

Division of Emergency Operations (DEO) Project Review

A Report from the Board of Scientific Counselors (BSC)

Office of Public Health Preparedness and Response (OPHPR)

Centers for Disease Control and Prevention (CDC)

Department of Health and Human Services (DHHS)

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**Division of Emergency Operations (DEO) Program Review
Office of Public Health Preparedness and Response (OPHPR)
Ad Hoc Board of Scientific Counselors (BSC) Workgroup Report**

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1.0 REVIEW OBJECTIVES AND PROCESS

Background

External peer review is a highly regarded mechanism for critically evaluating the scientific and technical merit of research and scientific programs. This rigorous process identifies strengths, gaps, redundancy, and research or program effectiveness in order to inform decisions regarding scientific direction, scope, prioritization, and financial stewardship. External peer review will address program quality, approach, direction, capability, and integrity and will also be used to evaluate the program's public health impact and relevance to the missions of the Centers for Disease Control (CDC) and the Office of Public Health Preparedness and Response (OPHPR; previously known as the Coordinating Office for Terrorism Preparedness and Emergency Response, or COTPER).

OPHPR has established standardized methods for peer review of intramural research and scientific programs in order to ensure consistent and high quality reviews. A more detailed description of CDC's and OPHPR's peer review policy is available on request.

CDC policy requires that all scientific programs¹ (including research and non-research) that are conducted or funded by CDC be subject to external peer review at least once every five years. The focus of the review should be on scientific and technical quality and may also include mission relevance and program impact. The OPHPR Board of Scientific Counselors (BSC) provides oversight functions for the research and scientific program reviews. The BSC primarily utilizes ad hoc workgroups or expert panels to conduct the reviews. It is anticipated that the BSC will be engaged in most of the reviews and they may elect to utilize workgroups, subcommittees or workgroups under subcommittees to assist in the review. The BSC will evaluate findings and make summary recommendations on all reviews, including those they engage in, as well as reviews performed by other external experts.

¹ Scientific program is defined as the term "scientific program" includes, but is not necessarily limited to, intramural and extramural research and non-research (e.g., public health practice, core support services).

Review Objectives

1. Evaluate CDC's EOC and provide recommendations on any improvements that could be made in CDC EOC facilities or services in order to maximize a CDC public health response effort.
2. Evaluate CDC's use of the DCIR framework to prioritize upward information flow to CDC leadership.

Review Process and Timeline:

The peer review was conducted by a 7-member ad hoc workgroup with two members of OPHPR's Board of Scientific Counselors (BSC) serving as workgroup co-chairs and 5 invited expert reviewers external to the OPHPR BSC. Facilitation and logistical assistance was provided by the DEO Associate Director for Science (ADS) and the OPHPR Office of Science and Public Health Practice (OSPHP).

1. *Pre-meeting:* OSPHP convened a pre-meeting web conference (webinar) with members of the workgroup on Tuesday, January 19, 2010 from 1:00 to 3:30 pm (EST). The webinar agenda included overview presentations on the DEO and CDC's response mission, CDC EOC utilization and activation, and the DCIR concept. Reviewers were given the option of submitting written individual comments in response to the review questions. These comments and questions were intended to inform the co-chairs and assist OPHPR in providing the workgroup with the necessary information in advance of the in-person meeting.

2. *Workgroup meeting:* The workgroup met for two and one-half days from January 26-28, 2010 in Atlanta, GA. On the first day and on the morning of the second day, there were presentations from DEO staff as well as from external stakeholders, discussions, and question-and-answer sessions. On the afternoon of the second day and the morning of the third day, the workgroup convened privately to deliberate, formulate findings, and write a draft workgroup report.

3. *Post-meeting:* The workgroup Chair(s) took the lead in completing the final report with input from the workgroup. Workgroup members and OPHPR and DEO program leadership have had

the opportunity to review and comment on the findings in the workgroup report before it was finalized. DEO will have the opportunity to provide program responses to any findings and individual recommendations in the report at the next BSC meeting. The full BSC will deliberate on the final panel report during its next meeting and present final recommendations to OPHPR leadership. DEO will respond to the BSC recommendations in writing and present their response and implementation plan at the next full BSC meeting.

2.0 SCOPE OF THE REVIEW

Background

CDC EOC

Prior to 2003, all of CDC's public health event responses were managed by the program office within the Center, Institute, or Office (CIO) at CDC that housed the scientific and technical subject matter experts (SMEs) that were most knowledgeable in responding to the incident. Since 2003, the CDC EOC has provided a centralized, physical location to manage CDC's response to large-scale domestic and international public health incidents.

CDC leadership, in consultation with CDC's SMEs and the Director of OPHPR's Division of Emergency Operations (DEO), determines how the CDC EOC will be used in response to a public health incident. Usage may range from partial facility utilization in support of a program-managed response to full activation of the Incident Management System (IMS) in support of an agency-wide response such as Hurricane Katrina or the 2009 H1N1 pandemic influenza response. Typically, when program resources are exceeded, CDC EOC may be utilized or activated to support their response efforts. At that time, CDC transitions from a program-managed response to a centralized, agency-wide response utilizing staffing from across CDC to support the IMS within the CDC EOC.

CDC is primarily a scientific public health organization where the workplace is dominated by a public health science culture and public health program specialist culture. In contrast, emergency response as mandated by the National Incident Management System (NIMS) has its

cultural roots in public safety operations (police, firefighting and the military). Each of these three cultures (i.e., public health science, public health practice, and emergency response) views the EOC through its own unique workplace cultural filters. These differences in workplace culture may result in potential cultural dilemmas such as miscommunication founded in differences of perspectives, the potential for confusion regarding CDC's roles and responsibilities in emergency preparedness and response, differences in beliefs that result in difficulties in understanding and barriers which may inhibit effective public health emergency response efforts and erode trust and confidence among different CDC groups.

Successful integration of these three workplace cultures within the CDC EOC where they converge to form the unique attributes of a public health response culture is the key to improving CDC EOC and thus improving CDC public health response as a whole. DEO requests that the ad hoc BSC workgroup conducting this review make suggestions regarding initiatives that may be useful in accelerating this integration (for example, training DEO staff to improve communication skills or cross-training SMEs and DEO staff).

CDC Director's Critical Information Requirements (DCIR) Concept

The DCIR concept constitutes a framework of pre-identified categories of incident-specific information that the CDC Director considers vital to leadership's decision making and situational awareness. The DCIR framework is a dynamic and flexible framework that can be easily modified to add new, or change existing, information requirements at the discretion of the CDC Director. This framework defines:

- The information needed by the Director
- The urgency of reporting that information. (i.e., immediate phone call and e-mail any time of day, or wait until normal business hours)

DCIRs ensure that information transmitted to the CDC Director is meaningful and readily recognized as critical to the Director's situation awareness. DCIRs allow the CDC Director to define further information needs and, in turn, focus agency efforts to acquire, filter, process, and synthesize information. DCIRs depend on the information requirements for each specific public health incident as outlined in the incident specific appendices of CDC's Emergency Operation

Plan (EOP) and should include the key decisions the Director is likely to make, and the type of information required to support those key decisions. There are two tiers of DCIRs:

- Standing DCIRs which are broad information categories that are in effect at all times and are posted in the CDC Emergency Operations Center (CDC EOC)
- Incident-Specific DCIRs that usually cascade down from the standing DCIRs and provide more granularity or specificity to the information categories required by the Director. These are developed by SMEs in the applicable CIO(s).

Peer Review Objectives and Focus Questions

1. Evaluate CDC's EOC and provide recommendations on any improvements that could be made in CDC EOC facilities or services in order to maximize a CDC public health response effort. The ad hoc workgroup will do this by hearing from internal CDC stakeholders during the review, as well as from review of an internal stakeholder survey input survey conducted by OPHPR.
 - *Barriers*: What are the significant barriers to utilization or activation of the CDC EOC by internal stakeholders? What are your recommendations for mitigating or eliminating these barriers?
 - *EOC Facilities and Work Environment*: What changes or modifications to CDC EOC facilities and work environment would be expected to increase the willingness of internal stakeholders to utilize the CDC EOC or request its activation for response to a public health incident?
 - *EOC Procedures*: What procedural changes from those outlined in CDC EOP, would increase internal stakeholder activation or utilization of the CDC EOC?
 - *EOC Services*: What services could DEO provide to internal stakeholders that would be expected to increase the utilization or activation of the CDC EOC?
 - *Feedback Mechanisms*: What improvements can be made in addition to the AAR process to obtain feedback from CDC EOC internal stakeholders?
 - *Training*: What additional the training from that outlined by OPHPR's Learning Office needs to be provided or improved to facilitate CDC EOC utilization or activation?

- *Metrics*: How best can DEO measure the success of its efforts to support internal stakeholders? How best can DEO measure impact of its efforts to support internal stakeholders?
2. Evaluate CDC's use of the DCIR framework to prioritize upward information flow to CDC leadership. The ad hoc workgroup will do this by hearing from internal CDC stakeholders during the review, reviewing existing documentation as well as from review of an internal stakeholder survey input survey conducted by OPHPR.
- *DCIR Strengths and Weakness*: Review the current draft CDC policy on DCIR and determine what are the strengths and weaknesses of the DCIR framework as it is currently used to facilitate the upward flow of actionable information to CDC leadership?
 - *Information Prioritization Frameworks*: Review incident specific H1N1 response DCIRs from April - November 2009. What framework should be used for the prioritization and reporting of public health incident information up the chain of command during a response in order to provide actionable information to CDC leadership?

3.0 WORKGROUP FINDINGS

3.1 CDC Emergency Operations Center (EOC)

Overall, our review of the Emergency Operations Center (EOC) suggests it has evolved to become a highly valued component of CDC that adds value to the agency and its overall capacity, and is a core element to the effectiveness of CDC's public health response. We have identified elements to enhance the value of the EOC and its function as a core element of CDC.

A substantial amount of information was provided before and during the peer review of the EOC that took place on January 26-28, 2010. In assessing all of this information, the following overall conclusions can be made.

- Use of the EOC has become institutionalized at CDC and its role is widely accepted among the various components of CDC.
- Since it first opened in 2003, there has been continuous improvement in the operation and utilization of the EOC along with the professionalism of the staff in the Division of Emergency Operations (DEO).
- Efforts have been made to adapt standard National Incident Management System (NIMS) practices and to provide flexibility in response in order to better manage the types of emergencies (e.g., disease outbreaks) handled by CDC and to align the EOC with the culture of CDC science.

Some of the evidence for these observations comes from the stakeholder survey done in the fall of 2009 and from the presentations and panel discussions held during the peer review. The stakeholder survey results were largely positive with respect to the utility and value of the EOC. The presenters during the peer review came from across the spectrum of CDC, including frequent “customers” of the EOC and those less likely to use the EOC. Individuals with less favorable views of their experiences in the EOC were also included in the panel discussions. However, even these individuals understood the importance of the EOC and an organized emergency response. Most of the examples cited as problematic related to responses that occurred several years ago. This suggests that CDC staff have adapted to the EOC environment and that the support services provided by the EOC have improved, even as the activity is more heavily utilized.

Although it seems obvious that the EOC provides “added value” service to the agency and it is hard to imagine managing a complex, prolonged response outside the EOC structure, the value may not be as obvious to everyone. DEO needs to do a better job promoting use of the EOC and documenting the benefits that accrue from using the facility and infrastructure, both in terms of efficiency and outcome. This is important to further solidify support among CDC staff, to advertise how the EOC can help, and to assure adequate investments are made in the EOC for continued high quality operation.

The peer review team was asked to address a series of questions, each of which is discussed below, along with recommendations to further improve the function of the EOC.

Barriers: What are the significant barriers to utilization or activation of the CDC EOC by internal stakeholders? What are your recommendations for mitigating or eliminating these barriers?

During the peer review, there seemed to be a perception among the staff of OPHPR, which includes DEO, that the EOC was being underutilized. However, there was little evidence presented to support that perspective. In contrast, the EOC appears to be heavily utilized. It has been in a continuous state of activation since April 2009, was used for a variety of emergency responses before April 2009, and has been used for concurrent responses on a number of occasions. The EOC does not have infinite absorptive capacity, and not every CDC response needs to be managed in, or through, the EOC.

The problem seems to be more a matter of timing for when CDC components come to the EOC rather than actual use. There are legitimate concerns about delays in various CDC components coming to the EOC either to utilize EOC support services or for formal activation. Several examples were presented. EOC staff would like to see this happen sooner rather than later. This may be hard to accomplish because problems arise all the time and CDC staff may have concerns about (1) not wanting to create “false alarms”, (2) an ingrained culture of self-sufficiency among CDC scientists, (3) loss of control or concerns about misuse of information, (4) inconvenience (especially for staff not located on the Roybal campus), and (5) an ongoing perception that use of the EOC creates “more work” and may create more problems than it solves.

Many CDC personnel seem to have the impression that coming to the EOC equals full activation, and may be unaware of the lesser levels of assistance that can be offered. In addition, earlier use of the EOC can be accomplished only when there is a stronger working relationship and trust between DEO and the programs, especially those most likely to use the EOC services. To build that relationship and trust requires significant outreach by DEO and significant input from the agency. Specific recommendations would include:

1. **Regular (e.g., quarterly) meetings between DEO and divisions/branches that are frequent users of the EOC to obtain feedback, promote services, develop stronger interpersonal relationships, and build trust.** EOC feedback at the Division Directors' meeting would also be a mechanism for this information sharing. Similar meetings may take place between DEO and occasional users of the EOC as necessary. This type of outreach seems essential, and it is important for DEO to meet agency components on their turf rather than having them always come to the EOC.
2. **Establish an internal stakeholder working group to provide input to DEO.** Such a working group should consist of members of the CDC components that are heavy users of EOC services, and should meet on a monthly or bimonthly basis. Such a group could go a long way to develop stakeholder support for the EOC. However, for this group to be most effective there should be clear evidence that efforts are being made to implement the recommendations made by the working group to DEO.
3. **Continue to demonstrate flexibility in using the EOC, and make sure stakeholders understand the flexibility and the services that are available. This can take the form of a menu (or suite) of services that are available from DEO short of formal activation.** Placing such a list on the website would assist in this process. This will bring components of CDC to the table earlier, and hopefully allow early phases of a response to be more effective for DEO and for the program.
4. **For the CDC Director's action and the DEO: there should be a clear understanding among all CDC components that complex responses are managed through the EOC structure.** This message needs to come unambiguously from the overall leadership of CDC and the leadership of the various organizational components.

