eHealth Philippines

Deliverables, 2016 and Beyond

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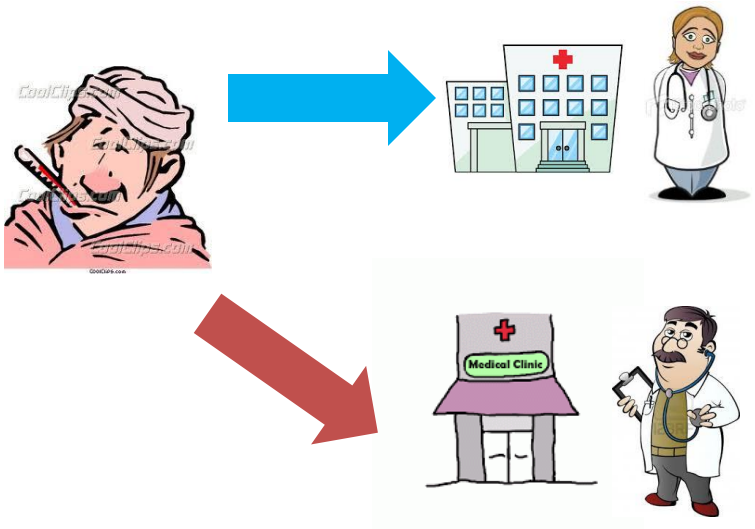
National Health System Goals

Existing Problems

Many data or health info coming from disparate systems and locations

- **DIFFERENT DATA FORMATS**
- **LACK HARMONIZATION**
- **DATA QUALITY PROBLEMS**
  - **RELIABILITY**
  - **TIMELINESS**
  - **ACCURACY**
- **COMPLETENESS**



Lack of access to personal health data when a patient go to another provider

- -If no existing record →New Registration
- -If existing, manual search of record
- -Vital Signs
- - Interview and Data Recording
- - Doctor's Orders
- - Observations, Assessment, Findings, Diagnosis

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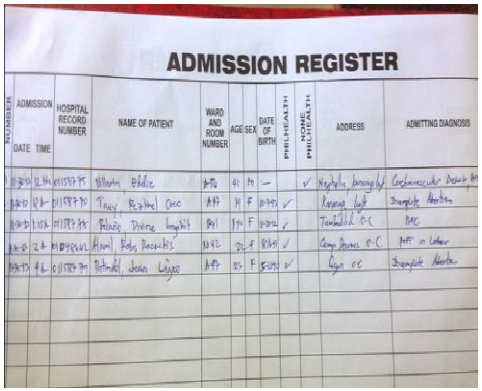
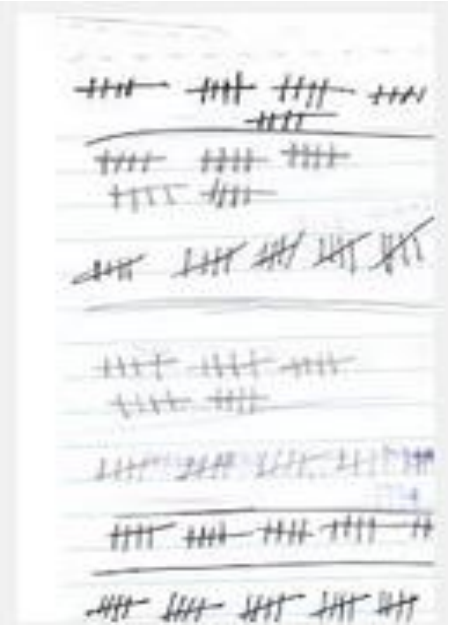
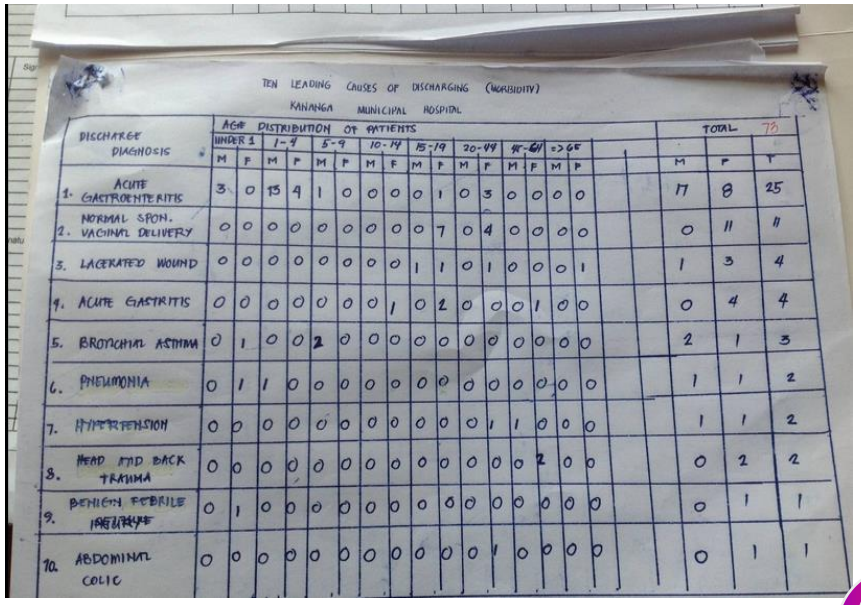
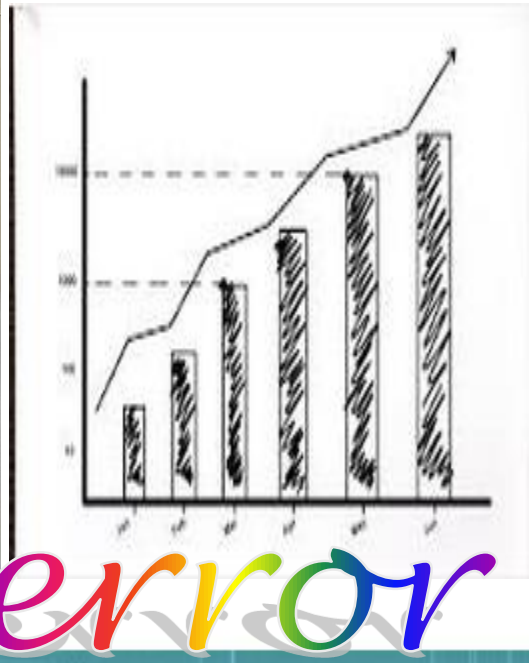
Inefficient recording & data processing







