THE CIP REPORT

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Healthcare and Public Health Sector

Editorial Staff

Editors
Morgan Allen
Olivia Pacheco

Staff Writers
Tim Clancy
Maeve Dion

JMU Coordinators
Ken Newbold
John Noftsinger

Publishing
Zeichner Risk Analytics
Contact: CIPP02@gmu.edu
703.993.4840

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School of Law
CRITICAL INFRASTRUCTURE
PROTECTION PROGRAM

In this month's issue of *The CIP Report* we highlight the Healthcare and Public Health (HPH) Sector. We present an overview of the sector from the Department of Health and Human Services (HHS) as well as two tables illustrating the size of the sector and its interdependencies, respectively. Contributions are presented from the MITRE Corporation, one from the Sector-Specific Metrics Workgroup and another from the HPH Sector Joint Advisory Workgroup (JAWG). We also take a look at the different aspects that make up the HPH Sector and offer an article about one of its sub-councils, Mass Fatalities Management Services (MFM).

Hospitals are another important part of the HPH Sector and we present an article on how some of our local hospitals are working together through the Northern Virginia Hospital Alliance (NVHA). The Medical Materials Coordinating Group (MMCG) is another of the HPH Sector's sub-councils and we look at why disaster preparedness is important within the medical materials supply chain. The National Association of County and City Health Officials (NACCHO) provides an article on the work that they do as a nonprofit organization representing local health departments. Lastly, Legal Insights discusses information sharing.

On a personal note, it is a great pleasure and honor to join this very dedicated team at George Mason University School of Law's Critical Infrastructure Protection (CIP) Program. It is our goal to help further develop and continue to grow the capability of this program, so that we can better assist all those engaged in protecting the critical infrastructures of this Nation.

Mick Kicklighter
Director, CIP Program
George Mason University, School of Law

The Healthcare and Public Health Sector Overview

by Nitin Natarajan, Department of Health and Human Services
Office of the Assistant Secretary for Preparedness and Response

If one were to ask the general public what "critical infrastructure" meant to them, the most likely responses would include roads and bridges, nuclear power plants, dams, water treatment plants, and similar physical structures. If the same people were asked about critical infrastructure within the Healthcare and Public Health (HPH) Sector, the responses would likely point to hospitals, pharmacies, and traditional healthcare delivery facilities. In fact, neither depiction captures the breadth of this diverse sector which reaches far beyond physical structures to networks, systems, and key domestic and international dependencies and beyond healthcare delivery systems to medical manufacturing, medical distribution, research and diagnostic laboratories, and other vital capabilities that form the fundamental building blocks operating behind the scenes upon which the healthcare delivery component is wholly dependent.

Homeland Security Presidential Directive 7 (HSPD-7) initiated the development of a national critical infrastructure protection strategy and divided the nation into 18 sectors. Each sector has been assigned to a Sector-Specific (Federal) Agency (SSA) for day-to-day management and execution of the requirements set forth in HSPD-7 and the National Infrastructure Protection Plan (NIPP). Working toward these critical infrastructure protection goals for the HPH Sector is the responsibility of the Office of the Assistant Secretary for Preparedness and Response within the Department of Health and Human Services (HHS).

The HPH Sector is a vital component of our Nation's stability and longevity and is comprised of interconnecting operations, information-systems, activities, processes, and resources. Taken independently, public health has one of the most singularly diverse and essential roles across all healthcare capabilities, from food and water protection to emergency planning, management, and policy development. Healthcare and public health have the vision of achieving overall resiliency against all hazards — natural and manmade — in order to prevent or minimize damage to, or destruction of, the Nation's healthcare and public health infrastructure; and to preserve the ability to mount timely and effective responses to both routine and emergency situations, while providing continuity of services in non-impacted areas. Looking across the sector, we strive to identify, analyze, and develop approaches to ensure continuity of mission through preparedness and response, with a focus on "consequence reduction" across the sector.

The HPH Sector constitutes approximately 15 percent of the Gross National Product (GNP)[1], equal to $1.86 trillion, and has an important impact on the U.S. economy. Privately owned and operated organizations comprise a vast majority of the sector and identify themselves with the delivery of healthcare goods and services. The public health component is composed largely of government agencies at the Federal, State, local, and tribal community levels. The public health component is not as large as the private component and performs a somewhat different array of functions, concentrating largely on preventive measures. The sector is highly diverse in its composition and relationships with its many systems, networks, services, facilities, functions, and roles, both public and private, needed to prevent disease and disability, treat patients, foster public health, and respond to incidents requiring medical and public health services.

The sector provides a full array of goods and services for acute hospital and ambulatory healthcare, public health, public health information, mental health, substance abuse treatment, environmental and occupational health, long-term care, tele-health, pharmaceuticals, mortuary services, medical supplies,

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[1] According to U.S. National Economic Accounts, the U.S. Gross Domestic Product was $12.456 trillion in 2005. The Healthcare and Public Health Sector was estimated to be approximately 15 percent of that total or $1.868 trillion.

Sector Overview *(Cont. from 2)*

and others. Private sector as well as Federal, State, and local agencies provide healthcare and public health services, and participate in ongoing surveillance and detection of potentially devastating threats to the Nation's critical infrastructure and key resources (CIKR) from bioterrorism and other manmade and natural threats. In public health and medical emergencies, additional capabilities such as mass vaccination, mass casualty and mortality services, and medical surge involving additional numbers of ill, injured, or worried citizens must be efficiently coordinated within the sector to permit essential healthcare for the Nation.

The sector's diverse workforce is essential to the continuity of sector functions and is dependent on many other sectors. The sector workforce can be found in medical treatment facilities; public health agencies; State and local centers for the aging; nursing homes; rehabilitation centers; group homes; academic institutions; healthcare clearinghouses; healthcare information technology and systems activities; pharmacies; laboratories; food processing, handling, and distribution centers; decontamination facilities and services; and fatality services. The workforce includes healthcare personnel, clinical providers, biomedical engineers, pharmacists, occupational health providers, medical materiel suppliers, transplant and blood product providers, health insurance and

other third-party payers, mortality services workers, and many others.

Elements of the sector are present in virtually all U.S. communities, although at varying levels of capability. Although the sector does have several major, nationally organized entities, the sector is highly decentralized[2]. Composed of both private and governmental entities, the boundaries between the two are often indistinguishable.

Table 1 on provides an overview that gives a sense of the size and breadth of the sector. It includes private sector and government data for comparison.

Nationally Significant vs. Regionally/Locally Significant Critical Infrastructure

A key challenge to a sector this diverse is the differentiation between infrastructure that is nationally significant as opposed to that which is regionally or locally significant. The loss of any one hospital in the nation may have catastrophic effects on that locality or even the region, but it is assumed that the loss of any single hospital would not have a devastating effect on the nation's healthcare and public health system as a whole. Likewise, the loss of a manufacturing site that produces a particular pharmaceutical may or may not be critical based upon whether or not other manufacturing sites could ramp up to meet the need. This adds an additional

layer of complexity to the sector and could require the monitoring of thousands of facilities and their capabilities throughout the nation and around the globe.

Significant Interdependencies

Sector organizations at the Federal, State, and local levels interact with each other and with public safety organizations, emergency response agencies, private enterprises, and volunteer organizations at all levels of society. More specifically, the sector depends on several other sectors in significant ways as shown in Table 2 on . All other sectors in the U.S. economy are dependent upon the HPH Sector in disasters and non-disaster situations to achieve, restore, and maintain human health.

Information Sharing

One of the key requirements of an effective security partnership includes the ability to share information over multiple mediums during preparedness, response, and recovery operations. To that extent, HHS, as the SSA for the HPH Sector, has taken steps to increase the amount of information shared with public and private sector partners throughout the sector. This fall, the SSA will be formalizing its dedication to information sharing with its sector partners by developing a joint working group on informa-

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[2] Examples of organizations that are national in scope include the Hospital Corporation of America, Tenet Healthcare Corporation, and the Veterans Health Administration. In addition, some sector elements are required to function and operate independently, based on Federal safe harbor and anti-trust laws. These examples were suggested by SCC reviewers during September 2006.

Sector-Specific Metrics Workgroup

by Erik Phelps, The MITRE Corporation,
Sector-Specific Metrics Workgroup Program Manager and Facilitator

Measuring the effectiveness of critical infrastructure protection (CIP) activities is a key component of the NIPP risk management framework. The NIPP promotes the use of a metrics-based system to assess whether efforts implemented to attain CIP goals and objectives are working.

Within the metrics-based system, the NIPP and subsequent guidance from DHS define three sets of metrics:

- **Core Metrics** are common across all sectors, enabling comparison and analysis between different types of CIKR.

- **Programmatic Metrics** are used to measure the effectiveness of specific programs, initiatives, and investments that are managed by government agencies and sector partners.

- **Sector-Specific Metrics** are tailored to the unique characteristics of each sector. These metrics address the specific protection challenges that the sector faces and the distinct business and/or operational continuity needs for each sector. They also reflect metrics and benchmarks that the asset owners and operators and other security partners agree can help drive progress toward achieving sector security goals.

In March of 2008, the HPH Sector launched a CIPAC Workgroup to develop its sector-specific metrics. This workgroup is co-chaired by David Morgan, Vice Chair, HPH Sector Mass Fatality Management Sub-Council and Nitin Natarajan, the CIP Program Manager for the HPH Sector from the HHS Office of the Assistant Secretary for Preparedness and Response. The membership for this group is comprised of members from the HPH SCC and GCC, and is supported by the MITRE Corporation.

The Sector-Specific Metrics Workgroup identified several challenges to developing and implementing metrics:

- **Voluntary Reporting** – the sector-specific metrics construct relies on public and private sector owners and operators to voluntarily report their progress in assessing risks to their critical infrastructure and implementing protective programs.