EOC Facilities and Work Environment: What changes or modifications to CDC EOC facilities and work environment would be expected to increase the willingness of internal stakeholders to utilize the CDC EOC or request its activation for response to a public health incident?

In the stakeholder survey and in the feedback from panelists, “lifestyle” concerns were commonly raised. Some of these lifestyle problems are beyond the direct control of DEO. But addressing them is very likely to reduce barriers to utilization, increase the comfort level of persons working in the EOC, and make them more willing to voluntarily participate in activations. The lifestyle concerns include availability of food after hours, rest areas, better noise control, more meeting space, and dedicated parking for those deployed to the EOC.

In addition, there are also two substantive concerns that need to be closely examined. First, while the EOC is located on CDC’s headquarters Roybal campus, many CDC personnel are located elsewhere, both in Atlanta and outside Atlanta. This represents a major inconvenience, and thus a major impediment, to use of the EOC by non-Clifton Road groups or personnel. Because this includes groups like NCEH and the immunization activity (two components that are heavy users of the EOC), this is a substantial problem that needs to be solved. Second, there is a widespread perception that to be part of a response or activation, an individual or group needs to be physically present in the EOC. This is clearly not the case, and results in situations where some groups only reluctantly utilize the EOC, while others want to be there but don’t really need to be physically present. Activation or utilization of the EOC does not de facto equal physical presence in the EOC. Alternatives need to be developed for non-Clifton Road components and DEO needs to better develop the concept of the “remote” or “virtual” EOC. Specific recommendations include:

- 5. The workgroup recommends that the CDC Director initiate efforts to address lifestyle concerns.** While a “concierge” function seems anathema to an emergency response, it should probably be a core component of the facility to support those working there. This would include assuring access to healthy meal options (either by having food made available directly by DEO, assuring after-hours access to the cafeteria, or obtaining food from outside sources), and maintaining a designated stress reduction/rest area. The DEO should work with facilities management to either block a number of parking spaces for response personnel or have a shuttle service available for off-site parking. Easily accessible meeting rooms/work areas for teams away from the main EOC would be beneficial (possible to include taking over rooms in the global communications center for

large-scale activations). Noise mitigation efforts should also be assessed. This is further addressed in recommendations 12, 13 and 14 below.

6. While a backup EOC exists in Lawrenceville, this location is not especially convenient for most Atlanta-based CDC components. **Although expensive, the workgroup recommends that the CDC Director consider a smaller, but full-service additional EOC on the Chamblee campus. EOC satellite facilities should also be considered for the non-Atlanta locations, especially NIOSH and Fort Collins** where it is impractical, expensive, and bad for morale for staff to come to Atlanta for extended periods.
7. **To reduce the number of individuals physically present in the EOC when activated, alternative models should be developed for participation via a “virtual” EOC. Present activities to develop virtual EOC procedures and software address this issue and should be moved forward.** This would also likely enhance the willingness of personnel to participate in a response and would reduce stress. Such an approach would allow responders to participate from their usual work location, or when necessary from home or the field. It is especially helpful for those who may need to be engaged episodically or briefly, or those located on other campuses or outside of Atlanta. This is further discussed in recommendations 10 and 11. The workgroup observed that expanding the physical size of the current EOC on the Roybal campus seems unwarranted, especially if some of the approaches above can be implemented.
8. EOC Working Space Availability:
 - a. **Review and make changes to the layout of the EOC to increase its flexibility and utilization for essential functions. Consideration may be given to modularized organization which may better enable flexible multiple event EOC response.**
 - b. **Move from the EOC physical space those functions that can be handled effectively by virtual participation.**
 - c. **Make site visits to well-regarded EOCs elsewhere in the nation that use alternative arrangements of organization to assess the feasibility of using these approaches at CDC** (e.g., EOCs that do not use the mission-control style).
For example, an alternative for the main floor would be a shift to laptop

computers on moveable tables that can be separated or clustered as needed to suit the requirements of effective response to a given incident. Greater flexibility in layout of the EOC also would create the potential to separate groups responding to different, concurrent incidents within the space of the EOC main floor. A priority in space should be the application of space released for new uses to respond to now-inadequately met mission needs. Notable among these are expansion of the confined area for the JIC and creation of additional quiet areas for focused preparation of briefings and reports.

- d. **The OPHR Director should address the issues of noise by examining the feasibility of implementing the previously developed sound deadening plan for the EOC main room.**
9. **CDC Buildings and Facilities operations should address the HVAC Environment: Identify and implement improvements to the heating, ventilation, and air conditioning throughout the EOC.**
10. **Virtual Emergency Management: Develop a plan to maximize the use of virtual coordination, collaboration, decision-making, and administration for the array of CDC emergency management approaches from short-duration, limited-scale incidents to extended, enterprise-level incidents.** CDC's management of emergencies in many instances is an enterprise endeavor in which the EOC itself is but one component. CDC's capacity, agility, and effectiveness in emergency management would likely be enhanced through application of existing, proven virtual systems. Most significant is the potential to speed and improve the insight and quality of collaborative decision making by virtual means that engage stakeholders across CDC as needed. A collateral benefit should be reducing the need for SMEs to relocate physically to the EOC for an incident. Achievement of effective virtual collaboration and decision making should increase the number of incidents that are addressed effectively by CDC short of activating the EOC. Commonly cited inhibiting factors in use of the EOC, such as tracking of personnel and their relevant capabilities can be reduced by other complementary IT-based systems. These actions may also result in improved emergency management outcomes, a higher level of CDC participant satisfaction, and lower financial cost to CDC.

- 11. Explore the value/cost savings/issues of virtual capabilities (coordination, collaboration) for present EOC (Atlanta). Explore the value/cost savings/issues of satellite EOCs for places not on Clifton Road (e.g., Chamblee or Fort Collins). This will be addressed via a cost benefit analysis.**
- 12. The CDC senior leadership needs to engage appropriate facilities management components of CDC to develop and implement plans to address:**
- a. **Parking: Consideration should be given to blocking a group of parking spaces reserved for personnel deployed to the EOC during an activation or other emergency response, especially for those not usually located on the Roybal Campus.**
 - b. **Food Service: Reliable solutions are needed for 24-hour food service during an activation to include healthy and nutritious food options**
 - c. **Hygiene and rest: Options should be developed and implemented to assure adequate access to shower, bathroom, and rest areas during an activation.**

EOC Procedures: What procedural changes from those outlined in CDC’s Emergency Operations Plan would increase internal stakeholder activation or utilization of the CDC EOC?

A number of the procedural modifications (such as the concept of the virtual EOC) are covered in the other questions. In addition, the concept of tailoring the response to fit program needs any time the EOC is utilized or activated is critically important. For any circumstance, only selected components of the EOC may be used, and even when fully activated, not every element is needed. The size and scope of the response should be developed jointly with the responsible program. There are several other specific recommendations that were identified.

- 13. A “human resources” activity should be built into the EOC.** Such an activity would help orient personnel as they come into the EOC, and could include the “concierge” function mentioned above. The HR function would also have responsibility for keeping formal rosters of available staff for any response. At present, the rostering function

appears relatively ad hoc. The HR component would also be responsible for debriefing personnel when they finish their tour of duty in the EOC.

- 14. There needs to be more structured procedures for deactivation of a response.** In NIMS, deactivation is a responsibility for the planning section and begins almost immediately. However, since many CDC activations use a modified NIMS structure, deactivation may not be as formalized. It appears that most responses simply “run out of steam” rather than end through systematic planning. This is important for those involved in the response, because otherwise the activity appears needlessly open-ended.
- 15. Every individual who takes part in a response needs to have clear time frames for the duration of their involvement (i.e., a set tour of duty).** Too often the duration of an assignment is unclear or is extended, and this uncertainty decreases the level of enthusiasm to take part in emergency responses. The analogy is uncertain deployments or repeated deployments in the military and the effect this has had on morale.
- 16. The EOC needs to systematically evaluate which functions need to be physically present in the EOC and which can be done remotely.** There is no need to use seats in the EOC for groups that are needed sporadically or for minimal periods of time. This results in either empty desks or individuals who are sitting around doing their normal work from the EOC. This wastes space and resources.
- 17. Because events that do not reach the level of EOC involvement may be worked outside the EOC at program levels, it is important to develop a standard and centralized process for programs to inform the EOC of events being worked outside of the EOC to ensure communication flow is both out of and into the EOC.**

EOC Services: What services could DEO provide to internal stakeholders that would be expected to increase the utilization or activation of the CDC EOC?

As noted above, it does not appear that the EOC is being under-utilized, and the facility and staff do not have infinite absorptive capacity. Not every response needs to be managed by DEO or in the EOC. There are recommendations in other sections designed to improve the experience of those working in the EOC – such as the “concierge” and HR services, the virtual EOC, and satellite facilities. DEO currently has a range of services available to CDC components, and

there does not appear to be significant gaps in the array of services. However, many potential users may not be aware of the options or the scope of existing services. This is why it is important to “market” the EOC better to the rest of the agency. This could be done through face-to-face meetings, through webinars or power-point presentations, or through development of a marketing video. Specific recommendations include:

18. A task force should review resources and capabilities (IT tools) for sustaining EOC situational awareness capabilities (e.g., data mining, visualization). This is a rapidly growing area that will require ongoing development and review to stay current and be most useful to the EOC.

19. The DEO should examine the possible benefits to EOC and program coordination of social networking as a component of building collaborative operations with programs.

20. As stated above, the DEO should develop and maintain virtual networks to expand the CDC’s linkages among campuses and with external stakeholders.

Feedback Mechanisms: What improvements can be made in addition to the AAR process to obtain feedback from CDC EOC internal stakeholders?

The After Action Report is an important feedback mechanism, but it is formal, takes time to accomplish, and may not capture the range of issues and experiences. This is especially true for longer activations, where memories may change or perceptions change as the response evolves. The EOC stakeholders working group mentioned above in recommendation 1, in addition to allowing stakeholders to become more invested in the EOC, can also provide important feedback on EOC operations and policies from the user’s perspective. There are a number of other feedback mechanisms that should be considered.

21. In-progress action reports. For prolonged activations, there should be periodic “in-progress” reviews to make sure course changes and corrective actions can be taken during the response rather than waiting until it has ended. This would be a periodic

“pulse check” to identify problems and issues. It is suggested that an in-progress review be done monthly for prolonged responses.

- 22. All persons engaged in a response should be debriefed at the time their tour of duty ends** (see also recommendation 16 above). This debriefing can be done face-to-face, or could be a web-based survey that is completed as part of out-processing. It allows everyone to contribute to feedback, especially when the experience is freshest in their mind.
- 23. The stakeholder survey conducted in the fall of 2009 should be repeated on a periodic basis and trends in satisfaction should be measured.** As a suggestion, the survey (or a simplified version of it) should be done annually. Results should be distributed.
- 24. AARs play an important role in an EOC. It is recommended that a specific, separate review be undertaken for the AAR to identify any corrective actions necessary to ensure that AARs are having their intended impact.**
- 25. An external customer survey should also be accomplished.** This would include stakeholders such as states, Federal departments, international partners, NGOs, and private sector partners.
- 26. Consideration should be given to establishing a standing technical advisory group of SMEs from the CDC organizational components most likely to use the EOC.** Note that this is specifically SMEs not only those engaged in the emergency operation but individuals who can contribute knowledge of how their subject area operates in the field to enhance SME-EOC collaboration and knowledge from SMEs to EOC (see also recommendation 2).
- 27. A suggestion box in the EOC for users (provide confidential feedback mechanism).**

Training: What additional training from that outlined by OPHPR’s Learning Office needs to be provided or improved to facilitate CDC EOC utilization or activation?

The available training is helpful to the majority of CDC personnel to help them operate in the EOC and engage in emergency response. In particular, the tiering system helps to assure the necessary training is delivered to those most likely to need and use it. The major concern has to

do with NIMS-related training. It is important to understand that CDC personnel may not operate only in the CDC EOC. There are likely to be times when CDC personnel work in other agencies or take part in operations that are not primarily handled by CDC or public health. NIMS is the standard operating language and procedure for most emergency response organizations, especially Homeland Security and the military. It is vitally important that CDC personnel who may be in such situations to fully understand NIMS concepts. These individuals should be NIMS-certified in the array of NIMS courses, as is required by many partners. The following are recommended:

- 28. CDC should identify those individuals likely to lead or play a major function in emergency response or EOC activation. Such individuals should be fully certified in NIMS and such certification should be documented. Mandatory NIMS training is required for personnel in accordance with the tier system already in place.**
- 29. An EOC training video would be helpful, not only for internal stakeholders but also for external stakeholders.** This video (or videos) may address increasing knowledge about the EOC, marketing of the EOC and orientation for new personnel. Such a video will require good production qualities to be useful. Such a product may also help to reduce the large number of tours currently given of the EOC. This is distracting to personnel working there and also consumes valuable staff time.
- 30. A cross-training plan should be developed for EOC staff and responders.** It is recognized that the bench strength may not be deep in a number of areas. If illness occurs or positions are vacant, there may be insufficient personnel with the depth of knowledge necessary for 24-hour coverage of a position or activity. Maximizing cross-training within EOC sections can facilitate increased ability to surge and enhance information sharing. Familiarization and liaison activities across functions in the EOC will also facilitate and increase understanding, team function, information sharing and participation.
- 31. It is important to continue the operational plan for which prolonged activations employ rotating incident commanders.** This also assists in training a cadre of personnel with the necessary skills.

