

IT Innovation in Philippine Hospitals

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The Best HealthCare System?

Which Country has the best HealthCare System?

United States?

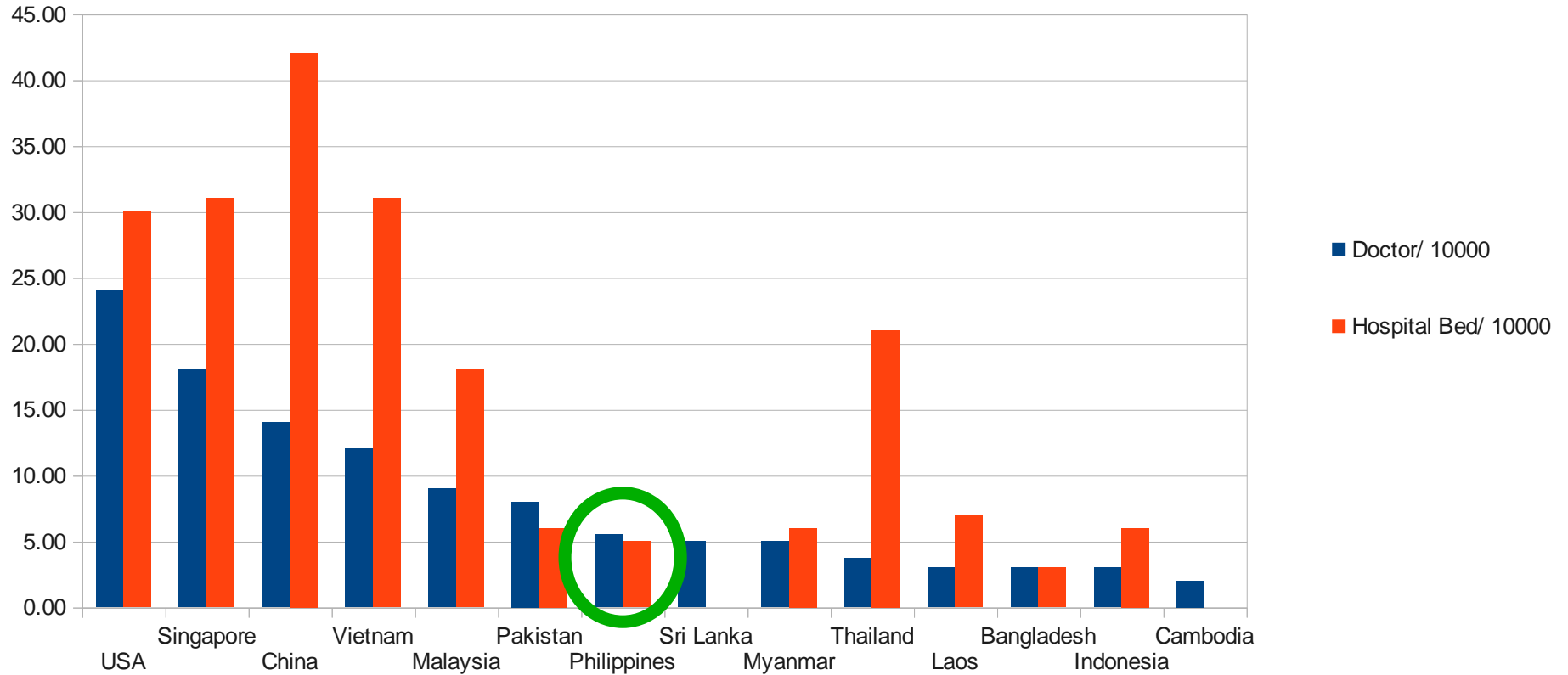
The US Healthcare System

According to Harvard (HBR March 8, 2010)

“If ever a field needed a makeover, it's medicine. Chaotic, expensive, inefficient, and often ineffective. Health care (in the US) is dying for innovation.”

- **Chaotic**
- **Expensive**
- **Inefficient**
- **Ineffective**

The PH Healthcare System



The US has 5 times more doctors per 10,000 population and 6 times more hospital beds per 10,000 population than the Philippines.

