currently track the following provider contact information:

- Primary contact name
- Expected provider address
- Primary telephone
- Primary fax
- E-mail address

A range of 1–10 SAs indicated that their IT systems can also track additional contact details, including:

- Backup contact name
- Backup or contingency address
- Backup or contingency telephone
- Backup or contingency fax
- Web site/URL used for emergency situations

### **Clinical Tracking**

Seven SAs reported that they are able to track the clinical requirements or special descriptions of patients or residents. A range 3–6 SAs indicate they are capable of tracking the following items:

- Special needs
- Dementia
- Dialysis
- Insulin dependent
- Oxygen dependent
- Ventilator

## Protection of Survey & Certification Provider Data

21 SAs reported that they have established a contingency plan and will be able to continue submitting reports to CMS should a disruptive event occur.

## Types of Providers Tracked

SAs indicate tracking capability for the following health care providers (in descending order):

Provider Type	SAs with IT Tracking Capability
Skilled Nursing Homes	21
Nursing Homes	19
Hospitals	18
Home Health Agencies	15
Critical Access Hospitals	14
Assisted Living Facilities	14
Hospitals with Swing Beds	13
End Stage Renal Disease (ESRD) Facilities	12
Hospices	12
Rehabilitation Hospitals/Units	11
Rural Health Clinics	11
Intermediate Care Facilities/Persons with Mental Retardation (ICFs/MR)	11
Adult Day Care Programs	8
Home and Community-Based Homes	6
Federally Qualified Healthcare Centers	6
Ambulatory Care Centers	10
Clinical Laboratories	10
Ambulance Services	4
Emergency Departments (separate from Hospitals)	3

## SA and State/County Emergency Management System Integration

14 SAs indicated that they must work with their county or State office of emergency management or operations staff to collect emergency management provider status data. Some SAs indicated that they had no direct information regarding their State's emergency management system, as it is totally managed totally by the State emergency management agency.

## Characteristics of IT Systems

SAs reported that their IT systems included the following characteristics:

Characteristic	SAs with Yes Response
Use a unique provider identifying number?	15
Online systems for health care providers (user accounts & passwords)?	15
Use Oracle?	21
Can your State support Oracle using internal resources?	22
Would you require external help with Oracle (if answered no)?	16
Use “.net” platform?	15
Can your State support “.net” using internal resource people?	15
Would you require external help with “.net” (if answered no)?	16
Are IT system staff located in a central location or disseminated?	
• Central Location	13
• Disseminated	12

## CONCLUSIONS

Based on the responses of 37 SAs, the majority of SAs can submit electronic reports to CMS, providing basic contact and status information regarding affected health care providers. While a few SAs indicate that they have established robust and fully integrated IT emergency management systems that effectively track the status of providers, most rely on simple electronic tools. SAs that report a robust and effective IT emergency management system include Alabama, Florida, New York (based on a preliminary telephone interview, survey information is anticipated in February 2007), and Texas.

The survey responses indicate that improvements to the SAs’ IT provider status tracking capabilities could occur in the following areas:

- Tracking providers’ backup contact information, a factor that can significantly increase the effectiveness of an emergency response and the speed of recovery.
- Tracking patient/resident clinical needs to assist in providing appropriate care when patients/residents are transferred from their “home facility.”
- Tracking providers’ supply needs, such as food, potable water, etc., to assist in a prompt emergency response.
- Developing a robust and integrated State emergency management IT system, in coordination with the State/county emergency management agency to assist in delivering a coordinated and effective response.

## Attachment 1

### SA Responding to CMS Emergency Preparedness IT Provider Tracking Capability Survey

On September 20, 2006, CMS issued S&C Letter 06-24 to all SA Directors, requesting that they complete the *State Agency Emergency Preparedness IT Capability* Web-based survey.

- The purpose of the survey is to assess and analyze SAs' current emergency preparedness IT provider tracking capabilities during a disruptive event.
- 37 States have currently responded to the survey (some States provided multiple responses, as their survey and certification responsibilities are administered by more than one agency.)

Regions/State Survey Agencies	Responded to Survey
<b>REGION 1</b>	
Connecticut Dept. of Public Health	Yes
Maine Dept. of Health & Human Services	Yes
Massachusetts Dept. of Public Health	Yes
New Hampshire Dept. of Health & Human Services	Yes
Rhode Island Office of Facilities Regulation	Did not respond
Vermont Dept. of Disabilities, Aging & Independent Living	Yes
<b>REGION 2</b>	
New Jersey Dept. of Health and Senior Services	Yes
New York State Dept. of Health	Did not respond
Puerto Rico Dept. of Health	Did not respond
US Virgin Islands Dept. of Health	Did not respond
<b>REGION 3</b>	
Delaware Division of Long Term Care Residents Protection Delaware Office of Health Facilities Licensing & Certification	Yes
District of Columbia Department of Health	Did not respond
Maryland Dept. of Health & mental Hygiene	Yes
Pennsylvania Dept. of Health	Did not respond
Virginia Dept. of Health	Yes
West Virginia Dept. of Health & Human Services	Yes
<b>REGION 4</b>	
Alabama Dept. of Public Health	Yes
Florida Agency for Health Care Administration	Yes
Georgia Dept. of Human Resources	Yes
Mississippi State Dept. of Health	Did not respond
North Carolina Dept. of Human Resources	Did not respond
South Carolina Dept. of Health & Environmental Control	Did not respond
Tennessee Division of Health Care Facilities	Did not respond
<b>REGION 5</b>	
Illinois Dept. of Public Health	Yes
Indiana State Dept. of Health	Yes
Michigan Dept. of Community Health	Yes
Minnesota Dept. of Health	Yes

<b>Regions/State Survey Agencies</b>	<b>Responded to Survey</b>
Ohio Dept. of Health	Yes
Wisconsin Dept. of Health & Family Services	Yes
<b>REGION 6</b>	
Arkansas Dept. of Health & Human Services	Yes
Louisiana Dept. of Health & Hospital	Did not respond
New Mexico Dept. of Health	Yes
Oklahoma State Dept. of Health	Yes
Texas Dept. of Aging & Disability Services Texas Dept. of State Health Services	Yes
<b>REGION 7</b>	
Iowa Dept. of Inspections and Appeals	Yes
Kansas Dept. of Health and Environment	Yes
Missouri Dept. of Health and Senior Services Missouri Social Services	Yes
Nebraska Dept. of Health & Human Services	Yes
<b>REGION 8</b>	
Colorado Dept. of Public Health & Environment	Yes
Montana Dept. of Health and Human Services	Yes
North Dakota Dept. of Health	Yes
South Dakota Health Systems Development & Regulation	Yes
Utah Dept. of Health	Yes
Wyoming Office of Health Quality	Yes
<b>REGION 9</b>	
American Samoa Dept. of Health	Did not respond
Arizona Dept. of Health Services	Yes
California Office of Licensure & Certification	Yes
Guam Dept. of Public Health and Social Services	Did not respond
Hawaii State Dept. of Health	Yes
Nevada Dept. of Health and Human Services	Yes
N. Mariana Islands Dept. of Public Health	Yes
<b>REGION 10</b>	
Alaska Dept. of Health and Social Services	Did not respond
Idaho Dept. of Health and Welfare	Yes
Oregon Dept. of Human Resources	Did not respond
Washington State Dept. of Health Washington Dept. of Social & Health Services	Yes

**Attachment 2**  
**CMS IT PROVIDER TRACKING IT CAPABILITY SURVEY QUESTIONS**

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1. \*Please provide the name and other contact information for the person responding to this survey (THE INFORMATION TECHNOLOGY CONTACT PERSON). That information will also allow us to clarify any remaining technical questions.
2. \*Person who completed survey:
3. State Survey Agency
4. \*Address 1:
5. Address 2:
6. \*City/Town:
7. \*State/Province:
8. \*Zip/Postal Code:
9. \*Phone:
10. \*E-mail Address:
11. \*Your CMS Regional Office is:
12. \*Your State Agency is:

In the next series of questions, there are both multiple choice and single responses. There are also text boxes to allow you to expand your responses.