- 32. Training for operating in the EOC should be developed to match the job and responsibilities of the individuals involved and not only be general or command structure only knowledge.**
- 33. Personnel training policies should be reviewed to ensure that appropriate career training or mentoring is available and used to develop these skilled individuals.** More generally, leadership and management skills may be increasingly necessary for CDC personnel to address the response capabilities for the agency.
- 34. EOC training and service across CDC should be incentivized using formal and informal policy (e.g., awards, recognition). Training requirements should be part of the personnel position descriptions and evaluation process. Position descriptions should include roles expected to be performed in the incident management system. A job category for emergency management personnel across levels of skill and seniority is needed.**

Metrics: How best can DEO measure the success of its efforts to support internal stakeholders? How best can DEO measure impact of its efforts to support internal stakeholders?

Metrics are important not only to measure effectiveness and acceptability of the EOC, but as importantly to document the impact and value of the facility and services. Impact should be measured not only in terms of effectiveness but also cost-savings and efficiency. Capturing such information in objective fashion is important for DEO and for CDC leadership. One of the values of metrics is to assess “Did we have the right people with the right skills at the right time for the mission?” Metrics can be developed and implemented to assess effectiveness, operational/logistical performance, impact, and value added.

- 35. Conduct an in-depth analysis of several activations/responses to measure the potential impact and cost savings that accrued from operating within the EOC/emergency response framework. The methodology for such an evaluation should be worked out with an objective external party(s).**

36. Periodically repeat the stakeholder survey done in the fall of 2009 to measure trends in satisfaction, knowledge, and attitudes regarding the EOC (see recommendation 26 above).
37. As in recommendation 15 above, operationally debriefing will also provide important metrics. The workgroup recommends debriefing EOC users at the end of their tour of duty and measuring their satisfaction with their deployment to the EOC.
38. Measure utilization of the EOC by organizational entity, type of response, number of responders, and duration.

3.2 Director's Critical Information Requirements (DCIR)

The DCIR is an important tool to keep leadership apprised of important developments in public health, in the agency, and in the response during an activation. However, it cannot be viewed in isolation, and is only one in a series of tools to inform "up the chain." Efforts to systematize the DCIR process at CDC are commendable and should be continued. Buy-in for this concept from leadership is critical.

DCIR Strengths and Weaknesses: What are the strengths and weaknesses of the DCIR framework as it is currently used to facilitate the upward flow of actionable information to CDC leadership?

Strengths:

- DCIRs are an excellent way for leadership to focus on what they believe is crucial to be made aware of on a daily basis.
- The DCIRs developed by DEO are clear, unambiguous, and actionable.
- Having standard DCIRs allows everyone to know what they are and how the information will be conveyed. They take the guess work out of information sharing with leadership.
- They are endorsed by the CDC Director.

Weaknesses:

- Public health responses are always evolving, and the DCIR concept may not be flexible enough to rapidly adapt to the changing landscape.
- What DEO believes is important may not necessarily correlate with what leadership believes is important.
- The volume of information may overwhelm the director or other leadership and they may “tune-out” the information.
- DCIRs should not be viewed as a substitute for other lines of communication of information.

Specific Recommendations:

- 39. DCIRs are one communication tool. There are others which are also highly valued for providing information vertically and horizontally. It is important to identify and prioritize all communication tools that enable both leadership and operators to stay informed.**
- 40. The CDC Director’s Office and Centers should identify essential elements of information and tools to inform the EOC of information they believe is most important to EOC and CDC-wide emergency operations.**
- 41. Create a DCIR review/creation process if it has not already been done.**
- 42. DCIRs should be refined in an ongoing manner to reflect the critical information that should be reported to the Director and when the director should be called to alert of an event.**
- 43. DCIRs should be carefully constructed to reflect specific needs and events and named for each event.**
- 44. When DCIRs are modified they should also have a dissemination plan and a plan for then they will be reviewed.**
- 45. The DCIR development process should be created with input from the SMEs staffing the EOC.**

Information Prioritization Framework: What framework should be used for the prioritization and reporting of public health incident information up the chain of command during a response in order to provide actionable information to CDC leadership?

In reviewing the process and procedures used to list and de-list components of the DCIRs for pandemic influenza H1N1, they seemed to be appropriate for the situation. There was a clear process to develop the DCIRs for H1N1, the director accepted the initial DCIRs. There was also a methodical approach to adding, subtracting, and periodically reviewing the DCIRs as the situation evolved over time. The DCIR process for H1N1 could serve as a model for other DCIRs at CDC and in other agencies.

In addition to the above the workgroup recommends a Strategic Planning Process:

- 46. The CDC Director and OPHR should initiate a five year strategic planning cycle for the EOC as a component of the CDC's preparedness and response mission. Staff this initiative to include a cross-section of stakeholders who will own and implement the resulting strategic plan.** The planning process can be an organizing framework for evaluating and acting on many of the observations and recommendations in this review.
- 47. Refine the enterprise-level CDC Emergency Operations Plan to include virtual collaboration and decision-making, and networked EOCs to include vision, mission, goals, objectives and measures of evaluation. It is important that the EOC strategic plan be integrated to the enterprise wide plan.**
- 48. As part of the strategic planning process, an internal and external stakeholder analysis (states and local governmental partners and any relevant business, professional organizations, and not-for profit partners) should be part of the process.**

4.0 APPENDICES

Appendix A.

Workgroup Member Biographies

Louis Rowitz, Ph.D. (*Workgroup Co-Chair*) Director, Mid-America Regional Public Health Leadership Institute; Director, University of Illinois, Chicago, School of Public Health, Center for Public Health Practice, Chicago, IL.

Dr. Louis Rowitz has built a unique career in public health academia via public health practice issues and initiatives. Serving as the Director of University of Illinois, Chicago (UIC), School of Public Health's Center for Public Health Practice since it began, he is also the first director of a state-based leadership institute funded by CDC. Since 1992, that Institute, the Mid-America Regional Public Health Leadership Institute (MARPHLI), has encompassed as many as four states and currently includes teams from Indiana, Wisconsin, Michigan and Illinois. The Institute has graduated over 700 Fellows since its inception.

Dr. Rowitz is one of the founding members of the National Public Health Leadership Development Network (NLN,) established in 1994 with funding from CDC to support the growth and improve access to public health leadership institutes across the country. Throughout the past 15 years, Dr. Rowitz has served in numerous roles including chairing various NLN committees and workgroups. He has twice served as the Chair of the NLN Board, leading the Network and its members into a new vision for public health leadership development.

Dr. Rowitz has added two leadership training institutes to the UIC Center for Public Health Practice: the Illinois Institute for Maternal and Child Health Leadership and the Illinois MCH Data Use Academy. In 2001, he became the Director of the Mid-America Public Health Training Center. He is the author of two bestselling books – *Public Health Leadership: Putting Principles into Practice* (Second Edition, 2009) and *Public Health for the 21st Century: The Prepared Leader* (2006). He currently serves on the faculty of the International Center for Leadership Development, also at UIC.

Dr. Rowitz has published a text on leadership in public health based upon his experience in developing the institutes. *Public Health Leadership: Putting Principles into Practice* (Aspen, 2001) is now the premier text in leadership courses and institutes across the country.

Robert J. Ursano, M.D. (*Workgroup Co-Chair*) Professor and Chairman, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD.

Dr. Robert J. Ursano is Professor of Psychiatry and Neuroscience and Chairman of the Department of Psychiatry at the Uniformed Services University of the Health Sciences, Bethesda, Maryland. He is founding Director of the Center for the Study of Traumatic Stress and is Editor of Psychiatry.

Dr. Ursano was educated at the University of Notre Dame and Yale University School of Medicine and did his psychiatric training at Wilford Hall U.S. Air Force Medical Center and Yale University. Dr. Ursano graduated from the Washington Psychoanalytic Institute and is a member of the teaching faculty of the Institute. Dr. Ursano served as the Department of Defense representative to the National Advisory Mental Health Council of the National Institute of Mental Health and is a past member of the Veterans Affairs Mental Health Study Section and the National Institute of Mental Health Rapid Trauma and Disaster Grant Review Section. He is a Distinguished Fellow in the American Psychiatric Association (APA); a Fellow of the American College of Psychiatrists, and of the American College of Psychoanalysts.

Dr. Ursano was the first Chairman of the APA's Committee on Psychiatric Dimensions of Disaster. Through his work with the Committee, the APA established a collaborative relationship with the Red Cross, the Bruno Lima Award, to recognize contributors to psychiatric care in times of disaster, and the Eric Lindemann Grant to support disaster services. His leadership in committee activities has been instrumental to the development of the APA's disaster psychiatry training program, and to the development and widespread international dissemination of psychosocial support training for emergency responders after the December, 2007 Southeast Asian Tsunami and in the immediate and extended aftermath of Hurricane Katrina. His Center's training and post-disaster health surveillance materials are currently being translated into Chinese to assist in the psychosocial response to recent earthquake victims.

Dr. Ursano has received the Department of Defense Humanitarian Service Award and the International Traumatic Stress Society Lifetime Achievement Award for "outstanding and

fundamental contributions to understanding traumatic stress.” He also received the William C. Porter Award from the Association of Military Surgeons of the U.S. Dr. Ursano has over 300 publications. He is co-author or editor of seven books. His publications include “Psychiatric Dimensions of Disaster: Patient Care, Community Consultation, and Preventive Medicine” in the Harvard Review of Psychiatry and Individual and Community Responses to Trauma and Disaster: The Structure of Human Chaos. He chaired the APA’s task force on Practice Guidelines for the Treatment of Acute Stress Disorder and Post-Traumatic Stress Disorder. Dr. Ursano continues to spearhead advances in understanding the neurobiological processes of traumatic stress response including efforts to develop a collaborative endeavor with academic centers including Yale University, Stanford University, the University of Washington, various Veteran’s Affairs (VA) Hospitals and the VA’s National Center for Post Traumatic Stress Disorder (PTSD) to identify, collect, process, and distribute neural tissue for pathological, microcellular, and genetic studies of PTSD. Stemming from this collaboration, Dr. Ursano and colleagues recently reported their identification of a potential genetic biomarker for PTSD.

Amy Kircher, M.P.H., Dr.PH. – Epidemiologist, Office of the Command Surgeon, U.S. Northern Command, Peterson AFB, CO.

Amy Kircher is an epidemiologist with the NORAD – US Northern Command Office of the Command Surgeon. Her primary responsibilities include disease surveillance, epidemiologic modeling, bioterrorism preparedness, and serving as a public health SME. Prior to joining NORAD – US Northern Command, Dr. Kircher worked as an epidemiologist and health educator at the Air Force Population Health Support Office (PHSO). While at PHSO she was responsible for development and deployment of education curriculum, data analysis and distribution, and public health consulting for 79 MTFs. Dr. Kircher completed a preceptorship in epidemiology at the Minnesota Department of Health where she worked on outbreak investigations, public health education, policy, and research. A second preceptorship at the University of St. Thomas, in health education, allowed her to develop and deliver curriculum, conduct research within the collegiate population, and serve as student mentor.

Dr. Kircher completed her Doctorate in Public Health at the University of North Carolina – Chapel Hill. Her Master’s in Public Health was awarded from the University of Wisconsin-La

Crosse in 1999. She holds a Bachelor of Arts with dual concentrations in Biology and Health from Concordia College in Moorhead, Minnesota. Ms. Kircher received a certificate in Homeland Defense from University Colorado – Colorado Springs.

William L. Waugh, Jr., Ph.D. - Professor of Public Administration, Urban Studies, and Political Science, Georgia State University, Atlanta, GA.

Dr. Waugh is an internationally known scholar in disaster studies and emergency management. He is the author of *Living with Hazards, Dealing with Disasters* (2000), *Terrorism and Emergency Management* (1990), and *International Terrorism: How Nations Respond to Terrorists* (1982); co-author of *State and Local Tax Policies* (1995); editor of *Shelter from the Storm: Repairing the National Emergency Management System after Hurricane Katrina* (2006) and *The Future of Emergency Management* (2006); and co-editor of *Emergency Management: Principles and Practice for Local Government*, 2nd Edition (2007); *Disaster Management in the US and Canada* (1996), *Cities and Disaster* (1990), and *Handbook of Emergency Management* (1990). He is also the author or coauthor of over a hundred articles, chapters, and reports published in the US, Canada, Europe, and Asia. He is the editor-in-chief of the *Journal of Emergency Management* and serves on the editorial boards of *Public Administration Review*, *Public Organization Review*, and the *International Journal of Economic Development*.

Dr. Waugh has been a consultant to public, private, and nonprofit organizations and the media on dealing with terrorist threats, responding to disasters, and building governmental and nongovernmental capacities for managing hazards and disasters. He has served on expert panels and participated in workshops on hospital surge capacity, the Homeland Security Advisory System, applying natural hazard lessons to Homeland Security, using community rating systems to encourage risk reduction, emergency management education, and Homeland Security education and training. He has developed prototype college courses for FEMA's Higher Education Project, worked on the last two Atlanta city charter reviews, helped develop a strategic management training program for Solidarity trade union's national council, and conducted training programs on emergency management and professional development for federal, state, and local agencies and nongovernmental organizations.

Dr. Waugh has served as chair of the American Society for Public Administration's Section on Emergency and Crisis Management three times, as well as serving in other ASPA leadership roles. He served two terms on the CEM Commission (International Association of Emergency Managers) that oversees the Certified Emergency Manager program and currently serves on the EMAP Commission that oversees the Emergency Management Accreditation Program and sets standards for state and local emergency management programs.

Dr. Waugh is the coordinator of the Andrew Young School's Graduate Certificate in Disaster Management, the MPA and MPP concentrations in disaster management, and the MPA concentration in public health.

