Annex K (Information Management)

1. **SITUATION**

   a. The Influenza Pandemic Threat: Refer to Annex B (Disease Intelligence).

   b. Mission and Intent of Higher and Supporting Organizations: Refer to Base OPLAN.

   c. Environment: Refer to Annex B (Disease Intelligence).

2. **MISSION.**

   Support the CDC staff during an influenza pandemic event through real-time data exchange and information management.

3. **EXECUTION**

   Concept of Operations:

   a. **CCHIS/NCPHI/ITSO**

      1) Provides augmented informatics and IT support during an influenza pandemic.

      2) Provide standards, technical assistance, consultation, and, in some instances, software and database development for the collection of data from CDC partners and stakeholders

      3) Works with partners to provide analytic tools and visualization approaches to provide information needed for decision makers throughout CDC.

   b. **Tasks to Supporting Organizations.**

      1) **Inter-Pandemic Period: (WHO Phases 1-2; USG Stage 0)**

         a) **CCHIS:**

            (1) In coordination with CCID, exchange laboratory test results and test orders with SLTT laboratory data systems and other appropriate surveillance partners.

            (2) Expand laboratory/hospital reporting network (BioSense) to 350 hospitals in 42 markets by 2007.

            (3) Ensure Countermeasure and Response Administration System (CRA) is available to support local health organizations.

b) **ITSO:**

Ensure storage capacity exists for increased data requirements.

2) **Pandemic Alert Period: (WHO Phases 3-5; USG Stages 0-2)**

a) **CCHIS:**

(1) Ensure use of Preparedness and Workforce Management System (PWMS) for surge requirements of staff.

(2) Coordinate with SLTT public health departments to ensure timely data transmission using current systems.

(3) Coordinate with CDC laboratories for timely analysis of epidemiological data.

b) **ITSO:**

(1) Provide Level 2 and 3 support for traveling/remote field offices as well as quarantine stations.

(2) Acquire, install, and support remote access terminal servers and software (CITGO).

c. **Recommendations and Requests for SLTT.**

Ensure information systems are compliant with Public Health Information Network (PHIN) standards.

d. **Coordinating Instructions.**

Implement suspect case investigation system.

4. SUPPORT SERVICES

Refer to Base OPLAN and Annex I (Support Services).

5. MANAGEMENT AND COMMUNICATIONS

Refer to Base OPLAN.

APPENDIXES:

1. Informatics

2. Telecommunications

Appendix 1 (Informatics)

1. **GENERAL**

   The ability to identify, process, and comprehend critical elements of information during an evolving influenza pandemic provides the critical situational awareness necessary for effective, coordinated decision making.

2. **CONCEPT OF OPERATIONS**

   Informatics supports an interoperable approach to the development or integration of information systems that support the activities of other functional areas while providing data for timely decision making. To achieve this situational awareness, three critical components must be tracked:

   a. **The Threat.**

      The characteristics of the circulating pandemic influenza virus; its impact on human health, and its patterns of transmission. Refer to Annex B (Disease Intelligence).

   b. **Resources.**

      The human and material resources that can be mobilized to respond, their location and utilization.

   c. **Interventions.**

      The type, location, effectiveness, and safety of intervention techniques used to mitigate the threat and achieve operational goals. Refer to Appendix 3 (Community Intervention), Annex F.

3. **SYSTEMS**

   a. **CCHIS:**

      1) Design, develop, implement, and provide ongoing operations and maintenance of the following DEOC information support systems:

         a) Incident Management.

         b) Preparedness and Workforce Management System (PWMS).

  c) Call Tracking.

  d) Outbreak Management.

  e) Notification.

  f) Messaging.

  g) Document Management Systems.

  h) Public Health Databases.

  i) Web Portals.

  j) Telephone Recording Systems.

  k) Bioterrorism Support Systems.

