

EMERGENCY PREPAREDNESS: INTEGRATED COMMUNITY SOLUTIONS (EPICS)

A Partnership Between Orange County and the State of Indiana

The EPICS Project, the planning of which was initiated in January 1998, is a partnership between the Orange County Commissioners, 25 public safety and health care agencies in Orange County and parts of Crawford County, the Indiana State Department of Health, the State Emergency Management Agency, and the Intelnet Commission. The project addresses how entire communities can organize themselves and prepare for emergencies of all kinds. This issue has assumed an even greater importance in the aftermath of the September 11, 2001 terrorist attacks in New York City, Washington, D.C., and near Pittsburgh, PA, and the subsequent anthrax terrorist incidents, which occurred through our postal system.

The EPICS Project makes strategic uses of telecommunications and information technology to enhance emergency preparedness in Orange County. These technology tools help bridge the distances that separate rural agencies, enable them to improve communication and coordination, and create the potential for the delivery of new services, including public education. While the EPICS model was designed and developed for replication in rural areas, it is also applicable in metropolitan communities.

The development and early operational phases of the project, during which substantial county, state, and federal resources were provided, ended on December 31, 2001. Orange County is now responsible for management, growth, and continued funding of the project, as the activities and technology resources become fully incorporated into the service-providing and social fabric of the community. EPICS public safety agencies, through their town and county councils, have assumed the costs of their own telecommunications/Internet connections.

General Geographic and Demographic Background

Orange County is located in the extreme south central part of Indiana. The three population centers of Paoli—the county seat, Orleans, and French Lick/West Baden are located in the upper half of the county, and smaller towns and villages are dispersed throughout the remaining geographic areas. The Hoosier National Forest occupies over half the county. The population is 19,306 and the per capita income is \$18,999, which places Orange County among the poorest counties in the state. Prior to implementing the EPICS Project, Orange County was underserved by the existing information infrastructure in the state, due to its rural nature and limited resources; but the county's three public school corporations and three public libraries were connected to the Internet through grant programs administered by the state's Intelnet Commission. Orange County is a partial, medically underserved area. Crawford County, which has two health clinics participating in the EPICS Project, is a medically underserved and health-professional shortage area.

A Model for Transforming Rural Public Safety and Health Care Services Through Telecommunications and Information Technology

In devising a community wide approach to emergency preparedness, the EPICS Project involves two principal groups: (1) 25 public safety and health care agencies, and (2) the residents, businesses, and other institutions, such as schools and libraries, in Orange County. The preparedness efforts of these two groups are envisaged as mutually reinforcing, and together they provide an integrated community solution, increasing the "net safety" of the county over time. The scope of emergencies includes, but is not limited to, forest, residential, and commercial fires; floods, tornadoes, and high winds; winter storms; limited seismic activity; highway, aircraft, and railroad accidents; hazardous materials; missing persons

and elderly homebound emergencies; and health emergencies—including bioterrorism. The scope of potential emergencies is dynamic and can expand over time, as domestic terrorist incidents, or “school shootings” with the resulting attention to school safety, clearly illustrate.

Emergencies are planned for and services are provided by public safety and health care agencies acting singly or in various combinations. For example, the mission of the county emergency management agency is largest in scope among the public safety agencies, as it must coordinate the planning and preparedness activities of fire, law enforcement, transportation, and health agencies—all of which are geographically dispersed throughout the county—relative to a significant number of multi-dimensional threats to public safety. Other emergencies may be responded to through different service-providing combinations, such as fire and law enforcement agencies, transportation and law enforcement agencies, and so forth. The recent anthrax terrorist incidents underscored the need for health and law enforcement agencies to work closely together in the future. Individual fire, law enforcement, transportation, and health agencies provide their own dedicated services in the towns and county, yet there are also occasions when the scope or severity of an emergency requires like agencies to come to the aid of another, as when several fire departments are needed to extinguish a large fire.

With these factors in mind, the general requirements in the EPICS Project are (a) to enable more effective communication and coordination among workers in any combination of interagency public safety and health services, (b) to develop new applications in the individual or collective service areas, depending upon the community needs, and (c) to leverage telecommunications and information technology in meeting these requirements. Once agencies have implemented these capabilities and acquired a measure of proficiency with the technology tools, they should be able to chart their own future directions in leveraging information technology to support emergency preparedness efforts in the county.