Stephen M. Ostroff, M.D. – Director, Bureau of Epidemiology and Physician General (Acting), Pennsylvania Department of Health, Harrisburg, PA.

Dr. Ostroff is currently the Director of the Bureau of Epidemiology for the Pennsylvania Department of Health where he supervises an approximate 70-person bureau responsible for disease surveillance and investigation in the Commonwealth. Areas of responsibility include infectious disease epidemiology, environmental health, and chronic disease.

Dr. Ostroff previously served for over 20 years with the U.S. Public Health Service, most recently as an Assistant Surgeon General and Deputy Director for the Centers for Disease Control and Prevention's National Center for Infectious Disease where he was Responsible for the conduct of epidemiologic investigations including outbreak investigations and research activities. Major outbreaks coordinated include: Hantavirus pulmonary syndrome in 1993, Ebola hemorrhagic fever in 1995, avian influenza in 1997, West Nile virus in 1999, anthrax in 2001, monkeypox in 2003, severe acute respiratory infection (SARS) in 2003, avian influenza in 2004, and tsunami response in 2004. While at CDC, Dr. Ostroff also coordinated CDC's response to the intentional anthrax infections in New York City and was appointed the acting director of CDC's Select Agent Program and oversaw the rewriting of the select agent regulations in 2002.

Dr. Ostroff previously served as the U.S. Department of Health and Human Services (HHS) Representative to the Pacific Islands, Office of Global Health Affairs, where he coordinated HHS activities in the US affiliated Pacific Islands, including those of the Centers for

Disease Control and Prevention and Health Resources and Services Administration (HRSA), developed activities for US-affiliated Pacific Islands in preparedness for avian influenza, and coordinated health-related activities with the U.S. Departments of Interior, Defense, and State. He has also served as a consultant to World Bank to develop projects related to avian influenza and disease surveillance in south Asia countries of Afghanistan, Pakistan, India, Sri Lanka, Bangladesh, Nepal, and Bhutan. Dr. Ostroff is the author of over 50 peer reviewed articles and book chapters on emerging infectious diseases, has testified before Congress on numerous occasions and is the President-elect of the Council of State and Territorial Epidemiologists (CSTE).

Dr. Ostroff is Board certified in Internal Medicine and completed his M.D. at the University of Pennsylvania. Subsequently he completed residencies in internal medicine at the University of Colorado Health Sciences Center and preventive medicine at the Centers for Disease Control and Prevention.

Philip J. Padgett, M.S. – Strategic Development, Advanced Systems Civil Programs, The Boeing Company, Arlington, VA.

At Boeing, Philip Padgett performs as a liaison with government and non-governmental organizations and analyzes federal-state-local-private sector planning, coordination, investment, and standards development for all-hazard preparedness and resiliency. His analyses are used to hone and exercise Boeing all-hazard preparedness and business continuity and to understand the situation awareness solutions requirements of the public sector.

Mr. Padgett is currently participating as a Planner in the National-Level Exercise 2009 Private Sector Working Group. He is the private sector member of the Emergency Management Accreditation Program governing Commission and a presenter at conferences related to infrastructure preparedness and public-private emergency management cooperation.

Mr. Padgett completed a Master of Science in Management at the University of Maryland University College.

Cheryl A. Bolstad, Ph.D., C.P.E. – Senior Research Associate, SA Technologies, Forest Hill, MD.

Dr. Bolstad is a Senior Research Associate for SA Technologies - a small women-owned business located in Marietta, Georgia that specializes in research on Situation Awareness. Dr. Bolstad has a Ph.D. in Psychology specializing in cognition and Human Factors from North Carolina State University. She received her master's degree from Florida Atlantic University and her bachelor degree is from the University of Colorado in Boulder. Dr. Bolstad has over 20 years experience as a cognitive engineer working for the both the military and private sectors. She has worked extensively in situation awareness (SA) research, user interface design, SA measurement and team performance assessment and training. She performed one of the first studies to determine sources of individual differences in SA. Most recently Dr. Bolstad's research has focused on developing methods for supporting team situation awareness in distributed systems, developing training systems for supporting situation awareness and developing metrics to assess team dynamics and performance. Dr. Bolstad has authored over 100 publications, is a member of multiple professional organizations and is a certified professional ergonomist.

Appendix B. Pre-Meeting Teleconference Agenda

**Pre-Meeting Web Conference
Office of Public Health Preparedness and Response (OPHPR)
Division of Emergency Operations (DEO) Program Review
Ad Hoc BSC Workgroup (BSC-WG)**

**Tuesday, January 19, 2010
1:00 - 3:30 p.m. (EST)**

Purpose: *To orient the workgroup members to the scope and charge for the review of CDC's Emergency Operations Center (EOC), CDC and DEO's response mission, and the DCIR concept.*

WEB Conference Access:

Attendee URL: <https://www.livemeeting.com/cc/cdc/join?id=5SFPCD&role=attend>
Meeting ID: **5SFPCD**

AUDIO Access:

Toll-Free Number: **1 (866) 564-8612**
Passcode (participant): **9567954**

NOTE: Please call the toll-free number below to hear the audio for this meeting.

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- | | |
|------------------|---|
| 1:00 – 1:05 p.m. | Welcome by OPHPR
Dr. Dan Sosin, Director (acting), OPHPR |
| 1:05 - 1:20 p.m. | Welcome by BSC-WG Co-Chairs/Individual Introductions of BSC-WG Members
Dr. Robert Ursano and Dr. Louis Rowitz, Workgroup Co-Chairs, Board of Scientific Counselors, OPHPR |
| 1:20 – 1:30 pm. | Review of BSC-WG Charge, Scope of Review, Focus Questions, Briefing Books
Dr. Mark Wooster, ADS, DEO, OPHPR.

<i>Purpose: To introduce the review scope, charge, and orient the BSC-WG to the focus questions and the briefing materials provided for the review.</i> |
| 1:30 – 1:45 pm. | Orientation to CDC's Response Mission
Mr. Phil Navin, Director, DEO, OPHPR

<i>Purpose: To provide an overview of DEO as an organization, DEO's resources: funding & staffing levels, and (1) CDC's, (2) OPHPR's, and (3) DEO's roles & responsibilities for the public health preparedness and response mission.</i> |
| 1:45 – 2:00 p.m. | Discussion and Questions |
| 2:00- 2:15 pm. | CDC EOC Utilization and Activation
Mr. Joe Spalviero, Operations Team Lead, DEO, OPHPR

<i>Purpose: To orient the BSC-WG to how the EOC is activated, how the EOC can be utilized, and the roles, functions, and services provided by each of the following EOC Incident Management System (IMS) Sections: Logistics, Operations, Plans, and Situation Awareness.</i> |

2:15 – 2:30 p.m.

Director’s Critical Information Requirement (DCIRs)

Dr. Mark Wooster, ADS, DEO, OPHPR

Purpose: To describe and orient the BSC-WG to the DCIR concept and provide examples of how DCIRs are used at CDC and at other organizations.

2:30 – 3:30 p.m.

Discussion and Questions

3:30 p.m.

Adjourn and Next Steps

Dr. Louis Rowitz and Dr. Robert Ursano, Workgroup Co-Chairs, Board of Scientific Counselors, OPHPR

Appendix C. Pre-Meeting Teleconference Slide Presentations

**Division of Emergency Operations (DEO)
Ad Hoc BSC Workgroup (BSC-WG)
Pre-Meeting Web Conference**



Mark Wooster, Ph.D.
Associate Director for Science
Division of Emergency Operations
Office of Public Health Preparedness and Response
Centers for Disease Control and Prevention

19 January 2010



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Webinar Objectives

- Provide an overview of the BSC workgroup purpose
- Orient workgroup members to review topics
- Familiarize workgroup members with review questions and background materials
- Prepare workgroup members for workgroup meeting in Atlanta - January 26-28, 2010



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Summary Workgroup Review Tools

- Briefing Materials.....
- Webinar – DEO BSC-WG: Jan19.....
- EOC Stakeholder Survey Report.....
- Stakeholder Panels: Jan 26-28.....
 - ◆ Leaders/DCIR
 - ◆ SME
 - ◆ EC
 - ◆ OPHPR (formerly COTPER)
- Tab 4 - Individual Reviewer Comment Form due January 21.....

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Workgroup Purpose

- All CDC scientific programs (including research and non-research) are subject to external peer-review at least once every five years.
- External Peer Review Goals:
 - ◆ Identify meaningful, actionable recommendations that can be implemented by the program
 - ◆ Evaluate the quality of CDC science
 - ◆ Enhance accountability and transparency
 - ◆ Enhance CDC programs' focus on the right priorities and maximum impact on public health



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Workgroup Process

- External expert panel co-chaired by two members of OPHPR's Board of Scientific Counselors (BSC)
- Consensus not required for workgroup findings and recommendations BSC
 - ◆ Lou Rowitz - Univ. of Illinois (*Workgroup Co-Chair*)
 - ◆ Bob Ursano - USUHS (*Workgroup Co-Chair*)
 - ◆ Amy Kircher - DOD (Emergency Management)
 - ◆ Bill Waugh - GA State Univ. (Disaster Policy)
 - ◆ Steve Ostroff - PA DOH (Epidemiology)
 - ◆ Phillip Padgett - The Boeing Co. (Emergency Management)
 - ◆ Cheryl Bolstad - SA Technologies (Situation Awareness)



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Review Topic

- **Division of Emergency Operations (DEO)** is an organizational unit within OPHPR that provides CDC's core Incident Management Structure to coordinate and execute preparedness and response activities.
- **CDC's Emergency Operations Center (EOC)** provides the core facility for centralized, agency-wide coordination and execution of preparedness and response activities.
- **Workgroup Objectives:**
 - ◆ Evaluate CDC's EOC and provide recommendations on any improvements that could be made to CDC EOC in order to maximize CDC public health response efforts.
 - ◆ Evaluate CDC's use of the Director's Critical Information Requirements (DCIRs) framework to prioritize upward information flow to CDC leadership.



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Workgroup Process



Workgroup Questions on CDC's EOC

- **Barriers:** What are the significant barriers to utilization or activation of the CDC EOC by internal stakeholders? What are your recommendations for mitigating or eliminating these barriers?
 - * Reference Materials: DEO Strategic Plan (Tab 10A); CDC Org Charts (Tab 10B), Stakeholder Survey Report – Questions 4, 7, 13, 15, 16, 17, 18, 29; EOC Activation and Utilization (Tab 13-A, B, C, G)
- **EOC Facilities and Work Environment:** What changes or modifications to CDC EOC facilities and work environment (Tab 14-B,C,D) would be expected to increase the willingness of internal stakeholders to utilize the CDC EOC or request its activation for response to a public health incident?
 - * Reference Materials: Stakeholder Survey Report – Questions 13, 15, 16, 17, 29; EOC Activation and Utilization (Tab 13-C); EOC Basics (Tab 14- B, C, D, E)

Workgroup Questions on CDC's EOC

- **EOC Procedures:** What procedural changes from those outlined in CDC's Emergency Operations Plan (EOP) (Tab 13-C), would increase internal stakeholder activation or utilization of the CDC EOC?

Reference Materials: Stakeholder Survey Report – Questions 19-23, 29 (Tab 11); EOC Activation and Utilization (Tab 13); EOC Basics (Tab 14);

- **EOC Services:** What services could DEO provide to internal stakeholders that would be expected to increase the utilization or activation of the CDC EOC?

Reference Materials: Stakeholder Survey Report – Questions 10, 19 (Tab 11); EOC Activation and Utilization (Tab 13- C); EOC Basics (Tab 14-B, C, D)



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Workgroup Questions on CDC's EOC

- **Feedback Mechanisms:** What improvements can be made in addition to the After Action Report (AAR) process (Tab 13-F) to obtain feedback from CDC EOC internal stakeholders?

★ Reference Materials: Stakeholder Survey Report – Question 31 (Tab 11); EOC Activation and Utilization (Tab 13-F); EOC Basics (Tab 14-E)

- **Metrics:** How best can DEO measure the success of its EOC efforts to support internal stakeholders? How best can DEO measure impact of its efforts to support stakeholders?

★ Reference Materials: Stakeholder Survey Report – Questions 19, 20); EOC Activation Profile (Tab 13-F, G)



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Workgroup Questions on CDC's EOC

- **Training:** What additional training from that outlined by OPHPR's Learning Office (Tab 15-A,B,C) needs to be provided or improved to facilitate CDC EOC utilization or activation?
 - ★ **Reference Materials:** Stakeholder Survey Report – Questions 27, 30 (Tab 11); EOC Activation and Utilization (Tab 13-B); EOC Basics (Tab 14-C); NIMS (Tab 15-A, B, C)



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Workgroup Questions on DCIRs

- **DCIRs Strengths and Weakness:** Review the current draft CDC policy on DCIRs (Tab 12-C) and determine what are the strengths and weaknesses of the proposed DCIR process to facilitate the upward flow of actionable information to CDC leadership?
 - ★ **Reference Materials:** Stakeholder Survey Report – Questions 24-27 (Tab 11) Director's Critical Information Requirements (Tab 12-A, B, C)
- **Information Prioritization Frameworks:** Review the information paper on incident specific H1N1 response DCIRs from April - November 2009 (Tab 12-B). What framework could be used for the prioritization and reporting of public health incident information up the chain of command during a response in order to provide actionable information to CDC leadership?
 - ★ **Reference Materials:** Stakeholder Survey Report – Questions 24-27 (Tab 11) Director's Critical Information Requirements (Tab 12-A, B, C)



Orientation to DEO and CDC's Response Mission

Phil Navin, Director
Division of Emergency Operations
Office of Public Health Preparedness and Response
Centers for Disease Control and Prevention

Board of Scientific Counselors ad hoc Workgroup
19 January 2010

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1



Purpose

Provide an overview of how the Division of
Emergency Operations and the Centers for
Disease Control and Prevention prepare for a
public health event.