2) Supports Public Health Information Network (PHIN) Systems/Architecture. Critical systems include:

  a) BioSense.

  b) Epidemic Information Exchange (EPI-X).

  c) Health Alert Network (HAN).

  d) Laboratory Response Network (LRN) Results Messenger.

  e) Outbreak Management System (OMS).

  f) Countermeasure and Response Administration System (CRA).

  g) Analysis/visualization suite "dashboard".

b. CCID:

Support the exchange of laboratory information between SLTT laboratories and CDC using the following systems.

1) Public Health Laboratory Information System (PHLIS).

2) National Respiratory & Enteric Virus Surveillance System (NREVSS).

3) LRN Messenger.

4) Specimen Tracking and Results Reporting System/Laboratory User Network Application (STARRS/LUNA).

c. For a list of influenza pandemic support, refer to Table 13 below:

Table 13: CDC Information Systems for Influenza Pandemic Support				
Information System	**Essential Element of Information**	**Purpose**	**Influenza Pandemic Role**	**Current Status (as of December 2006)**
BioSense	Early Event Detection & Tracking.	Real-time biosurveillance/situational awareness. Provides data from hospitals/healthcare systems in 50 major metropolitan areas (goal: 350 hospitals by 12/2006), in national laboratories, and DoD/VA hospitals. BioIntelligence Center provides data analysis.	Early detection of syndromic data from multiple sources supports event detection and tracking.	Currently in 185 hospitals and various DoD/VA healthcare facilities.
Countermeasure and Response Administration System (CRA)	Resource Management & Services Delivered	State/local response tool. Aggregate and individual patient modules required. Individual or aggregate data may be kept locally, but aggregate counts are sent to CDC for centralized tracking of vaccinations given, vaccine availability, etc.	Counts sent to CDC may provide broad overview. Data entry weak link.	Currently tracks smallpox. Planned modules for aggregate population reporting and individual reporting are targeted for implementation Sep 2006. A Quarantine and Isolation module is planned but an implementation date has not been scheduled.
Epi-X	Response Coordination	Provides secure, web-based, person-to-person specific communication about outbreaks and other acute or emerging health events among public health officials from CDC, State and local health departments and the military.	Message traffic could alert health providers to pandemic outbreaks.	

FluFinder	Resource Management	Backup to SPARx. Flu Finder dynamically presents flu vaccine availability information to all State health departments. The system allows for ordering new vaccine shipments and helps CDC and partners allocate vaccine according to locations of greatest need. Distribution shown down to the State level versus zip code level in SPARx.	Provides feedback on resource allocation at the State level to deter pandemic.	Currently off-line. Functionality exists in a reserve capacity. Two versions: A. Ordering, apportionment, and tracking. B. Vaccine tracking only.
Health Alert Network (HAN)	Partner Communications	Provides critical precautions, response, and treatment recommendations through a national health broadcast network.	Message traffic could alert health providers to disease outbreaks in specific locales.	
Laboratory Response Network (LRN) Results Messenger	Response Coordination	Provides LRN labs the ability to share lab results securely with public health partners.	Sentinel, reference, national labs.	
Outbreak Management System (OMS)	Case Management and Contact Tracing	Suite of tools supports local case and exposure management interventions. Captures standard data; configures outbreak-specific vocabularies; performs analyses; and creates dynamic questionnaires, reports, and outbreak specific packages.	State and local use.	In use in California (EPA) Idaho Michigan Tennessee
Surveillance, Preparedness Awareness and Response System (SPARx)	Resource Management	Part of broad CDC management effort to give public health decision-makers timely information on countermeasure availability and to support the management and apportionment of commercial sector and government-owned	Provides feedback on resource allocation at zip code level to deter pandemic. Does not show the spread of the disease; only resource availability/scarcity.	

		pharmaceuticals and other countermeasures. Data acquired represents the number of doses of vaccine (or anti-virals) available at manufacturer/distributor and amount sent to providers (down to the Zip Code level).		
Preparedness and Workforce Management System (PWMS)	Resource Management	Event response team and deployment management tool	Manage response personnel for internal and deployed teams	In production in DEOC.
WebEOC	CDC Response Coordination	Emergency management collaboration tool	Share operational and case information with HHS/OS.	In production. Hosted at SOC, HHS and used by CDC DEOC.
Public Health Laboratory Information System (PHLIS)	Virologic surveillance	A PC-based electronic reporting system for entering, editing, and analyzing data locally and for transmitting data electronically to other state or federal offices.		
CDC Alerting Service	Response Coordination	Real time emergency alerting system for message delivery by phone, e-mail, SMS, etc.	Distributing notifications to field teams.	In transition to Dialogic. Planned to interface w/ PWMS application.