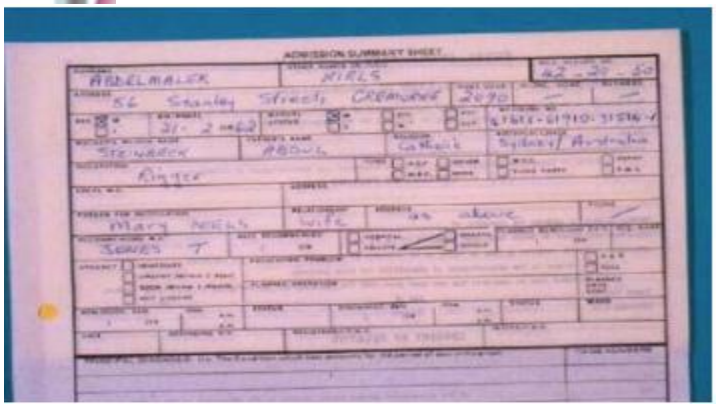


L...o....n....g ..... reporting process

National Epidemiology Center

Evidence-based decision-making for public health action

Need for better member verification and claims processing



PhilHealth
Your Partner in Health

eHealth is ...

Health Information and Management Systems Society (HIMSS):

"the application of Internet and other related technologies in the healthcare industry to improve the access, efficiency, effectiveness, and quality of clinical and business processes utilized by healthcare organizations, practitioners, patients, and consumers in an effort to improve the health status of patients"

Challenges of today's health system

- Access to health care services
- Access to real-time information for decision-making

eHealth can provide solutions to achieve the goals, and hurdle the challenges of Kalusugang Pangkalahatan (KP)

National eHealth Vision

By 2020, eHealth 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.

National eHealth Vision

- Health and Well Being
- Community Health
- ...

Health Information

Health Reports

Top Leading Causes of Deaths
Top Leading Causes of Morbidity
Top Leading Causes of Injury
...

Health Care Activities

- Pilipinas Go4Health
- Hataw
- ...

- Personal Record
- Medication Record
- Medical Histories
- Examinations
- Procedures
- ...

Health Record

- Pharmacy Services
- Diagnostic Services
- Hospitals
- Health Providers
- ...

