

EXPANDING THE HEALTH INFORMATION MANAGEMENT PUBLIC HEALTH ROLE

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The health information management (HIM) professional is strategically placed to manage information within the public health arena. As managers of information flow, HIM professionals utilize increasing levels of technology to link clinical settings, public health departments, research institutions, and consumers with health information.

However, as technology increases the amount and accessibility of health information, HIM professionals must expand their role as information managers within the public health field. This article discusses HIM professionals' role in public health research and data management, policy development, and disaster preparedness and response management.

Public health is "the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities and individuals."¹ The Institute of Medicine report *The Future of the Public's Health in the 21st Century* stated that health status and disease monitoring involves the accurate, periodic assessment of community and patient health status, identification of health risks, and determination of health service needs.² Health status and disease monitoring data are used to support three core public health functions: 1) assessment of community and personal health status and needs, 2) assurance of access to health care and population health services, and 3) policy development to support personal and public health goals.³⁻⁴ Increasingly, the expertise of the HIM professional is strategic to the work of each core public health function.

Moreover, HIM professionals' roles have expanded outside the traditional healthcare field. While HIM professionals serve traditional roles in ensuring quality, collection, storage, processing, analysis, interpretation, security, and sharing of data, they have expanded these roles within the public health arena as innovators in community public health settings.⁵⁻⁷ Studies supported by AHIMA have acknowledged that nontraditional (out-of-hospital) settings for HIM professionals have grown significantly.⁸⁻¹⁰

Public Health Research and Data Management

As the field of technology has grown, the role of the HIM professional has expanded to manage data from paper formats to electronic records. The traditional HIM professional roles of data management, retrieval, analysis, and privacy/security are expanded through the move to electronic formats. In addition, the HIM professional's role in the standardization of data continues to expand within the public health principles of assessment and assurance. HIM professionals are integral to the assurance of definitional standards (ICD-10, SNOMED, HL7) and terminology within informational

data sets that will facilitate accurate data sharing and exchange.

HIM professionals serve vital roles in public health research, ranging from data collection, assessment, and management to project management. Data collection, assessment, and management tasks may include obtaining and/or querying medical records from health facilities, reviewing medical records for record completeness and accuracy, abstracting data from medical records based on study protocols, and conducting classification coding for research purposes. Project management tasks include administrative responsibilities in public health research. HIM professionals in these data collection and management roles may serve as research data analysts working with national, population-based longitudinal data or outcome coordinators focusing on strategies for preventing heart disease, breast and colorectal cancer, and osteoporotic fractures in postmenopausal women.^{11, 12}

Moreover, public health research relies on standardized health information that is both accurate and timely. HIM professionals play important roles in the standardization of data as well as the development of mechanisms for data query and retrieval that will support multiple end users. Additionally, HIM professionals have been instrumental in the development and management of a number of public health databases. Two major data sources are used for population-based research: 1) population-based data collected through personal interviews or examinations and 2) data based on records, containing data collected from vital statistics and medical records.¹³ Many public health studies, pharmaceutical companies, managed care organizations, government agencies, and others use information from patient records to examine the relationship of risk factors or causalities to certain kinds of diseases, or to determine the true definitions of a disease.¹⁴ Epidemiology examines the patterns of disease occurrence in human populations and the factors that influence or determine these distributions in relation to time, place, and persons.¹⁵ As data managers, HIM professionals are involved in many types of epidemiological studies, including studies of infectious diseases, cancer, environmental factors, nutritional factors, chronic diseases, and health services.¹⁶

Public Health Research and Policy Development

HIM professionals are increasingly serving important roles in public health research and policy development, especially in the last decade. As members of special panels and commissions, for example, the Health Information Protection Taskforce of the State Alliance for e-Health, HIM professionals influence policy development.^{17, 18} Specifically, using input from community health status assessments, program outcomes, and environmental recovery efforts following natural and/or man-made disasters, HIM professionals are involved in organizing information that guides

policy development and program decision making.^{19,20} For example, a study by Watzlaf and colleagues investigated the effectiveness of ICD-10-CM in capturing public health diseases. These HIM researchers found that ICD-10-CM was more specific and more fully captures the range of public health disease when compared with ICD-9-CM.²¹ Other examples of research studies highlighting the work of HIM professionals in public health include Houser and colleagues' studies of the impact of the HIPAA Privacy Rule on obtaining medical records for epidemiology and other public health research studies and using medical record information to measure providers' behavior changes in regard to patient assessments and screening in health research, and Garvin and colleagues' development of a public health assessment tool to prevent Lyme disease.²²⁻²⁴ HIM professionals are vital partners in public health research addressing priority populations that face disparities in healthcare (e.g., racial and ethnic minorities, low-income groups, women, children, the elderly, residents of rural areas, and individuals with disabilities and special healthcare needs) as well as population-based disease reporting and tracking.²⁵