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2



Agenda



- Opening Remarks
- National Directives
- CDC's Model
- CDC Director's Actions
- DEO Organizational Overview
- Closing Remarks

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3



Vision, Mission and Director's Intent



Mission Statement:

DEO provides CDC's core Incident Management Structure to coordinate and execute preparedness and response activities.

Vision Statement:

To be recognized as the CDC's National Center for public health preparedness and emergency response.

Division Director's Intent:

Use the principles of the Incident Management System to manage CDC resources to support public health activities, events, and exercises in coordination with internal and external partners by assisting with the deployment of assets, gathering and disseminating information, and coordinating and managing the activities/events.

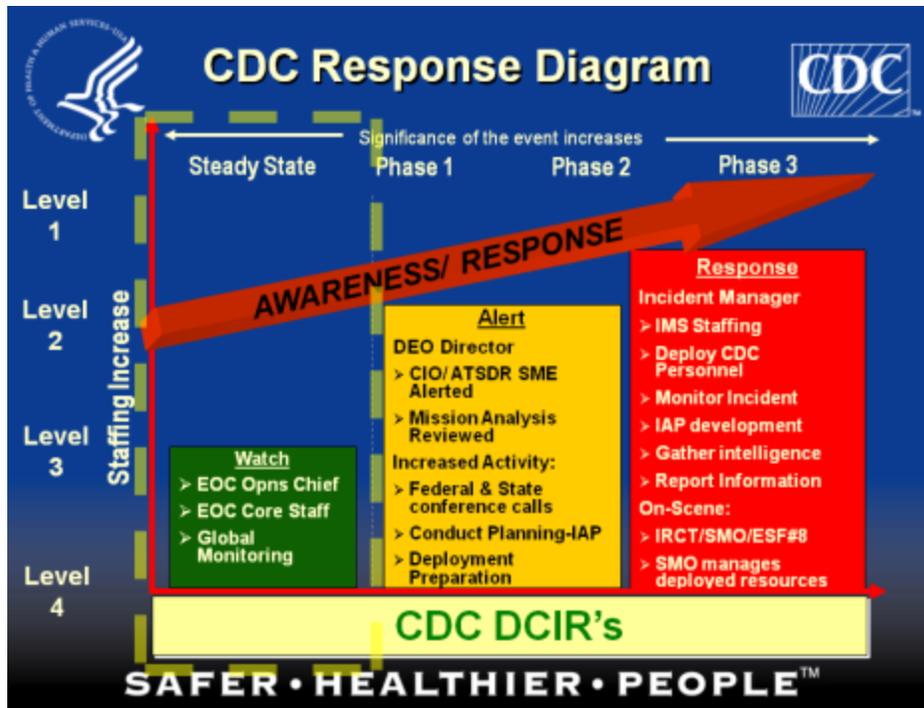
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Basic Principles CDC

- Not every event requires EOC activation
- Majority of events are managed within programs
- No action can be taken without awareness
- Collective management requires a centralized facility
- Event structure must be expandable
- Adjust management structure to meet mission needs
- Spectrum of small scale versus large-scale events
- Focus on principles – not a scenario

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CDC Director's Critical Information Requirements (DCIRs)

- Report disease outbreaks/deaths that are above the base line for the seasonal or geographic norm
- Report DOH or physician inquiries of suspected H5N1
- Report confirmed bird/animal H5N1
- Report any chemical, biological, nuclear threats or events-airborne releases, natural hazard or water
- Media interest for any accidental or intentional agent or toxin release/use
- Vaccine adverse affects resulting in death
- Food borne illness resulting in above base line numbers
- Accidental death/injury of CDC personnel
- Request for use of CDC aircraft
- Report any requests for SNS assets
- Report events affecting CDC installation activities/operations
- Report incidents of international significance affecting CDC staff
- Significant theft, loss, accidental release or inventory discrepancy of select agents.

Note: DCIR's become more detailed and change constantly once an event occurs



Federal Preparedness References



- National Response Framework
- National Incident Management System
- Homeland Security Presidential Directive 5 & 8*
- Universal Task Lists
- Target Capabilities List
- National Planning Scenarios
- Integrated Planning System
- Comprehensive Preparedness Guide
- National Preparedness Guidelines
- Homeland Security Exercise & Evaluation Program
- Exercise Evaluation Guides

* Will be modified

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9



National Planning Scenarios



- Scenario 1: Nuclear Detonation – 10-Kiloton Improvised Nuclear Device
- Scenario 2: Biological Attack – Aerosol Anthrax
- Scenario 3: Biological Disease Outbreak – Pandemic Influenza
- Scenario 4: Biological Attack – Plague
- Scenario 5: Chemical Attack – Blister Agent
- Scenario 6: Chemical Attack – Toxic Industrial Chemicals
- Scenario 7: Chemical Attack – Nerve Agent
- Scenario 8: Chemical Attack – Chlorine Tank Explosion
- Scenario 9: Natural Disaster – Major Earthquake
- Scenario 10: Natural Disaster – Major Hurricane
- Scenario 11: Radiological Attack – Radiological Dispersal Devices
- Scenario 12: Explosives Attack – Bombing Using Improvised Explosive Devices
- Scenario 13: Biological Attack – Food Contamination
- Scenario 14: Biological Attack – Foreign Animal Disease (Foot & Mouth Disease)
- Scenario 15: Cyber Attack

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10



National Response Framework - 15 ESFs



 <p>1: Transportation <i>Department of Transportation</i></p>	 <p>6: Mass Care, Emergency Assistance, Housing and Human Services <i>Department of Homeland Security / Federal Emergency Mgmt Agency</i></p>	 <p>11: Agriculture and Natural Resource <i>Department of Agriculture / Department of the Interior</i></p>
 <p>2: Communications <i>National Communications System</i></p>	 <p>7: Logistics Management and Resource Support <i>Department of Homeland Security / Federal Emergency Mgmt Agency / General Services Admin</i></p>	 <p>12: Energy <i>Department of Energy</i></p>
 <p>3: Public Works and Engineering <i>Department of Defense / Army Corps of Engineers</i></p>	 <p>8: Public Health and Medical Services <i>Department of Health and Human Services</i></p>	 <p>13: Public Safety and Security <i>Department of Justice</i></p>
 <p>4: Firefighting <i>Department of Agriculture / Forest Service</i></p>	 <p>9: Search and Rescue <i>Department of Homeland Security / Federal Emergency Mgmt Agency / U.S. Coast Guard / Department of the Interior</i></p>	 <p>14: Long-Term Community Recovery <i>Department of Agriculture / DHS / FEMA / Small Business Administration</i></p>
 <p>5: Emergency Management <i>Department of Homeland Security / Federal Emergency Management Agency</i></p>	 <p>10: Oil and Hazardous Materials Response <i>Department of Homeland Security / U.S. Coast Guard / Environmental Protection Agency</i></p>	 <p>15: Emergency Public Information and External Communications <i>DHS / FEMA</i></p>

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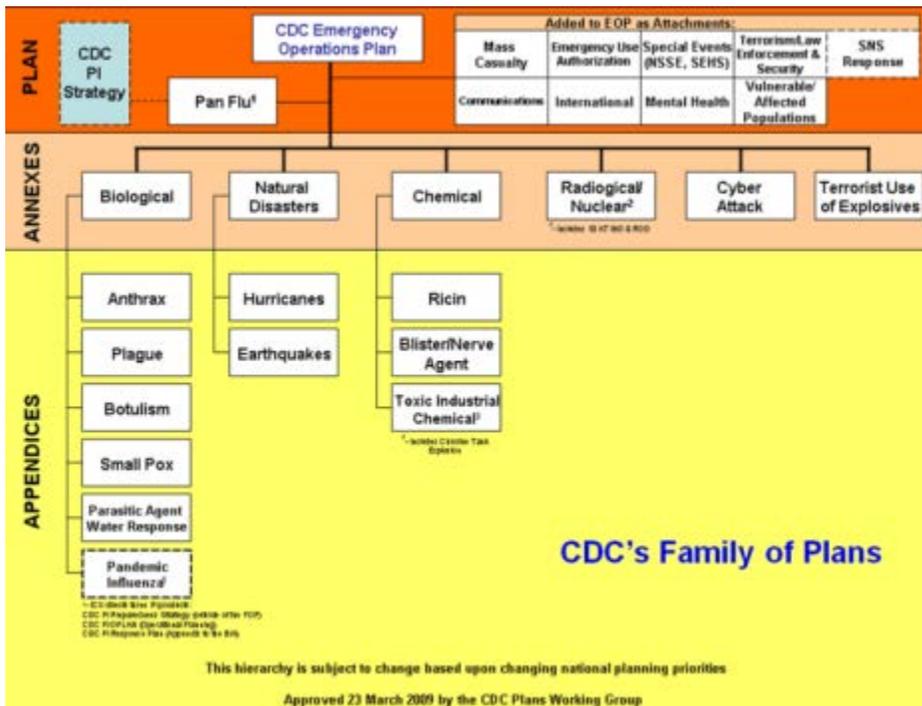
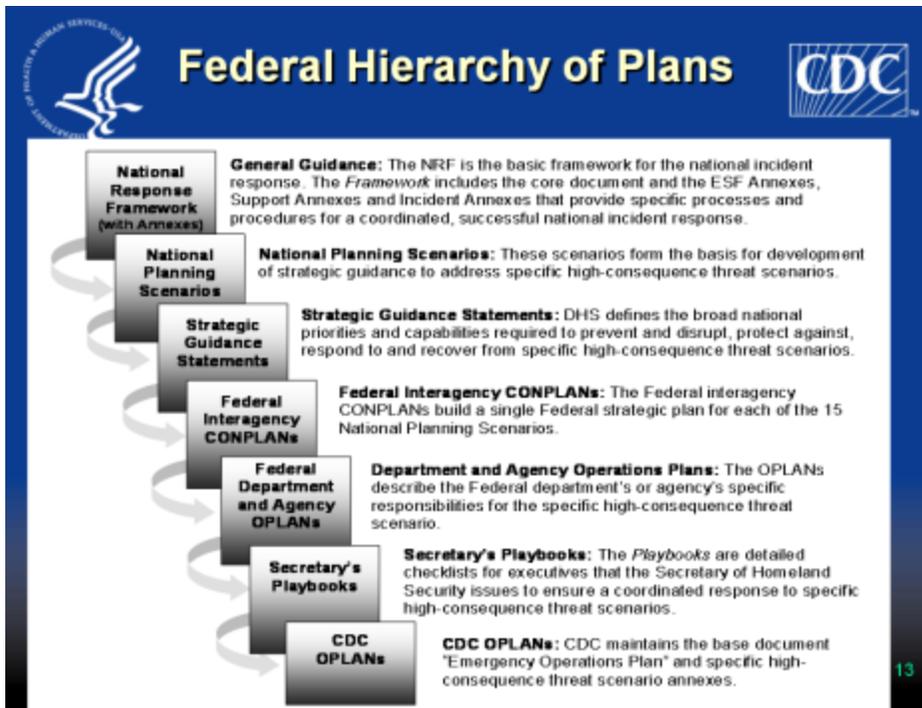
Emergency Support Function (ESF) #8



- Assessment of public health/medical needs
- Health surveillance
- All-hazard public health and medical consultation, technical assistance, and support
- Behavioral health care
- Public health and medical information
- Vector control

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12





Training & Exercises



- ◆ Skill Proficiency - Laboratory
- ◆ Individual incident Command System (ICS) Training
- ◆ Collective Training – teams and sections
- ◆ Exercises
 - ★ Seminars
 - ★ Tabletops
 - ★ Functional
 - ★ Full Scale
- ◆ Validate what you plan through training and exercises

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Establish Pre-event Information Flow



- ◆ Develop routine daily information systems
 - ★ Daily reports
 - ★ Executive summaries
 - ★ Classified and unclassified briefings
- ◆ Develop "alert" messaging systems
 - ★ Early notification: Spot Reports and SITREPS
 - ★ Phone
 - ★ Email
- ◆ Develop "follow-up" reporting
 - ★ Situational reports
 - ★ Focused subject briefings
 - ★ Director update briefings

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Criteria to Centralize Event Management



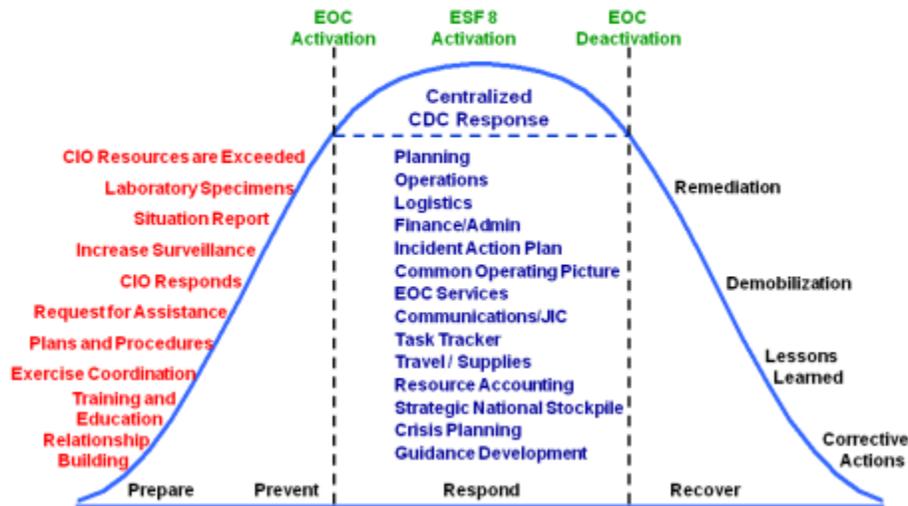
- Federal level interest
- Number of cases and/or deaths
- International impacts
- Exceeds organizational unit's management & staffing capability
- Urgency of event
- Geographical dispersion
- Predictable impact (hurricane)
- Public health threat (satellite intercept)
- Number of CDC Organizations involved
- Media interest (*E. coli*)
- Need for numerous deployments and/or procurement actions
- Select agent (e.g. anthrax, botulism)
- As directed by the CDC Director

Note: Some or all of the criteria may trigger utilization or activation.