General Communication and Information-Sharing Capabilities

The technological centerpiece of the EPICS Project is a local telecommunications network that connects the county emergency management agency; seven fire/EMS departments; the county ambulance service; four town police departments and the county sheriff; four street departments and the county highway department; and four rural clinics, the hospital, and the county health department to each other. The network is an “external instrument of cohesiveness” among these 25 agencies, providing the channels for communication and information sharing. E-mail, general and private list serves, and multi-agency scheduling software provide the capabilities at the application level to support communication, coordination, information distribution and sharing, and work flows for any service-providing combination among the 25 agencies (i.e., like or mixed interagency services). Through the local network and the Internet, public safety and health care agencies within Orange County can execute administrative, policy, and service functions with their counterparts in state and federal government. In addition, each local agency can access the vast health and safety information resources of the World Wide Web to support a variety of functions. While the network and these software tools are no substitute for meeting and working together in face-to-face situations, they create efficiencies and serve as a catalyst for generating and maintaining closer service-providing relationships among the agencies over time. The network connections, computers, and communication/information-sharing software are valuable, irreplaceable “emergency preparedness resources” in the county.

Emergency Management Services

The local telecommunications network enables coordinated emergency planning, preparedness, and mitigation efforts among the 25 public safety and health agencies. An electronic version of the county emergency operations plan is now available to all agencies, and updates of the plan can be easily distributed through the network, allowing agencies to be “on the same page.” The resources are in place

to enable coordinated, online development of future emergency operations plans, and the network can also be used to coordinate planning with adjacent counties and the State Emergency Management Agency, in the event that disasters exceed the resource capabilities of Orange County. Two-way video capabilities permit communications with the State Emergency Management Agency during an emergency, if the infrastructure is not disabled; and the computing network can also support recovery operations. The network served as a distribution channel for providing time-sensitive, electronic information to county agencies in the aftermath of the September 11 terrorist incidents. Agencies can formulate lessons learned during emergencies, and they can be electronically stored and shared with all agencies to improve operational capabilities during future emergencies.

Health Services

The local network connects the Orange County Health Department, the Bloomington Hospital of Orange County emergency room, and four rural health clinics; thus, it is a step toward coordinating the delivery of health care services in the county. An electronic patient record keeping system, Visual Petra (www.petrasystems.com), has been developed and is presently shared by the emergency room and two rural clinics, which provides an additional measure of coordination in health care delivery. Since patients may be treated at multiple facilities, the records are available when and where they are needed. The network supports teleradiology services between the rural hospital in Paoli and its parent hospital in Bloomington, IN, which is nearly 50 miles away; and physicians in both locations are able to view identical computer images of CT scans as they discuss diagnostic and treatment implications. The clinics can use their digital cameras to support teledermatology services, which are available at www.ruralconsult.com through the Midwest Center for Rural Health. Web-based services for the enhanced treatment of diabetes are being developed in a partnership with the Indiana University School of Medicine, Department of Endocrinology in Indianapolis. A partnership with Medical Care and Outcomes, Inc., Indianapolis, will soon make follow-up care and treatment compliance monitoring services available to the clinics, which will integrate the total treatment regimen of clients. Clinics and the hospital can use the vast health information resources on the WWW for patient and staff education, and clinical problem solving. Primary care physicians in Orange County were able to participate in a recent two-way video workshop on bioterrorism, which was sponsored by Clarian Health in Indianapolis. Clinic and hospital web sites contain an e-mail interface, which supports communication with clients throughout the community.

Fire/Emergency Medical Services

Fire/EMS vehicles in Orange County do not have onboard, global positioning systems, so drivers must rely on their personal knowledge for locating emergency destinations. This can sometimes be difficult in rural areas, especially if a remote responder is not familiar with the area. In EPICS working group meetings, it was determined that when the county's 911 operator fields a call from the community, a digital map is simultaneously displayed, which pinpoints the location of the caller. Through a software application devised in partnership with the developer of the 911-operator station, we are now able to send facsimile maps to fire/EMS departments and the county ambulance service, making it easier for public safety workers to find their destinations in emergencies and increasing the likelihood they will save lives and property.

Law Enforcement Services

County law enforcement agencies identified the importance of sharing information in an EPICS working group session. The county sheriff and the four town police departments are now able to develop digital case files and accident reports in their own facilities and share this information electronically with each other, the county prosecutor, and four contiguous Indiana State Police posts, which creates an important

new law enforcement capability. The system incorporates Indiana State Police forms in all locales. The courts will soon be involved in this effort through the county prosecutor. Orange County is the first in the state to adopt this type of system on a countywide basis.

Educational Resources/Programs To Support Community Emergency Preparedness

All EPICS agencies have information sites on the World Wide Web, which were made available through the Intelnet Commission's IN-map Program. They provide health & safety information that is tailored to the needs of Orange County residents (e.g., emergency operations plan, CPR training and health screening announcements, safety preparedness checklists, etc.), and residents can communicate with public safety and health professionals through an e-mail interface on each agency's home page. The Orange County Cooperative Extension Service (CES) has also developed a variety of disaster education resources. All of these web sites are assembled into *Orange County Safety Net* (<http://epics.co.orange.in.us>). *Orange County Safety Net* is linked to *Indiana Safety Net* (www.state.in.us/safetynet), a state web site that provides 12 different categories of health and safety information to Indiana's residents.

