OUR LADY OF FATIMA UNIVERSITY

COURSE UNIT

BACHELOR OF SCIENCE IN NURSING: COMMUNITY HEALTH NURSING

COURSE MODULE	COURSE UNIT	WEEK
CM3	CU4	16
New Technologies Related to Public Health Electronic Information		

CHECK LIST

- ✓ Read course and unit objectives
- ✓ Read study guide prior to class attendance
- ✓ Read required learning resources; refer to unit terminologies for jargons
- ✓ Proactively participate in classroom discussions
- ✓ Participate in weekly discussion board (Canvas) Answer and submit course unit tasks

UNIT EXPECTED OUTCOMES (UEOs)

At the end of this unit, the students are expected to:

Cognitive:

1. Determine eHealth, digital health and information and communications technology for health
2. Describe the national eHealth vision and its components.
3. Enumerate the importance of eHealth in the community.

Affective:

1. Listen attentively during discussion.
2. Demonstrate tact and respect when challenging other people's opinions and ideas.

Psychomotor:

1. Take part in discussion and group activities.

2. Apply health evaluation appropriate for health care needs of the patient.

REQUIRED READINGS

Nursing Care of the Community "A comprehensive text on community and public health nursing in the Philippines" 1st Edition Zenaida Famorca

Nursing Practice in the Community 4th Edition Araceli Maglaya

Public Health Nursing in the Philippines 10th Edition National League of Philippine Government Nurses

STUDY GUIDE

Introduction

The Department of Health (DOH) is mandated to be the over-all technical authority on health that provides national policy direction and develop national plans, technical standards and guidelines on health. It is also a regulator of all health services and products, and provider of special or tertiary health care services and of technical assistance to other health providers especially to local government units. The implementation of Kalusugan Pangkalahatan or Universal Health Care is directed towards ensuring the achievement of

the *health system goals of better health outcomes, sustained health financing and responsive health system.*

The World Health Organization defines eHealth as the use of information and communication technologies for health. It supports the delivery of health services and management of health systems to become more efficient and effective. eHealth is described also as a means to ensure that “the right health information is provided to the right person at the right place and time in a secure, electronic form to optimize the quality and efficiency of health care delivery, research, education and knowledge. The application of information and communication technologies in health has rapidly increased for the past years and gained significance not only in the Department of Health but in the entire health sector. The DOH has continuously addressed the challenges and demands to further improve health care service deliveries and outcomes. Many countries have recognized the importance of adopting information and communication technology in health, also called as eHealth, to optimize processes and improve data collection, processing and analysis. The adoption of ICT has provided concrete foundation for health investments and innovations. Countries have formulated their own eHealth agenda to establish direction and plan the necessary steps to achieve their intended vision, mission, and goals.

The National Objectives for Health, 2005-2010 and the 2011-2016 prioritized the use of ICT in various reforms areas, critical health programs, and specific areas in health administration. In 2005 and 2013, the Philippines was signatory to the 58thand 66thWorld Health Assembly Resolution. The 58th World Health Assembly advocated the following:

o Draw up a long-term strategic plan for developing and implementing eHealth services in the various areas of health sectors including health administration which includes an appropriate legal framework and infrastructure and encourage public and private partnership;

o Develop the infrastructure for ICTs for health as deemed appropriate to promote equitable, affordable and universal access;

o Build on closer collaboration with private and non-profit sectors in ICTs;

o Reach communities, including vulnerable groups, with eHealth services appropriate to their needs;

o Mobilize multi-sectoral collaboration for determining evidence-based eHealth standards and norms and to share the knowledge of cost-effective models, thus ensuring quality, safety and ethical standards and respect for the principles of confidentiality of information, privacy, equity and equality;
o Establish national centers and networks of excellence for eHealth best practice, policy coordination, and technical support for health-care delivery, service improvement, information to citizens, capacity building, and surveillance; and
o Establish and implement national electronic public-health information systems and to improve, by means of information, the capacity for surveillance of, and rapid response to, disease and public-health emergencies.

