

An Overview of Nutrition Informatics: A Public Health Perspective

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Introduction

Nutrition informatics is the fusion of nutrition, information, and technology. Public health professionals work in an immensely "information-rich" world. As many paper-based tools transition to the technology, there are more efficient ways to collect, display and study data from such tools as food/nutrition analysis tables, electronic health records (EHRs), and smartphone applications. Nutrition informatics allows public health professionals to more effectively use their knowledge and skills through the support of technology in many ways [1].

Need of public health in nutrition informatics

The field of nutrition informatics unfamiliar to most public health professionals. In consequence, public health leaders and other domains responsible for information science and technology decisions are often not fully cognizant of the basic sciences of this discipline and the essential experiences available. Without such awareness, the public health community has only recently begun to appreciate. This is contributed to the development of the current patchwork in the public health agencies at every level. The rapid evolution and widespread dissemination of data management software and web-based information, mobile apps, and categorically focused nutrition information systems have resulted in substantial exposure of benefits of information and communication with a comprehensive approach in public health practices [2].

Nutrition informatics is not just limited to those who work in or have an interest in technology it impacts all areas of dietetics practice, for example:

- **Clinical:** EHRs, clinical decision support, telehealth.
- **Consumer-based:** Apps and wearables, m-health, social media.

- **Food and nutrition management:** Staffing and workload statistics, recipe analysis.
- **Public health:** Disease surveillance, disease prevention, surveys.
- **Research:** Clinical trials, other data collection, and analysis.
- **Retail:** Consumer purchasing trends, sales history, inventory.
- **Public Policy:** Evidence-based policymaking, measuring policy outcomes [3].

Informatics specialist

An informatics specialist demonstrates knowledge of standard technologies, as well as system design, hardware, software, and user support. Skills include knowledge of regulation related to technology, the ability to serve an information resource for others using technology and competency in the analysis, management and evaluation of technology and applications [3,4].

Public health informatics expert

Expertise in public health are involved in nutrition informatics research and work with other healthcare providers to develop new methods and policies for data and information management [5]. Nutrition informatics tools that might be used by public health practitioners include databases containing footprints of known pathogens, thus making it possible to rapidly determine cause of outbreaks. Global positioning systems give accurate mapping coordinates related problem solving and decision making for location of epidemics [6]. Using clinical decision support it is possible to develop algorithms that can be used to develop best practices for safe food production [7]. Social media might be used to rapidly communicate information might be used to field workers and the public. These practitioners are the educators for future nutrition informaticists.

Community practice and research

This area of practice includes community nutrition programs and program evaluation as well as public health issues. Informatics relates here to not only the collection and analysis of data related to public health crisis, but the use of aggregate data for monitoring the public health [8]. Examples of informatics skills might relate to the use of personal health records or a smart phone application to monitor an individual's intake to evaluate the impact of a public health program. With the increased use of food tracking using barcoding, outbreaks of food-borne illness can be traced [9]. Researchers now rely on technology for managing and analyzing large volumes of data. With the increased use of food tracking using barcoding, outbreaks of food-borne illness can be traced. Researchers now rely on technology for managing and analyzing large volumes of data. Clinical research studies are now managed through clinical trial applications that drive scheduling, data collection, and study milestones [10]. Grant applications are now filed electronically requiring facility with the completion and filing of online forms.

Conclusion

The initial effort to identify informatics competencies for the field of food and nutrition. Based on trends in health care, technology and information management skills are critical components of contemporary practice continues to partner with RD informaticians within the Academy as well as Health Informatics Management Systems Society to develop and offer training programs in informatics in the future.

Conflict of Interest

None.

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