Health Care Services

- Safer, quality health care
- Equitable and Responsive Health System

Attainment of the

eHealth Vision

Context Setting

KALUSUGAN PANGKALAHATAN

Philippine Development Plan 2011-2016

MDGs

National Objectives for Health 2011-2016

World Health Organization
WORLD HEALTH ASSEMBLY

Philippine eGovernment Master Plan 2013-2016

Philippine Digital Strategy 2011-2016

Health Enterprise Architecture

Information System & Strategic Plan 2011-2013
2014-2017

Philippine eHealth Strategic Framework & Plan 2013-2017

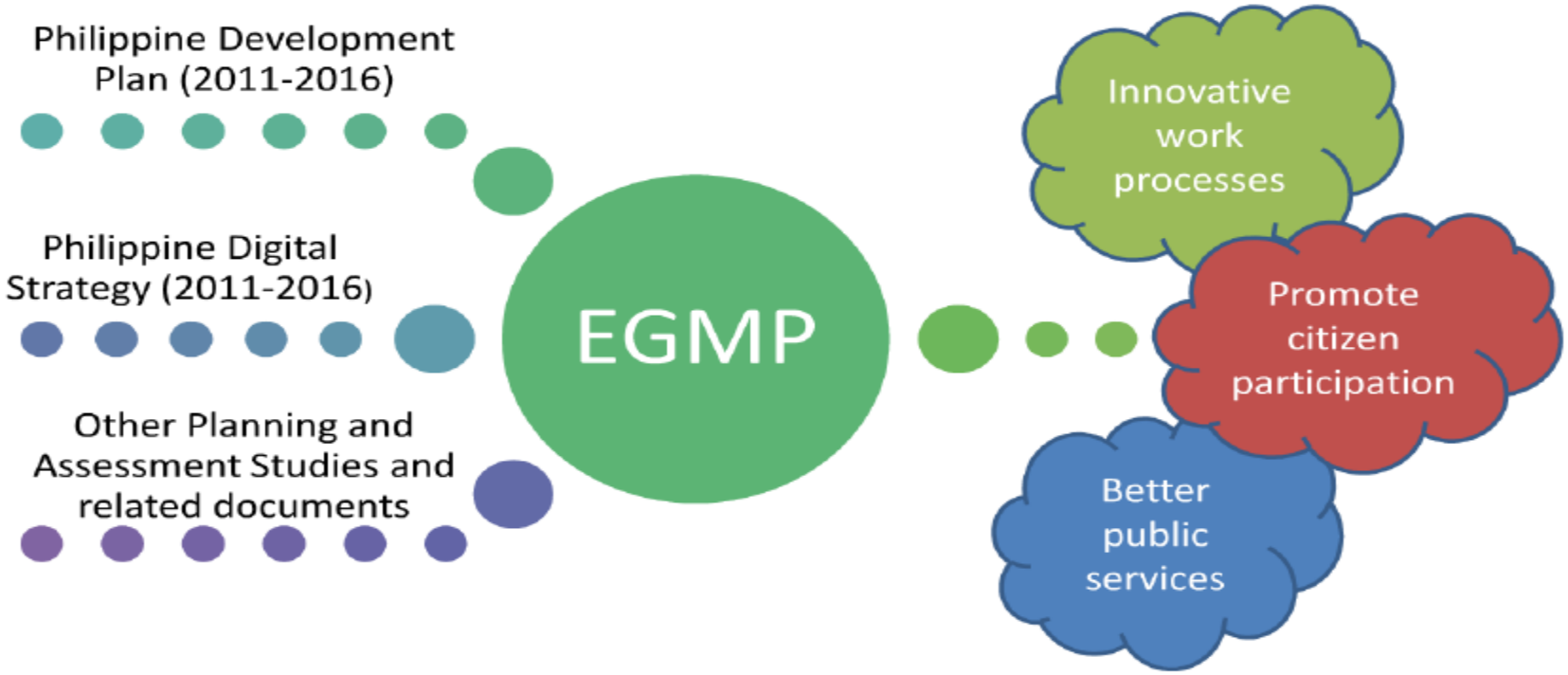
APPLICATIONS- WEB SERVICES

Philippine Health Information System

Frontline Services	Regulations	Pharmacy Services	Community Based Services	Disease Registries | Surveillance	Health Finance & Insurance
Emergency Response	Health Supply Chain	Health Service Delivery	Diagnostic Services	Environmental Monitoring	Human Resources in Health

