IT Innovation in Philippine Hospitals

Engr. Fred Nadela, MBA
Segworks Technologies Corp.

The Best HealthCare System?

Which Country has the best HealthCare System?

United States?

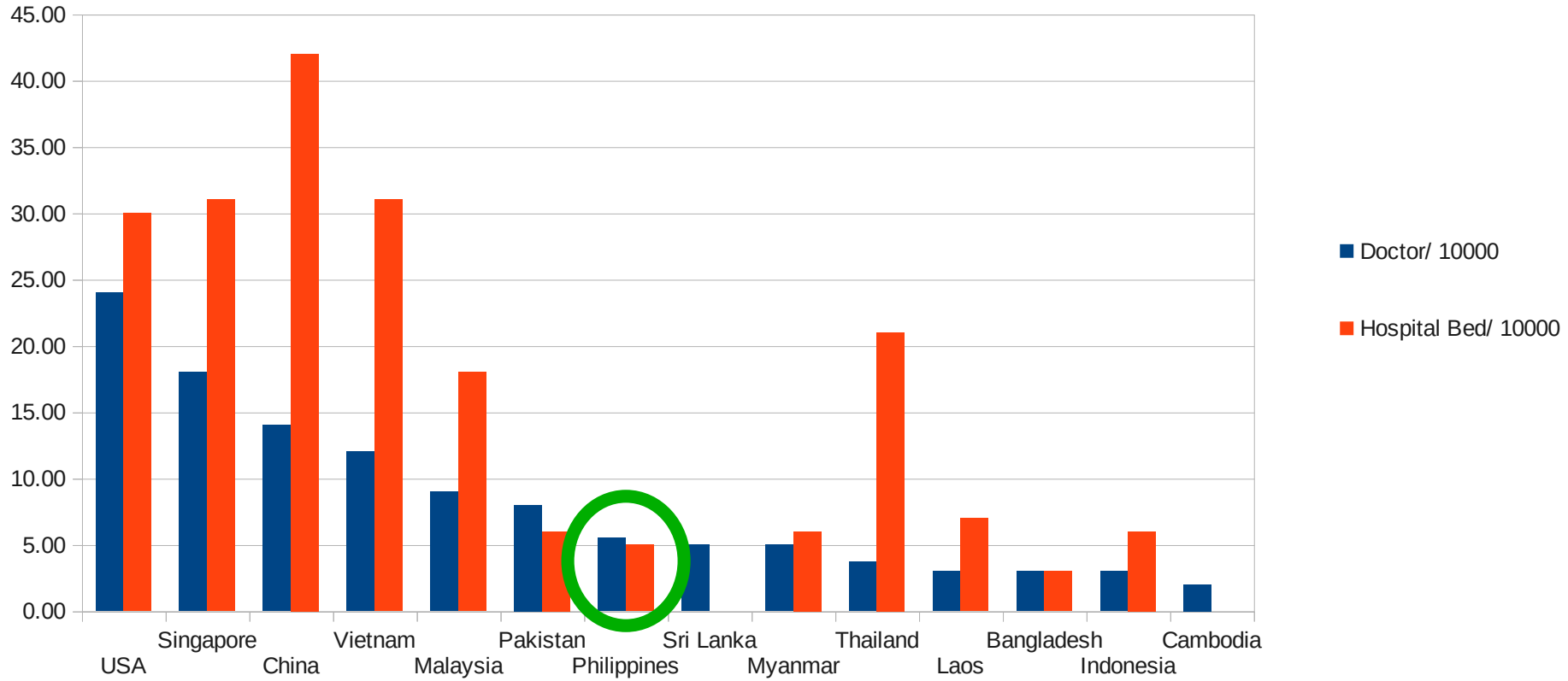
The US Healthcare System

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.