_e_Health in the Philippines

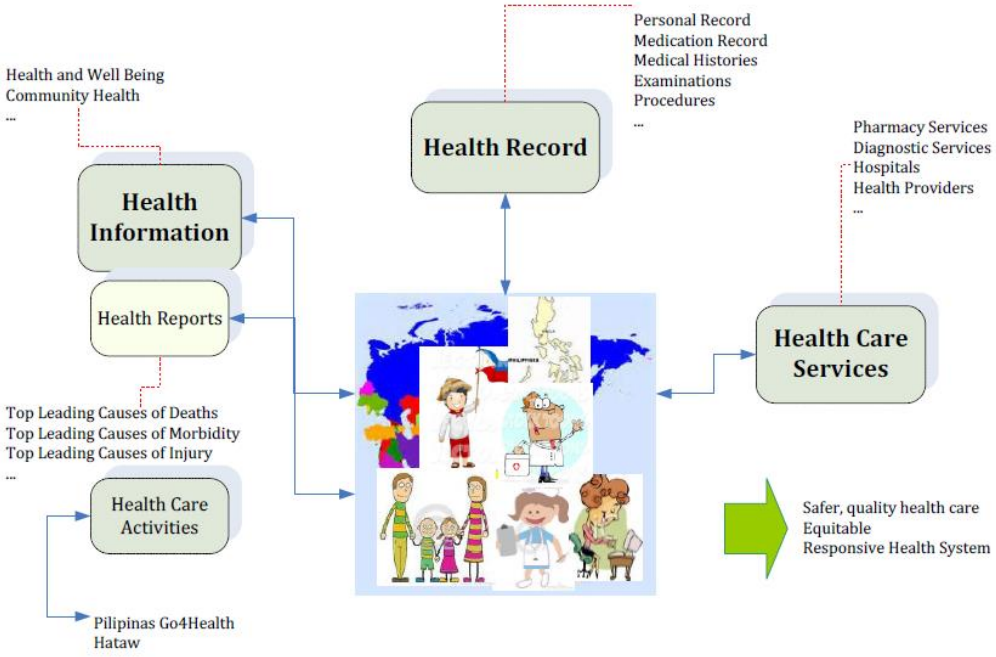
developing software for Field Health Services and Information System, and has continuously developed or built other application or information systems. The use of ICTs in the DOH has remarkably supported and improved some of the functions of the Department. ICTs have been used in the areas of innovative technological changes, networking and infrastructure, office automation, development and implementation of computer-based systems. From the limited resources in terms of ICT personnel and funds, the DOH Management has augmented the budget on ICT to fully accomplish and support the ICT strategic goals and direction.

Existing information systems and data sources are being integrated or harmonized to eventually address other challenges like establishment of the DOH data warehouse, quality database and establishment of a more responsive information system and access to and sharing of knowledge products. For remote and underserved areas and vulnerable populations, the DOH has implemented telemedicine in selected pilot areas through the National Telehealth Center, National Institute for Health, University of the Philippines, Manila. The DOH has also developed and implemented mobile technology solutions in reporting cases through the Health Emergency Management Staff's - Surveillance in Post Extreme Emergencies and Disasters (SPEED) with support from WHO. There are several mobile technology applications developed and for implementation, e.g. Text TB for

reporting inventory of tuberculosis drugs, maternal and neonatal death reporting, and routine health data reporting.

*e*Health Vision

By 2020 *e*Health will enable widespread access to health care services, health information, and securely share and exchange patients' information in support to a safer, quality health care, more equitable and responsive health system for all the Filipino people by transforming the way information is used to plan, manage, deliver and monitor health services.