Knowledge Management

Basis and Goals of the EGMP



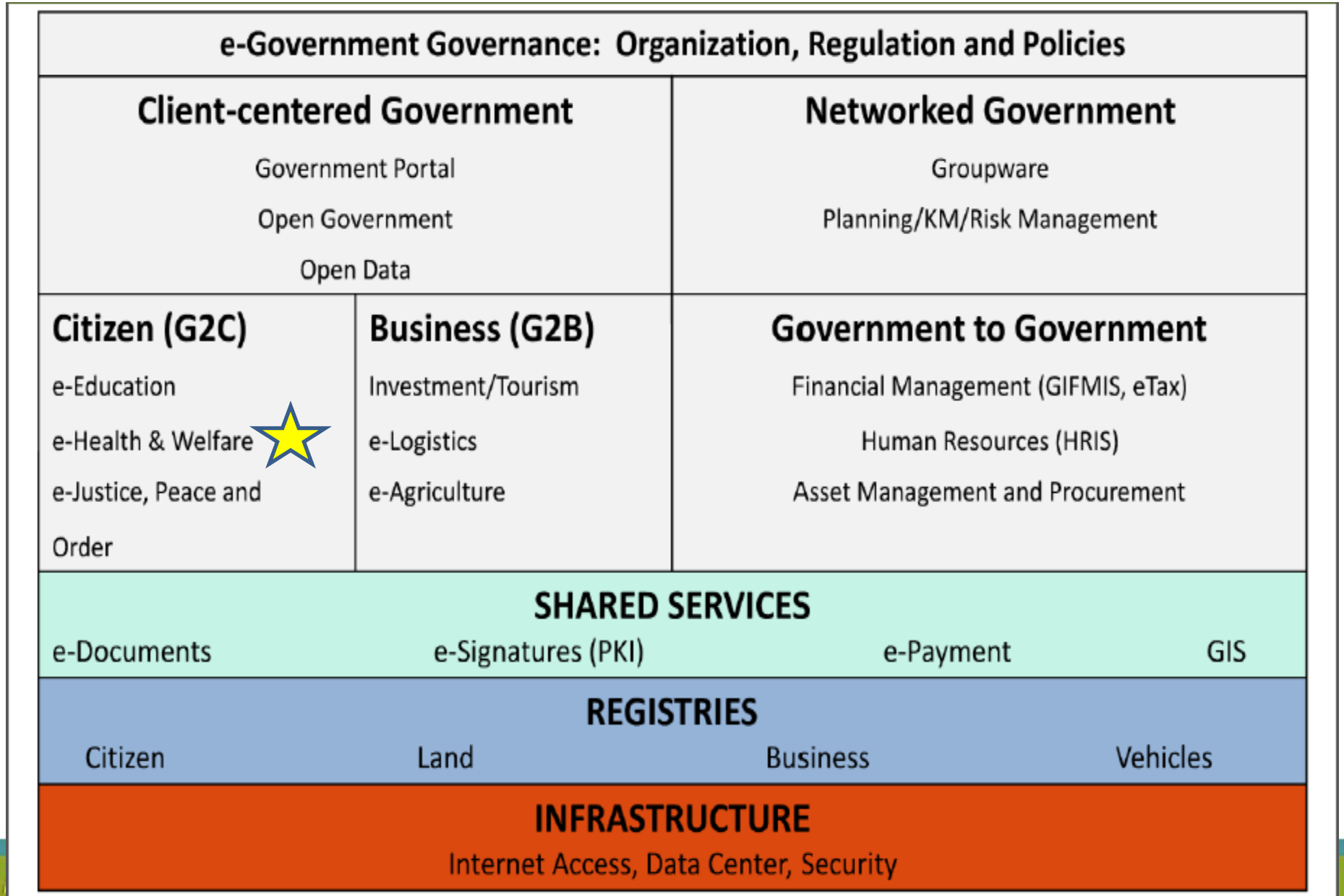
Transparent & Open

Collaborative

Efficient Delivery of Services

Innovative

E-Gov Building Blocks



NATIONAL OBJECTIVES FOR HEALTH 2011-2016 (chapter 6)

OVER-ALL GOAL:

Establish harmonized, quality, relevant and responsive eHealth services to provide the necessary tools, data, information and knowledge for evidence-based policy and program development towards the provision of accessible, quality, affordable, efficient and safe health services and attainment of better health outcomes for all Filipinos.

Enabling Structures and Resources

Critical Application Systems

Philippine Health Information Systems

Knowledge Management

Telemedicine/ mHealth

eHealth Context Setting

66th World Health Assembly

- Consider, as appropriate, options to collaborate with relevant stakeholders, including national authorities, relevant ministries, health care providers, and academic institutions, in order to draw up a **Road Map** for implementation of ehealth and health data standards at national and subnational levels.

- Consider developing, as appropriate, **policies and legislative mechanisms linked to an overall national eHealth strategy**, in order to ensure compliance in the adoption of ehealth and health data standards by the public and private sectors, as appropriate, and the donor community, as well as to ensure the privacy of personal clinical data.