IT Innovation in Phil Hospitals

Focus of Innovation

Tools to assist
Doctors in
Evidence-
Based Decision
Making

International Medical Center

Portal Home

Email

Sitebuilder

Webstats

Marketing Solutions

Support

Contact

Welcome to the Doctor Portal!

Here you will find quick, convenient access to the tools and information you need to manage your Web site and grow your practice. Each section features important step-by-step instructions for administering your Web site, requesting changes and using our support.



Check My Email

View Appointment Emails from New Patients and keep in contact.



Edit My Site

Make changes and updates to your site using our new Sitebuilder tool.

Total Marketing Solution

- Brochures
- Practice Profile Cards
- Marketing Banner
- Neighborhood Mailer



View My Stats

Detail reports on visitors, page views, referrals, and more.



Get Support

View help files and get the answers you need.

Website Vitals

GET A FREE WEBSITE CHECK-UP!

SEM Performance Dec 1, 2007 - May 12, 2008 Refresh Data

Change Date Range

Impressions **42,076** Clicks **306** Avg. Position **1.4**



[View Full Report](#)

Web Statistics May 1, 2008 - May 12, 2008 Refresh Data

Change Date Range

New Visitors this Month **305** Visitors this Month **1,245**



[View Full Report](#)

What's New

ADA Medical News Today Dental-Professional.com Officite

April 30, 2008

Representative lauds Connecticut Mission of Mercy
Tolland, Conn.—The media took note and the politicians spoke of "this extraordinary event" A congressman took to the floor of the U.S. House of Representatives to describe folks "so desperate to get dental care" they waited all night, stood in the rain or left to pray when turned away. [Go to full story.](#)

FDA issues market clearance for new form of latex glove
Washington—The U.S. Food and Drug Administration cleared for marketing a patient examination glove made from a new form of natural rubber latex, the first approval of a device derived from a desert plant native to the Southwestern United States. The FDA regulates medical-dental devices. [Go to full story.](#)

CDC says lead levels reported in dental crown are a "highly unlikely" health risk to adults
When news of lead contamination in an outsourced dental crown hit the presses in late February, the ADA called on the nation's leading health agencies to address safety concerns raised by the reports. Association leaders are gratified by their responses. [Go to full story.](#)

May 23 deadline for NPI compliance
Dentists who file electronic claims and haven't yet obtained a national provider identifier have less than one month to do it. [Go to full story.](#)

San Antonio to host an annual session combining history, rodeo, the arts
San Antonio—The American Dental Association invites you to attend its 140th annual session Oct. 16-19 at the Henry B. Gonzalez Convention Center in this historic Texas city. [Go to full story.](#)

Your New Patients



24 Appointment Requests

Change Date Range

Get found in Google



Officite's SEM Program

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc vitae augue interdum elit commodo commodo. Nulla adipiscing, leo a fringilla bibendum, odio enim tristique mi, at ullamcorper urna eros sit amet est. Vivamus cursus risi ac felis. Aliquam ut nulla et lacus molestie malesuada. Praesent sem libero, tincidunt non, auctor at, [Read More >>](#)

Interact on a new level. Bring video to your website

Whether a patient is meeting you for the first time or they've been with your practice for years, there's no doubt they will be impressed by the depth a video brings to their understanding of your practice's specialties, philosophies, staff and procedures. [Read More >>](#)



IT Innovation in Phil Hospitals

Focus of Innovation

Health Information System Portals

- Patients could log on to their own secure patient portal
- Doctors could log on to a Doctor's Portal
- Nurses could log on to a Nurse's Portal

The screenshot displays a web-based patient portal for the International Medical Center. The interface is designed for a doctor, Dr. Kemp Stephens, and shows a patient's medical record for Adrienne Methews, a 37-year-old male. The patient's last visit was on 04-05-2004, and the encounter type was an office visit. The portal is organized into several sections:

- PMH (Table | Diagrams):** Includes medical history such as CHEST PAIN NEC 766.59 since 04-12-2004, Diabetes since 1990, and a note about overall health. It also lists pain as Left Back Posterior.
- Allergy:** Lists allergies to BARBITURATES (Clumsiness, dizziness) and PENICILLINS (headache, sore mouth or throat).
- Health Maintenance:** Lists various preventive care services performed on 07-07-2004, including Annual Physical, Cholesterol, Clinical Breast Exam, Colonoscopy, Dental Exam, Hearing, and Influenza Vaccine.
- Surgery / Procedures:** Lists procedures such as Exploratory laparotomy for perforated appendix, broken hip in 1999, and wisdom teeth removal.
- Family History:** Lists family medical history including Breast cancer in the Aunt, Diabetes in the Family, and Prostate Cancer in the Father.
- Current Medication:** Lists medications such as Aredia IV SolR 30 mg (04-18-2004), Bravelle Inj SolR 75 unit (06-04-2004), D-Biotin Misc Powd (07-15-2004), Paraplatin, Tylenol, and Warfarin Sodium Oral Tab 1 mg (06-14-2004).
- Personal Notes:** Contains a note about a 2-week trip to Europe next month and family status.
- Social History:** Lists social history details such as Degree MBA + a diploma holder, Occupation service in an MNC, Married Yes, Marital Status Married, Children 1, and Single parent No.
- Specialty:** Lists specialty information including Date of Service (12-22-2003), Date of Surgery (12-22-2003), Diagnosis normal, Indication symmetric, Lesion Size normal, Location asymmetric, and Operation regular.

The interface includes a navigation menu on the left with options like Start Encounter, Face Sheet, Vitals, HPI, ROS, Physical Exam, Specialty, Last Lab Result (1), Last Rad Result (1), Illustrations, Pictures, Assessment & Plan, Lab Order (1), Radiology Order(2), Prescription, Dictate/Transcribe, E & M, Close, Addendum, and Progress Notes. The top navigation bar includes Home, Appointments, Patient, CPOE, Mail, Report, and Settings. The bottom of the screen shows a Windows taskbar with the 'Done' button and a 'Local intranet' icon.

IT Innovation in Phil Hospitals

It is quite clear that innovation in healthcare as envisioned by Harvard requires the use of Information Technology.

IT Innovation in Phil Hospitals

Initial Use of IT in Hospitals:

- ◆ Investments in IT were decided by administrators and shareholders
- ◆ Administrators and shareholders have different information requirements from patients, nurses and doctors
- ◆ Administrators and shareholders are interested in how efficiently the hospital is run, how efficiently are they collecting, generating revenue, etc.

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Initial IT Implementation in Hospitals

Only data relevant to Billing and Cashiering are captured

HOW IT WORKS

- Data from other depts are physically delivered to billing for encoding
- SOA is generated
- Receipt is printed



Admitting



Ward/Doctors

- slow
- prone to errors



Income Center



Billing



Cashier / Social Service



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Initial IT Implementation:

- ◆ fine for administrators and shareholders
- ◆ does not address the needs of patients, doctors, nurses and other healthcare providers

IT Innovation in Phil Hospitals

Some Challenges:

◆ Cost

There are more than 1,600 hospitals all over the Philippines. How many can afford to invest?

◆ Personnel

There are many IT personnel around but you need to train them.

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Some Challenges:

◆ Changing Regulations

Can your system quickly implement changes in the regulations?

IT Innovation in Phil Hospitals

Meeting the Challenges:

Segworks

- a PHIC accredited Hospital Information Tech. Provider (HITP)
- ◆ a software development company w/c has focused on developing a Hospital Information System for the last 7 years
- ◆ Member of ICT4H TWG of DOH
- ◆ President ICT Davao Inc.