Should you find that these text boxes do not allow sufficient space, please send an e-mail to George Karahalis, Director, Training Staff at [george.karahalis@cms.hhs.gov](mailto:george.karahalis@cms.hhs.gov). Attach documents to this e-mail that will more fully describe your response or that help us understand how your IT system might benefit a better coordinated approach to disaster management for your State Survey Agency or other State Agencies.

We appreciate your thoughtful responses.

13. \*Does your SA have the capability (or by another established entity via MOA, contract, etc.) to submit electronic data reports to CMS regarding healthcare providers' and suppliers' status during an emergency situation?
14. Please use this space to expand on your response above (if needed).
15. \*Does your SA's IT emergency situation IT system currently track patient census?  
\_\_\_\_\_ Yes  
\_\_\_\_\_ No
16. If yes, does the SA system track patient/resident census for both regulated facilities and others that may offer medical assistance during an emergency situation?  
\_\_\_\_\_ We will be expanding our system to track census for all  
\_\_\_\_\_ Other clarifying information?

17. \*What information does your SA collect and track concerning emergency status of providers? Multiple answers okay.

- Provider name
- Unique provider number
- Provider current location (in case had to evacuate to new location)
- Capacity by types of service (Emergency Department, Operating Room(s), Radiology, Lab, Ambulatory Surgical Suite, etc.)
- Beds in service (if applicable)
- Number of beds in damaged zone of facility
- Types of services damaged and unavailable to patients/residents
- Status of emergency power
- Status of regular power
- Status of potable water (gallons per person per day)
- Status of food (days)
- Status of medical supply availability
- Status of medical supply resupply date
- Status of water and food resupply date
- Equipment damaged report
- Damaged equipment estimated repair date
- Special assistance requests and status
- Entire facility closed
- Facility evacuated
- Other, Please Specify

18. \*Does your State Agency's IT system currently track facility contact information?  
\_\_\_\_\_ Yes  
\_\_\_\_\_ No

19. \*If Yes, please indicate which items are tracked:

- Primary contact name
- Backup contact name
- Expected address
- Backup or contingency address
- Primary telephone
- Backup or contingency telephone
- Primary fax
- Backup or contingency fax
- E-mail address
- Web site URL during emergency situations
- Other, please specify

20. \*Does your SA's IT system currently track resident/patient clinical requirements or special descriptions:  
\_\_\_\_\_ Yes  
\_\_\_\_\_ No

21. If yes, which of the items below apply?

- Special needs
- Dementia
- Dialysis

- Insulin dependent
- Oxygen dependent
- Ventilator
- Other, please specify

22. \*Have you established a contingency plan to protect your agency's survey and certification provider data and continue submitting reports to CMS, should a disruptive event interrupt your usual methods?

Please indicate if you will send e-mail with more detail

23. \*Please choose the types of healthcare providers that your SA has the ability to track provider and patient/resident status. Multiple answers are okay.

- Skilled Nursing Homes
- Nursing Homes
- Rehabilitation Hospitals/Units w/in Hospitals
- Hospitals with Swing Beds
- Hospitals
- Psychiatric Hospitals
- Critical Access Hospitals
- Hospice
- Assisted Living Facilities
- Adult Day Care Programs
- Home and Community-Based Group Homes
- Adult Foster Care Programs
- Treatment Foster Homes for Children
- Ambulance Services
- Rural Health Clinics
- Federally Qualified Healthcare Centers
- Ambulatory Care Center (not otherwise listed)
- Case Management Agencies
- Clinical Laboratories
- Durable Medical Equipment, Prosthetics, Orthotics and Supplies
- End Stage Renal Disease (ESRD) Centers
- Emergency Departments (separate from hospitals)
- Psychiatric Residential Treatment Facilities
- Intermediate Care Facilities/Mental Retardation (ICFs/MR)
- Home Health Agencies
- Personal Care Agencies
- Personal Care Homes

24. Other healthcare facilities not mentioned above?

In the series of questions below, please choose the number range that corresponds most closely to the number of each kind of regulated provider listed below.

25. \*Skilled Nursing Homes
26. Rehabilitation Hospital/Units w/in Hospitals
27. \*Nursing Homes

28. \*Hospice
29. \*Psychiatric Hospitals
30. \*Hospitals
31. \*Hospitals with Swing Beds (if not included above)
32. \*Emergency Departments (with holding beds)
33. \*Emergency Departments (with holding beds)
34. Assisted Living Facilities
35. Adult Day Care Programs
36. Home and Community-Based Group Homes
37. Adult Foster Care Programs
38. Foster Homes for Children
39. \*Ambulance Services
40. Rural Health Clinics
41. Federally Qualified Healthcare Centers
42. Ambulatory Care Centers (not otherwise listed)
43. Case Management Agencies
44. Clinical Laboratories (not included in any category above)
45. Durable Medical Equipment, Prosthetics, Orthotics and Supplies Companies
46. End Stage Renal Disease (ESRD) Centers
47. Psychiatric Residential Treatment Facilities
48. Intermediate Care Facility/Mental Retardation
49. Home Health Agencies
50. Personal Care Agencies
51. Personal Care Homes
52. Other healthcare providers not mentioned above?
53. \*Please describe the State Licensure Database that your agency currently uses to track and manage State licensure data for healthcare providers. Please also supply the name of the platform (e.g. Oracle).
54. \*Please describe your SA's use of ASPEN beyond the requirements of federal certification. Please include use for non-certified programs such as assisted living facilities.

55. \*What is the number of internal users (staff) of your existing State licensure database?
56. \*Please list the elements tracked in your State licensure database, including the demographic, licensure, inspection and enforcement related items.
57. \*Does each individual provider have a unique identification number?  
 Yes  
 No

If Yes, Please describe

58. \*Does your agency currently support any online systems for healthcare providers which include managing user accounts - unique user accounts and passwords? Please describe the systems used and the number of external (provider) users supported.  
 Yes  
 No

If Yes, Please describe

59. Does your SA's current system require you to work with county or State Office of Emergency Management or Operations staff to collect provider emergency information?

Additional Comment

60. If yes (and not responded to earlier), please describe below your system or database used to keep emergency-related information, the platform for the database (Oracle, etc), and the number of internal users (staff that utilize the system).
61. If your SA utilizes Oracle, please indicate the version of Oracle used and explain your experience and resources devoted to its use, database administrator, etc.