Appendix 2 (Telecommunications)

1. **SITUATION**

    During an influenza pandemic situation, normal telecommunications systems; i.e., cell phones; land lines; radios; etc. , will most likely function properly. Some overload of telecommunications circuits is possible in areas where absenteeism is increased with high levels of influenza pandemic activity and increased teleworking, hampering the exchange of information between CDC personnel.

2. **CONCEPT OF OPERATIONS**

    The timely exchange of information is critical to CDC operations. The following methods are available for individuals who are either deployed or absent from work to communicate with their CDC counterparts in order to meet mission needs during an influenza pandemic:

    a. Land Line Telephones. Telephones will be the primary means of individual communications and should be used to the maximum extent possible during an event. If required, government phone cards can be provided for long distance calling. If dialing direct back to CDC is not an option, and a government phone card is unavailable, the DEOC can be reached at 1-770-488-7100. The DEOC can then patch the caller through to anyone at CDC.

    b. Domestic Deployment. Domestic personnel who deploy will be provided a cell phone, if available, from the DEOC before deployment. This phone will be for official purposes only.

    c. International Deployment. Before deploying anyone abroad, a determination will be made if the standard DEOC issued international cell phones will function properly in the area of assignment. If a location does not support the phones provided by the DEOC, arrangements will be made to either, 1) procure equipment before departure that will function in that location or, 2) authorize the procurement of a local cell phone upon arrival in country.

    d. Governmental Emergency Telecommunication Service (GETS). GETS cards have been issued to all key staff members to ensure they have land line priority in case the telephone network gets congested with increased call volume. Each deployed team leader is issued a GETS card upon deployment to ensure priority service.

e. The National Security Emergency Preparedness (NSEP) Telecommunications Service Priority (TSP) System has been installed in the Director's Emergency Operations Center. This service provides the regulatory, administrative, and operational framework for the priority installation and/or restoration of NSEP telecommunications services.

f. Other Voice Communications. Systems are available to support the communications needs of deployed teams/individuals as required. These systems include satellite telephones; High Frequency (HF) radios; hand-held radios for intra-team communications, and International Maritime Satellite Organization (INMARSAT) satellite systems.

g. The National Public Health Radio Network (NPHRN) is a HF radio network that allows CDC to communicate into and out of impacted areas. In addition, NPHRN provides a communication channel for deployed staff, SLTT health departments, and other Federal agencies when other means are unavailable or restricted/limited. The NPHRN is managed by CDC. SLTT requests for frequencies and call signs should be processed through the DEOC.

h. Domestic Events Network (DEN). DEN is a 24/7 interagency unclassified telephonic conference dedicated to real-time coordination of National Airspace System (NAS) security. Information is shared via the DEN so that discrete agencies can come together jointly to analyze an incident and plan how to manage it. This system will also allow CDC quarantine stations to be on line to maximize coordination efforts.

i. CDC Information Technology on the Go (CITGO). CITGO is available to 1200+ concurrent users. CITGO is a web-based application that CDC employees and contractors can utilize to securely access applications, data and e-mail remotely. RSA Secure ID key fobs are required for access. CITGO can be utilized from virtually any remote location, either by a dial-up modem using CDC's remote access dial-up lines, or by using an Internet connected laptop or workstation. Examples of potential connections include using another organization's Internet connection such as a county or SLTT health department, international field locations, research libraries, and airport kiosks.