- …

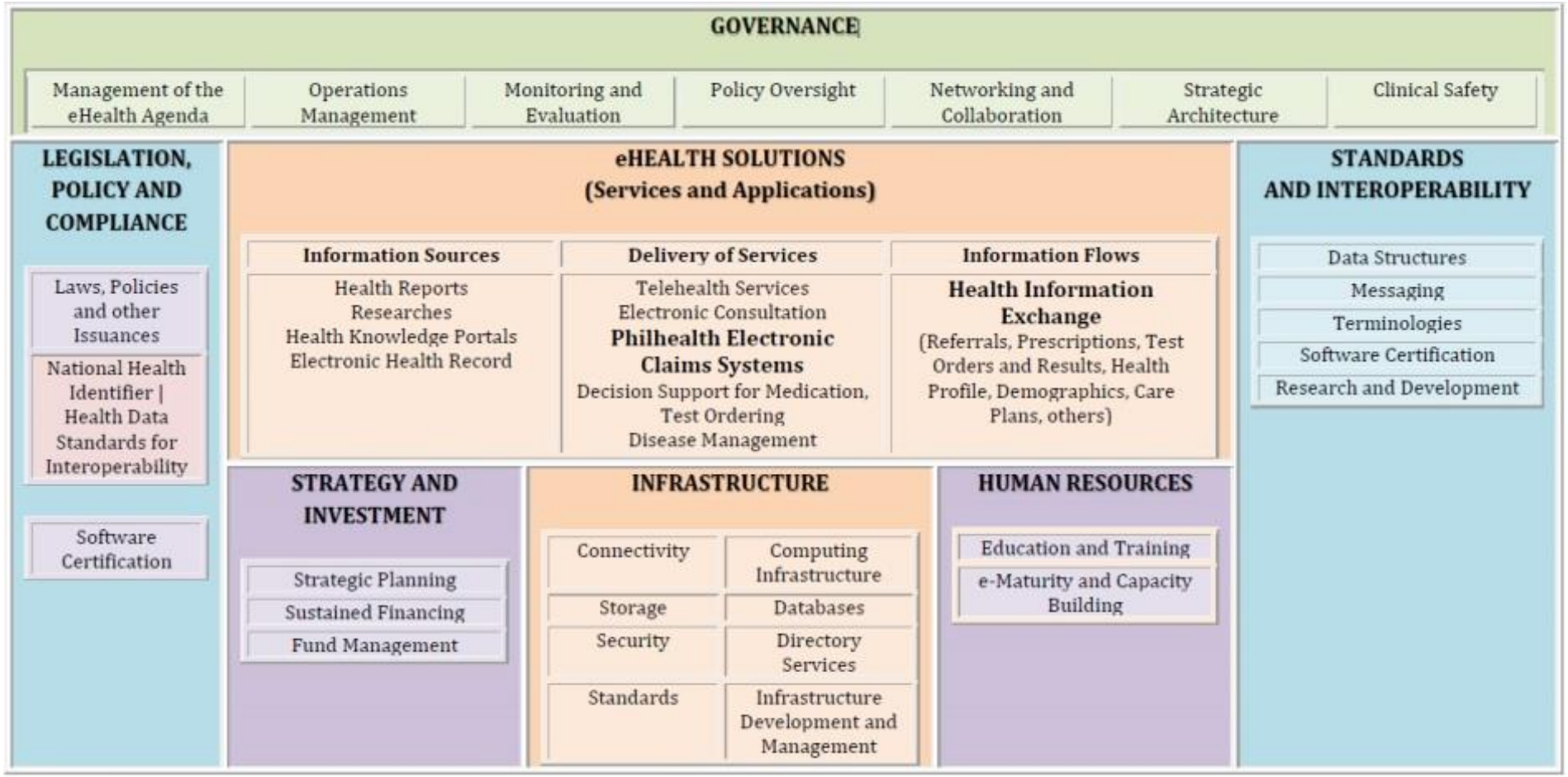
Philippines *e*Health Strategic Framework and Plan (PeHSFP)

The PeHSFP is the result of comprehending what the Philippines needs to achieve in order to address its health goals and challenges.

Philippines eHealth Strategic Guiding Principles

- Client-focus or person centered information
- Collaboration and/or partnerships with different stakeholders
- Users' Involvement
- Strategic approach in phases
- Harmonization and Independence
- Recognize the presence of entities that have already started eHealth
- Availability of human resource
- Compliance to laws and regulations
- Optimize use of resources

Philippines *e*Health Components



Philippines eHealth Strategic Phases

Phase		Time Frame	Description
Phase 1	Short-Term	2013 – 2014	**Standardize and Connect** – focus is on the establishment of governance and foundations, and provide basic connections to start information sharing across the health sector.
Phase 2	Medium-Term	2015 - 2016	**Transform** – Continuing innovations to develop and implement defined national eHealth solutions.
Phase 3	Long-Term	2017 - 2020	**Maintain and Measure** – By this time eHealth has been established and need to be maintained and sustained, continuously measured in terms of performance, and ongoing innovations and updates need to be managed.

eHealth Plan

National eHealth Vision

2017 - 2020

Maintenance | eHealth Researches & Innovations

2015 - 2016

Implementation Expansion of *i*ClinicSys, *i*HOMIS, Philhealth Systems and Philippine Health Information Exchange | eHealth Researches & Innovations

Software Certifying Body to National Health Data Reporting

National Health Data Committee

2014

Implementation of *i*ClinicSys, *i*HOMIS, Philhealth Systems and Philippine Health Information Exchange | RxBox