Additional Comment

62. Do you feel your agency is able to fully support Oracle using internal resources? Please explain.

Additional Comment

63. If you are not certain or answered "no" to the question above, would you require external assistance (vendor) support for Oracle management? Please explain below.

Additional Comment

64. Has your agency developed, maintained, or supported an application built using the Microsoft "dot NET" [.net] platform? If applicable, please provide details of your experience including report writing experience.

Additional Comment

65. Do you feel your SA is able to fully support "dot NET" with internal resources? Please explain.

Additional Comment

66. If you answered "no" to the above question, would you require external assistance to support "dot NET?" Please explain below.

Additional Comment

67. Are there other software or hardware details that we should know about to help us create this baseline of information about emergency situation IT?

68. \*If you have an existing IT system for emergency management, how many total users do you support from the system? Please insert the number.

69. \*Are your IT emergency status system users (staff) located in a CENTRAL LOCATION within the State, or DISSEMINATED around the State?

\_\_\_\_\_ CENTRAL LOCATION  
\_\_\_\_\_ DISSEMINATED around the State  
\_\_\_\_\_ Other, Please Specify

70. If there is other information that you think will help us with our effort, please share that with us using the space below, or attach to an e-mail directed to [george.karahalis@cms.hhs.gov](mailto:george.karahalis@cms.hhs.gov).



## Appendix B: CMS EPRI Screen Shots

The screen shots included in this appendix depict the CMS EPRI system that was used in the California pilot test in January and February 2009. The order of the screen shots illustrates the entire request and reporting cycle: the SA issues an emergency request, providers receive notification of the request, providers login to CMS EPRI and respond to the request, and the SA compiles a summary report with all the reported data.

Exhibit B.1 shows the CMS EPRI Web page that SAs use to create and send an emergency request. Note that, in this Exhibit, the request is being sent to the group of providers called “Pilot Test Participants.” SAs can use the CMS EPRI to create numerous types of subsets of providers (e.g., all providers in the State, all providers in a county, all hospitals within 100 miles of a city).

### Exhibit B.1: SA Creates and Sends an Emergency Request

The screenshot shows a Mozilla Firefox browser window displaying the CMS EPRI website. The address bar shows the URL: <http://cms-ca.epridemo.org/Emergency/Requests.aspx>. The page title is "Emergency Status - Mozilla Firefox". The website header includes the AHRQ and CMS logos, and the text "EPRI | Emergency Preparedness Resource Inventory". The navigation menu includes "Home", "Providers", "Reports", and "Emergency Requests".

The main content area is titled "Emergency Requests" and features a "Create New Emergency Request" dialog box. The dialog box has the following fields:

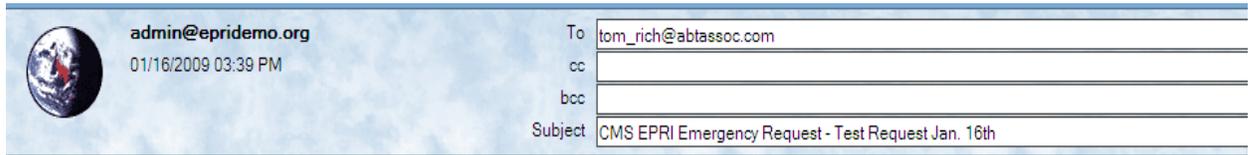
- Request Name:** Test request Jan. 16th
- Message To Recipients:** This is a test of the CMS-EPRI website. Please login to the website and update the status of your facility.
- Provider Group:** Pilot Test Participants

Buttons for "Send" and "Cancel" are visible in the top right of the dialog box. In the background, a table of existing emergency requests is visible, with columns for Date Created, Request Name, and other details.

Date Created	Request Name	Other Details
2/5/2009	B	
2/4/2009	C	
2/3/2009	2-	
1/23/2009	1.	
1/23/2009	1.	
1/23/2009	1.	
1/23/2009	1.	
1/23/2009	1.	
1/22/2009	1.	
1/22/2009	1.	
1/22/2009	1.	
1/22/2009	1.	
1/22/2009	12.22.09 Test Request 3	Practice group   2   0
1/22/2009	12.22.09 Test Request 2	Practice group   2   1
1/22/2009	12.22.09 Test Request 1	Practice group   2   1

When the SA sends the emergency request (by clicking the Send button shown in Exhibit B.1), an e-mail is sent to all the emergency contact persons associated with the providers in CMS EPRI. Exhibit B.2 shows an illustrative e-mail sent by CMS EPRI. Note that the e-mail includes the message entered by the SA, the Web site address, and the provider's login and password, which for the pilot test were set to the providers' CCN.

### Exhibit B.2: E-mail to Provider Sent by CMS EPRI



Please log in to CMS EPRI and respond to an emergency request for information, by clicking the Emergency Request tab and then clicking a Respond link on the Emergency Requests page.

