Informatics and Population Health

Public Health Core Science

A public health department is collecting data regarding how many people participate in childhood vaccination programs every year. This data collection is part of which public health core science? Select all that apply.

Laboratories

Informatics

Surveillance

Epidemiology

Prevention Effectiveness

Public Health Surveillance monitors the impact of control measures like vaccinations.

Public Health Informatics collects, compiles, and communicates vaccination information.

Epidemiology determines where diseases originate, the spread through populations, and possible preventive measures, but do not monitor vaccine use.

Public Health Laboratories perform tests to confirm disease diagnoses and conducts research and training. They do not monitor vaccine usage.

Prevention Effectiveness provides economic information for decision makers to assist them in selecting the best solutions when there is a disease outbreak.

Public Health Approach Components

Place the four components of the public health approach in the correct order.

Surveillance

Risk factor identification

Plan intervention

Implementation

The first step is identifying the problem. Informatics are used by surveillance systems to collect data about a health event.

The second step is identifying the cause. Informatics investigate factors, environmental or personal behaviors, that might make certain populations more susceptible to a health event.

The third step is looking at possible interventions. Data from the past help guide proposed interventions.

The fourth step is implementing the intervention. This takes a lot of collaboration between different agencies and informatics is key in communication.

Reference

Centers for Disease Control and Prevention (CDC). (2014). Introduction to public health [PowerPoint slides]. In: Public Health 101 Series. U.S. Department of Health and Human Services. https://www.cdc.gov/publichealth101/informatics.html

eHealth Technologies and Public Health

In what ways do electronic health (eHealth) technologies promote public health?

Provide remote self-testing

laboratories Prevent all outbreaks

Collect data on a yearly basis

Provide consultations to rural clients

Electronic health (eHealth) technologies can communicate through phones, mobile devices, and computers help clients receive timely consultations, appointments, and resources especially in remote areas and within vulnerable populations. eHealth technologies do not provide remote self-testing, data collection yearly, and prevent all outbreaks.

Decision-making

A public health system in a remote area needs to decide about how to educate the public about food safety. What would be the best informatics to use?

Collect data about current food safety practices

Analyzing the population's preference on education

Surveying the population's current knowledge

Distribute pamphlets on food safety

Data collection, analysis, and dissemination of information drive quality decision-making in public health systems across states and territories. However, analyzing how they would like to be educated would help the public health system's decision. Data about current food safety practices, surveying current knowledge, and just distributing pamphlets will not help decide how to educate the public.

Public Health Approach

A public health department examines past disaster relief data to plan for upcoming hurricane response. Which part of the public health approach is this?

Implementation

Surveillance

Intervention evaluation

Risk factor identification

Intervention evaluation includes examining data from the past help guide proposed interventions.