Philippines eHealth Action Lines

Actions Lines		Mapped eHealth Components
1	**Governance**	Governance | Strategy and Investment
2	**Foundations**	Infrastructure | Standards and Interoperability | Legislation, Policy and Compliance
3	**e-Health Solutions**	eHealth Solutions (Services and Applications)
4	**Change and Adoption**	Human Resource

Philippines eHealth Targets
Phase 1: 2013-2014

GOVERNANCE

- Signed Joint Department of Health and Department of Science and Technology Department Memorandum on the Creation of National Governance Steering Committee and Technical Working Group on eHealth
- Department Order on the National Health Data Committee and its Implementing Policies, Procedures, and/or Guidelines
- Department Order on Software Data Compliance Body for National Health Data Reporting and its Implementing Policies, Procedures, and/or Guidelines
- Administrative Order on Institutionalizing the National Telehealth Services under the Department of Health
- Draft Executive on Philippine eHealth

FOUNDATIONS

- Administrative Order on the National Implementation of Health Data Standards for eHealth Standardization and Interoperability (eHSI Release 001)
- Administrative Order on the Implementation of Software Data Compliance to National Health Data Reporting
- Philippine Health Enterprise Architecture version 2.0
- Minimum Data Sets for the Philippine Health Information Exchange Registries
- Operational Infrastructure

Philippines *e*Health Targets
Phase 1: 2013-2014

eHEALTH SOLUTIONS

- Telemedicine Pilot I, implemented in GIDA in the Philippines
- Developed and Implemented Philippine Health Information Exchange System Phase 1 (Identified Sites)
  - Philippine Health Information Exchange System software version 1.0
  - Integrated Clinic Information System (*i*ClinicSys) software of the Department of Health
  - Integrated Hospital Operations and Management Information System (*i*HOMIS) software of the Department of Health
- Implemented Philhealth Electronic Claims Systems in Identified Sites
- Almost complete RxBox2 Research
- Conducted eHealth Researches
- Developed and implemented in phases the eHealth projects under the Department of Budget and Management's Medium-Term Information and Communication Technology Harmonization Initiative
- Developed and implemented in phases the Interoperable Health Information System for CHD4A – Calabarzon of the Korea International Cooperation Agency

CHANGE AND ADOPTION

- Conduct of Awareness Activities

Philippines eHealth Targets
Phase 2: 2015-2016

GOVERNANCE

- Working National Health Data Committee
- Working Software Data Compliance Body for National Health Data Reporting
- Experts Commitees on various concerns such as data security and privacy, standardsm etc

FOUNDATIONS

- Philippine Health Enterprise Architecture version 3.0
- National Health Data Dictionary version 3.0
- Administrative Order on Information Protection

eHEALTH SOLUTIONS

- Enhancement and Implementation of the Philippine Health Information Exchange System Phase 2 (Replication to Identified Sites)
- Implemented Philhealth Electronic Claims Systems in Expansion Sites
- Implemented RxBox2
- Conducted eHealth Researches
- Developed and implemented proposed projects under the Department of Budget and Management's Medium-Term Information and Communication Technology Harmonization Initiative

Philippines eHealth Targets
Phase 2: 2015-2016

eHEALTH SOLUTIONS

- Information and Communication Technology Harmonization Initiative
- Continuing implementation of the Interoperable Health Information System for CHD4A – Calabarzon of the Korea International Cooperation Agency

CHANGE AND ADOPTION

- Conduct of Awareness Activities
- Enhanced Health Care Provider Licensing or Accreditation

Philippines eHealth Targets
Phase 3: 2017-2020

GOVERNANCE

- Working National Health Data Committee
- Working Software Data Compliance Body for National Health Data Reporting

FOUNDATIONS

- Updated National Health Data Standards for eHealth Standardization and Interoperability
- Operations, Maintenance and Monitoring of DOH, Philhealth and DOST Systems

eHEALTH SOLUTIONS

- Continuous eHealth Innovations

CHANGE AND ADOPTION

- Conduct of Awareness Activities
- Continuing Implementation of Health Care Provider Licensing or Accreditation
- Education and Training

eHealth Milestones

DOH and DOST

*e*Health Deliverables - Milestones

Consensus-building

Output: Minimum data sets and standard format disseminated to hospitals clinics, community centers by March 2014

- Patient Registry : DOH, PhilHealth
- Provider Registry : DOH, PhilHealth
- Facility Registry : DOH
- Shared Record : DOH, PhilHealth
- Terminologies : DOH, PhilHealth
- Health Interoperability Layer : DOH, PhilHealth

*e*Health Deliverables - Milestones

Content building (Registries)

Outputs:

- 70 DOH Hospitals inputting by Dec 2014 [with e-claims] (53 DOH Hospitals using *i*HOMIS)
- 651 public hospitals inputting by Dec 2015 [with e-claims]
- 3,600 Rural Health Units/City Health Offices by Dec 2015 [with e-claims]
- RxBox deployed in 140 RHUs/CHOs by Dec 2014 and 1,000 RHUs/CHOs by Dec 2015
- 2,500 rural health units using *i*ClinicSys of the DOH by 2015
- Philhealth e-claims are deployed in all hospitals and clinics by Dec 2016 **(85 Million Filipinos covered by e-claims)**

Note: Total number of hospitals, 1,796 [Public hospitals, 721]

*e*Health Deliverables - Milestones

PHIE Infrastructure operational by Dec 2014

DOST-ICTO

- Data Warehouse (e.g. cloud computing)
- Connectivity down to the barangays

DOST-ASTI

- Registry Database Infrastructure (client, provider, facility, terminologies, shared record)
- Interoperability Layer Infrastructure

*e*Health Deliverables - Milestones

DOST-PCHRD

- eHealth Researches

  eHealth applications: tele-parasitology and tele-dermatology by 2014

- Smart diagnostic devices by Dec 2015

*e*Health Deliverables - Milestones

- Policies (Administrative, Legal, Ethics, Research and Finance) to achieve compliance and enhance benefits from eHealth

  - Policy Guidelines: Department Circulars, Executive Orders

    e.g. , facility or professional licensing tied up to inputting to registries; ethics incorporated in Philippine Health Research Ethics Board Guidelines

  - Legislation

    e.g., revise content of earlier Telehealth Bill filed in Congress

eHealth Commitments

MITHI (Health, 2014)

- Philippine Health Information Exchange (integrating/harmonizing health data coming from different electronic medical record systems and hospital information systems)
- Development and Implementation of the Health Enterprise Data Warehouse
- Integrated Health Goods Licensing Information System
- Standards Training and Change Management
- Implementation of DOHs Integrated Clinic Information System
- Expansion of the DOHs Integrated Hospital Information System
- System Enhancement and Implementation of the National Disease Registry

KOICA – Interoperable Health Information System for CHD4A – CALABARZON (5 years)

- Health Information Exchange
- Implementation the DOHs Integrated Clinic Information System
- Upgrading and Implementation of the Integrated Hospital Operations and Management Information System
- Data Warehousing

PCHRD Funds

1. Devices to gather and transmit data, e.g., RxBox, mobile phones, tablets, diagnostic devices
2. Applications, e.g. tele-referrals, tele-consultations

eHealth Commitments

DOH and PhilHealth

1. Universal Coverage (85 M Filipinos)
2. System Development, Implementation, and Maintenance of iClinicSys, iHOMIS, Philhealth eClaims Systems, and Philippine Health Information Exchange System
3. Operational Support to Systems
4. Interoperability Standards Setting (National Health Data Committee & Software Certification to National Health Data Reporting)
5. Training/Capability Building
6. Legislations/Policies

eHealth Commitments

Funding for 2015, 2016, and beyond to sustain eHealth

- Operational Support (including Manpower, Technical support)
- System Maintenance
- Infrastructure Upgrade
- Capability Building
- System Monitoring and Evaluation

Monitoring and Evaluation
Philippines eHealth Key Result Areas

Health Consumers Safer and Quality Health Care	**Health Care Providers** Make More Informed Decisions	**Health Care Managers, Policy Makers and Researchers** Effective Program/Research Development, Policy Making, Implementation & Monitoring
• National health identifier that is unique for each person • Access to quality and reliable health information • Access to individual electronic health records • Access and management of personal health records • Interactioin with health care providers • Health information can be shared and exchanged • Use of electronic consultations or telehealth capabilities in remote areas • High speed broadband connectivity • Online health reporting systems	• National health care provider identifier • Access to quality and reliable health information • Access to an integrated/single view of the patients' health information at the point of care • Access to health information like clinical decision support tools, medications, clinical knowledge, skills development , and others • Collaboration/coordination with other health care providers, and interaction with health consumers. • Secured sharing and exchanging of health information • Electronic consultations or telehealth services • Online test/examination ordering system and results reporting, referrals, and prescriptions • High speed broadband connectivity	• Access to quality and reliable health information for improved analysis, utilization, policy making, decision making and research purposes • Availability of tools to support the monitoring of health system activities and outcomes • Defined health data standards and processes for eHealth solutions' development and compliance

eHealth Philippines

The key to keeping updated the **Philippines eHealth Plan** as well as success in implementing the national eHealth agenda, is the continuing collaboration and communication with the different stakeholders to gain support, guidance, cooperation and commitment.

HELP…….. HELP……..

Why… How … What… When can you help?

Draft eHealth Executive Order

SECTION 1.