<http://cms-ca.epridemo.org>

Your username: TP116

Your password: TP116

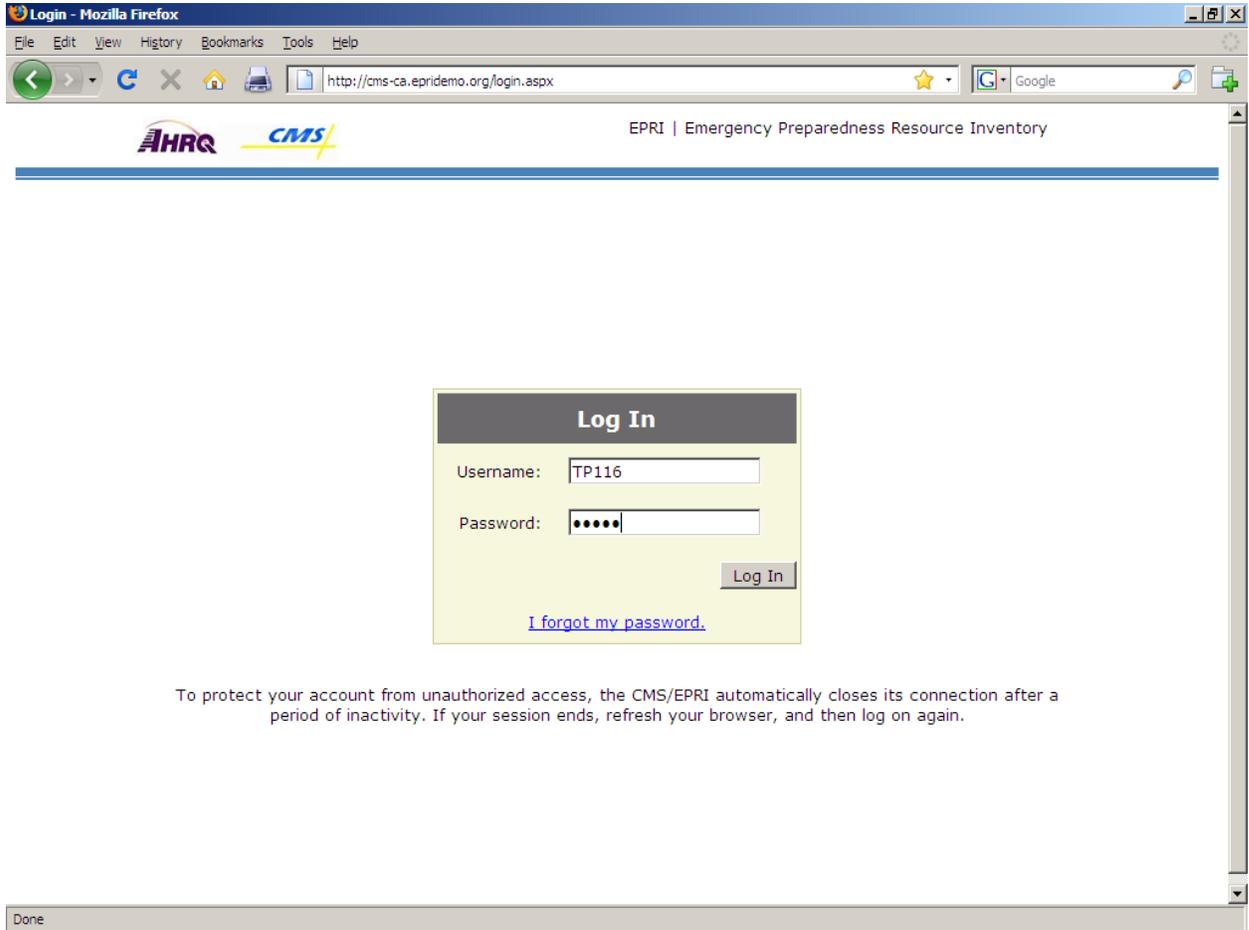
Request name: Test Request Jan. 16th

Message from sender: This is a test of the CMS-CA EPRI website. Please log into the system and update the status of your facility.



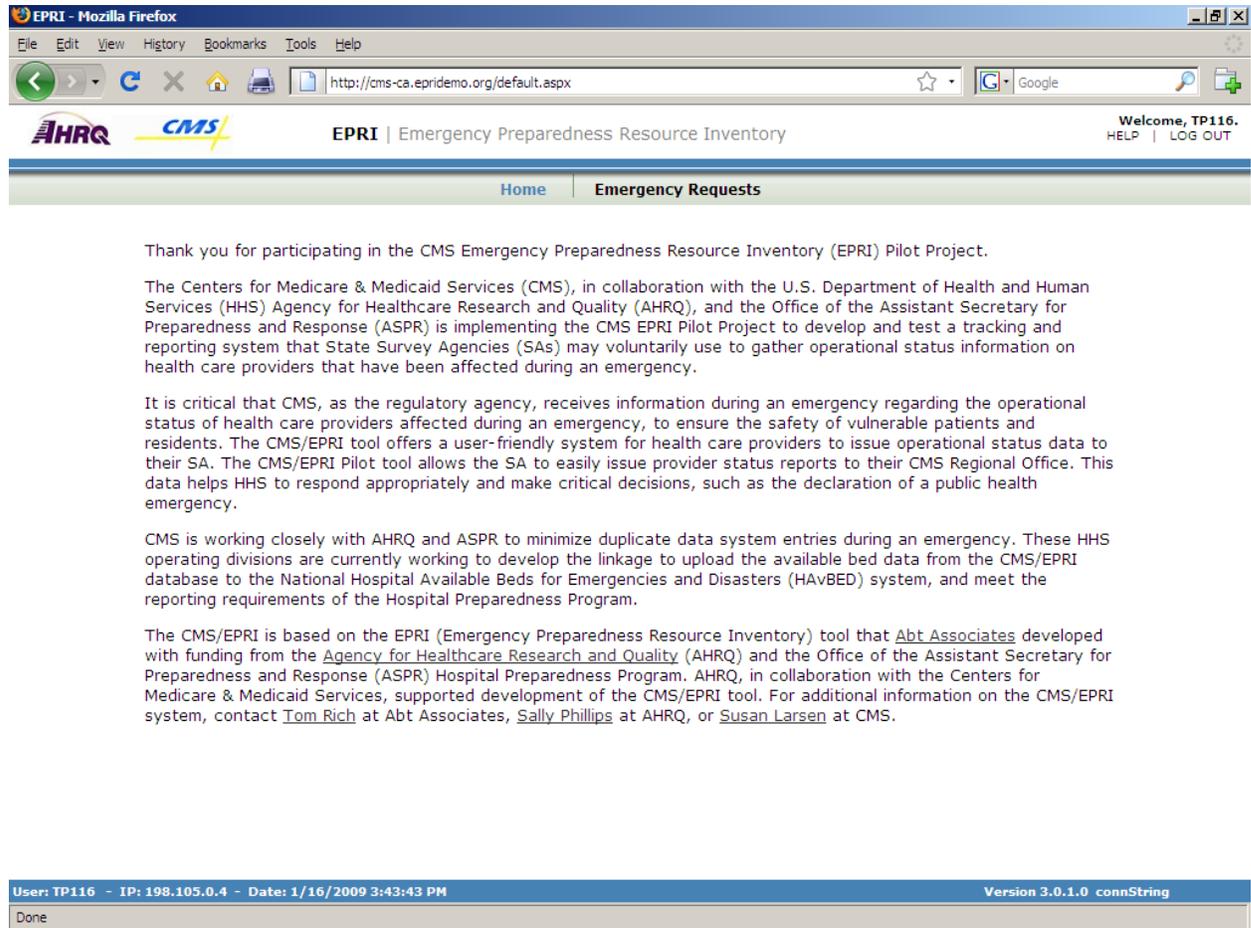
Exhibit B.3 shows the CMS EPRI login page. To respond to the emergency request, the provider logs in using the user name and password contained in the emergency request e-mail (see Exhibit B.2).

### Exhibit B.3: CMS EPRI Login Page



Once the provider enters their login and password, the CMS EPRI home page is displayed (see Exhibit B.4). To respond to the emergency request, the provider clicks the “Emergency Request” tab.

#### Exhibit B.4: CMS EPRI Home Page



Clicking the Emergency Request tab on the home page displays a Web page (see Exhibit B.5) that shows a one-line summary of each outstanding emergency request (i.e., requests to which the provider has not yet responded). In Exhibit B.5, there is only one outstanding request. To respond to this request, the provider clicks the “Respond” link on the right hand side of the one-line summary. Optionally, the provider can view previously submitted responses by clicking the “Response status” drop down list and selecting “Any.”

### Exhibit B.5: List of Outstanding Emergency Requests

The screenshot shows a web browser window titled "Emergency Status - Mozilla Firefox" with the URL <http://cms-ca.epridemo.org/Emergency/Responses.aspx>. The page header includes logos for AHRQ and CMS, and text for "EPRI | Emergency Preparedness Resource Inventory". A user greeting "Welcome, TP116." is visible with links for "HELP" and "LOG OUT".

The main content area is titled "Emergency Requests" and features a search interface with a "Search Names:" text box, a "Response status:" dropdown menu set to "Response needed", and a "Search" button. Below the search area is a table with the following data:

Date Sent	Sent By	Request Name	Sent To	Response Date	Responder	Action
1/16/2009	admin	Test Request Jan. 16th	Test Provider 116			<a href="#">Respond</a>

At the bottom of the page, a status bar displays "User: TP116 - IP: 198.105.0.4 - Date: 1/16/2009 3:44:14 PM" and "Version 3.0.1.0 connString". A "Done" message is visible at the very bottom of the browser window.