- **Sensitive Data** – information about the level of critical infrastructure protection within an organization is sensitive in nature. Owners and operators are reluctant to share this information for fear that it could negatively impact their organization if it becomes publicly available.

- **Complexity and Size of the HPH Sector** – the HPH Sector is comprised of several distinct sub-sectors, each with unique functions. There are hundreds of thousands of organizations within the sector, including hospitals, laboratories, medical product manufacturers, and public health agencies, among others. Developing metrics and collecting data from this wide variety and large number of organizations presents a challenge.

Given these challenges, the workgroup concluded that developing new metrics and placing an additional data collection burden on owners and operators would not be a viable approach. Instead, the workgroup decided to leverage existing sector metrics and data within the sector. The workgroup reviewed the sector's CIP objectives and identified accreditation bodies and industry associations as potential metrics data sources. The workgroup invited subject-matter experts from the Joint Commission, ERM Certification and Verification Services, and the International Association for Healthcare Security & Safety (IAHSS) to share information about their organizations and the data they collect.

Over the course of the past several years, the Joint Commission has continued to increase the emphasis

Research & Development/Modeling, Simulation & Analysis Joint Advisory Workgroup

by J. Lydia Duckworth, The MITRE Corporation, Chair,
Healthcare and Public Health Sector Joint Advisory Workgroup (JAWG), and
Mahino Talib, The MITRE Corporation, JAWG Research Analyst

Background Information

The HPH Sector CIP Research and Development and Modeling, Simulation, and Analysis (R&D/MS&A) workgroup was formalized in September of 2007 and is officially referred to as the HPH Joint Advisory Workgroup (JAWG). Establishment of the workgroup was made a requirement by DHS in the 2006 NIPP, and was first conceptualized in the HPH Sector Annual Report for 2007. It is envisioned that this group will provide direction and strategy to protection, preparedness, and response requirements for the sector.

The R&D/MS&A JAWG is a public/private partnership, comprised of the HPH SCC and GCC members as well as representatives of academia and subject-matter experts. It is the role of this group to identify sector CIKR protection and preparedness R&D /MS&A needs for HPH. This group is also relied upon to provide thoughtful leadership and to make recommendations to other formal workgroups and programs on HPH protection, preparedness, and response requirements; for supporting the R&D technology transfer process; and, for engaging project leads who head up DHS S&T — or centers of excellence (COE) — sponsored R&D initiatives. JAWG responsibilities include: 1) identifying gaps in sector CIKR protection-preparedness related capabilities; 2) recommending programs to the White House Office of Science and Technology Policy (OSTP) annually to address those gaps, in particular those that exist across multiple sectors; 3) developing mechanisms for assembling sector R&D/MS&A related information on a continuing basis for use in the HPH Sector annual report and the NIPP; and 4) developing a comprehensive view across the sector of relevant R&D efforts focused on CIKR protection-preparedness related topics.

Currently, the MITRE Corporation Chairs the workgroup and provides research, analysis, and reporting of sector and cross-sector initiatives. The workgroup is comprised of members from organizations and institutions such as Johns Hopkins University, George Washington University Medical Center, the National Center for the Study of Preparedness and Catastrophic Event Response, Quest Diagnostics, INOVA Health System, CUBRC, University of Pittsburgh Medical Center, Baxter, Yale New Haven Hospital, the Transportation Sector, HHS' Office of the Assistant Secretary for Preparedness and Response (ASPR), HHS' Food and Drug Administration (FDA), HHS' Centers for Disease Control and Prevention (CDC), HHS' Agency for Healthcare Research and Quality (AHRQ), HHS' Health Resources and Services Administration (HRSA), and DHS. The diversity of membership provides a balance across sector priorities, each bringing expertise, acumen, and reach-back to address complex concepts in preparedness, protection, and response capabilities. Current priorities illustrate sector concerns that there is significant disparity between current state capabilities and those required to manage large-scale, long-term crisis.

Tasking/Workgroup Charge

Since its inception, the JAWG has been tasked with informing SSA requirements for R&D, and formulating strategies to address near-term and long-term measures to improve capabilities for responding to and recovering from a disaster. To a large extent, the sector JAWG is able to generate its requirements based on outcomes from incidents such as Hurricane Katrina, September 11, and other international catastrophes. During FY 2008, the group focused on medical surge, workforce sustainability[1], and the medical supply chain as themes to define

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[1] Workforce Sustainability (Prevention and Protection) – maintaining the greatest number of fit personnel active in the field, or available for deployment to the field, as possible.

R&D/MS&A *(Cont. from 5)*

priorities and objectives. Support for this work required a high degree of participation and collaboration from the sector JAWG. Many of the participants support other national- and regional-level forums on such topics as biosurveillance/biosecurity, medical surge, healthcare informatics, standards development, resource typing, medical manufacturing, health information technology, and regional resilience programs, thus ensuring a broad knowledge base and background from which to draw upon.

In addition to focusing on the thematic areas to address sector requirements, a simultaneous JAWG effort commenced to perform a thorough examination of HPH Sector current and past research initiatives to help inform sector capabilities and associated gaps. The results of this effort are being leveraged to continue assessing HPH requirements for 2009, and to inform initiatives that result from 2008 requirements.

Medical Surge

The Medical Surge theme is led by Dr. Gabe Kelen, Director, Johns Hopkins Office of Critical Event Preparedness and Response. Initial activities included educating members on recent catastrophic events and other related disasters culminating in surge. The intent was to generate a common understanding of medical surge in order to refine the definition and scope of priorities for this theme. The process resulted in a focused examination of areas requiring study, a breakdown of each area into elements of research,

development, or MS&A, followed by a validation of the topics that were either not represented or that had limited visibility. Medical surge priorities were a significant component of 2007 requirements as well, reflecting the sector's ongoing emphasis on integrating protection and emergency management concepts into a single holistic framework that is compatible with the sector's mission and goals.

The ability to carry out healthcare and public health functions under inordinate circumstances requires an integrated approach to managing resources, infrastructure, operations, and patients. The research priorities under medical surge necessarily address the complexities of developing an approach that is sustainable (to the degree practicable), predictive, and that offers a scientific basis for sound decision-making. The healthcare and public health communities recognize that as circumstances escalate and the continuum of response functions are maximized, the ability to provide care will be stressed, requiring a reduction in services and limiting the options for applying optimal clinical standards. Research into medical surge gives consideration to the changing modes of disaster — response vs. recovery — reflecting a focus on "sustainability." Additionally, it is intended that each of the core components of medical surge will be analyzed to expose inaccurate assumptions and potential failures in the application of surge management. Aspects such as command, control and communications, resource needs and availability, standards of care, monitoring of the healthcare infra-

structure, understanding the risk posture across escalation intensities, and the transition of operations from steady-state to crisis-state, are uniquely important to an integrated surge framework. An understanding of the conditions under which each aspect would be employed will require significant modeling and analysis.

The study of surge has progressed in recent years, yet the science and quantitative data to support decision-making across varying disaster scenarios is lacking. Developing and testing planning documents require data that enables predictive analysis to support incident command structures and decision-making at the local level. Situational awareness and a common operating picture are necessary to form the basis for reliable, consistent, and actionable decisions. As a scenario evolves, sustainability of services and infrastructure must be achievable. For example, the ability to extend the triage model (diverting patients along with identifying facility diversion) to facilitate surge capacity needs will necessitate knowledge on how alternate sites of care are to be identified, what process will be implemented for diverting patient flow to these facilities, and how that process will be facilitated. Methods for effecting medical surge will need to "promote access to care" (and the awareness) — taking into consideration the role of public health, the needs of underprivileged populations, and the necessary technologies or capabilities required for accessing care. As a result of the efforts conducted over the 2008

Mass Fatalities Management in the Context of Disaster Planning

by Robert M. Fells, External Chief Operating Officer and General Counsel
International Cemetery, Cremation and Funeral Association

The typical image of the healthcare and public health response to a natural disaster or public health emergency is likely to include medical teams ramping up to triage and treat extensive injuries and life-threatening illnesses as well as heightened surveillance. Often overlooked both within and outside the sector, is the challenge presented by mass fatalities. Modern medical facilities and state-licensed mortality officials can manage the deaths occurring day-to-day. But what happens when there is a sudden surge of unexpected fatalities? Hurricane Katrina demonstrated that the United States of the 21st century has limited capability and no comprehensive system to collect, identify, store, and process bodies in large numbers.

To help address this challenge, the HPH Sector established the Mass Fatalities Management Services Sub-Council (MFM), one of nine sub-councils developed under the Healthcare Sector Coordinating Council (HSCC), the private sector counterpart of the GCC, organized under the umbrella of the NIPP. The MFM represents the full spectrum of personnel and services needed after death, including medical examiners, coroners, funeral directors, cremationists, cemeterians, clergy, and manufacturers and distributors of funeral, memorial, and cremation supplies. Major trade associations in the death care industry are also represented on the MFM.

The MFM established several primary goals, and wishes to partner with the Federal and State governments to help address the problem. First, the MFM's position is that a Mass Fatality Management Component should be developed and incorporated into the National Response Framework (NRF) and all other Federal agency response plans and policies. These plans should include policies and procedures dealing with the dignified recovery, storage, identification, and processing of remains as well as the timely issuance of death certificates and the orderly conduct of the funeral and final disposition. Second, the MFM has endorsed the establishment of a single agency and agency official responsible for implementing and managing the mass fatality component of any disaster response plan. Third, MFM promotes the establishment of a national missing person's database and locater for displaced family members which would include a unique universal identification code for all victims. Fourth, the MFM takes the position that funeral homes, cemeteries, crematories, and morgues, and their suppliers should be included as a priority for logistical and workforce support and protection, including vaccinations and personal protective equipment during emergency situations that may involve quarantines, restrictions on transportation, travel and public gatherings as well as the actual conduct of the funeral, and final disposition. Lastly, the MFM would like consideration of tempo-

rarily suspending certain Federal, State and local laws, rules, and regulations governing the conduct or practice of funeral directing, cemetery, or crematory operations and which may otherwise hinder the proper conduct of fatality services in an emergency situation. These would include, but not be limited to, the FTC Funeral Rule, various workplace, wage and hour, and environmental policies.

