Public Health & Information Technology

Lecture 1

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Public Health & Information Technology

Public Health Informatics (PHI) is the application of informatics in areas of public health, including surveillance, prevention, preparedness, and health promotion.

Informatics is the process by which raw data turns into information and, subsequently, knowledge

Public Health & Information Technology

Public Health Informatics (PHI) is the systematic application of information and computer science and technology to public health practice, research, and learning

Public Health & Information Technology

The main goals of PHI

1- The use of information science and technology for promoting population health rather than of individuals.

2- Disease prevention rather than treatment focus in order to prevent chain of events or disease spread.

Public Health & Information Technology

PHI often operates at the level of government rather than at the private sector.

PHI is using informatics in public health through

1- Data collection 2- Data analysis 3- Make decision and actions

Public Health & Information Technology

PHI could be considered one of the most useful systems in

1- Disease surveillance,

2- Epidemics,

3- Natural disasters and bioterrorism.

Surveillance systems

Surveillance in public health is the collection, analysis and interpretation of data that are Important for the prevention of injury and diseases

1- Paper-based surveillance : Surveillance systems were mainly in the form of paper reports submitted from hospitals, physicians and clinics to local health departments.

Surveillance systems

Paper-based surveillance systems:

1- Time consuming and very cost

2- limited by incomplete data collection and inadequate analytical capacity

3- Incapable of providing timely information for public health action

Surveillance systems

2- Modern surveillance systems : Electronic surveillance systems delivering more timely data and information concerning a disease or a situation that can cause an outbreak

Surveillance systems

Electronic surveillance systems :

1- Short time consuming

2- Electronic health records can be shared easily with other systems

3- Improve the chances of detection of disease surveillance, epidemics, natural disasters and bioterrorism events. (Real time outbreak detection)

Development of Public Health Informatics

The latest development of PHI, such as geographic information system (GIS), which uses digitized maps from satellites that can be used to provide a large volume of data.

GIS gives more details about geographic location, trends, conditions and spatial patterns

Public health informatics in KSA

Ministry of Health (MOH) is the main governmental agency with overall responsibility for health policies and planning.

Reference

- https://doi.org/10.1016/j.jtumed.2016.08.011
- A review of the role of public health informatics in healthcare

Good Luck for All Students

- Please do not hesitate to contact me if you have any questions.

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