Exhibit B.6 shows the data entry page for an illustrative provider that is *not* a hospital. Note that the data elements in the General Provider Information section at the top of the page are all shaded—they are not editable. The data in the shaded fields has been uploaded from the CMS CASPER system. If any information is incorrect, text on the page instructs the provider to contact the SA, who will update the information in their State database, which results in an update in CASPER. The data elements below the General Provider Information show the specific emergency contact, status, and bed availability data request. As shown on the page, the data values submitted on this provider’s previous submission are displayed, so that the provider need only enter values that have changed.

**Exhibit B.6: Provider Data Entry Page (All Providers Except Hospitals)**

The screenshot shows a web browser window titled "Inventory - Mozilla Firefox" with the URL "http://cms-ca.epridemo.org/Emergency/CmsInventory.aspx?id=43&id=24351". The page content is titled "Emergency Status Request: Test Provider 116".

**General Provider Information** (shaded fields):

- Provider's Name: Test Provider 116
- CMS Certification Number (CCN): 619619
- National Provider Identifier (NPI): 88949
- Ownership Type: for profit
- Total Number of Beds: 168

**Provider Address** (shaded fields):

- Street Address: 55 Wheeler St
- City: Agoura Hills
- State: California
- ZIP Code: 90002
- County: Madera

If the general provider information and/or address details are incorrect, please contact your State Survey Agency.

**Your response submitted on 1/16/2009 is shown on this page. Edit the responses, as appropriate.**

**Emergency Contact** (shaded fields):

- Contact Name: Tom Rich
- Telephone: 7894561236
- Alternate Telephone: (empty)

**Status** (shaded fields):

- Operational Status: Fully Operational
- Explain: (empty)
- Evacuation Status: No Evacuation
- Provider Census: 114
- Total Loss of Power: No

**Available Beds** (shaded field):

- Total Available Beds: 9

Buttons: Submit, Cancel

Only a single bed availability data element is shown in Exhibit B.6 because that provider is not a hospital. If the provider is a hospital, additional data elements are requested, including eight different bed availability categories (corresponding to the current HAvBED system categories), the emergency department contact person, and the emergency department status. Exhibit B.7 shows the bottom portion of the data entry page for a hospital. Exhibit B.7 also shows the Estimated Date and Time for Restored Operations data elements, which are requested if the provider status is not Fully Operational. The provider clicks “Submit” to transmit the data to the SA.

### Exhibit B.7: Provider Data Entry Page (If Provider is a Hospital)

The screenshot displays a web browser window titled "Inventory - Mozilla Firefox" with the URL <http://cms.epridemo.org/Emergency/CmsInventory.aspx?id=33&id=1260>. The form contains the following data:

- Alternate Telephone: 555-555-5555, 444-444-4444
- power not available in the west wing
- Estimated Date and Time of Day for Restored Operations: 11/30/08, Unknown
- Evacuation Status: Partial Evacuation Completed
- Explain: west wing evacuated
- Provider Census: 74
- Total Loss of Power: No
- Provider Unable to be Reached: No

**Available Beds**

Adult Intensive Care	Medical/Surgical	Burn or Burn ICU	Pediatric ICU
3	25	1	0
Pediatrics Medical/Surgical	Psychiatric	Negative Pressure/Isolation	Operating Rooms
8	4	0	2

**Emergency Department**

- Contact Name: John Smith
- Telephone Number: 111-111-1111
- Fax Number: 222-222-2222
- Status: Closed

Buttons: Submit, Cancel

Footer: User: centennial - IP: 198.105.0.4 - Date: 11/12/2008 4:39:59 PM Version 3.0.1.0

The SA is able to monitor incoming responses to the emergency request that was issued. Exhibit B.8 shows a report that summarizes key data elements from the responses, including for providers that were included in the emergency requests but who have not yet responded. All the reported data can also be exported to a spreadsheet, which the SA can easily submit to their CMS RO.

**Exhibit B.8**

The screenshot shows a web browser window displaying the EPRI Emergency Summary report. The browser title is "EPRI - Mozilla Firefox" and the address bar shows "http://cms-ca.epridemo.org/Emergency/EmergencySummary.aspx?id=74". The page header includes logos for AHRQ and CMS, and the text "EPRI | Emergency Preparedness Resource Inventory". A navigation menu has "Home", "Providers", "Reports", and "Emergency Requests".

The main content area features a filter section: "Show status of: Pilot Test Participants based on:" with a dropdown menu set to "2-3-09 Pilot Test request" and an "Output:" dropdown set to "Web Page".

Below the filter is a data table with the following columns: Provider Name, Date of Response, Time of Response, Operational Status, Restored Operations Date, Restored Operations Time, Evacuation Status, Total Power Loss, Total Bed Count, Provider Census, Beds - Total Available, Beds - Adult Intensive Care, Beds - Medical/Surgical, Beds - Burn or Burn ICU, Beds - Pediatric ICU, Beds - Pediatric Medical Surgical, Beds - Psychiatric, Beds - Negative Pressure Isolation, and Beds - Operating Rooms.

Provider Name	Date of Response	Time of Response	Operational Status	Restored Operations Date	Restored Operations Time	Evacuation Status	Total Power Loss	Total Bed Count	Provider Census	Beds - Total Available	Beds - Adult Intensive Care	Beds - Medical/Surgical	Beds - Burn or Burn ICU	Beds - Pediatric ICU	Beds - Pediatric Medical Surgical	Beds - Psychiatric	Beds - Negative Pressure Isolation	Beds - Operating Rooms
Alameda County Medical Center	2/3/2009	1:19 PM	Fully Operational			No Evacuation	No	613	126	17	4	11	0	0	0	0	1	1
Barton Memorial Hospital	2/3/2009	1:08 PM						62	0	6	1	4	0	0	0	0	0	4
John C. Fremont Healthcare District, Ewing Wing	2/3/2009	2:15 PM						16	0	0								
Manor Care of Palm Desert	2/3/2009	12:46 PM	Fully Operational			No Evacuation	No	0	150	28								
San Ramon Regional Medical Ctr	2/3/2009	1:17 PM	Fully Operational			No Evacuation	No	123	84	39	4	37	0	0	0	0	4	8
Scipps Memorial Hospital - Endinitas	2/3/2009	12:52 PM	Limited Operation	2/5/2009		Pending Evacuation	No	138	138	6	3	2	0	0	0	0	1	14
St Joseph Hospital	2/3/2009	12:46 PM	Fully Operational			No Evacuation	No	140	0	0	0	0	0	0	0	0	0	0

## Appendix C: FY 2009 CMS Survey and Certification (S&C) Mission Priority Document (MPD): Section 12. Emergency Preparedness

**12. Emergency Preparedness:** SAs operate in a larger context of State emergency preparedness and often play important roles within a State Incident Command System (ICS) that extend far beyond Federal survey and certification functions. In such cases States have cost accounting systems in place to allocate expenses properly and ensure that the cost of non-Federal activities is not charged against Federal accounts. Nonetheless, some emergency preparedness and emergency response activities are vital to the effective conduct of Federal quality assurance and, as such, are properly included in the State's S&C mission, priority, and budget document.