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Meeting the Challenges:

Segworks

- ◆ Has successfully implemented HIS in 7 hospitals (tertiary and secondary)
- ◆ Has successfully implemented HIS in a 1,200 bed hospital

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Meeting the Challenges:

Segworks' Partners

- ◆ **Hewlett Packard** – the global leader in healthcare systems
- ◆ **AMTI** – Systems Integrator, 19 years in the business, 2B revenue

IT Innovation in Phil Hospitals

SegHIS Features:



Best Practices



Fully Integrated



Real Time Reports & Certificates



Embedded e-Claims



IT Innovation in Phil Hospitals

SegHIS Features:



Best Practices



Fully Integrated



Real Time Reports & Certificates



Embedded e-Claims



IT Innovation in Phil Hospitals

SegHIS Features:



Best Practices

- ◆ **Access Control** – better security
 - ◆ username and password login
 - ◆ a user can access allowed modules only

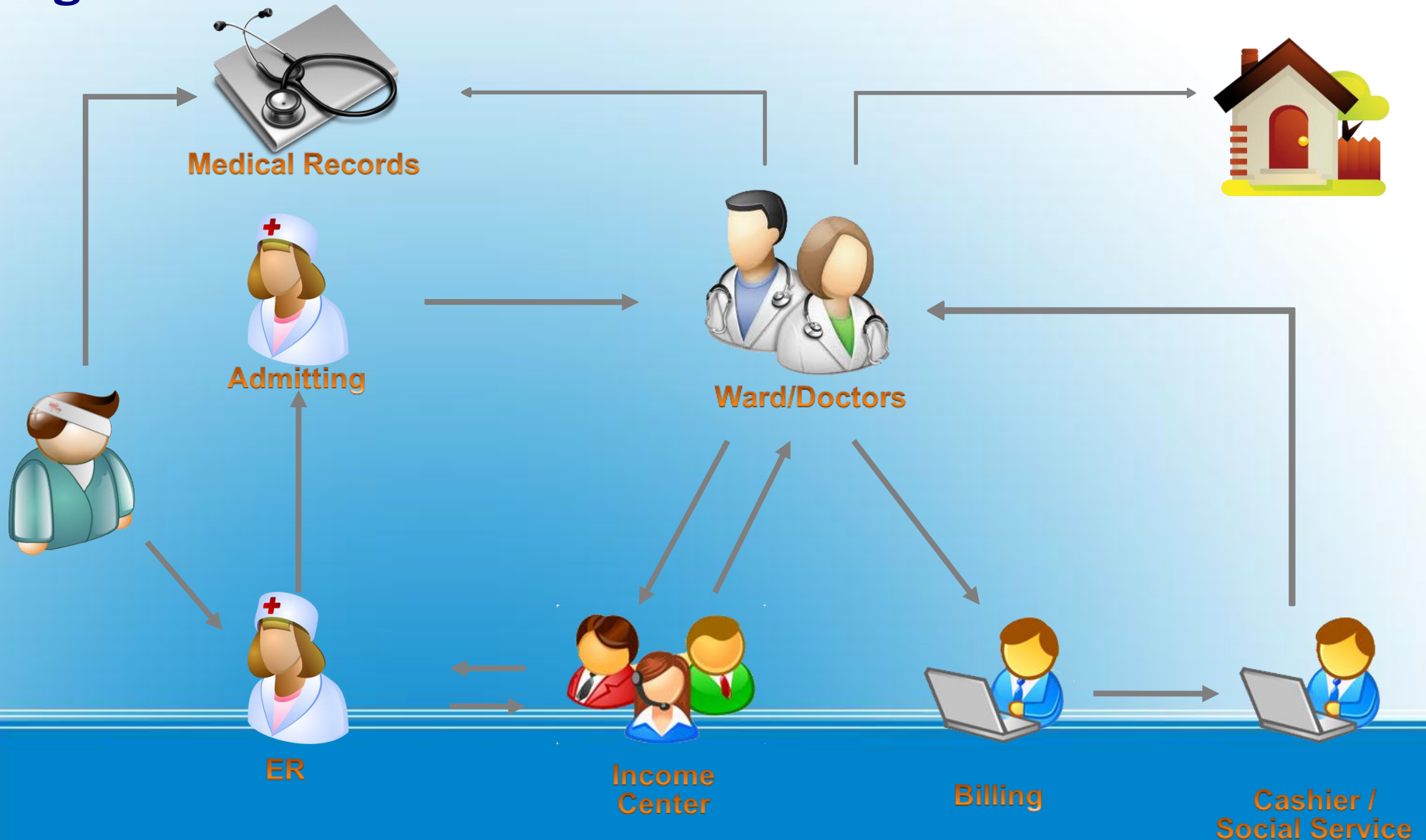
- ◆ **Audit Trail**
 - ◆ changes in the data such as deletion, editing are recorded including username and timestamp of such changes