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Evolution of CDC Response



The Centers, Institutes and Offices (CIOs) within CDC respond to public health events every day and not all events or incidents require CDC's Incident Management System (IMS) structure.



Division Mission Essential Tasks



- Maintain and provide, 24/7/365, a single point of information entry concerning public health threats and events
- Maintain situational awareness and alert CDC leadership and HHS
- Analyze, synthesize and summarize all operationally relevant information for incidents
- Coordinate Incident Management training and staffing
- Establish and maintain effective communications and coordination with partners
- Develop plans and exercises for 15 scenarios
- Provide logistical support



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Summary



- ◆ Pre-Event Planning
- ◆ Exercises
- ◆ Facility Maintenance
- ◆ Daily Protocols
- ◆ Alert Systems
- ◆ Expandable Staffing Capabilities

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 **Questions?** 

Success for the future....



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**CDC's
Emergency Operations Center**

**Joseph Spalviero
Operations Team Lead
Division of Emergency Operations
Office of Public Health Preparedness and Response
Centers for Disease Control and Prevention**

**Board of Scientific Counselors ad hoc Workgroup
19 January 2010**

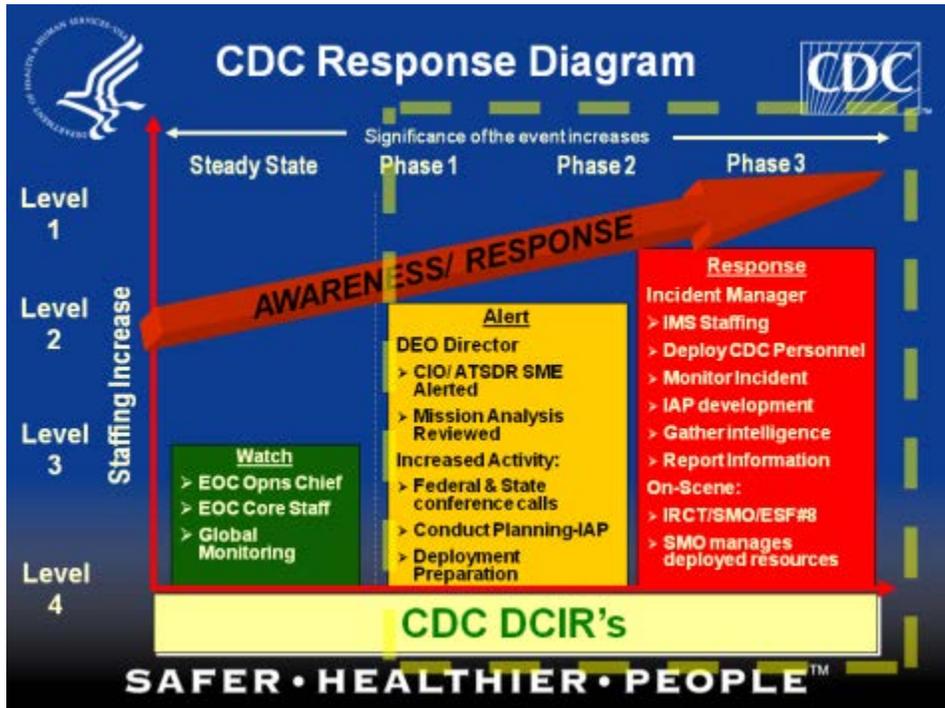
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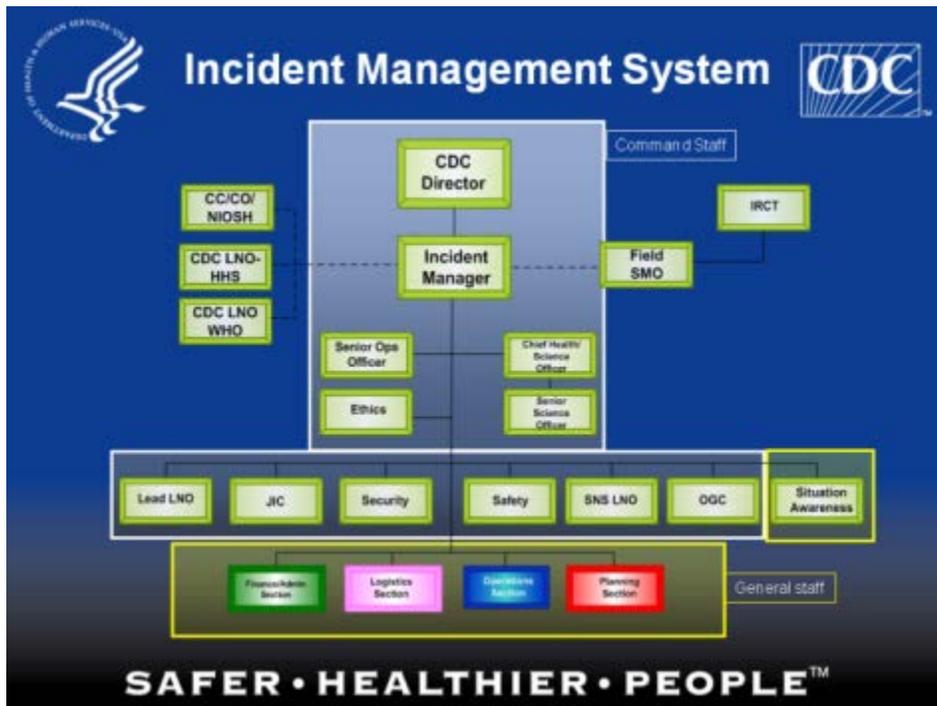
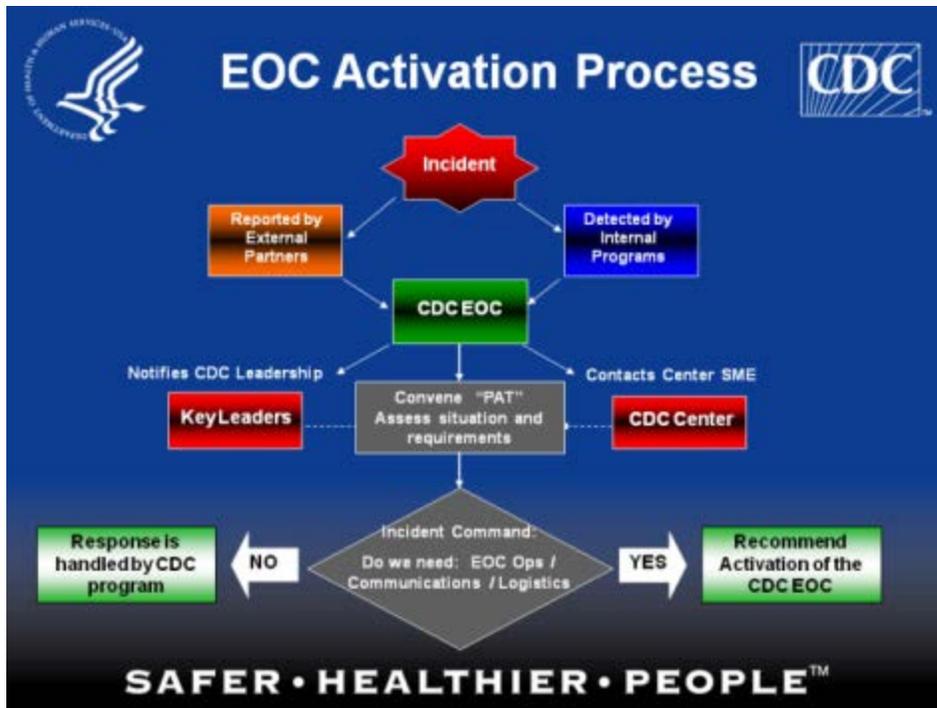



Purpose

To orient the Board of Scientific Counselor's ad hoc Working Group to how the EOC is activated, how the EOC can be utilized, and roles, functions, and services provided by each of the EOC Incident Management System (IMS) Sections

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CDC IMS Command Staff



- Normally consists of the following core functions:
 - ◆ Incident Manager, Chief Health/Science Officer, Chief of Staff, Joint Information Center, Security Officer, Safety Officer, Liaison Officer, Strategic National Stockpile Liaison, General Council and Ethics.
- Provides overall leadership to CDC IMS and response
- Sets objectives, establish DCIRs and approves the Incident Action Plan
- Defines the IMS structure and staff needed for the response
- Coordinates with other agencies (both US and international) and jurisdictions involved in the incident response
- Approves deployment of CDC personnel and major purchases of materiel
- Ensures security and safety of CDC staff and property

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IMS General Staff



Operations Section

- Coordinates and manages all aspects of response preparedness and Full Scale Exercise activities with internal and external partners.
- Coordinate within CDC and with HHS-SOC or other agencies for execution of potential missions.
- Inform and coordinate incident information and resources with CDC.
- Provide all administrative, AV / Communications, and IT support for EOC 21, EOC 1 and Bldg 21, maintains EOC equipment and supports all users.
- Manage and support daily / routine operational activities.

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IMS General Staff



Planning Section

- Develops agency response plans and contingency plans
- Prepares and publishes the Incident Action Plan (IAP) and CDC Situation Report (SITREP)
- Chairs planning meetings and participates in other meetings (such as Plans Decision Unit)
- Conducts/Develops After Action Reviews

- Through the section's Technical Support Unit:
 - ◆ Provides science-based response experts
 - ◆ Develops technical guidance, data, and courses of action for the Incident Manager in response to external and internal requests

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IMS General Staff



Logistics Section

- Manages logistical support for event/incident response operations including:
 - ◆ Equipment (communication, survival, PPE) for deployers
 - ◆ Travel support for deployers
 - ◆ Transportation support for equipment, specimens, etc.
- Coordinates additional EOC space/facility requirements
- Provides procurement support for EOC and deployers
- Manages use of CDC leased aircraft
- Provides overall logistics planning and policy support
- Provides logistical support for COOP

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IMS General Staff



Finance/Administration Section

- Staffed by Financial Management Office (FMO)
- Provides event related
 - ◆ Cost Tracking
 - ◆ Finance Policy
 - ◆ Common Accounting Number management (CAN)
- Procurement Branch
 - ◆ Staffed by Procurement and Grants Office (PGO)
- Provides market research assistance
 - ◆ Procures: supplies / services
- Deploys Federal Contracting Officers (FCO) as required

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IMS General Staff



Situation Awareness Section

- Consolidates the Scientific and support information for the Directors Update briefing (DUB)
- Collects, coordinates, and disseminates critical information
- Coordinates knowledge sharing across CDC and external partners
- Implements Knowledge Management Processes and maintains a Common Operating Picture (COP)
- Collaborates on integration of information technologies, and information sources to improve information sharing
- Provides Geo-spatial mapping, visualization products, and automated support tools

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CDC EOC History



- **EOC activations:**
 - FY 2007 - 4 activations / 128 days
 - FY 2008 - 5 activations / 104 days
 - FY 2009 - 3 activations / 173 days

- **EOC domestic and international utilizations:**
 - FY 2007 - 37 utilizations / 307 days
 - FY 2008 - 63 utilizations / 358 days
 - FY 2009 - 44 utilizations / 365 days

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CDC EOC History



- **Call inquiries received:**
 - 2007 - 27,134
 - 2008 - 26,986
 - 2009 - 24,210

- **Tours provided:**
 - 2007 - 192 Tours for 1,859 visitors
 - 2008 - 210 Tours for 2,188 visitors
 - 2009 - 254 Tours for 2,294 visitors

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Questions



Success for the future....



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14

Director's Critical Information Requirements (DCIRs)



Mark Wooster, Ph.D.
Associate Director for Science
Division of Emergency Operations
Office of Public Health Preparedness and Response
Centers for Disease Control and Prevention

19 January 2010



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Purpose

To provide an overview of the Director's Critical Information Requirements (DCIRs) concept to the BSC Workgroup



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Why DCIRs?