The strategic vision describes the Philippines Health System that has been enabled by eHealth. It shows how eHealth will be used to address health system's priority goals and challenges to deliver health outcomes. The Aquino Health Agenda on achieving Universal Health Care or Kalusugan Pangkahalatan for all Filipinos is a continuing commitment to health sector reform and achieving the Millennium Development Goals. The National Objectives for Health 2011-2016 has set the health program goals, strategies, performance indicators and targets towards achieving KP. The overall goal is to achieve health system

goals of *financial risk protection, better health outcomes, and responsive health system* for the Filipino people.

eHealth has proven to provide improvements in health care delivery and is at the core of responsive health system. eHealth will improve the quality and safety of the health system through empowerment of health consumers to better manage their health records; availability of information like single view of the patients' information at the point of care, decision support tools and knowledge-based information thereby reducing medical errors, improved treatment and monitoring; and availability of information for efficient and effective surveillance and monitoring of diseases and management of health

eHealth will also support a more equitable health system through presence of information about the availability, location, expertise and services of health care providers. This will provide health consumers with ready information for reference purpose and health care providers for referral process. Electronic consultations in rural, remote and disadvantaged areas can be made accessible or available.

eHealth will provide a more responsive health system because information can be securely shared and exchanged without repeating effort and time in providing the same information to different health care providers; use of eHealth solutions to speed up processes like ordering system and results reporting; reduced time and cost of health consumers undergoing unnecessary or duplicated diagnostic tests; improved diagnosis and treatment activities; reduced travel time using telehealth services; and efficient and effective disease monitoring and response.

Key Strategic Guiding Principles

Key strategic guiding principles in the development of Philippines eHealth Strategic Framework and Plan are as follows:

1. eHealth must serve the needs of the client or person.
2. Collaboration and partnerships with key health care stakeholders are critical in realizing the country's eHealth vision.
3. Users' must be involved at all phases of development and implementation to gain commitment for implementation.

4. A strategic approach in terms of phases enables more focus, and judiciously and efficiently make use of resources to achieve the eHealth vision.
5. eHealth activities must be aligned or harmonized, without controlling health care providers to implement local eHealth solutions.
6. The presence of entities that have already started eHealth must be recognized so as not to constraint their continuing advancement and gain their support.
7. Human resource can be made available by building capability to implement the eHealth agenda in the country and promote transparency and public accountability.
8. Implementation of eHealth must comply to relevant laws and regulations.
9. Investments must be made on areas that deliver the greatest benefits to health consumers, health care providers, and healthcare managers; and ensure no duplication in terms of time, effort and resources.

eHealth Components

The components are the building blocks to achieve the stated vision. There were initial identified components to realize the outcomes of eHealth in the Philippines, i.e. enabling structures and resources, mission-critical health application systems, Philippine Health Information System, Knowledge Management for Health, and telemedicine/mHealth services. The groupings are more information or application systems based and were reviewed together with the National eHealth Strategy Toolkit. Updated components are governance, strategy and investment, eHealth solutions (services and applications), standards and interoperability, infrastructure, legislation/policy and compliance, and human resource.

	Components	**Description**
1	Governance	Directs and coordinates eHealth activities at all levels like hospitals and health care providers. Critical areas of governance are management of the eHealth agenda, stakeholders' engagement, strategic architecture,

		clinical safety, management and operation, monitoring and evaluation, and policy oversight.
2	Legislation, Policy and Compliance	Formulation of the required legislations, policies and compliance to support the attainment of the eHealth vision. Examples of these are the national legislations, policies, and regulations on how health information are stored, accessed and shared across geographical and health sector boundaries; implementation of unique health identifier; implementation of national health data standards; and software certification or accreditation
3	Standards and Interoperability	Promotes and enables exchange of health information across geographical and health sector boundaries through use of common standards on data structure, terminologies, and messaging. One strategy to ensure compliance to health data standards for interoperability is the implementation of software certification or accreditation where eHealth solutions must comply in order to be certified as able to exchange health information.

4	Strategy and Investment	Develops, operates and sustains the national eHealth vision. These components support the development of a strategy and plans to serve as guide in the implementation of the eHealth agenda. Investment refers to the funding or amount needed for executing the strategies and plans.
5	Infrastructure	Establishes and supports health information exchange, i.e. the sharing of health information across geographical and health sector boundaries, and implementation of innovative ways to deliver health services and information. Infrastructure includes physical technology and software platforms, services and applications to support health information exchange. Examples of these are high-speed data connectivity and computing infrastructure, like computers and mobile devices for the collection, recording

		and exchange of electronic information, among others.
6	Human Resource	Workforce or manpower to develop, operate or implement the national eHealth environment such as the health workers who will be using eHealth in their line of works, health care providers, information and communication technology workers, and others.
7	eHealth Solutions	Required services and applications to enable widespread access to health care services, health information, health reports, health care activities, and securely share and exchange patient's information in support to health system goals. These address the needs of the various stakeholders like individuals, health care providers, managers, officials, and others. Examples of eHealth solutions are electronic health/medical/personal records, electronic referrals, medications management, distance learning and electronic resources, telemedicine, mobile health, adverse event monitoring, disease surveillance, among others.