- ◆ **More efficient workflow**



IT Innovation in Phil Hospitals

SegHIS ER / IPD Workflow



IT Innovation in Phil Hospitals

SegHIS Features:



Best Practices



Fully Integrated



Real Time Reports & Certificates



Embedded e-Claims



IT Innovation in Phil Hospitals

SegHIS Features:



Fully Integrated

- ◆ Multiple point, one-time encoding of information
 - ◆ information is encoded at multiple points
 - ◆ no double encoding w/c leads to error
- ◆ Data is propagated throughout the system
 - ◆ Patient information encoded at Admission can be viewed by doctors using doctor's module
 - ◆ Cost of Served Lab requests instantaneously recorded at billing



IT Innovation in Phil Hospitals

SegHIS Features:



Fully Integrated

- ◆ HIS can be integrated seamlessly with a Financial Information System and with Human Resource Information System



IT Innovation in Phil Hospitals

SegHIS Features:



Best Practices



Fully Integrated



Real Time Reports & Certificates



Embedded e-Claims



IT Innovation in Phil Hospitals

SegHIS Features:



Real Time Reports & Certificates

MRP 09

Republic of the Philippines
Department of Health
Center of Health Development - Davao Region
SOUTHERN PHILIPPINES MEDICAL CENTER
MEDICAL RECORDS SECTION
Davao City

RELEASE OF RESPONSIBILITY FOR ERRONEOUS ENTRY ON
DEATH CERTIFICATE

March 08, 2012
Date

Name: FERRER, JUSTINE MAE HERMOZA Health Record No. 576793
Age: 12 years old Civil Status: Child Sex: FEMALE

I hereby certify that the Death Certificate of FERRER, JUSTINE MAE HERMOZA
has been presented to me for final review and correction of any erroneous entry, topographical or
otherwise.

I therefore assume full responsibility for any correction which has to be made after the Death
Certificate has been registered.

I hereby release the Southern Philippines Medical Center, Davao City, and its staff from all
liability of whatever nature which may arise from the registration of the Certificate with erroneous
entries.

JOSHUA FERRER BROTHER
Informant Name and Signature Relationship to Patient

RENABEL ALMERIA
Name and Signature of Witness

03/08/2012 09:58 AM
Date and Time

Medical Certificate

Republic of the Philippines
CERTIFICATE OF FETAL DEATH

Province: DAVAO DEL SUR Registry No. _____
City/Municipality: SAVAO CITY

Save Cancel

1. NAME OF FETUS (if given)
Given Name: Michaela Elizabeth Kimberly Middle Name: Carlo Last Name: Fernandez

2. SEX: Male Female Undetermined

3. DATE OF DELIVERY
Day: 15 Month: April Year: 2010

4. PLACE OF DELIVERY
Name of Hospital / Clinic / Institution / House No. / Street, Barangay: SOUTHERN PHILIPPINES MEDICAL CENTER, DAVAO CITY City / Municipality: SAVAO CITY Province: DAVAO DEL SUR

5a. TYPE OF DELIVERY: Single Twin Triplet, etc.

5b. IF MULTIPLE DELIVERY, FETUS WAS: First Second Others, Specify: _____

Birth Certificate

Republic of the Philippines
OFFICE OF THE CIVIL REGISTRAR GENERAL
CERTIFICATE OF DEATH
SOUTHERN PHILIPPINES MEDICAL CENTER - DAVAO CITY

Province: DAVAO DEL SUR Registry No. _____
City/Municipality: DAVAO CITY

First Update Cancel

1. NAME: Given Name: Michael Middle Name: Sara Last Name: Fernandez

2. SEX: Male Female

3. RELIGION: Catholic

4. AGE: a. 1 year or above: Completed Years: 32 b. under 1 year: Months: Days: c. under 1 day: Hrs: Min: Sec:

5. PLACE OF DEATH: Street/Barangay: SOUTHERN PHILIPPINES MEDICAL CENTER City/Municipality: DAVAO CITY Province: DAVAO DEL SUR