- Every day, numerous public health events take place
- CDC Subject Matter Experts (SME) - public health information network
- Trusted contacts - level of detail and context
- CDC SMEs are generally the first to know about significant public health events
- Information flow to leadership: too much/too little
- Keep CDC's Director informed - proactive rather than reactive
- Minimize the likelihood of CDC being uninformed



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Underlying Cultural Challenges

Bridging Three Cultures: Public Health Response, Practice, and Science

Culture Categories:	<u>Response</u>	<u>Practice</u>	<u>Science</u>
Members	Generalist	Analyst	Specialist
Values	Uniformity	Process	Individuality
Mission	Operations/Goals	Collaboration	Science
Ownership	Team	Shared	Individual PI/Authors
Communications	Chain of Command	Community	Social Network
Information	Shared	Assessed	Proprietary
Response	Centralized	Via Grantees	Decentralized/SME
Methods	Standardization	Procedures	Creativity
Goals	Complete Mission	Improve Systems	New Knowledge
Ideas	In Box	Build Box	Out of Box
Leadership	Incident Command	Meta-Leaders	Reputation
Decision madewith	Info on Hand	After Policy Review	After Data Review



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DCIRs

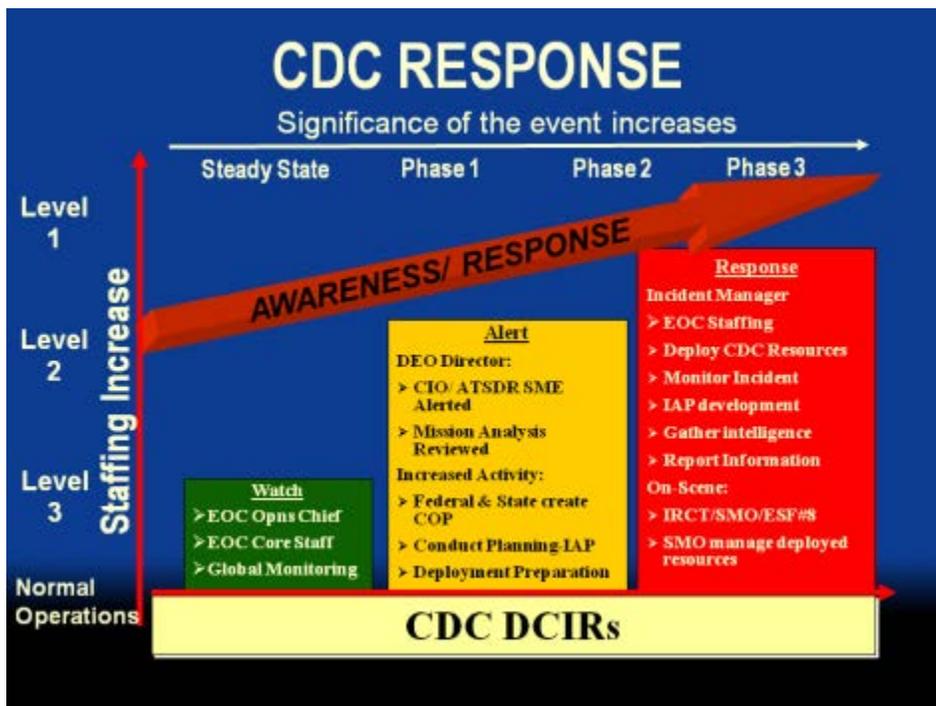
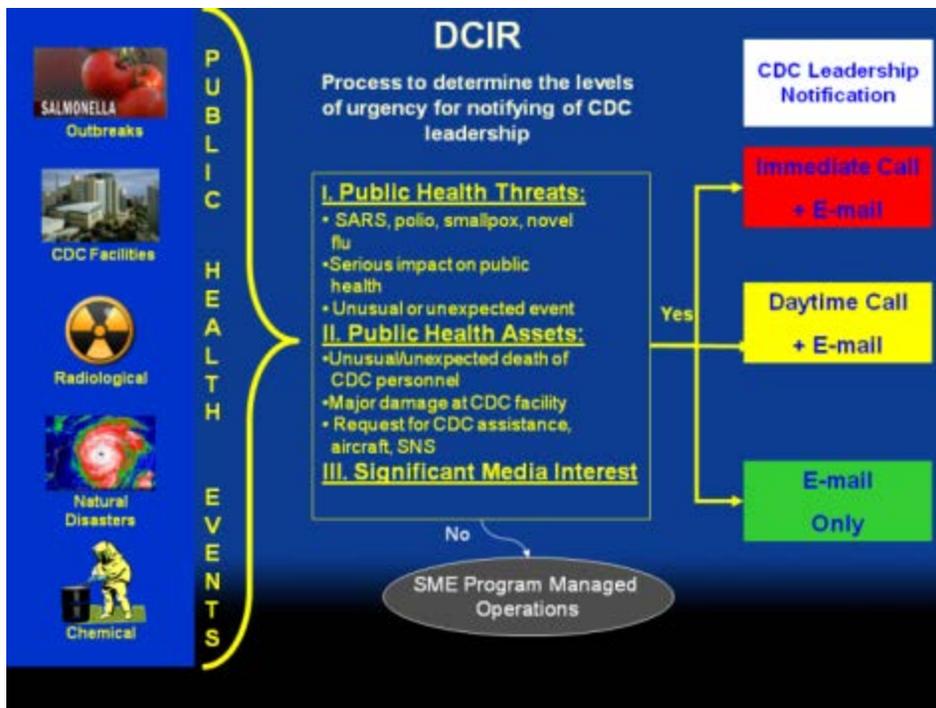
- DCIRs are a list of information categories that CDC's Director considers vital for decision-making and situational awareness:
 - ◆ What specific information is needed by the Director
 - ◆ What is the urgency of reporting that information

- The DCIR framework is flexible and can be modified at the discretion of CDC's Director and senior CDC leadership.



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DCIRs

- Top-down to facilitate bottom-up communications
- Used to prioritize public health event information
- Leadership expectations and intent: what and when
- Helps CDC understand what information is critical
- Helps CDC understand information time needs
- Improves efficiency of information gathering
- Without a process, SMEs use their individual judgment
- DCIRs are guidance to augment the SME's judgment



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OPHPR's DCIRs Definition

- DCIRs are significant, time-sensitive events/information requirements, developed and approved by CDC's Director. Once a DCIR is identified, notification is made to select CDC leadership within a defined period of time as identified by the Director.



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DCIRs - January 2009

- Disease outbreaks/deaths that are above the base line for the seasonal or geographic norm
- DOH or physician inquires of suspected H5N1
- Confirmed bird/animal H5N1
- Any chemical, biological, nuclear threats or events-airborne releases, natural hazard or water
- Media interest for any accidental or intentional agent or toxin release/use
- Vaccine adverse affects resulting in death
- Food borne illness resulting in above base line numbers
- Accidental death/injury of CDC personnel
- Request for use of CDC aircraft
- Any requests for SNS assets
- Events affecting CDC installation activities/operations
- Incidents of international significance affecting CDC staff



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Proposed DCIRs - Jan 2010

Urgent Notification: within 30 min, notification by email and phone

- Nuclear/Radiological release/accident
- Suspected intentional release of chemical terrorism agents (sarin) or biological agents
- Chemical accident with potential for high morbidity and mortality (chlorine tank explosion)
- Public health threat/incident with significant impact on U.S. infrastructure (earthquake)
- Severe threat to life or accidental death of a CDC employee
- Emergency request for assistance from a Minister of Health, WHO/PAHO
- Unexpected emergency activation of the NOC or the SOC
- Unexpected event resulting in a significant degradation at a CDC installation
- Any condition that requires immediate notification of the Secretary, HHS
- Emergency request for CDC aircraft
- Unexpected press coverage of significant, politically sensitive, circumstances
- Emergency request for time-sensitive, life-saving, SNS materiel for items the CDC Director has not delegated release authority
- Change in status of critical resources that prevent or seriously threaten SNS asset

DCIRs –The Challenge

- Challenges:
 - ◆ Attempting to cover all possible DCIR categories increases the list to an unmanageable number
 - ◆ Using subcategories or tiers helps, but is problematic
 - ◆ Broad DCIRs can mean almost everything or nothing
 - ◆ Bridging public health science, practice, and response cultures related to DCIRs
 - ◆ DCIRs need to be useful to be accepted



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DCIR - Workgroup Objective

Evaluate CDC's use of the DCIR framework to prioritize upward information flow to CDC leadership:

- **DCIR Strengths and Weakness:** Review the current draft CDC policy on DCIRs (Tab 12-C) and determine what are the strengths and weaknesses of the proposed DCIR process to facilitate the upward flow of actionable information to CDC leadership?
- **Information Prioritization Frameworks:** Review the information paper on incident specific H1N1 response DCIRs from April - November 2009 (Tab 12-B). What framework could be used for the prioritization and reporting of public health incident information up the chain of command during a response in order to provide actionable information to CDC leadership?

Discussion and Questions Session

- ◆ CDC EOC Utilization and Activation
- ◆ Director's Critical Information Requirements



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Appendix D. Workgroup Meeting Agenda

AGENDA

Ad Hoc BSC Workgroup (BSC-WG) Meeting
Division of Emergency Operations (DEO) Program Review of CDC Emergency Operations Center (EOC)
Office of Public Health Preparedness and Response (OPHPR)
Centers for Disease Control and Prevention (CDC)

Mountain Laurel Room, Emory Conference Center Hotel, 1615 Clifton Road, Atlanta, GA 30329
January 26 - 28, 2010

Tuesday January 26, 2010

- 9:00 - 9:15 a.m. **Welcome and Individual Introductions**
CAPT Dan Sosin, M.D., M.P.H., Director (acting), Office of Public Health Preparedness and Response (OPHPR)
Phil Navin, M.H.A., Director, Division of Emergency Operations, OPHPR
Robert Ursano, M.D., and Louis Rowitz, Ph.D., Workgroup Co-Chairs
- 9:15 - 9:30 a.m. **Workgroup Charge and Logistics/Topic Overview/Update**
Mark Wooster, Ph.D., Associate Director for Science, DEO, OPHPR
- 9:30 - 10:30 a.m. **Presentation: CDC's Emergency Operations Center Stakeholder Survey Analysis**
Nicholas Holt, Ph.D., Project Manager, SRA International, Inc.
Patrick Kilgo, M.S., Emory University, Rollins School of Public Health
- 10:30 - 11:00 a.m. **Discussion and Questions**
- 11:00 - 11:30 a.m. **Workgroup Planning Session (*closed session*)**
Robert Ursano, M.D., and Louis Rowitz, Ph.D., Workgroup Co-Chairs
- 11:30 a.m.-12:30 p.m. **Lunch**
- 12:30 - 1:10 p.m. **Panel #1: Round Table Presentations**
Topic: Improving CDC EOC - CDC Emergency Coordinators (EC) Stakeholder Panel
Facilitator: Robert Ursano, M.D., Workgroup Co-Chair
Panel Members: (10 minute presentations per panel member)
 - Sherrie Bruce (CCID/NCPDCID) - *Information Flow to Leadership/DCIR*
 - Lisa Delaney, M.S. (NIOSH) - *Metrics, Feedback, and IMS Training*
 - Dave DeSantis, M.S. (CCHIS/NCHM) - *EOC Facilities, Services, and EOC Training*
 - Dan Holcomb (CCEHIP/NCEH) - *Barriers to Using the EOC*
- 1:10 - 2:00 p.m. **Discussion and Q&A for EC Panel**
- 2:00 - 3:00 p.m. **Panel #2: Question and Answer Round Robin**
Topic: Improving CDC EOC - OPHPR Stakeholder Panel
Facilitator: Louis Rowitz, Ph.D., Workgroup Co-Chair
Panel Members: (Each panel member will respond to questions in a round-robin format)

- Mark Austin (OPHPR/DEO)
- Todd Piester (OPHPR/DSNS)
- Luis Poblano (OPHPR/DEO)
- Todd Talbert, M.A. (OPHPR/DSLRL)

- 3:00 - 3:15 p.m. **Break**
- 3:15 - 3:30 p.m. Shuttle to CDC Roybal campus, Visitor's Center (Bldg. 19)
- 3:30 - 5:00 p.m. Onsite Operational Review of EOC by BSC Workgroup (accompanied by DEO staff)
- 5:00 - 5:15 p.m. Shuttle back to Emory Conference Center
- 6:00 p.m. BSC-WG Optional Dinner with DEO and OPHPR senior staff
Club Room, Emory Conference Center Hotel

Wednesday January 27, 2010

- 9:00 - 9:10 a.m. **Welcome Day 2 / Announcements**
Robert Ursano, M.D., and Louis Rowitz, Ph.D., Workgroup Co-Chairs
- 9:10 - 10:50 a.m. **Panel #3: Question and Answer Round Robin**
Topic: Improving the EOC – Subject Matter Expert (SME) Stakeholder Panel
Facilitator: Robert Ursano, M.D., Workgroup Co-Chair
Panel Members: (Each panel member will respond to questions in a round-robin format)
- Inger Damon, M.D., Ph.D. (CCID/NCZVED)
 - Nicki Pesik, M.D. (CCID/NCZVED)
 - Bill Rich (NCEH/OD/OTPER)
 - James Spahr, M.P.H. (NIOSH)
 - Susan Dietz, M.S., (OWCD)
 - Ian Williams, Ph.D. (CCID/NCZVED)
- 10:50 - 11:50 a.m. **Discussion and Q&A for SME Panel**
- 11:50 a.m. - 12:50 p.m. **Lunch**
- 12:50 - 2:10 p.m. **Panel #4: Round Table Presentations**
Topic: Improving the CDC EOC and DCIRs - Leader Stakeholder Panel
Facilitator: Louis Rowitz, Ph.D., Workgroup Co-Chair
Panel Members: (10 minute presentations per panel member)
- Ray Arthur, Ph.D. (COGH/DGPPC) - *Information Flow to Leadership/DCIR*
 - ADM Mitchell L. Cohen, M.D. (CCID/OD) - *Senior Leader's Impression of the EOC*
 - Toby Merlin, M.D. (CCID/OD/ICU) - *EOC Facilities, Services, and EOC Training*
 - RADM Stephen Redd, M.D. (CCID/OD) - *Information Flow to Leadership/DCIR*
 - CAPT Drue Barrett, Ph.D. (OD/OCSO) - *EOC Facilities, Services, and EOC Training*
 - Mark Keim, M.D. (CCEHIP/NCEH) - *Metrics, Feedback, and IMS Training*
- 2:10 - 2:40 p.m. **Discussion and Q&A for Leader Panel**

2:40 - 3:00 p.m. **Break**

3:00 - 5:00 p.m. **Deliberations and Report Writing (*closed session*)**
Robert Ursano, M.D., and Louis Rowitz, Ph.D., Workgroup Co-Chairs

5:00 p.m. **Adjourn**

Thursday January 28, 2010

9:00 - 9:05 a.m. **Welcome Day 3 / Announcements**
Robert Ursano, Ph.D., and Louis Rowitz, Ph.D., Workgroup Co-Chairs, Board of
Scientific Counselors, OPHPR

9:05 - 11:00 a.m. **Deliberations and Report Writing (*closed session*)**

11:00 - 11:30 a.m. **Briefing to OPHPR and DEO Senior Staff**
Robert Ursano, Ph.D., and Louis Rowitz, Ph.D., Workgroup Co-Chairs

11:30 – 12:00 p.m. **Next Steps and Meeting Evaluations**

12:00 p.m. **Adjourn**

Appendix E. List of Briefing Materials Provided in Advance to the Workgroup

Briefing Materials - Table of Contents

- Tab 1: External Reviewer Roles and Responsibilities**
- Tab 2: Scope of Review**
- Tab 3: Review Objectives and Process**
- Tab 4: Individual Reviewer Comment Form for Focus Questions**
- Tab 5: Pre-Meeting Web Conference – January 19, 2010**
 - A. Agenda
 - B. Presentations (*to be provided in advance of web conference*)
- Tab 6: Meeting Information – January 26-28, 2010**
 - A. Agenda
 - B. Presentations (*to be provided at workgroup meeting*)
- Tab 7: EOC Stakeholder Panel Members**
 - A. List of Invited EOC Stakeholder Panel Members
 - B. Guidance to Panel Members (*to be provided at workgroup meeting*)
- Tab 8: List of Acronyms**
- Tab 9: Biographies**
 - A. Workgroup Members
 - B. OPHPR and DEO Staff

Background Materials for Reviewers

- Tab 10: Overview of the Division of Emergency Operations (DEO)**
 - A. DEO Overview
 - B. DEO Strategic Plan (FY2009-2014)
 - C. Organizational Charts
 - i. CDC and COTPER (as of September 2009 for stakeholder survey)
 - ii. CDC and OPHPR (as of January 2010)
 - iii. DEO Organizational Structure

Tab 11: Emergency Operations Center (EOC) Stakeholder Survey Report
(independent analysis and report by SRA International, Inc.)