Orange County's educational institutions have telecommunications/Internet connections, which will enable them to access these and other health and safety information resources. The three public school corporations and three public libraries are connected to the Internet through grant programs managed by the Intelnet Commission, and Orange County's CES office has a T-1 connection, which is made available through a partnership with IHETS, Purdue CES, and Orange County government. Other T-1 circuits are available at the Area Learning Center in Paoli and the South Central Area Vocational School in Rego. Health and safety information from *Orange County/Indiana Safety Net* will be incorporated into structured projects for students and residents in K-12 classrooms, public libraries, and 4-H programs. Some of these educational activities will correspond to selected events throughout the year, such as Severe Weather Awareness Week and Public Health Week. Students may involve their parents in projects such as conducting home health and safety assessments—including the availability of essential first-aid supplies. Health and public safety officials will work with local educational institutions in developing and delivering these programs. The local/state network also enables delivery of continuing education programs for health and public safety workers. Web-based applications can be delivered to the doorstep of each agency, and two-way video, distance education services can be made available at T-1 sites throughout the county.

EPICS Advisory Council

Leadership of the EPICS Project shifted from the state to the local level in January 2001 and commenced with the formation of the EPICS Advisory Council. The EPICS Advisory Council, which meets monthly, coordinates planning and development of interagency services that use the local/state/national information infrastructure, and it is intended as a forum for managing and growing the project over its life cycle.

Representatives from each of the five EPICS service areas—health, emergency management, fire, law enforcement, and transportation—participate on the EPICS Advisory Council, which reports to the county commissioners. Representatives also function as coordinators of working groups in the five EPICS service areas. The working groups help to assess county service needs, develop new services that use the information infrastructure, and promote overall health and safety in the county. EPICS Advisory Council members are:

Commissioner Charles Hall, District 2
Randy Clark, Helix Technology (Chairperson)
Philip Bruce, EPICS Project Manager
Norman Cundiff, Orange County Emergency Management Director

Patrick Cassidy, Orleans Fire Department
Richard Dixon, Orange County Sheriff's Department
Donald Smelser, Orange County Engineer
Bob Lineberry, Orange County Highway Department
Linda Wells Freiburger, South Central Family Health Care
Andy Boston, Orange County Cooperative Extension Service
Trisha Adams, Hoosier Uplands
Hazel Katter, Indiana State Department of Health
Bob Demuth, State Emergency Management Agency

EPICS Project Management Meetings

EPICS Project Management Meetings are held quarterly (last Wednesday of March, June, September, and December). The project management meetings include the EPICS Advisory Council, all local and state agencies participating in the EPICS Project, other state & community stakeholders, and interested residents, including the local press.

Project Funding and Resources Profile

EPICS Partners collaborated to secure funding and resources of more than \$600,000. The Orange County Commissioners, the EPICS Advisory Council, and the 25 public safety and health agencies are responsible for continued funding of the project. The funding and resources profile is expected to grow as new partners join the project.

Orange County Commissioners contributed \$8,000 for a public safety server, so that public safety and health agencies can create, store, retrieve, and share critical information resources.

Build Indiana Fund provided \$56,000 for the purchase of 21 computers for public safety agencies, training, and supplies. Funds were obtained through support of State Representative Jerry Denbo and State Senator Becky Skillman.

Indiana State Department of Health contributed \$390,000 in federal block grant funds, through the Centers for Disease Control and Prevention, for computers, video units, digital cameras, telecommunications services for Orange County health agencies, and development of advanced telemedicine applications.

State Emergency Management Agency is contributing the time and expertise of their Emergency Operations Center Coordinator and the Regional Coordinator. They are engaged in planning and training, and they participate on the project management team.

Intelenet Commission contributed \$146,000 for project management services during the development phase of EPICS, content development, and telecommunications services for public safety agencies.

Orange County's 25 public safety and health care agencies are contributing their time and effort to make the project work to support the public safety and health missions of Orange County and the State of Indiana. The public safety agencies pay for their own network/Internet connections.

EPICS Project Agencies

Orange County

Orange County Commissioners

Orange County Emergency Management Agency

Orange County Sheriff's Department

Paoli Police Department

Orleans Police Department

French Lick Police Department

West Baden Springs Police Department

Orange County Rural Fire Department District 1

Orange County Rural Fire Department District 2

Paoli Fire Department

Southeast Fire Department

Orleans Fire Department

French Lick Fire Department

West Baden Springs Fire Department

Orange County Highway Department

Paoli Street Department

Orleans Street Department

French Lick Street Department

West Baden Springs Street Department

Orange County Ambulance Service

Orange County Health Department

Bloomington Hospital of Orange County

South Central Community Health Care

Patoka Family Health Care Center

Crawford County Family Health Care

Comprehensive Health Care

State of Indiana

Indiana State Department of Health

State Emergency Management Agency

Intelenet Commission

EPICS Project Points Of Contact

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