Adoption of the Philippine eHealth Strategic Framework and Plan (PeHSFP) to harmonize and make various eHealth Initiatives interoperable, and ensure proper utilization of ICTs to improve health care delivery and promote universal access to health for all Filipinos;

SECTION 2.

Establishment of an eHealth Committee (eHC) and Philippine Health Information Network (PHIN).

1. A **eHealth Committee** is hereby created which shall be composed of, but not limited to, duly authorized officials from the Department of Health, Department of Science and Technology, Commission of Higher Education, _____ and their duly attached agencies such as but not limited to Philippine Health Insurance Corporation, Philippine Council for Health Research and Development, Information and Communication and Technology Office, Advance Science and Technology Institute including two (2) representatives from the private sector. The Committee shall be co-chaired by the Secretaries of the Department of Health and the Department of Science and Technology.

.

SECTION 2.

The private sector members of the Committee shall be from the ICT industry and from a health care provider group as may be recommended by any member of the Committee .

The eHC may create inter-agency subcommittees as may be necessary to fulfill its mandate. It may also call upon other relevant government agencies and private sector groups as circumstances and exigencies may require.

SECTION 2.

2. The **PHIN** is also hereby created to serve as a platform for consultation and the technical interagency mechanism to integrate and harmonize the development and implementation of the national eHealth plan. It shall be to be composed of the duly authorized representative of the Department Health, Department of Interior and Local Government, Department of Social Welfare Development, Department of Education, Department of National Defense, Philippine Health Insurance Corporation, National Economic and Development Authority, Philippine Statistics Authority, Department of Science and Technology and their relevant attached agencies such as but not limited to Philippine Council for Health Research and Development, Food and Nutrition Research Institute, Information Communication Technology Office, Population Commission; University of the Philippines, Manila/Diliman in particular the National Telehealth Center, College of Public Health, Statistics Center or Population Institute; _____ including representatives from the private sector.

The private sector members of the PHIN shall include the Philippine Medical Association, Philippine Hospital Association, Philippine Nurses Association and other professional groups and Non-Government or Private Organizations involved in eHealth or health information systems. Their nomination and term shall be determined by the eHC as recommended by PHIN based on need. They shall be nominated by any member of the eHC or PHIN through the eHC and appointed by the Chairperson(s) for a term of at least one (1) year, which may be renewed upon re-nomination by the Committee and re-appointment of the Chairperson(s).

SECTION 3.

Mandate of eHealth Committee. The Committee is mandated to ensure the implementation of the PeHSFP as well as spearhead its regular scientific evaluation and reformulation if necessary; to provide policy guidance on eHealth initiatives' integration and harmonization in particular the adoption of eHealth standards and its conformity to other related government ICT and statistical regulation, frameworks and plans and international commitments if applicable; to champion and provide the enabling environment on the use of correct, sustainable, cost-effective and responsive ICT solutions and systems, and to develop capacity-building programs.

SECTION 4

Coverage. All departments, bureaus, offices, agencies, especially government health facilities, including the private sector health facilities shall give full support and collaborate with the eHC and PHIN for the smooth and successful and implementation of the PeHSFP.

SECTION 5

Implementation. The eHC shall issue such rules and regulations as may be necessary to implement this Order.

SECTION 6 Funding.

The eHC shall develop a multi-year expenditure plan for the implementation of PeSHFP. The funding requirements shall be sourced primarily from the annual appropriations of concerned departments and agencies in particular the Department of Health, Department of Science and Technology, Philippine Health Insurance Corporation and the from the eGovernment Fund or from other sources such as from Local Government Units, Development Partners and Private Sector in accordance with applicable laws and rules.

The operation of eHC and PHIN will be taken from the operating budgets of the Knowledge Management and Information Technology Service or the Office of the Secretary or any available funds of the Department of Health, and from the Philippine Council for Health Research and Development of the Department of Science and Technology .

SECTION 7 Secretariat.

The DOH with DOST shall provide the technical, and administrative support to the eHC and PHIN through Knowledge Management and Information Technology Service for DOH and the Philippine Council for Health Research and Development for DOST. The Secretariat shall be headed by a senior staff of the Department of Health and co-headed by a senior staff from the DOST duly designated by the Chairpersons, endorsed by the eHC, and supported by sufficient number of staff, as may be deemed necessary by the eHC , in accordance with applicable laws, rules and regulations.

SECTION 8 Repealing Clause. All issuances, orders, circulars, memoranda, rules, regulations and others issuances or parts thereof inconsistent herewith are hereby repealed , modified or amended accordingly.

SECTION 9 Separability Clause. If any provision of this Order is declared invalid or unconstitutional, the other provisions not affected thereby shall remain valid and subsisting.

SECTION 10. Effectivity. This Order shall take effect immediately upon publication in the Official Gazette or in a newspaper of general circulation.

Thank You.