Disease Classification and Population-Based Registries

Public health disease reporting and tracking depend on accurate and timely disease classification and registry data. The early work of Grace Whiting Myers, a pioneer in the field of medical library science, laid the foundation for clinical record indexing and disease documentation.²⁶ Today, HIM professionals have a direct role in disease classification and registry coding and data reporting. Classification and registry data used in public health focus on population health. Data are aggregated for entire populations instead of individual patients or for reimbursement purposes. Disease classification systems such as ICD-9-CM, ICD-10-CM, and ICD-10-PCS are used for capturing and reporting public health diseases such as HIV/AIDS, sexually transmitted diseases, tuberculosis, and other infectious diseases; leading causes of death; and morbidity/mortality data related to bioterrorism. The International Classification of Functioning, Disability, and Health (ICF) is used for classification of functioning and disability. All these classifications of data are important for public health reporting, research, data tracking, and policymaking.²⁷

Three major types of population-health registries are used within the public health arena: disease-based registries (e.g., cancer registry, diabetes registry), disease management registries (e.g., immunization registry), and risk-based registries (e.g. high-risk obstetrics registry, preparedness registries for emergency volunteers and responders).²⁸ The cancer registry is the most common registry that collects and manages data by state. The Surveillance, Epidemiology, and End Results (SEER) program is a national population-based cancer registry used for collecting data on the prevention, diagnosis, and treatment of cancer in the United States.²⁹ The HIM professional serves an

important role in the submission, standardization, analysis, and review of data within these registries.

Disaster Management

Catastrophic events, such as Hurricanes Andrew, Katrina, and Gustav and the floods of Iowa, have influenced the expanding role of HIM professionals in disaster preparedness as well as in recovery planning in postdisaster situations. In the aftermath of these disasters, healthcare consumers were faced with a disruption in the continuity of healthcare services due to the loss of vital records and supportive information. For example, Louisiana experienced an information crisis in Hurricane Katrina's aftermath as public health officials lacked information on the number of persons receiving services in their communities and lacked health record information necessary to meet the needs of the public and displaced evacuees.^{30, 31} This crisis in information flow directly impacted the role of the HIM professional within the core public health principles of assessment and data assurance.

As health information data are dependent on the storage media used for patient information, the HIM professional serves a strategic role in the disaster planning and recovery process. Moreover, with an increase in the utilization of electronic record systems and personal health records (PHRs), HIM professionals are integral in planning for sustainable information technology essential to data record recovery post event. HIM professionals play an essential role in providing support to emergency responders by coordinating the request and receipt of necessary health records at emergency care sites and trauma centers. Such coordination of information solidifies the role of the HIM professional in the public health arena.

As technology increases the amount and accessibility of healthcare information, the HIM professional is positioned to support the three core public health functions of assessment, assurance, and policy development. HIM professionals functioning at this level have combined their HIM knowledge and background with graduate-level study in public health or related fields.

According to a national report on the public health workforce, an estimated 448,254 public health professionals in the United States were positioned in a variety of occupations: administrators, professionals, technicians, protective service, paraprofessionals, administrative support, skilled craft workers, and service/maintenance.³² Among these, 605 federal and state/territorial agencies employed health information systems/data analysts in the public health workforce.³³ HIM professionals are represented in these agencies, as well as in other work settings such as academic health centers, private research enterprises, community-based organizations, and other public-sector agencies. This expanded level of participation in varying workforce venues enables HIM professionals to lead the way in creating and utilizing data collection and management tools that address public health issues. Representation in these work environments shows added potential for growth and expansion of the HIM profession in the public health field as well as a broader need for

HIM professionals in worldwide public health settings.³⁴

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