The items identified below are key elements that have been developed based on the recommendations of the S&C Emergency Preparedness Stakeholder Communication Forum. While we realize many States already have very well-developed systems that far exceed the elements described here, we appreciate that for some States, enhanced IT reporting capabilities will require additional time to implement. States should therefore plan to establish capability for the electronic tracking and reporting capability no later than July 1, 2009.

To assist States in this effort, CMS is currently piloting, with the support of the HHS Agency for Healthcare Research and Quality (AHRQ), a template of the Emergency Preparedness Resource Inventory (EPRI) database is being developed to meet the CMS provider tracking and reporting requirements for SAs. States will be able to download and utilize the EPRI database software at no cost. An evaluation of the CMS EPRI Pilot findings will be issued at the end of the pilot period.

### (a) SA Continuity of Operations (COOP)

The SA maintains a coordinated emergency Continuity of Operations Plan (COOP), updated at least annually, which is submitted to the CMS RO. The COOP addresses:

- Essential S&C business functions, including:
  - Provision of prompt responses to complaints regarding patients/residents who are in immediate jeopardy.
  - Provision of monitoring and enforcement of health care providers. Even in widespread or significant disasters where reduced S&C activities may occur, key activities (such as complaint investigations, provider communications, communication with CMS regarding any advisable adjustment to previously-imposed enforcement actions that might impede evacuee placement, etc) will still need to occur in order to ensure the health and safety of patients and residents.
  - Conducting timely surveys or re-surveys in the aftermath of a disaster.
- Identification of strategies to ensure maintenance and protection of S&C critical data.
- A program of COOP exercises, conducted at least annually by designated staff to ensure State, Regional, Tribal, and Federal responsiveness, coordination, effectiveness, and mutual support.

**(b) Effective Communication & Coordination with CMS**

- **Point of Contact:** A State S&C emergency point of contact (and back-up) is available 24 hours per day and 7 days per week to the CMS RO when the State declares a widespread disaster. The contact:
  - Coordinates State S&C activities with CMS,
  - Addresses questions and concerns regarding S&C essential functions,
  - Provides status reports, and
  - Ensures effective communication of Federal S&C policy to local constituencies (see details below).

These functions may be fulfilled by a person within the State ICS who has been clearly assigned to communicate with CMS and provide data for S&C functions.

- **Policy Communications:** The SA maintains capability for prompt dissemination of CMS policy and procedures to surveyors, providers, and affected stakeholders. During a disaster, the capability is operative 24/7. The SA capability includes back-up communication strategies, such as Web sites and hotlines, and emergency capability that enable functional communication during energy blackouts. A designated person is available for responding to health care providers’ questions and concerns related to Federal survey and certification. These functions may be performed by a person within the State ICS who has been clearly assigned to perform these functions.
- **Information and Status Reports:** The SA or the State ICS maintains capability and operational protocols to provide the CMS RO with a) State policy actions (such as a Governor’s emergency declarations or waiver of licensure requirements) and b) an electronic provider tracking report, upon request, regarding the current status of health care providers affected by a disaster. The capability includes:

Provider Contacts	Provider Status	Provider Plans
<ul style="list-style-type: none"> <li>• Provider’s name</li> <li>• CMS Certification Number (CCN)</li> <li>• National Provider Number (NPI)</li> <li>• Provider type</li> <li>• Address (Street, City, ZIP Code, County)</li> <li>• Current emergency contact name</li> <li>• Contact information (telephone number and alternate [e.g., cell phone] and e-mail address)</li> </ul>	<ul style="list-style-type: none"> <li>• For profit or not-for-profit agency, or government agency status</li> <li>• Provider status (evacuated, closed, damaged)</li> <li>• Provider census</li> <li>• Available beds</li> <li>• Emergency department contact information (name, telephone number, FAX number) if different than provider contact information</li> <li>• Emergency department status (if applicable)</li> <li>• Loss of power and/or provider unable to be reached</li> </ul>	<ul style="list-style-type: none"> <li>• Estimated date for restored operations</li> <li>• Source of information</li> <li>• Date of the status information</li> </ul>

**(c) Recovery Functions**

Recovery functions will be determined on a case-by-case basis between the SA and the CMS RO. In the context of survey & certification, recovery functions represent those activities that are required to ensure that a provider has re-established the environment and systems of care necessary to comply with Federal certification requirements.

**(d) Funding**

We believe that, for many or most States, the types of actions that we are specifying are currently underway or in place based on State-level initiatives and/or prior informal arrangements between States and ROs formed on an ad hoc basis. In many of these cases, implementation costs will be very low. We therefore encourage SAs to seek other available sources of emergency services funding or grants to promote emergency preparedness wherever possible, and to share information and expertise with other States.

To the extent that routine work cannot be accomplished during a significant disaster, unobligated S&C funds may be available to provide fiscal resources that otherwise could not be budgeted for the above activities. Depending on the nature of the disaster, the CMS RO may also authorize expenditures for certain recovery efforts that would not normally be covered, when such activities advance the subsequent recovery and the continued or resumed certification of providers. An example is the conduct of pre-survey site visits in the aftermath of a disaster, prior to the reopening of a health care facility, particularly when the result of the site visit is a conclusion that a subsequent survey is not required (such as a finding that damage is so light that a new life-safety code survey is not needed).

If a very significant emergency occurs in a State and it calls upon extra SA resources to meet the resulting needs, the State can submit a supplemental budget request, which we will consider for priority funding depending on the severity and extent of the emergency.

## Appendix D: CMS EPRI Pilot After Action Report/Improvement Plan Summary

### Communication Testing Exercises in California, Nevada, and Wisconsin

The following information summarizes the CMS EPRI After Action Report/Improvement Plans, following the pilot communication testing exercises in Wisconsin, Nevada, and California.

**Brief overview of the exercises:** From November 19, 2008, through December 15, 2008, State Survey Agencies (SAs) and selected voluntary health care providers in Nevada and Wisconsin participated in a pilot test exercise of the CMS Emergency Preparedness Resource Inventory (EPRI) system, which is a modified version of the EPRI resource inventory system developed for AHRQ. The California SA and voluntary health care providers participated in a similar pilot test exercise from January 21, 2009, through February 5, 2009. This system is being pilot tested to determine if it is a viable alternative for SAs to use to fulfill CMS's forthcoming requirement to report provider status during an emergency. SA staff used the system to create and send emergency requests to participating providers. Providers used the system to respond to the requests.

**Objectives of the exercises:** The overall goal of the pilot is to create a user-friendly, cost-effective system that SAs may voluntarily use to track operational status data on all health care provider types that are affected during an emergency. Within this goal, there were three objectives:

- Adapt the EPRI tool to meet the specific needs of the CMS Central and Regional staff, SAs, and health care providers to meet the CMS reporting requirement.
- Obtain feedback on the usability of the CMS EPRI system, including procedures for sending and responding to emergency requests.
- Send two emergency requests to providers, with instructions to log into CMS EPRI and respond to the request.

**Major strengths identified during the exercises:** Overall, SA and provider staff found the CMS EPRI system easy to use. Providers believed that responding to emergency requests was not too burdensome—they estimated it would take no more than 10-15 minutes to respond to a request. One California provider indicated the entry took less than 10 minutes.