Secondary goals of the MFM include emergency licensing reciprocity for medical examiners, coroners, funeral directors and other licensed fatality service personnel to allow them to support the needs of fatality services in other jurisdictions and limited legal liability protection for funeral homes, cemeteries, and crematories to fully comply with a pre-need contract or failure to adequately comply with the Federal, State and local laws, rules, and regulations.

Moving forward, MFM is seeking to coordinate with fellow sectors whose goods and services are integral to the success of effective and comprehensive mass fatalities management services. For example, the Transportation Sector will affect supply chain; the Chemical Sector supplies embalming supplies and disinfectants; water availability is critical for the mortuary and cremation processes, and food and agriculture could assist with a need

Creating a Regional Healthcare Response Capability: The Role of Inova Health System and the Northern VA Hospital Alliance

by Dan Hanfling, MD, Director, Emergency Management and Disaster Medicine*

The HPH Sector occupies a critical role in the response to catastrophic disaster events. The consequences of forgetting about this piece of the emergency management portfolio became readily evident after the devastating hurricanes that significantly impacted the Gulf Coast in the summer of 2005. The experiences that led to the widespread destruction along the Gulf Coast left more than half of all hospitals in the City of New Orleans closed and crystallized the fact that CIP cannot be considered without also including the role that the HPH Sector plays in such endeavors. No where more so than in Northern Virginia — where the Inova Health System (Falls Church, VA) has spearheaded hospital and healthcare emergency management operational capabilities — has this bona fide integration of the healthcare sector into the spectrum of emergency service delivery become a reality.

The Inova Experience

The back-to-back attacks in the fall of 2001, in which Inova Health System facilities played integral roles in successfully managing patients from both the Pentagon attacks and the anthrax bioterrorism mailings, galvanized the will of this not-for-profit fully integrated healthcare system. With more than 20,000 employees in the Northern Virginia suburbs of Washington, D.C., Inova reset its focus on emergency management and disaster preparedness.

Recognizing that the capability to provide uninterrupted patient care was true to its mission of healthcare service delivery, significant time, expense and energy was, and continues to be, devoted to these efforts.

The game-changing nature of the 2001 attacks accelerated planning and coordination that was long a hallmark of emergency service delivery in Northern Virginia. Indeed, the very successful coordination of Federal, State and local response elements at the Pentagon was contingent upon many years of pre-event planning among those agencies that responded to the terror attack on that fateful morning. However, there was one very significant exception to this exemplary planning: the local hospitals were never consulted nor involved in such planning. As was documented in the after-action analysis of the response to the Pentagon attack, the Inova Regional Trauma Center, the only Northern Virginia trauma center, barely eight miles from the southwestern face of the scarred Pentagon, received no patients on that awful day. The two closest community hospitals, Virginia Hospital Center in Arlington and Inova Alexandria Hospital, both excellent facilities by anyone's measure, but not accustomed to managing severe trauma, received 70 patients between them. Hospitals were by and large left out of the nexus of communications and decision-making with regard

to the incident response, and as a result, patients were not necessarily afforded the most appropriate immediate resources required for their management.

The anthrax mailings, one month later, drove home the fact that not all events are signaled by the wail of a siren, the rising plume of an explosion, or the chaos generated by conventional terror. More insidious, but in many cases far more paralyzing, was the fear of the unknown, unseen disease spread by weaponized anthrax. This was an event in which no "disaster" was ever declared and incident management was chaotic, confused, and uncoordinated.

In the setting of these dramatic experiences, a trio of respected healthcare leaders, who had long played significant roles in providing medical direction to two highly-respected fire and rescue departments (Arlington Fire Department and Fairfax County Fire and Rescue), and who also practiced medicine at Virginia Hospital Center and Inova Fairfax Hospital, banded together a coalition of partners to bridge the gaps made apparent by the failures evident in the emergency response to the Pentagon attack and the anthrax mailings. As the fires were still cooling at the Pentagon, the Northern Virginia Emergency Response Coalition (NVERC) was born, a venue for mostly public

NVHA *(Cont. from 8)*

health, EMS, and hospital providers to come together, under the auspices of the Northern Virginia EMS Council, to discuss preparedness gaps and needs. In fact, the regional health alerts and protocols that were disseminated to area healthcare providers to help offer guidance during the anthrax attacks were done so under the auspices of this coalition, in conjunction with the local health department authorities. From October 2001 until October 2002, the NVERC met on a regular basis to address topics of preparedness in a very uncertain climate.

Taking the Next Step, Creating the NVHA

However, it became increasingly clear that in this ongoing milieu of rapidly shifting priorities regarding homeland security, the hospital community was going to need to better define its place in the emergency response continuum, and plan for such contingencies in a much more coordinated fashion. Coupled with the developing attention being given to these needs by the Federal government, and in anticipation of the availability of funding to hospitals under the National Hospital Bioterrorism Preparedness Program, the chief executive officers of all 14 hospitals in Northern Virginia, led by the Inova Health System, elected to create an entity specifically focused on the needs of the hospitals for both planning and response to emergency events in our community and beyond. The Northern Virginia hospitals were organized in October 2002 in a voluntary attempt to regionalize the healthcare sector approach to

disaster planning and response. The Northern Virginia Hospital Alliance (NVHA) was created with "at risk" money provided by each hospital (It is important to note that this unprecedented level of cooperation preceded any of the federal grant programs that were later established to support such efforts).

Six years later, this organization remains very active in all aspects of community disaster planning and response, led by a very active and engaged Board of Directors, comprised of the chief executive officers of the 14 regional hospitals. The principle planning efforts of the NVHA Disaster Preparedness Program for the region include some of the following key elements:

- The development and maintenance of the Northern Virginia Regional Hospital Emergency Operations Plan (RHEOP) and hazard specific annexes. This includes the ongoing integration with the Northern Virginia Metropolitan Medical Response System (MMRS) project, which is comprised of representatives from the disciplines of Emergency Management, Fire/EMS, Law Enforcement and Public Health authorities in the Counties of Arlington, Caroline, Fairfax, Fauquier, King George, Loudoun, Prince William, Spotsylvania, and Stafford; the Cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park; and the Towns of Dumfries, Herndon, Leesburg, Purcellville, and Vienna.

- Coordinating the development and maintenance of hospital disaster supply caches, and collective purchasing agreements and equipment standardization, by means of conducting an annual Inventory and Gap Analysis of disaster equipment and supplies. This is especially important, both to ensure that a strategic approach to emergency planning is mapped to the "all hazards" approach – for example, being able to respond to large-scale trauma as well as widespread infectious disease, even the fury of Mother Nature. A significant development in this arena has been the establishment of the NVHA warehouse, a secured, temperature-controlled, centrally-located facility that serves as the repository for many critical supplies and equipment used to support hospital operations in the event of disaster.

- Continual participation in statewide and jurisdictional emergency preparedness programs, including those in coordination with our counterparts in D.C. and Maryland, through ongoing representation on relevant committees, planning groups, and other ad-hoc planning initiatives.

- Spearheading the delivery of burn care in a region that has very few burn care capabilities. This is being accomplished in a coordinated approach combining the procurement of critical burn care supplies, and the

The Medical Materials Supply Chain and its Impact on Disaster Preparedness

by Al Cook, Certified Materials and Resource Management Professional (CMRP)
Fellow, Association of Healthcare Resource and Materials Management (FAHRMM)

The Medical Materials Coordinating Group (MMCG) is a sub-council of the HPH SCC. It is an assemblage of owners and operators in Manufacturing, Distribution, Equipment Rental, and Hospital Materials Management. This group continues to research the medical supply chain to help prepare the healthcare industry for the events that might be considered "catastrophic" from either manmade or natural disasters.

The findings to date have been consistent with other's view of the medical supply chain in that it is operating in a "just-in-time" inventory environment. This is consistent from the manufacturing through distribution process and in many cases is now apparent at the individual hospital level. According to Wikipedia, "Just-in-time (JIT) is an inventory strategy implemented to improve the return on investment of a business by reducing in-process inventory and its associated carrying costs . . . Inventory is seen as incurring costs, or waste, instead of adding value, contrary to traditional accounting." Economic forces have driven the medical supply chain to reduce its inventory investment in order to continue to be economically sound.

Inventory at a hospital level is generally taken at a "warehouse" level and the distributed inventory at various care points within the facility is often overlooked. Distributors have, in many cases, moved to distributed inventory models where inventories are lower in each facility but redundant in some warehouses in order to have the flexibility to meet hospital demands as periodic surges in demand occur. Computerization has benefited these inventory management practices and now computer-to-computer communications have made the processes even more efficient. While the amounts are lower, increased visibility of these inventories have allowed for more efficient reordering processes. There is at any given time a certain amount of surplus inventory in the supply chain.

So how does this impact the ability of the medical supply chain to respond to medical disasters? There can be little doubt that the overall amount of medical materials in the current medical supply chain is less than it was in the 1980s, when Diagnostic Related Group (DRG) reimbursement seemed to fuel the need to lower costs for hospitals and manufacturers. This does not mean that the medical community is not capable of responding to an event of national significance; it is just more difficult.

Disaster preparedness is as old as the health care profession. Hospitals have always had to be prepared for hurricanes, tornadoes and external events, which could overwhelm the immediate ability to manage the volume. So what is different now? The answer is that really nothing is different other than there has to be more effective planning. There is no longer the luxury of bringing in another 50 cases of gloves or IV fluids and keeping a higher level of inventory of all items. In many cases, the room that used to be available for maintaining these inventory levels has been converted to more useful space that now contributes to the revenues for the hospitals rather than the overhead. Today's pressure of potential disaster response requirements in health care are also a little different than they used to be. Natural disasters are no longer the only disasters to be prepared for. Now the expectation is to receive mass casualties from "all hazards;" what the government classifies as CBRNE events (chemical, biologic, radiological, nuclear, and explosive as well as natural events and pandemics).