- A. Final Report of Survey Analysis (to be provided at a later date)
- B. List of Survey Questions by Cohort
- C. Crosswalk of Review Focus Questions to Survey Questions

Tab 12: Director's Critical Information Requirements (DCIRs)

- A. DCIRs at CDC
 - i. Overview
 - ii. Standing DCIRs for Dr. Julie Gerberding and Dr. Thomas Frieden (draft)
 - iii. Example of Event-Specific DCIRs (from CDC Influenza Pandemic OPLAN)
- B. DCIRs in CDC's H1N1 Response
- C. CDC DCIR Policy (draft)
- D. Examples of DCIRs From Other Organizations (HHS, DHS, DOD Army)

Tab 13: EOC Activation and Utilization

- A. Activation Preliminary Assessment Team SOP
- B. CDC Policy: Surge Staffing During Emergency Responses
- C. CDC Emergency Operations Plan (pp. 57-69; Attachment B, 91-100)
- D. CDC Influenza Pandemic OPLAN (Annex A, DEOC Task Organizations, A-1 to A-17)
- E. Hurricane Appendix to CDC Emergency Operations Plan, July 2009
- F. After Action Report (AAR) Comments Pertaining to the CDC EOC, 2005-2009
- G. CDC EOC Activation Profile, Fiscal Years 2005-2009

Tab 14: EOC Basics

- A. CDC's Roles and Responsibilities in Public Health Emergencies
 - i. The National Incident Management System
 - ii. Emergency Support Functions
 - iii. Emergency Support Function #8
- B. The CDC Emergency Operations Center
- C. EOC 101: Basic Responder Course - selected slides (optional reading)
- D. EOC Tour Briefing Guide and Talking Points (optional reading)

- E. *CDC Connects* Article on EOC and Stakeholder Survey
- F. ICS and IMS (*an overview of the Incident Command System and Incident Management System at CDC*)
- G. Example ICS Structures: Standard NIMS ICS (FEMA), CDC All-Hazard, and CDC 2009 H1N1 Influenza

Tab 15: National Incident Management System (NIMS) Training

- A. Responder Training
- B. CDC Responder Tier Descriptions and FEMA NIMS Courses
- C. CDC-wide NIMS Training Compliance Report (1st Quarter, FY2010)

Appendix F. Division of Emergency Operations Overview (May 2009)



Division of Emergency Operations



DEO's Mission

DEO provides CDC's core Incident Management Structure to coordinate and execute preparedness and response activities.

The DEO Director's intent is to use the principles of the Incident Management System (IMS) to manage CDC resources to support public health activities, events, and exercises in coordination with internal and external partners by assisting with the deployment of assets, gathering and disseminating information, and coordinating and managing the activities/events.

DEO's Essential Tasks

Daily Roles and Responsibilities:

- Maintain and provide, 24/7/365, a single point of information entry concerning public health threats and events.
- Coordinate CDC IMS training and core staffing
- Maintain situational awareness and alert CDC leadership and HHS on events of interest
- Analyze, synthesize and summarize all operationally relevant information for incidents
- Establish and maintain effective communications and coordination with partners
- Develop plans and exercises for the 15 National Planning Scenarios
- Provide logistical support for internal CDC deployments

During a response:

Everything that we do every day plus:

- Support the 200 CDC staff assigned to the CDC Emergency Operations Center (EOC)
- Fill many of the functional roles in the Incident Management System:
 - Task Tracking
 - Request for Information/Action
 - Action Request Form/Mission Assignment
 - Deployment Coordination, Rostering and Demobilization
 - Leadership positions in the Operations Section

Operations

- Provide a 24/7/365 public health emergency operations center
 - Triage phone calls to connect physicians (with ill patients), state health departments, and others to the appropriate CDC subject matter experts (SMEs)
- Monitor the Director's Critical Information Requirements
 - Maintain situational awareness and keep CDC leadership and HHS informed
 - Analyze, synthesize and summarize all operationally relevant information for incidents
- Establish and maintain effective communications and coordination with:
 - CDC Centers, Institutes and Offices
 - State and regional public health agencies w/ HHS Secretary's Operations Center (SOC) and DHS National Operations Center (NOC)
 - Selected international public health organizations
- Conduct and distribute:
 - CDC Daily Activity Report
 - High and Low Alert Situation Reports (SITREPs)
 - CDC SITREPs – Incident Notices
 - Health Alert Network (HAN) advisories and alerts
 - National Response Center (NRC) messages
 - Safety and wellness checks of CDC staff in an area impacted by a disaster
- Coordinate with CDC security (OSEP) and international health (COGH) staff to alert CDC staff stationed or traveling in a potentially impacted area

May 2009



Division of Emergency Operations



- Assemble a Preliminary Assessment Team of CDC leaders and SMEs when a public health emergency is reported to CDC
- Provide audio-visual system and administrative support to the CDC EOC and DEO
- Provide IT HELP Desk support during day-to-day through major response
- Ensure the EOC is always ready to meet the CDC response modes
 - Ensure all equipment, facility rooms and staff are ready to support all levels of response from Steady state to a Urgent Phase 3 major response

Plans, Training, Exercise and Evaluation

- Develop, coordinate, and disseminate CDC response plans and standard operating procedures
 - CDC Emergency Operations Plan
 - CDC Emergency Response Annexes
 - Incident Management System Standard Operating Procedures
- Coordinate with federal, state, local, tribal, and private agencies to support and synchronize response planning and exercises
 - Engage state health department participation in state EOC
 - Engage state representatives in CDC Exercise Control Cell
- Develop, execute, and evaluate CDC/DEO exercises to measure the effectiveness of CDC's response, improve plans and identify training needs
 - Use HSEEP guidance in exercise development, conduct and evaluation
 - Conduct After Action Reports (AARs) and Hotwashes to gather SME comments
- Develop CDC AARs and track Improvement Plan (IP) progress
 - Publicly release AARs and IPs for each event
 - Coordinate involvement of CDC Centers, Institutes, and Offices in resolving AAR and IP issues
 - Use SME comments in response to IP issues to revise plans and annexes
- Train CDC/DEO staff on current CDC response methods and procedures
 - Conduct periodic event-specific training for CDC responders
 - Conduct CDC EOC orientation and procedure training for CDC Centers, Institutes, and Offices' action officers
- Compile current information necessary to develop the CDC Daily Report and provide up-to-date situational awareness and to drive an informed emergency response
 - Information Operations supplies current data to the Operations Team
 - Use information to develop a Common Operating Picture
- Integrate science with operations to ensure CDC response plans and execution are scientifically based
 - Help develop Courses of Action and Objectives with science SMEs
- Utilize Incident Action Planning (IAP) to manage CDC's emergency response
 - Help control CDC response through operational period
 - Use scientific SME-based objectives

Logistics

- Manage property accountability for the Division
- Provide logistics planning support during emergency responses, to include continuity of operations (COOP) events
- Procure and manage supplies for responses to include emergency deployment operations and COOP events
- Coordinate CDC equipment and personnel transportation
- Coordinate and track specimen, supply, and equipment shipments
- Procure, maintain, and manage emergency deployment equipment for the CDC

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Division of Emergency Operations



- Provide deployment support for CDC personnel responding to emergency deployments
 - Communications
 - Field Survival
 - PPE
 - Travel, transportation, and lodging
- Manage CDC aircraft

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Appendix G. Acronyms

List of Acronyms

AAR	After Action Review / After Action Report
AC/IC	Area Command / Incident Command
ADS	Associate Director for Science
AFB	Air Force Base
APHL	Association of Public Health Laboratories
ARC	American Red Cross
ASPH	Association of Schools of Public Health
ASPR	Assistant Secretary for Preparedness and Response (HHS)
ASTHO	Association of State and Territorial Health Officers
ATSDR	Agency for Toxic Substances and Disease Registry (CDC)
BSC	Board of Scientific Counselors
BSC-WG	Board of Scientific Counselors Workgroup
CA	Cooperative Agreement
CAP	Corrective Action Plan
CC	Coordinating Center
CC/CO/NC	Coordinating Center/Coordinating Office/Institute/National Center
CCEHIP	Coordinating Center for Environmental Health and Injury Prevention (CDC)
CCHIS	Coordinating Center for Health Information and Service
CCHP	Coordinating Center for Health Promotion (CDC)
CCID	Coordinating Center for Infectious Diseases (CDC)
CDC	Centers for Disease Control and Prevention
CDC EOC	CDC Emergency Operations Center (formerly DEOC)
CDC OD	CDC Office of the Director
CIR	Critical Information Requirement
CO	Coordinating Office
COA	Course of Action
COB	Close of Business
COI	Centers, Offices, Institutes
COP	Common Operating Picture
COTPER	Coordinating Office for Terrorism Preparedness and Emergency Response (CDC)
CSTE	Council of State and Territorial Epidemiologist
DBPR	Division of Bioterrorism Preparedness and Response (CDC)
DCIR	Director's Critical Information Requirement
DEO	Division of Emergency Operations (CDC/COTPER)
DEOC	Director's Emergency Operations Center (CDC). Now called CDC EOC
DFO	Designated Federal Official
DHHS	Department of Health and Human Services
DHS	Department of Homeland Security
DO	Duty Officer

DOD	Department of Defense (also DoD)
DOE	Department of Energy
DOJ	Department of Justice
DSAT	Division of Select Agents and Toxins (CDC)
DSLRL	Division of State and Local Readiness (CDC)
DSNS	Division of Strategic National Stockpile (CDC)
EAP	Emergency Action Plan
EC	Emergency Coordinator
ECS	Enterprise Communications System (CDC)
EMAC	Emergency Management Assistance Compact
EMI	Emergency Management Institute (FEMA)
EMS	Emergency Management Specialist (formerly ERC)
EO	Executive Order
EOC	Emergency Operations Center (CDC EOC)
EOP	Emergency Operations Plan
ERC	Emergency Response Coordinator (now Emergency Management Specialist)
ERP	Emergency Response Plan
ESF	Emergency Support Function (generally followed by function #)
ESF-8	Emergency Support Function-8 – Health and Medical Services
EST	Emergency Support Team
FACA	Federal Advisory Committee Act
FEMA	Federal Emergency Management Agency (DHS)
HHS	Health and Human Services
HSPD	Homeland Security Presidential Directive
IAP	Incident Action Plan
IC	Incident Commander
ICS	Incident Command System
IM	Incident Manager
IMS	Incident Management System
IRCT	Incident Response Coordination Team
IT	Information Technology
JAS	Job Action Sheet (NIMS term for position description)
JIC	Joint Information Center
LNO	Liaison Officer
LOG	Logistics, Logistics Section, Logistics Team, etc...
LRN	Laboratory Response Network (CDC)
NACCHO	National Association of County and City Health Officials
NC	National Center
NCBDDD	National Center on Birth Defects and Developmental Disabilities (CDC)
NCCDPHP	National Center for Chronic Disease Prevention & Health Promotion (CDC)
NCEH	National Center for Environmental Health (CDC)
NCHM	National Center for Health Marketing (CDC)

NCHS	National Center for Health Statistics (CDC)
NCHHSTP	National Center for Hepatitis, HIV, STD, and TB Prevention (CDC)
NCID	National Center for Infectious Diseases (CDC - old)
NCIPC	National Center for Injury Prevention and Control (CDC)
NCIRD	National Center for Immunization and Respiratory Diseases (CDC)
NCPDCID	National Center for Preparedness Detection and Control of Infectious Diseases (CDC)
NCPHI	National Center for Public Health Informatics (CDC)
NCZVED	National Center for Zoonotic, Vector-Borne, and Enteric Diseases (CDC)
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health (CDC)
NRF	National Response Framework (replaced NRP which replaced FRP)
NRP	National Response Plan (replaced FRP, replaced by NRF)
OD	Office of the Director
OPHPR	Office of Public Health Preparedness and Response (CDC)
OPLAN	Operations Plan
OPPE	Office of Policy, Planning and Evaluation (CDC)
OPS	Operations, Operations Section, Operations Team
OSPHP	Office of Science and Public Health Practice (CDC)
PAHPA	Pandemic and All Hazards Preparedness Act
PANFLU	Pandemic Influenza
PLANS	Planning Section, Plans Team, etc...
POC	Point of Contact
SA	Situational Awareness
SITREP	Situation Report
SME	Subject Matter Expert
SOP	Standard Operating Procedure
TOC	Table of Contents
USPHS	United States Public Health Service