**Primary areas for improvement, including recommendations:** Pilot test participants made a number of suggestions and recommendations throughout the pilot test period. In particular, the providers noted the importance of coordinating CMS EPRI reporting with other State and Federal reporting requirements and systems. The suggestions and recommendations need to be incorporated into an overall plan for transforming the pilot test Web site into a Web site that can be made available to any State that wants to use it; can operate 24/7 if necessary; and meets the needs of providers, SAs, and CMS Central and RO staff.

**Success of overall exercise:** The testing exercises in all three pilot States were determined to be successful, in that emergency requests were e-mailed to volunteer providers; the providers were able to log in and respond to the request; and the system was able to generate a summary file with all responses.

**Exercise Purpose and Design:** Beginning in July 2009, all State SAs will be required to submit electronic reports regarding the current operational status of health care providers that have been affected during an emergency. Some States have existing electronic reporting systems that can be used to meet this requirement; most do not. CMS needs this critical data to effectively monitor the ability of affected providers to continue meeting their Conditions of Participation. The operational status data is also used by the U.S. Department of Health and Human Services (HHS) to determine whether a public health emergency declaration is necessary. CMS EPRI, an adaptation of the EPRI inventory tool developed by Abt Associates for AHRQ, is being developed and pilot tested to determine if it should be offered as a possible system that States can use to meet the CMS reporting requirement. Three States agreed to participate in a pilot test of CMS EPRI: California, Nevada, and Wisconsin. CMS and the SA staff in the three pilot States recruited health care providers to voluntarily participate in the pilot. Providers participating in the pilot represented a range of provider types, including hospitals, hospices, home health agencies, intermediate care facilities for persons with mental retardation (ICF/MR), skilled nursing facilities, and assisted living facilities. Pilot test participants were asked to comment on the overall design of CMS EPRI and test various system features. The pilot test culminated with each SA sending two emergency requests to the voluntary providers. Providers were instructed to log into CMS EPRI and respond to the request by entering current operational status data.

**Exercise Objectives and Goals:**

- **Goal:** Create a user-friendly, cost-effective system that SAs may voluntarily use to track operational status data on all health care provider types that are affected during an emergency.
- **Objective:** Adapt the EPRI tool to meet the specific needs of CMS Central and Regional staff, SAs, and providers to meet the CMS reporting requirement.
- **Objective:** Obtain feedback on the usability of the CMS EPRI system, including procedures for sending and responding to emergency requests.
- **Objective:** Send two emergency requests to providers with instructions to log into CMS EPRI and respond to the request.

**Type of Exercise:** Communication Exercise

**Mission Area:** Response

**Scenario:** No specific scenario (e.g., flood, hurricane) was necessary for this exercise. However, Wisconsin was under a winter storm watch and used that scenario for testing purposes, and California used a wildfire scenario. Providers were asked to respond to emergency requests issued by their SA for operational status information stemming from the scenario incident.

**Location:** Pilot test participants were State SA and voluntary health care provider staff from Nevada, Wisconsin, and California (see below). Participants joined the exercise from the office locations; they did not gather at a single location for the exercise.

**Partners:** Pilot test partners included:

- Centers for Medicare & Medicaid Services
- Agency for Healthcare Research and Quality
- Office of the Assistant Secretary for Preparedness and Response
- Abt Associates Inc.

**Participants: Participating organizations and agencies included:**

- Nevada
  - Bureau of Licensure & Certification, Nevada State Health Division, Nevada Department of Health and Human Services
  - The following health care providers: Danville Services of Nevada, LLC; Atria Summit Ridge; Manor Care Reno; Nathan Adelson Hospice; Merrill Gardens; Progressive Hospital; Caring Nurses, Inc.; TLC Care Center
- Wisconsin
  - Bureau of Technology, Licensing and Education, Division of Quality Assurance, Wisconsin Department of Health Services
  - Hospital Emergency Preparedness Program, Division of Public Health, Wisconsin Department of Health Services
  - The following health care providers: Sheboygan Senior Community; Mount Carmel; Morning Star; Aspirus Wausau Hospital; Hillview Nursing Home; Affinity Health System-Mercy Medical Center; Creative Community Living Services Inc.; Clearview Long Term Care & Rehab; LindenGrove-Waukesha; Park Manor; Assisted Living Services Heritage at Deer Creek; Ridgewood Care Center; Valley VNA; Park View Health Center; Mendota Mental Health Institute-Central Wisconsin Center; St. Joseph's Hospital; Extencicare Corporation
- California
  - Licensing and Certification Program, California Department of Public Health
  - The following health care providers: Alameda County Medical Center; Barton Memorial Hospital; John C. Fremont Healthcare District, Ewing Wing; Manor Care of Palm Desert; San Ramon Regional Medical Center; Scripps Memorial Hospital-Encinitas; St. Joseph's Hospital; Stonebrook Healthcare; Sutter Roseville Medical Center

**Total Number of Participants:**

- Players 38
- Victim role players 0
- Controllers 1
- Evaluators 5
- Facilitators 2
- Observers 7

**Exercise Evaluation:**

- Three participant evaluation feedback documents for each of the three phases of the pilot test were developed. The participants submitted their completed evaluations to CMS.
- Three debriefing conference calls were held to allow for additional participant feedback.
- Participants were encouraged to e-mail additional evaluative comments to CMS or Abt.
- CMS EPRI compiled statistics on the number of responses to each emergency request.

**Exercise Events Synopsis:**

- **Nevada and Wisconsin Exercise Events:**
  - **November 19, 2008:** Conference call with pilot test participants to introduce them to the pilot project, describe their involvement, and present and discuss the overall CMS EPRI design.
  - **November 20, 2008:** Phase I of the pilot begins: a CMS EPRI login and password are given to providers to test CMS EPRI.
  - **December 2, 2008:** Conference call with pilot test participants to de-brief on Phase I.

- **December 5, 2008:** Phase II of the pilot begins: Nevada and Wisconsin SA staff are asked to test the CMS EPRI Web pages for creating provider groups and sending emergency requests.
- **December 15, 2008:** Phase III of the pilot begins: Nevada and Wisconsin SA staff each send an emergency request to the providers in their State. SA staff send a second emergency request to providers on December 16, 2008.
- **December 17, 2008:** Conference call held with pilot test participants to debrief on all three phases of the Pilot Test.
- **California Exercise Events:**
  - **January 21, 2009:** Conference call with pilot test participants to introduce them to the pilot project, describe their involvement, and present and discuss the overall CMS EPRI design
  - **January 22, 2009:** Phase I of the pilot begins: a CMS EPRI login and password are given to providers to test CMS EPRI.
  - **January 23, 2009:** Phase II of the pilot begins: CA SA staff is asked to test the CMS EPRI Web pages for creating provider groups and sending emergency requests.
  - **February 2, 2009:** Conference call with pilot test participants to de-brief on Phase I.
  - **February 3, 2009:** Phase III of the pilot begins: California SA staff sent an emergency request to the providers in their State. SA staff sent a second emergency request to providers on February 4, 2009.
  - **February 5, 2009:** Conference call held with pilot test participants to debrief on all three phases of the Pilot Test.