With this in mind, there is a need for healthcare to review the potential demand for medical materials and to work with the entire supply chain to become more capable of meeting the kind of demand surges that might occur with a catastrophic event. For hospitals, there is a need to recognize that a catastrophic event is not a hospital event; it is a community event. Communities should be considered as regionalized

Medical Materials *(Cont. from 10)*

rather than localized. Hospitals need to engage in planning from a community perspective. There are alternate sources of medical materials in the community that might be drawn upon in a catastrophic event. Capacity for care can be extended through the use of community planning.

Planning for such an event requires a careful examination of the medical supply chain and the capability of the supply chain participants to answer the surge in demand such an event would create. Hospitals have inventory, not just in their warehouses, but in many of their medical care areas. Distributors have the ability to respond quickly when the demand is identified and within the distribution community, there would be a need to re-distribute capacity to the impacted areas. Manufacturers will also have to be included since they also have some level of inventory. In addition, manufacturers will have to estimate their ability to ramp up production to return the supply chain to some level of normalcy. Critical supplies that are identified as "weak" in the supply chain have to be bolstered to support this anticipated demand.

Internally, there is a need for hospitals to identify what areas of the hospital might be closed or impacted by such an event and how much of their internal supply chain might be diverted to the first point of care. Shortfalls in anticipated immediate demand on critical supply items must be identified and circulating inventory increased to the point that the hospital can be self-sufficient for some period

of time until they can begin to be re-supplied by their existing supply chain partners. Consideration must be given to the disruptions that will occur to the normal transportation methods and contingency plans to overcome those obstacles have to be provided for in the plan. These partners have to examine their internal supply patterns and determine, with the provider, the products that will be demanded and their own capability of immediate shipment of those supplies and how long it is anticipated for these supplies to actually reach the hospital. These calculations will determine how much the hospital must have to be self-sufficient until reinforcements will arrive.

Among the distribution and manufacturing communities, there has to be some considerable planning to determine what their surge response capabilities are and what medically necessary products will need to be considered for increased capacity in the supply chain. Where it is determined that any of these points in the supply chain need to be reinforced, the medical community has a responsibility to openly and effectively communicate that need and to collaboratively investigate methods of increasing the amount of necessary supplies to meet the short-term surge in demand.

Michael Osterholm, director of the Center for Infectious Disease Research and Policy at the University of Minnesota said in 2006, "Investors punish companies for having excess capacity they don't use . . . ." Dr. Osterholm has called for a program of "critical product

continuity" to see the United States through the worst of pandemic disruption. He proposes identifying items that are essential to people's health and safety and then finding a way, possibly through government funding or tax incentives, to create emergency stocks or extra production capacity for them. High on his list of "critical products" is tools for fighting flu itself, such as face masks, ventilators to help the sickest patients survive, and syringes to administer a vaccine if one becomes available. This advice applies as well to catastrophic manmade events.

While the medical supply chain might be less resilient as a result of the move to JIT inventory, it is also more capable of identifying where surpluses exist through these computerized tools and we can manage "bulges" in the supply chain more effectively through these tools. Fewer resiliencies require more planning and a higher level of commitment to manage the planning effort. Much work remains to be done to identify the areas that need the most support and the MMCG will continue to evaluate the medical supply chain and work collaboratively to protect the response capability of our system. ❖

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Bernard Wysocki Jr. and Sarah Lueck, The Wall Street Journal, Thursday, January 12, 2006.

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The National Association of County and City Health Officials
The National Voice of Local Public Health

by Angela Ablorh-Odjidja* and Patrick M. Libbey**

Introduction

An effective public health system is needed to protect the health of the nation. This system requires the collaborative efforts of a complex network of players: policymakers, law enforcement officials, community members, the healthcare sector, and governmental public health agencies. Local health departments (LHDs) are a key component of the governmental public health system that works to improve the health and safety of the nation.

The National Association of County and City Health Officials (NACCHO) is the national nonprofit organization representing the approximately 2,860 LHDs nationwide. NACCHO's mission is to support efforts that protect and improve the health of all people and all communities by promoting national policy, developing resources and programs, seeking health equity, and supporting effective local public health practice and systems.

This article will discuss the difference between "public health" and "healthcare", describe the roles of LHDs in protecting the public's health, identify some of the challenges currently facing public health, and discuss NACCHO's role in addressing these challenges.

Public Health vs. Healthcare

Public health is often confused with healthcare. While healthcare focuses on the direct delivery of services to ensure the health of individuals, public health focuses on the delivery of services to ensure the health of populations or "what we as a society do collectively to assure the conditions in which people can be healthy."[1]

Confusion between public health and healthcare services is not totally unfounded, for the two have not always been mutually exclusive. After World War II, a lack of medical care was increasingly identified as a significant obstacle to promoting and improving community health.[2]

This led to the increased role of LHDs as safety-net providers.[3]

The public health role in the delivery of healthcare services was controversial from the start.[4] In 1973, former Surgeon General, John J. Hanlon, called for public health agencies to withdraw from providing personal health services and concentrate on their "important and unique potential as community health conscience and leader in promoting the establishment of sound policy."[5]

Recently, there has been a national effort to return governmental public health agencies to more population-based public health services. As a result, many LHDs no longer provide direct healthcare services and instead contract with managed care organizations and non-governmental organizations (NGOs) to deliver these services.[6]

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[1] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 20.
[2] Turnock B. 2008. *Public Health: What It Is and How It Works* (4th ed.). Sudbury, MA: Jones and Bartlett: Pg. 221.
[3] Turnock B. 2008. *Public Health: What It Is and How It Works* (4th ed.). Sudbury, MA: Jones and Bartlett: Pg. 221.
[4] Turnock B. 2008. *Public Health: What It Is and How It Works* (4th ed.). Sudbury, MA: Jones and Bartlett: Pg. 220.
[5] Turnock B. 2008. *Public Health: What It Is and How It Works* (4th ed.). Sudbury, MA: Jones and Bartlett: Pg. 220.
[6] The term "non-governmental organization" includes many different types of organizations, including physician practices, hospitals, community based organizations, and other voluntary organizations. According to the 2005 National Survey of Local Health Departments, LHDs increasingly rely on NGOs to provide the following services: comprehensive primary care, obstetrical care, home healthcare, oral healthcare, behavioral/mental health services, substance abuse services, cardiovascular disease screening, HIV/AIDS treatment, prenatal care, and mental illness prevention. See: National Association of County and City Health Officials. 2005. *2005 National Profile of Local Health Departments*. Washington, DC; National Association of County and City Health Officials: Pg. 44.

NACCHO *(Cont. from 12)*

The Public Health System and the Role of LHDs in Protecting the Nation's Health

In 1994, the Core Functions of Public Health Steering Committee issued the *Public Health in America Statement*.[7] In this statement, the Committee articulated the public health vision and mission, the role of public health, and the ten essential services needed to contribute to the goal of creating and maintaining conditions in which people can be healthy.[8]

LHDs play a critical role in assuring the public health system's ability to accomplish the stated mission, vision, role, and essential services of public health. As noted by Bernard Turnock, MD, MPH, "in the overall structuring of governmental public health responsibilities, LHDs are where the 'rubber meets the road'."[9]

According to the NACCHO 2005 *National Profile of Local Health Departments*, "the role of every LHD is to coordinate all public health activities in a community regardless of which organization may take the lead in a particular area."[10] Due to their varying size and capacity,

Public Health Vision, Mission, and Essential Services
http://www.health.gov/phfunctions/public.htm

Vision:
Healthy People in Healthy Communities

Mission:
Promote Physical and Mental Health and Prevent Disease, Injury, and Disability

Public Health
• Prevents epidemics and the spread of disease
• Protects against environmental hazards
• Prevents injuries
• Promotes and encourages healthy behaviors
• Responds to disasters and assists communities in recovery
• Assures the quality and accessibility of health services

Essential Public Health Services
• Monitor health status to identify community health problems
• Diagnose and investigate health problems and health hazards in the community
• Inform, educate, and empower people about health issues
• Mobilize community partnerships to identify and solve health problems
• Develop policies and plans that support individual and community health efforts
• Enforce laws and regulations that protect health and ensure safety
• Link people to needed personal health services and assure the provision of health care when otherwise unavailable
• Assure a competent public health and personal health care workforce
• Evaluate effectiveness, accessibility, and quality of personal and population based health services
• Research for new insights and innovative solutions to health problems

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[7] The Core Functions of Public Health Steering Committee was chaired by the Assistant Secretary for Health and the Surgeon General, and comprised of the Federal Public Health Service agency heads and the presidents of the American Public Health Association, the Association of Schools of Public Health, the Association of State and Territorial Health Officials, the Environmental Council of the States, the National Association of Country and City Health Officials, the National Association of Local Boards of Health, the National Association of State Alcohol and Drug Abuse Directors, the National Association of State Mental Health Program Directors, Partnership for Prevention and the Public Health Foundation. Public Health Functions Project, http://www.health.gov/phfunctions/project.htm.

[8] Public Health Functions Project. 2000. *Public Health in America Statement*, http://www.health.gov/phfunctions/public.htm.

[9] Turnock B. 2008. *Public Health: What It Is and How It Works* (4th ed.). Sudbury, MA: Jones and Bartlett: Pg. 186. Bernard J. Turnock is Clinical Professor and Director of the Division of Community Health Science at the University of Chicago's School of Public Health.

[10] National Association of County and City Health Officials. 2005. *2005 National Profile of Local Health Departments*. Washington, DC; National Association of County and City Health Officials: Pg. 44.