SYSTEM/ DEVELOPER	KEY INFORMATION
BizBox	A set of web-based for various health care institutions such as hospitals and rural health units.
Community Health Information Tracking System (CHITS)	One of the pioneering EMR developed in 2004 by the University of the Philippines - Manila. The relevant customized forms based on DOH and Philhealth programs in CHITS were organized into modules for easier workflow integration.
eHealth TABLET for Informed Decision Making of LGU's (eHatid)	Key product features of eHatid: EMR software application for mobile android devices, dashboard, and a Mayor-Doctor Communication as a channel for decision making and sharing of health-related information.
Event-based Surveillance and Response System (ESR)	An online health event surveillance reporting system. It involves reporting all health events (existing or rare) that raise concern, fear, alarm in the community which may have known, suspected or possible impact on human health.
Integrated Clinic Information System (iClinicSys)	As an integrated system, it is linked to other DOH home grown systems such as the Maternal and Neonatal Death Reporting, Tuberculosis Information System, Injury Reporting and Chronic Non-Communicable Disease Reporting.
Integrated Hospital Operations and Management Information System (iHomis)	It has modules for the following areas in the hospital: admitting, outpatient, emergency room, billing and cashier, nursing, pharmacy, dietary, laboratory and radiology.
Integrated Tuberculosis Information System (IT IS)	It has a case management module that captures patient's demographic profile, TB examination record and treatment information.
Mag-Ina (Maternal and Neonatal Telereferral System (MInTS)	A web-based maternal and neonatal telereferral system. It enables lying-in clinics to electronically send referrals requests when pregnant mothers and newborns need to be transferred to a higher care facility.
National Rabies Information System	It allows animal bite treatment center to capture bite patient records and generate reports for submission to program managers at all levels of the health system.

Philhealth eClaims System	A web-based facility developed by Philhealth for claim reimbursement transactions
Philippine Integrated Disease Surveillance and Response (PIDSR) System	Indicator reporting based system of priority diseases or syndromes and conditions such as Acute Viral Hepatitis, Dengue, Cholera, Malaria, Measles and Acute Encephalitis among others.
Secured Health Information Network Exchange (SHINE)	It also has referral features and an SMS reminder facility for scheduled visits/ appointments
SegWorks Integrated Health Management System (SegIHMS)	A suite hospital and community electronic health information system
Wireless Access for Health EMR (WAH EMT)	The current WAH group expanded the CHITS with new modules such as the Synchronized Patients Alerts via SMS, Mobile Midwife and the statistics aggregator.

FURTHER READINGS

Website: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3748548/

Website: https://pubmed.ncbi.nlm.nih.gov/15682160/

Website: https://www.americanmobile.com/nursezone/nursing-news/compassionate-nurse-the-importance-of-compassion-in-nursing/

https://www.doh.gov.ph

TERMINOLOGIES

Digital Health– also known as the Information and Communication technology (ICT) in health system, is the field of theory and practice associated with any aspect of adopting digital technologies to improve health from its conceptualization to application or operation.

eHealth – the cost-effective and secure use of information and communications technologies in support of health and health-related field, including health care services, health surveillance, health literature, and health education, knowledge and research.

Electronic Medical Records (EMR) – automated systems based on document imaging or systems which have been developed within a medical practice or community health center

UNIT TASKS

Describe and Explain at least 3 eHealth usability and utility in the community setting.

REFERENCES

Books

Nursing Care of the Community “A comprehensive text on community and public health nursing in the Philippines” 1st Edition Zenaida Famorca

Nursing Practice in the Community 4th Edition Araceli Maglaya

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Websites

EBSCOhost.com