6. DATE OF DEATH: 07/25/2011 [mm/dd/yyyy]

7. CITIZENSHIP: Filipino

8. RESIDENCE: House No. / Street, Barangay: SAN VICENTE City/Municipality: DAVAO CITY Province: DAVAO DEL SUR

9. CIVIL STATUS: Single Widowed Unmarried

10. OCCUPATION: Driver

Death Certificate



IT Innovation in Phil Hospitals

SegHIS Features:

Real Time Reports & Certificates

City Health Office

- ❖ Leading Causes of Morbidity (Overall)
- ❖ Leading Causes of Discharge
- ❖ Leading Causes of Mortality
- ❖ Cancer / Tumor Monitoring
- ❖ Notifiable Diseases
- ❖ Sentinel surveillance Worksheet

Department of Health (DOH)

- ❖ Discharges Based on Accommodation
- ❖ Result of Treatment / Condition on Discharge
- ❖ Inpatient's Demographic Data
- ❖ Outpatient (OPD) Demographic Data by Province

IT Innovation in Phil Hospitals

SegHIS Features:

Real Time Reports & Certificates

Hospital Reports

- ❖ Number of Death
- ❖ Leading Causes of Emergency Cases in ER Department
- ❖ Leading Causes of Non- Emergency Cases in ER Department Abortion
- ❖ Average Daily Census of Admitted Patient's
- ❖ Caesarian Section Cases Discharged within 3 Days after Surgery
- ❖ Discharged within 3 days upon Admission
- ❖ Discharges within 3 days upon Admission by Clinics
- ❖ Distribution of Beds and Bed Occupancy Rate
- ❖ Leading Major and Minor Surgical Procedure s
- ❖ Neonatal Mortality Including > 1 year old
- ❖ Normal Delivery Discharged within 1 Day upon Admission
- ❖ Number of Deliveries
- ❖ Patient's Average Length of Stay
- ❖ Summary of patient's Admitted in the Hospital
- ❖ Top Leading Communicable diseases
- ❖ Top Leading Diseases
- ❖ Total Inpatients Days and Number of Discharges
- ❖ Leading Causes of Consultation at OPD

PhilHealth

- ❖ Causes of Confinement
- ❖ Causes of Mortality
- ❖ Obstetrical Procedures
- ❖ Top Procedures

IT Innovation in Phil Hospitals

SegHIS Features:



Best Practices



Fully Integrated



Real Time Reports & Certificates



Embedded e-Claims



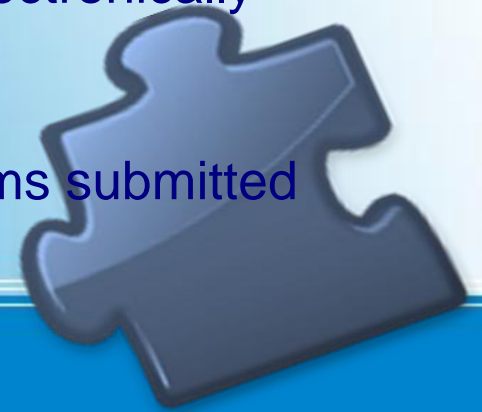
IT Innovation in Phil Hospitals

SegHIS Features:



Embedded e-Claims

- ◆ Online Claims Eligibility
 - ◆ Allows the hospital to instantaneously determine if a patient is PhilHealth eligible
- ◆ Online Claims Submission
 - ◆ Allows the hospital to submit PHIC claims electronically
- ◆ Online Claims Status Verification
 - ◆ Allows the hospital to track the status of claims submitted



IT Innovation in Phil Hospitals

Embedded e-Claims:

◆ Online Claims Eligibility Service

CLAIMS ELIGIBILITY WEB SERVICE (CEWS)



Tracking Number:

As of 11-20-2012: 45

PhilHealth Number (PIN): 190905703882

Member: DELA CRUZ, JUAN OCAMPO

Patient: DELA CRUZ, MARIA BAUTISTA

Confinement: 09-15-2012 to 11-20-2012

CLAIMS ELIGIBILITY WEB SERVICE (CEWS)



Tracking Number: C120-0612-1100-0004

As of 11-20-2012: 45

PhilHealth Number (PIN): 190905703882

Member: DELA CRUZ, JUAN OCAMPO

Patient: DELA CRUZ, MARIA BAUTISTA

Confinement: 09-15-2012 to 11-20-2012

IT Innovation in Phil Hospitals

Embedded e-Claims:

◆ Online Claims Submission

Billing Main::eTransmittals

Process List Transmittal Close

Search options

Patient/Case No./Transmittal No.

Transmittal Date

Search

Search result eTransmittals On September 30, 2012

Transmittal No.	Total Claims	Transmittal Receipt Ticket No.	Transmittal Control No.	Transmittal Date	Transmittal Time	Action
11-001-0004	1	112012000024	C120-0612-1100-0008		17:34:04	

File Attachment

Patient Demographic

Bill Nr.	2012085939	Case Nr.	2012041342
Patient Name	MAHILUM, VILMA P.	HRN	2435765
Sex	Female	Age	51 years
Address	SIBAWAN KIDAPAWAN CITY 9407 COTABATO Region XII		
Confinement Date	Aug 31, 2012 05:10 PM To Sep 30, 2012 04:00 PM		
PhilHealth No.	17-0500954496	Tracking No.	

+ Add files... Start upload Cancel upload Delete

ONE_BIG_FILE.pdf 22.28 MB **Error** Delete

Request Entity Too Large



IT Innovation in Phil Hospitals

Embedded e-Claims:

◆ Online Claims Status Verification

e-Claim Status Verification
SOUTHERN PHILIPPINES MEDICAL CENTER
J.P. LAUREL BAJADA, DAVAO CITY

DELA CRUZ, MARIA BAUTISTA

PIN/PHIC Nr: 190905703882
Admission Date: 09-15-2012
Discharge Date: 09-20-2012
Claim Received: 11-01-2012
Claim Refile:



121120990002599

Status: WITH CHEQUE
As of: 11-21-2012 09:53:20AM

e-Claim Status Verification
SOUTHERN PHILIPPINES MEDICAL CENTER
J.P. LAUREL BAJADA, DAVAO CITY

DELA CRUZ, MARIA BAUTISTA

PIN/PHIC Nr: 190905703882
Admission Date: 09-15-2012
Discharge Date: 09-20-2012
Claim Received: 11-01-2012
Claim Refile:



121120990002599

Status: WITH VOUCHER
As of: 11-21-2012 09:49:40AM

PAYMENTS

Voucher No	Voucher Date	Check No	Check Date	Check Amt	Claim Amt	Payee
201-110001-12S99	11-21-2012	0000000051	11-21-2012	2451.96	2502.00	SEGWORKDS
201-110001-12S99	11-21-2012	AC	11-21-2012	492.00	600.00	DR. MAE CONCEPCION J. DOLENDO
201-110001-12S99	11-21-2012	AC	11-21-2012	460.00	560.00	DR. LEOPOLDO J. VEGA

PAYMENTS

Voucher No	Voucher Date	Check No	Check Date	Check Amt	Claim Amt	Payee
201-110001-12S99	11-21-2012			0.00	2502.00	SEGWORKDS
201-110001-12S99	11-21-2012			0.00	600.00	DR. MAE CONCEPCION J. DOLENDO
201-110001-12S99	11-21-2012			0.00	560.00	DR. LEOPOLDO J. VEGA

IT Innovation in Phil Hospitals

Summary:

- ◆ IT Innovation will result in better & more efficient healthcare services
- ◆ There are opportunities and challenges in implementing IT Innovation in Philippine Hospitals
 - Hospital Administrators should take a closer look at IT Innovations, particularly Hospital Information Systems
 - IT Professionals & Students should take a closer look how they can participate in implementing IT Innovations in Philippine Hospitals.

- The End -

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