United States Moves to Expand Government Information Sharing, Limit Overclassification
Streamlined Rules Sought for Sharing 'Sensitive but Unclassified' Information

by Timothy P. Clancy, JD, Principal Research Associate for Law

Numerous experts and blue-ribbon panels — including the 9/11 Commission and the Markle Foundation[1] — have complained that too many incentives exist for Federal agencies to withhold key security information about terrorism. The 9/11 Commission Co-Chair and former Rep. Lee Hamilton once observed that "[r]ight now, all of the incentive is for classifying information. You might say the motto is: 'when in doubt, classify.'"[2] However, as Rep. Hamilton and the 9/11 Commission observed, the government's tendency towards classification leads to a paradox — more and more restrictions often lead to less and less security, as vital information gets stovepiped and locked away.

This security paradox does not end with classification. Even if government information does not meet the standards for National Security Classification under Executive Order 12958, Federal agencies may restrict unclassified information deemed too sensitive for dissemination. After the September 11th attacks, concerns rose over disclosure of sensitive government information that could be used by potential terrorists or other adversaries. As a result, new congressional authorities[3] and Federal agency directives authorized creation of new categories of protected information known as "sensitive but unclassified" (SBU).

These relatively new policy changes and the failures of terrorism-related information sharing prior to 9/11 reignited the openness versus secrecy debate that raged during the Cold War. Scientific, open government and public policy watchdog groups immediately criticized the new restrictions charging they harmed scientific freedom and eroded public confidence in the government. There are also ques-

tions whether the new restrictions actually decreased security overall. The new restrictions were largely ad hoc, uncoordinated and confusing with no clear, uniform government-wide criteria for determining when information is SBU.[4] With such vague and often conflicting standards for what constituted SBU, many security experts also complained that the proliferation of SBU further stifled the sharing of terrorism information.

In May, 2008, President Bush issued a Memorandum to Federal agencies announcing a new policy designed to streamline the rules for unclassified information related to terrorism. The new policy adopts, defines, and institutes *Controlled Unclassified Information* (CUI) as the single categorical designation for all information referred to as SBU. It is important to note that the new CUI policy would

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[1] The Markle Foundation Task Force on National Security in the Information Age, March 2002 – July, 2006. The Task Force issued three relevant reports: Mobilizing Information to Prevent Terrorism (2006); Creating a Trusted Information Network for Homeland Security (2003); and Protecting America's Freedom In The Information Age (2002).

[2] The Hon. Lee H. Hamilton, *Remarks on Classification*, Information Security Oversight Office October 18, 2005, http://www.wilsoncenter.org/about/director/docs/Hamilton_classification.doc.

[3] The Homeland Security Act of 2002, P.L. 107-2962, and the Intelligence Reform and Terrorism Prevention Act of 2004, (IRTPA) P.L. 108-458 (Intelligence Reform Act).

[4] Government Accountability Office (GAO), *Information Sharing: The Federal Government Needs to Establish Policies and Processes for Sharing Terrorism-Related and Sensitive but Unclassified Information*, GAO-06-385 (Washington, D.C.: Mar. 17, 2006).

Legal Insights *(Cont. from 14)*

apply only to federal information related to terrorism in the Information Sharing Environment (ISE) authorized by the Intelligence Reform and Terrorism Prevention Act of 2004.[5] The Memorandum establishes a new CUI framework for designating, marking, safeguarding and disseminating information designated as CUI and gives the National Archives and Records Administration (NARA) authority to oversee and manage the CUI framework government-wide.

Prior to leaving for the August recess, the House of Representatives passed three information sharing bills that largely endorse and expand slightly the new White House CUI policy.   H.R. 6193, the "Improving Public Access to Documents Act", seeks to curb the practice of labeling documents with restrictive markings and would apply only to DHS. A related bill H.R. 6576, the "Reducing Information Control Designations Act" extends the mandates in H.R. 6193 to the entire Federal government.

Adding further details to the new CUI framework, the House bills include a "whistleblower" provision that would allow government employees to challenge what they view as improper use of CUI designations without fear of retaliation. The legislation would also require agencies to publish a list of documents designated as CUI, indicating which of the documents have been withheld in response to requests submitted under the Freedom of

Information Act (FOIA).

The legislation also states that labeling a document as CUI "is not a determinant of public disclosure" under FOIA. The provision is an attempt to address the problem of improper denials under FOIA for sensitive information when the information withheld is not covered by a specific exemption from disclosure under FOIA.

To help enforce the new requirements, the measures require agencies to assign an "electronic personal identification number" or other electronic marker to each employee with authority to designate information as CUI.   The marker would be used to identify which documents the employee labels as CUI, determine when such documents have been shared, and reveal when CUI markings are misused. The bill would also require annual training for relevant employees and contractors focusing on the proper use of CUI markings as well as the consequences of improper designations.

Both bills have bipartisan support and passed the House by voice vote.   While no companion bill is currently pending in the Senate, the Senate Homeland Security and Government Affairs Committee recently held a hearing in late July on information sharing developments including the new CUI policy.

Along with the CUI bills, the House also passed the "Reducing Over-Classification Act of 2007"

(H.R. 4806), which directs the Secretary of Homeland Security to develop and administer policies at DHS to remove barriers that currently prevent the department from sharing terrorism-related information. The bill would require the Secretary of Homeland Security to develop a strategy to prevent the over-classification of homeland security information and encourage the sharing of sensitive data with other law enforcement and intelligence agencies.

Key members of Congress, including bill sponsor Jane Harman (D-CA) assert that H.R. 4806 is necessary to prevent DHS employees and contractors from using the classification scheme to hide "misdeeds and mistakes" rather than the purposes for which the classification scheme was intended. The bill requires DHS to "include a system of financial and other incentives and disincentives to encourage department personnel to use classified and sensitive and shared information program markings properly, including incentives and disincentives that impact the career advancement potential and bonus eligibility of an employee." This system would be overseen and audited by the DHS Inspector General.

Both the new CUI framework and the corresponding legislation are important steps toward creating a more streamlined and efficient information sharing regime. How-

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[5] As amended by the 9/11 Commission Act, the Intelligence Reform Act defines the ISE as "an approach that facilitates the sharing of terrorism and homeland security information, which may include any method determined necessary and appropriate."

Sector Overview Tables *(Cont. from 3)*

Table 1: Summary of the Healthcare and Public Health Sector

Major Element	Private Sector	Public Sector			
		Federal	**State**	**Local**	**Tribal**
Healthcare personnel	> 13,000,000[i]	> 450,000[ii]			
Hospitals (including specialty hospitals)	5,525[iii]	~ 350[iv]	1,121		36
Ambulatory facilities (including office practices and dental offices)	300,000	~ 490,000 (unable to separate by ownership; some may be private)[v]			
Long-term care facilities	~ 70,000 (unable to separate by ownership)[vi]				
Home health agencies	6,928 (unable to separate by ownership)[vii]				
Pharmacies	~ 70,000[viii]				
Health departments		Parts of HHS, the Environmental Protection Agency, Department of Defense, and Department of Veterans Affairs	57	~3,000	36
Health-related laboratories	~ 172,000[ix]	~ 2,000 (unable to separate by ownership)[x]			
Pharmaceutical manufacturers	> 2,500[xi]				
Medical device and supply companies	> 1,000[xii]				
Blood products centers	> 500[xiii]	2			
Health insurers and other payers	1,300[xiv]	1	50		

[i] Falling within this broad category are many professional categories. Included are approximately 5 million first-responders with at least some emergency medical training, approximately 3 million registered nurses, and more than 800,000 physicians. In alphabetical order, the overall figure includes, but is not necessarily limited to, the following: ambulance drivers and attendants; behavioral health professionals; clinical laboratory technologists and technicians; emergency management specialists; emergency medical technicians and paramedics; fire-fighting occupations with medical capabilities; hazardous materials removal workers; nuclear medicine technologists; nurses; occupational health and safety specialists; pharmacists; physicians; physician assistants; radiological technologists and technicians; respiratory therapists; veterinarians; and volunteer firefighters with medical capabilities. See, HHS, Health Resources and Services Administration. Preliminary findings for the 2004 national sample survey of registered nurses, **http://bhpr.hrsa.gov/healthworkforce/reports/rnpopulation/prelimi-naryfindings.htm**. See, HHS, Health Resources and Services Administration, 2006. Physician supply and demand, projections to 2020, HRSA-230-BHPr-27(2), **http://bhpr.hrsa.gov/healthworkforce/reports/physiciansuplydemand/currentphysicianworkforce.htm**.