**Observation of outcomes:**

- **Objective:** Adapt the EPRI tool to meet the specific needs of the CMS Central and ROs, SAs, and providers to meet the CMS reporting requirement.
- **Strength:** The EPRI tool developed for AHRQ served as an effective platform for the CMS EPRI system.
- **Objective:** Obtain feedback on the usability of the CMS EPRI system, including procedures for sending and responding to emergency requests.
- **Area for Improvement:** Pilot test participants identified a number of areas that could improve the usability and clarity of the system. Overall, however, they found the system easy to use and estimated that responding to a request would typically take no more than 10-15 minutes.
- **Objective:** Send two emergency requests to providers, with instructions to log into CMS EPRI and respond to the request.
- **Strength:** SAs staff in Nevada, Wisconsin, and California each e-mailed two emergency requests to participants. Six of eight Nevada participants, 15 of 18 Wisconsin participants and 8 of 9 California participants responded to at least one of the requests.

**References:** *FY 2009 CMS Survey and Certification Mission Priority Document (MPD).*

**Exercise Lessons Learned:** The following lessons were learned during the CMS EPRI testing exercises:

- **Providers should expect that responding to an emergency request via the CMS EPRI system will take no more than 10-15 minutes.**
- **Although exercise participants made a number of suggestions for improving the CMS EPRI system, overall, participants felt that the system was easy to use.**
- **SA and Provider staff felt that the CMS EPRI was a valuable tool for tracking and reporting the status of providers affected by an emergency, as well as providing useful information for non-affected providers could use (e.g., potential alternate care sites, surge issues, etc.).**



## Appendix E: Participant User Feedback Evaluation Summary

Three participant user feedback evaluation documents were used during the pilot State CMS EPRI exercises (see following pages):

- Phase I feedback document (provider feedback on the CMS EPRI emergency request data entry process)
- Phase II feedback document (SA feedback on the provider group and emergency request creation process)
- Phase III feedback document (provider feedback on receiving an emergency request e-mail, logging into CMS EPRI, and responding to the emergency request)

Participant feedback is included in the three documents (*in italics*).



Evaluation of CMS EPRI Web Site	Response
<ul style="list-style-type: none"> <li>• <b>Suggestions for Improvement</b> <ul style="list-style-type: none"> <li>○ Do you have any other suggestions for improving the CMS EPRI Pilot Web site and database?</li> </ul> </li> </ul>	<p>Comments (use additional sheets as necessary):</p> <ul style="list-style-type: none"> <li>○ <i>None. Just, whatever suggestions you receive, after this test, keep it short and simple! Simplicity will be the key to getting the information you want if it ever becomes necessary.</i></li> <li>○ <i>not at this time</i></li> <li>○ <i>It seems to be a very user friendly system.</i></li> <li>○ <i>The Web site was very user-friendly. There were some messages where the text would run vertically instead of horizontally making it difficult to read. The drop down menus and automatically filled in info are very helpful and make it easy to report current conditions quickly.</i></li> <li>○ <i>Easy enough to ask for # of beds and by type, however in emergency situations, individual facilities may be capable of expanding services.</i></li> <li>○ <i>No issues.</i></li> <li>○ <i>None.</i></li> <li>○ <i>No.</i></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Follow-up Telephone Call</b> <ul style="list-style-type: none"> <li>○ Would you be willing to participate in a telephone conversation with Abt Associates to discuss your reaction to the CMS EPRI database? If so, please provide your name and phone number.</li> </ul> </li> </ul>	<p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>Name: _____</p> <p>Phone Number: _____</p>



**CMS EMERGENCY PREPAREDNESS RESOURCE INVENTORY (EPRI) PILOT DATABASE  
HEALTH CARE PROVIDER - USER TEST EVALUATION (PHASE III)  
(N=15)**

User's Name (optional):	Provider Name and Address (optional):	Provider Type:	Date:
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Evaluation of CMS EPRI Web Site	Response
<ul style="list-style-type: none"> <li>• <b>Receipt of Emergency Request E-mail</b> <ul style="list-style-type: none"> <li>○ Was the e-mail that you received from the State Survey Agency (SA) requesting emergency status information clear and understandable?</li> <li>○ Was it clear from the e-mail what you needed to do in order to respond to the request?</li> <li>○ Do you have any suggestions for improving how the SA notifies providers of an emergency request?</li> </ul> </li> </ul>	<p><input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5</p> <p>Easy <span style="float: right;">Difficult</span></p> <p>Mean = 1.3</p> <p>Comments:</p> <ul style="list-style-type: none"> <li>○ Only suggestion would be to put reason for request ahead of directions paragraph. It flows more logically that way.</li> <li>○ Consider several addressees for each site as the primary may not be in the office at the time.</li> <li>○ I was out of the building on the day sent, did not get the request until the following day. This delayed the response time.</li> <li>○ If I didn't have the background of the project it would not have been clear from the e-mail. The questions about number of beds were confusing (licensed, occupied, available?)</li> <li>○ Perhaps consideration should be given to sending an automated telephone message alerting individual that a request has been sent.</li> <li>○ Today was a heavy meeting day for me, so when I saw the e-mail on my BlackBerry, I left my meeting and went to a computer and entered the data. It was pretty easy.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>System Log In</b> <ul style="list-style-type: none"> <li>○ Did you have any difficulty logging in to the system with the login and password that was provided in the e-mail from the SA?</li> </ul> </li> </ul>	<p><input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5</p> <p>Easy <span style="float: right;">Difficult</span></p> <p>Mean = 1.1</p> <p>Comments:</p> <ul style="list-style-type: none"> <li>○ No problems</li> <li>○ We need to have categories for available beds that correspond to our options. ie. skilled beds, assisted living, rehab, etc.</li> <li>○ There was a long wait between screens, can something be done to let the user know that is search/processed? At first I thought my screen was locked up.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Using the Web Site to Respond to an Emergency Request</b> <ul style="list-style-type: none"> <li>○ Did you have any problems understanding how to respond to the State Survey Agency's request?</li> <li>○ Did you have any problems navigating to the Web page where you filled out the data entry form for the emergency request?</li> <li>○ Did you have any problems completing the data entry form?</li> <li>○ Do you have any suggestions for making the system easier to use?</li> </ul> </li> </ul>	<p><input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5</p> <p>Easy <span style="float: right;">Difficult</span></p> <p>Mean = 1.6</p> <p>Comments:</p> <ul style="list-style-type: none"> <li>○ Only problem I had (and maybe since this was a test, it was not a problem) was an "error" message when I clicked the "Submit" button. I am not sure since there was no explanatory material with the test. I do know the information I input into the form was neither saved nor sent and recorded as a response when I went back into the test system.</li> <li>○ wasn't sure at first where the respond link was</li> <li>○ Our available beds really did not match what the categories listed were. We had subacute beds available but did not know where to log that.</li> <li>○ I filled out half of the form and then hit send. I wanted to go back and update the form and this was not possible.</li> <li>○ I was doing it in a hurry today. I filled out the form, sent it, and then I realized that I had left an area blank. I could pull up what I had sent, but there was no way to submit a revised version. I am sure people would end up doing this during an emergency also. Maybe you can have a 15 minute or 1 hour window where you can go back in and modify the information or a way to submit a new version.</li> <li>○ There was a lag between screens. I was not sure if my computer was locked up, there was an issue with the internet or the program was just running that slow. So maybe something to let the user know it is working.</li> <li>○ The time stamp on the Emergency Status Log reflects Eastern Standard Time. This should be adjusted to reflect the responding providers' time zone.</li> </ul>