Sector Overview Tables *(Cont. from 16)*

ii See, HHS, Health Resources and Services Administration, The Public Health Workforce Enumeration: 2000, HRSA/ATPM Cooperative Agreement # U76AH00001-03, ftp://ftp.hrsa.gov//bhpr/nationalcenter/phworkforce2000.pdf.

iii See, American Hospital Association, www.ahadata.com.

iv See, Kaiser Commission on Medicaid and the Uninsured, Stresses to the Safety Net: The Public Hospital Perspective, June 2005. See also, National Association of Public Hospitals and Health Systems, www.naph.org; and www.defenselink.mil, www.airforcemedicine.afms.mil, http://home.pcisys.net/~pwebber/milhosp1.htm, www.cnrc.navy.mil/richmond/naval_medical_facilities.htm, www.vha.gov.

v See, U.S. Census Bureau, 2003 Economic Census, Table 1: Advance Summary Statistics for the United States, 2002, NAICS Basis, www.census.gov/econ/census02/advance/TABLE1.htm; and U.S. Census Bureau, Ambulatory Health Care Services, 2002, Document ECO2-621-01, www.census.gov/econ/census02/guide/INDRPT62.HTM.

vi The are many subcategories of such facilities, including group homes for the disabled with nursing care, homes for the aged with nursing care, homes for the elderly with nursing care, hospices, nursing care facilities, nursing homes, rest homes with nursing care, retirement homes with nursing care, and skilled nursing facilities. See, U.S. Census Bureau, 2002, NAICS Definitions, 623 Nursing and Residential Care Facilities, www.census.gov/epcd/naics02/def.

vii This category of facilities includes centers devoted to hospice care, hospital care, pharmacy services, physicians, practice administration, rural health, and skilled nursing. See, HHS, Centers for Medicare and Medicaid Services, www.cms.hhs.gov/center/hha.usp.

viii See, National Council for Prescription Drug Programs, www.ncpdp.org.

ix Approximately 90,000 are located in physicians' offices. See, Online Survey and Certification Reporting System (OSCAR) database, Centers for Medicare and Medicaid Services, Baltimore, Maryland. See also, General Accounting Office, 1999, Emerging Infectious Diseases: Consensus on Needed Laboratory Capacity Could Strengthen Surveillance, Report to the Chairman, U.S. Senate Subcommittee on Public Health; Committee on Health, Education, Labor, and Pensions, February, Document No. GAO/HEHS-99-26, available at www.gao.gov.

x Of particular interest are laboratories that are part of the Laboratory Response Network, including national laboratories, reference laboratories, and sentinel laboratories. Data drawn from the Online Survey and Certification Reporting System (OSCAR) database, Centers for Medicare and Medicaid Services, Baltimore, Maryland.

xi See, Pharmaceutical Manufacturer Information, www.drugs.com/manufacturers.

xii See, HHS, Centers for Medicare and Medicaid, Health Industry Market Update: Medical Devices and Supplies, December 2004.

xiii See, American Association of Blood Banks Locator Database, www.aabb.org/Locator/Locator.asp.

xiv See, America's Health Insurance Plans Association, www.ahip.org.

Table 2: Sector Interdependencies

Interdependent Sector	Interdependency
Transportation Systems	Movement of supplies, raw materials, pharmaceuticals, personnel, emergency response units, patients, and fatalities.
Communications	Third-party reimbursements and other business processes.
Energy	Electric, natural gas, propane, and diesel fuel to power and run facility functions of all kinds, including facility protection programs.
Water	Healthcare, pharmaceutical operations and sanitization services.
Emergency Services	Coordination with first-responders and Emergency Medical Services, and includes local law enforcement for security for various emergencies (e.g., quarantine, imposed isolation, etc.).
Information Technology	Business, clinical, and security information systems.
Postal and Shipping	Movement of equipment and supplies.
Chemicals	Support to the pharmaceutical industry.
Food and Agriculture	Food production and distribution for healthcare and public health personnel and patients.
Local Law Enforcement	Security for various emergencies, such as quarantine and imposed isolation.

Sector Overview *(Cont. from 3)*

tion sharing and communications under the Critical Infrastructure Partnership Advisory Council (CIPAC) framework. This working group will be co-chaired by both the Sector Coordinating Council (SCC) and the Government Coordinating Council (GCC) and will include members of both committees and additional subject-matter experts as needed. In addition to routine communication methods such as e-mail, the SSA plans to utilize the Homeland Security Information Network (HSIN) to facilitate the sharing of what is now known as Controlled Unclassified Information (CUI). The planned release of HSIN Next Generation (HSIN NexGen) in the fall of 2008 will provide the HPH Sector with the capability to share information more easily, via even more mediums and in a timelier manner.

To address the need to share classified information with the sector's security partners, the SSA, through the U.S. Department of Homeland Security (DHS), has obtained security clearances for key private sector, academic, and State, local, tribal, and territorial partners. The SSA has also arranged for classified briefings for key sector partners to ensure that the right information is reaching the right personnel in a timely manner. The frequency of these briefings is expected to increase as the number of security partners who are eligible to attend continue to rise.

Strategic Homeland Infrastructure Risk Assessment

Another key initiative undertaken

by the HPH Sector, through the DHS Homeland Infrastructure Threat and Risk Analysis Center (HITRAC), is the Strategic Homeland Infrastructure Risk Assessment (SHIRA). The purpose of SHIRA is to generate and apply a standardized methodology that can be applied across the 18 CIKR to assess sector risk and generate a national risk profile. The SHIRA process includes analyzing risk in the context of threat x consequence x vulnerabilities leveraging the 15 National Threat Scenarios. Each sector applies the threats against assets in their sector based upon the likelihood of the threat occurring, and the degree to which consequences escalate into a catastrophic event. Information on vulnerabilities and threats are provided directly by the sector as well as the intelligence community. This process is completed for all sectors on a sector-by-sector basis; once completed, the data is aggregated into a national level risk profile. Key drivers in the assessment of risk lie in the level of consequences related to loss of life and economic impacts (the greater the impacts, the greater the consequence level will be); however, it should be noted that final analysis rests with HITRAC, which validates the likelihood of all threat scenarios that have been applied to come up with a probabilistic numerical value for the overall risk to a sector. Over time, the process has matured giving rise to the application of consequences related to psychological and mission impacts. This is an important indicator for healthcare and public health, as it is generally viewed that direct impacts to the sector in terms of loss of life (HPH

specific) and direct economic impacts will not likely rise to the level of national criticality. By contrast, the likelihood is greater that any threat directed at the sector as well as any event occurring across the other 17 sectors will overwhelm the healthcare and public health system bringing its critical functions of response and patient care to a halt, generating a surge in psychological disorders. Included in this process is the identification of critical national and international assets, the loss of which would have a devastating impact on each or multiple sectors.

Within the HPH Sector, a multi-disciplinary group including private sector partners, academics, and State and local partners accomplishes this initiative. This fall, the SSA will be formalizing its support of this effort by developing a joint working group on risk assessment under the CIPAC framework. This working group will be co-chaired by both the SCC and GCC and will include members of both committees and additional subject-matter experts as needed. The DHS process also includes input provided by each state homeland security advisor.

Conclusion

The HPH Sector, like all its fellow sectors, has gone through a rapid maturation process. This process has built a strong foundation upon which it can begin to tackle some of the more complicated challenges. The need to ensure adequate information sharing across all levels of government and with our private

Sector Overview *(Cont. from 18)*

sector/academic partners is critical to its success in managing any manmade or naturally occurring disaster. The sector must continue to maintain its focus on its key constituency, the owners and operators throughout this diverse sector. These sector partners will be managing the local, regional, or national responses in the days, months, and years to come. In order for the sector to be successful, it must collectively (public/private sectors and academia) develop the tools and share the information needed to sustain the delivery of life-saving goods and services prior to, during, and after a natural or manmade event.

Note: Sections of this article have been taken from the 2007 Healthcare and Public Health Sector-Specific Plan and the 2008 Healthcare and Public Health Sector Annual Report. ❖

GCC Members

Association of Public Health Laboratories
Association of State and Territorial Health Officials
National Association of County and City Health Officials
National Guard Bureau
National Indian Health Board
Department of Agriculture
Department of Defense
Department of Health and Human Services
Department of Homeland Security
Department of Veterans Affairs

SCC Members

American Association of Blood Banks
American Association of Occupational Health Nurses, Inc.
American Hospital Association
American Industrial Hygiene Association
American Medical Association
American Nurses Association
America's Health Insurance Plans
Association of Healthcare Resource and Materials Management Professionals
Biotechnology Industry Organization
Blue Cross & Blue Shield Association
Blu-Med Response Systems
Brooklawn Memorial Park
DST Output
Evidence Based Research, Inc.
Health Information and Management Systems Society
Henry Schein, Inc.
International Cemetery and Funeral Association
Johns Hopkins University
Joint Commission on Accreditation of Healthcare Organizations
LabCorp
National Funeral Directors Association
Pharmaceutical Research and Manufacturers of America
University of Pittsburgh Medical Center

R&D/MS&A *(Cont. from 6)*

period, the JAWG has identified the following areas of medical surge management to be further examined: informatics, crisis standards of care, situational awareness, and healthcare system capacity management. There exist many opportunities for advancement in medical surge management, all of which can be realized through stakeholder collaboration and rigorous analysis.

Workforce Sustainability

The Workforce Sustainability theme is headed by Professor Christopher Davis, Chief Medical Officer & Chief Scientist, CUBRC Inc. The rationale for workforce sustainability is in the desire to bridge the gap between broader biosurveillance initiatives intended to protect the general population, and the need to specifically protect healthcare and public health workforce while performing their roles and responsibilities. This particular concept is not being addressed elsewhere within the sector and has broad cross-sector implications for managing limited human resources in less than desirable circumstances. The recognition that the sector is limited in resources is certainly not new, but the notion that measures must be identified to mitigate the impacts of limited workforce capacity, developing robust strategies for engaging and educating medical and non-medical staff, and embracing concepts that protect the mental health and well being of those workforce members, is by and large a novel concept.

Healthcare and public health functions are a critical component to the Nation's stability. This sector is wholly responsible for the health and safety of the population, for advancements in research, development of new medical technologies and preventive diagnostics, and for maintaining vigilance with regard to international events that may give rise to domestic outbreaks or require nationally-significant policy changes. At all levels of the healthcare and public health continuum, the workforce is the singularly most critical asset, without which sector operations could not be sustained. The HPH Sector mission would fail without the support of the workforce to carry out disease management, disease surveillance, response and recovery during an event, and the general provision of care. Currently, the sector lacks a sufficient level of resources to maintain a daily provision of care. Coupling the current lack of resources with the potential for a disease outbreak or disaster, the diminishing workforce has the potential to bring the sector mission to a halt.

The needs of the HPH Sector are different from those of other sectors, with the exception of emergency services. This workforce is exposed daily to disease, illness, biologics, environmental hazards, etc. They are exposed to the consequences of an event often times even before the event has been identified. They are, in short, on the front lines, risking their health and that of their families daily. It is this aspect of workforce sustainability that is centric to HPH.

At the core of this issue is the process by which we sustain the number of active and inactive HPH workers for the provision of care under all-hazards (before, during, and following an event). This requires a paradigm shift in education so that resources can be leveraged across multiple disciplines rather than a single specialized skill. It requires specific actions to identify and mobilize non-practicing and retired personnel. And it mandates that workforce be protected before, during, and following an event from the direct and indirect effects of a catastrophe.

If in focusing on the tools and processes to address emergency response and recovery, we fail to develop plans to instill resiliency in, and sustain the greatest number of workforce (e.g., known trained, unknown — previously trained, not currently practicing, trained volunteers, untrained volunteers, retirees) for any event, HPH will likely fail in its mission at great expense to those who are critical to the Nation's stability and public health. Healthcare and public health must conduct research and develop practical approaches to address training needs, to assess the psychological status of the workforce in order to determine which individuals are best suited to support certain types of disasters, and establish national- and state-level programs to identify the total capacity of workforce members in existence. Methods by which we can sustain and maintain the greatest numbers of effective workforce include:

R&D/MS&A *(Cont. from 20)*

- Monitoring (prior to, during, and after an incident)
- Protection in advance (prevention)
- Protection during (and after) an incident
- Psychological training
- Post-incident surveillance
- Analytic training and development to extend the reach of skilled workforce and to improve the skill of those who are untrained or non-practicing

The result of work completed in 2008 to address workforce sustainability culminated in the following requirements for research, and modeling, simulation and analysis: psychological health, workforce mobilization, workforce typing, and protection of family and dependents.

Medical Supply Chain

Medical supply chain management is a multi-faceted issue, presenting the sector with complex vulnerabilities. All healthcare and public health functions rely on the integrity of the supply chain. The range of medical materials includes both durable and non-durable goods, from radiological equipment to latex gloves; the diversity of the supply chain involving the manufacturing, distribution, and consumption of medical materials accounts for high number gaps in capabilities that must be carried out by the sector for purposes of protection, preparedness, and response. While domestic influences have raised in visibility as a result of such incidents as contaminated products, what is perhaps less obvious is the upsurge of international medical materiel interdependencies that

currently exist. While the diversion of medical material production to locations abroad may have cost-reduction benefits, these dependencies render the supply chain, and therefore the sector, vulnerable to events outside of U.S. control. Before these vulnerabilities can be addressed by preparedness and protection initiatives, the vulnerabilities in the international supply chain must be identified and analyzed to determine the extent of their implications. The sector's dependency on the international medical material supply chain poses a significant risk to existing capabilities which can be addressed in a few intersecting ways: modeling, simulation, and analysis, a cost-benefit analysis to give private industry incentive to produce products locally, and research into the development of alternate resources for manufacturing essential medical materials.

Vulnerabilities exist in the domestic management of the medical material supply chain as well. Certain specialized medical materials are produced by sole or limited sources; in the event of a disruption in the production process of these materials, the sector would have no immediate way to compensate for the unavailability of the product(s). Additionally, if the product is produced in a limited quantity, then even a short duration of medical surge would result in its rapid depletion, generating a scarcity in resources at the national level. Transportation and distribution of medical supplies lead to another set of vulnerabilities; in order for medical supplies to reach their appropriate destinations, they travel

through several nodes controlled by varying jurisdictions, owners and operators, and modes of transport. More importantly, there is little knowledge transfer or collaboration among Federal, State, and private partners to track the supplies and devices.

As a result of analysis from the JAWG as well as the combined SCC and GCC membership, the following requirements have been recommended for further examination: vulnerabilities in international supply chain manufacturing, medical device sustainability, sole or limited source dependencies, U.S. manufacturing incentives, just-in-time inventory, maintenance of stockpiles, transportation and distribution of supplies/devices, and policy issues.

Current Initiatives and the Way Forward

In October of 2008, the JAWG will hold its annual meeting to identify and establish priority initiatives for the new fiscal year. In addition to this, the group is currently collaborating with the CDC to support the development of the National Biosurveillance Strategy. This work is still in its preliminary phases and the role of the JAWG continues to evolve. In the future, the JAWG aims to further leverage the expertise of its members to address other pressing issues in their sphere of influence, to maximize their knowledge base across research initiatives, engage in R&D and MS&A projects, and to continue to identify measures for improving sector capabilities in preparedness, protection, and response. ❖

NVHA (*Cont. from 9*)

delivery of Advanced Burn Life Support training courses to hundreds of key healthcare personnel, those most likely to find themselves on the front lines of having to deliver such care in another significant event that imperils the region.

Developing the Regional Hospital Coordinating Center

The experience that the Northern Virginia community had as a result of three successive terror driven events: the Pentagon attacks, the anthrax mailings, and the "sniper" attacks in 2001 and 2002 highlighted the need for our region to coordinate the healthcare approach to such events. With the creation of the NVHA, and the strong influence such an "ad hoc" effort had on the Commonwealth of Virginia's approach to disaster response and preparedness, the healthcare community leadership efforts in Northern Virginia were critical in influencing and promoting the implementation of bona fide regional coordination and cooperation. This has been exemplified by the creation of an operational entity, the Regional Hospital Coordinating Center (RHCC) that has been successfully implemented to assist in the management of a number of disaster events and threats, including Hurricane Isabel (2003), the Skyline anthrax incident (2005), and numerous other exercises and warnings. In fact, the prototype of this regional communications capability was first put to use by the Metropolitan Washington Airports Authority in response to a small incident that occurred at Dulles

International Airport in January 2000. At the time, the Inova Fairfax Hospital Communications Room also served as a de facto "medical command" clearinghouse, called MEDCOMM. It was only after the 9-11 events, that such a capability was widely recognized for the contribution such coordination provides to the remainder of the emergency response community, and funded in large part by federal grant opportunities, as well as a significant "contribution in kind" by the Inova Health System, which provides the location and staffing for this center.

The Northern Virginia Regional Healthcare Coordinating Center (NoVA RHCC) is a multi-agency coordination center responsible for all operational components required to implement the NVHA Mutual Aid System (NVHA-MAS) and NoVA RHEOP. The mission of the RHCC is to ensure patients are delivered to the healthcare facility most capable of providing definitive patient care, in the shortest and most efficient time possible, through coordination and collaboration with regional partners. The primary responsibilities of the RHCC include:

- Providing a single point of contact between Northern Virginia hospitals and the VVDH Emergency Communications Center (ECC);

- Collection and dissemination of initial event notification to NCR hospitals and public safety partners;

- Collection and dissemination of ongoing situational awareness updates and warnings, including the management of the current bed availability in Northern Virginia hospitals;

- Establishing and managing WebEOC resource management tool and information exchange platform for the duration of any incident;

- Establishing and managing the Medcomm radio system for the duration of an incident;

- Serve as the single point of contact and collaboration point for Northern Virginia Fire/EMS agencies for the purposes of hospital diversion management, movement of patients from an incident scene to receiving hospitals, and input/guidance with respect to hospital capabilities, available services, and medical transport decisions;

- Coordinating inter-hospital patient movement, transfers, and tracking;

- Providing primary resource management to Northern Virginia hospitals for issues related to personnel availability, equipment and supply procurement and usage, and pharmaceutical availability and distribution;

- Providing secondary resource management support (if local EOCs fail to respond) to Northern Virginia hospitals for

NVHA *(Cont. from 22)*

key support resources, amongst them food, fuel, and water;

- Coordination of regional expenditures for reimbursement;

- Coordination of regional medical treatment and infection control protocols, during a biological incident, if required; and

- Coordination of Northern Virginia hospital requests for the Strategic National Stockpile (SNS) through the local jurisdiction EOC.

The NoVA RHCC maintains three levels of activation, depending on incident complexity and magnitude. Together, these levels represent a continuum of activity and responsibility required to effectively manage and coordinate the hospital response to events affecting the Northern Virginia region. In fact, the American Medical Association (AMA) and the CDC recognized Northern Virginia as one of four communities across the country demonstrating exemplary planning for regional coordination and enhanced medical capacity in the setting of disaster. An award was presented to the NVHA at the 2nd National Congress on Health Systems Readiness in Washington, D.C., on July 18, 2007.

Conclusion

CIP efforts must recognize the crucial role played by the healthcare community, particularly its hospitals, and must incorporate them into future efforts for planning support and funding. As the final common pathway for the victims of disaster, it is crucially important to further enhance the modest, but very practical capabilities exemplified by the hospital community of Northern Virginia, with the key support afforded by Inova Health System. ❖

Dan Hanfling is an Inova Health System Clinical Professor at the Department of Emergency Medicine, George Washington University and an Adjunct Distinguished Scholar at the School of Public Policy, George Mason University.

MFM *(Cont. from 7)*

for refrigerated trucks and facilities if needed.

Lessons learned in the aftermath of Hurricane Katrina in New Orleans should not be forgotten. Our society must ensure that the rule of law is maintained and that all victims are treated with dignity. In its absence, the normal functioning of society quickly breaks down to the detriment of all. ❖

Legal Insights *(Cont. from 15)*

ever, they are only first steps and implementing a new government-wide framework will take at least five years according to the White House. Many tough questions remain to be addressed, particularly the impact on FOIA. The framework announced by the White House is silent on whether a CUI designation automatically exempts sensitive information from disclosure under FOIA. The House-passed legislation attempts to tackle this contentious issue but it is far from clear whether any information sharing legislation will be enacted in an election year. ❖

NACCHO *(Cont. from 13)*

LHDs vary greatly in the activities and services they provide directly, through contracts, and through other governmental organizations and NGOs.

The activities and services most frequently provided by LHDs include those most associated with traditional public health practice: adult and childhood immunizations, communicable/infectious disease surveillance, tuberculosis screening, food service establishment inspection or licensing, environmental health surveillance, food safety education, tuberculosis treatment, high blood pressure screening, and tobacco use prevention.[11]

New Issues Facing Public Health

The nation faced a number of public health threats prior to and during the early part of the twentieth century: life threatening communicable disease, poor sanitation, and high rates of infant mortality.[12] Innovations in public health helped to respond to these challenges and accomplish what history has recognized as the most significant public health achievements of the twentieth century.[13] LHDs played a significant role in addressing these threats and substantially contributed to the increased life-expectancy and the general health and well-being of the Nation. LHD activities that contributed to these early

public health achievements include sewage disposal, food safety, and public education about hygienic practices (e.g., food handling and hand washing).[14]

Despite the notable accomplishments of the twentieth century, public health challenges continue to evolve. LHDs, along with the entire public health system, must be able to respond in kind. Some of the issues facing public health today include obesity and overweight, the threat of pandemic influenza, and bioterrorism. Additionally — and possibly among the most critical — are the challenges to the public health infrastructure: workforce development, information systems, and the development of public health performance standards and accreditation.

Obesity and Overweight
The obesity and overweight epidemic continues to threaten the health and quality of life of millions of American adults and children.[14] The rapidly increasing rate of obesity is a growing concern because of the increased risk it poses for the development of chronic disease and other poor health outcomes:
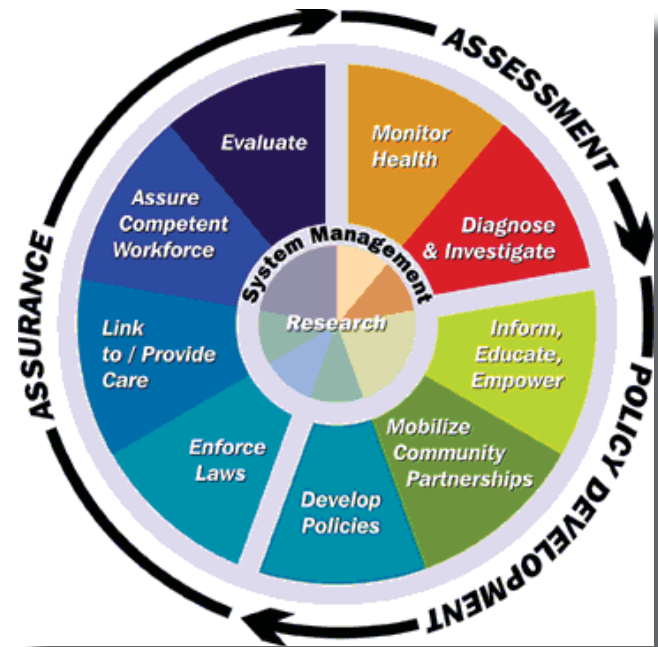
high blood pressure, type 2 diabetes, stroke, sleep apnea, and some cancers (endometrial, breast, and colon).[15] LHDs, in concert with the community, policymakers, and other members of the public health system, are integrally involved in quelling the factors that have contributed to the rise of the obesity and overweight in the United States.

Pandemic Influenza
Recently, public health has been concerned with pandemic influenza and the potential spread of the highly contagious and pathogenic avian H5N1 virus (avian flu). The exact occurrence of the next influenza pandemic or how severe it

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[11] National Association of County and City Health Officials. 2005. 2005 *National Profile of Local Health Departments*. Washington, DC; National Association of County and City Health Officials: Pg. 44.

[12] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 20.

[13] Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report: Ten Great Public Health Achievements—United States, 1990-1999, http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm.

[14] Turnock B. 2008. *Public Health: What It Is and How It Works* (4th ed.). Sudbury, MA: Jones and Bartlett: Pg. 38.

[15] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 76.

NACCHO *(Cont. from 24)*

will be is unpredictable. What is known, however, is that the arrival of a pandemic is inevitable and everyone around the world is at risk. "Good surveillance, timely vaccine development and production, and the ability to administer vaccine to large numbers of people in a short amount of time will be very important in the event of a pandemic."[17] LHDs will play an integral part in the nation's ability to respond in the event of this public health threat.

Preparedness
The events of September 11, 2001 pushed to the forefront concerns regarding public health's ability to respond to terrorist attacks and other public health emergencies.[18] In an emergency, whether natural (e.g., floods, tornadoes, earthquakes,) or intentional (e.g., bioterrorist attacks) state and local health officials will work closely with federal public health agencies and law enforcement to respond.[19]

Public Health Infrastructure
The ability of the public health system to address both existing and emergent public health concerns is only as strong as its infrastructure: public health workforce; information, data and communication

systems; and organizational and systems capacity.[20] Currently, the Nation's public health workforce,[21] disease surveillance and information systems,[22] and organizational and systems capacity[23] are disparately prepared to meet the challenges facing public health today. Among the key problems are an aging workforce, demands for many new skills, and an infrastructure for information technology and communication that has not been fully modernized.

Improving the management and coordination of the work of public health agencies is critical to an effective governmental public health system. The National Public Health Performance Standards Program (NPHPSP) and the voluntary accreditation of state and local health departments are two efforts in which governmental public health partners are currently engaged in to achieve this goal.

NACCHO's Role in Assisting LHDs Address Existing and Emergent Public Health Challenges

NACCHO serves every LHD in the Nation. These include LHDs associated with counties, cities,

combined county-city entities, towns, multi-town, multi-county, or other regional entities within a state, tribes, and states. Additionally, state associations of county and city health officials (SACCHOs) operate in 34 states. NACCHO maintains close communication with all SACCHOs and collaborates with them on many projects, including state-to-state networking, education and training, and national advocacy for local public health. Today, NACCHO's active (dues-paying) membership comprises approximately of 1,200 LHDs that collectively serve almost three-quarters of the U.S. population.

NACCHO's strategic plan, established by its Board of Directors,[24] is a description of the organization's goals and objectives that express its values and the needs of its membership. The specific focus is on strengthening the capacity of LHDs to protect and improve the health of the populations they serve, to foster the development of a workforce that can conduct the necessary functions effectively, to communicate the value of LHDs, and maintain NACCHO's own infrastructure to support those needs.[25]

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[16] Centers for Disease Control and Prevention. Obesity and Overweight: Introduction, http://www.cdc.gov/nccdphp/dnpa/obesity/.

[17] Department of Health and Human Services, National Vaccine Program Office. Preparing for the Next Pandemic., http://www.hhs.gov/nvpo/pandemics/flu5.htm.

[18] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 141.

[19] Institute of Medicine. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 141.

[20] Public Health Foundation. Public Health Infrastructure Resource Center: Understanding Public Health Infrastructure, http://www.phf.org/infrastructure/index.php.

[21] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 116.

[22] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 126.

[23] Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington DC: National Academies Press: Pg. 154.

[24] NACCHO is governed by a 32-member Board of Directors comprised of local public health officials from diverse communities across the country, including *ex officio* members representing the National Association of Counties (NACo), of which NACCHO remains an independent affiliate, and the United States Conference of Mayors.

NACCHO *(Cont. from 25)*

NACCHO has an expansive portfolio of activities funded by federal agencies, private foundations, and corporations to help LHDs address existing and emergent public health issues. These projects include: bioterrorism and emergency preparedness, food safety, land use planning, workforce development, tobacco control, infectious disease prevention and control, traffic safety, injury prevention, maternal and child health, immunization, rural health, and primary care.

NACCHO has also played a key role in representing the needs of LHDs in the national effort to improve the governmental public health infrastructure. NACCHO's activities include the development and implementation of a curriculum for training newly-appointed local health officials, the development of an operational definition of an LHD, participation in the NPHPSP, the development of an LHD accreditation program, promoting the advancement of public health informatics, as well as the dissemination and training regarding community health assessment and strategic planning tools, including Mobilizing for Action through Planning Partnerships (MAPP). In addition, NACCHO produces the *Profile of Local Health Departments* surveillance series, the only comprehensive survey that includes every LHD in the United States. The *Profile* characterizes local public health practice. NACCHO has also established and maintains the only known database of evaluated and

peer-reviewed model and promising practices from LHDs throughout the country.

Conclusion

LHDs, along with federal and state governmental public health agencies, are responsible for the health and safety of the public. In this capacity, they must ensure that basic public health functions are carried out appropriately and are effective in protecting the health of the Nation.

NACCHO, in collaboration with partners at the federal, national, state, and local levels, will continue to articulate concerns and seek solutions to address the needs of LHDs in addressing public health issues. NACCHO's technical assistance, resources, and advocacy on behalf of local public health and the public health system will continue to contribute to developing a stronger, competent, and prepared public health system, better prepared to promote and protect the public's health.

For more information about NACCHO, please visit **www.naccho.org**. ❖

Angela Ablorh-Odjidja is the Program Manager for the Public Health Law and Maternal Child Health Projects at the National Association of County and City Health Officials.

**Patrick M. Libbey is the Executive Director of the National Association of County and City Health Officials.*

[25] National Association of County and City Health Officials. *NACCHO Strategic Plan 2007-2008*, http://www.naccho.org/about/upload/strategicplan2007-2008_final-2.pdf.

Metrics Workgroup *(Cont. from 4)*

on emergency management within its standards for health care facility accreditation. Recent changes include the development of a separate chapter focused solely on emergency management. The workgroup reviewed materials presented by the Joint Commission and determined that the standards and associated data could be useful in developing metrics.

A representative from ERM Certification and Verification Services presented on the ISO certification process and standards that might be used as the basis for metrics for medical product manufacturers. After reviewing the materials, the workgroup determined that very few ISO standards are directly related to CIP.

A representative from IAHSS discussed information the organization has available that could support the sector-specific metrics effort. The workgroup found that while the organization did not have consistent metrics and periodic data collection processes, it did have the capability to implement new metrics and provide supporting data.

During the next several months, the workgroup will continue to research potential sources of CIP-related metrics and data. Using this information, the workgroup will select an initial set of sector-specific metrics that will indicate the level of success CIP efforts are having within the sector. The workgroup expects to complete this effort in the spring of 2009. ❖