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Focus of Innovation

Tools to assist Doctors in Evidence-Based Decision Making

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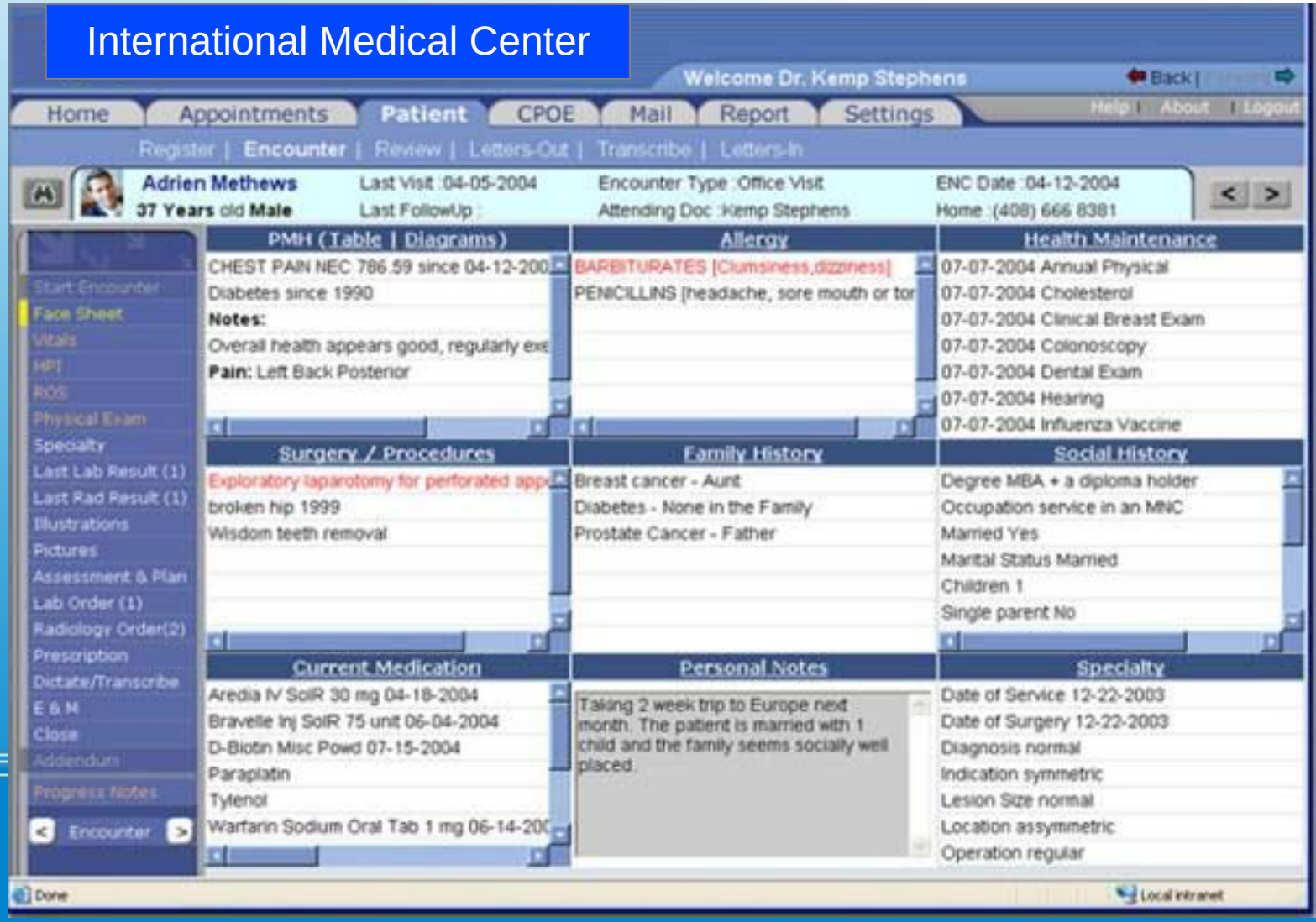
Focus of Innovation

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



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

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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

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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?

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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 is 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

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SegHIS Features:

- Best Practices
- Fully Integrated
- Real Time Reports & Certificates
- Embedded e-Claims

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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**

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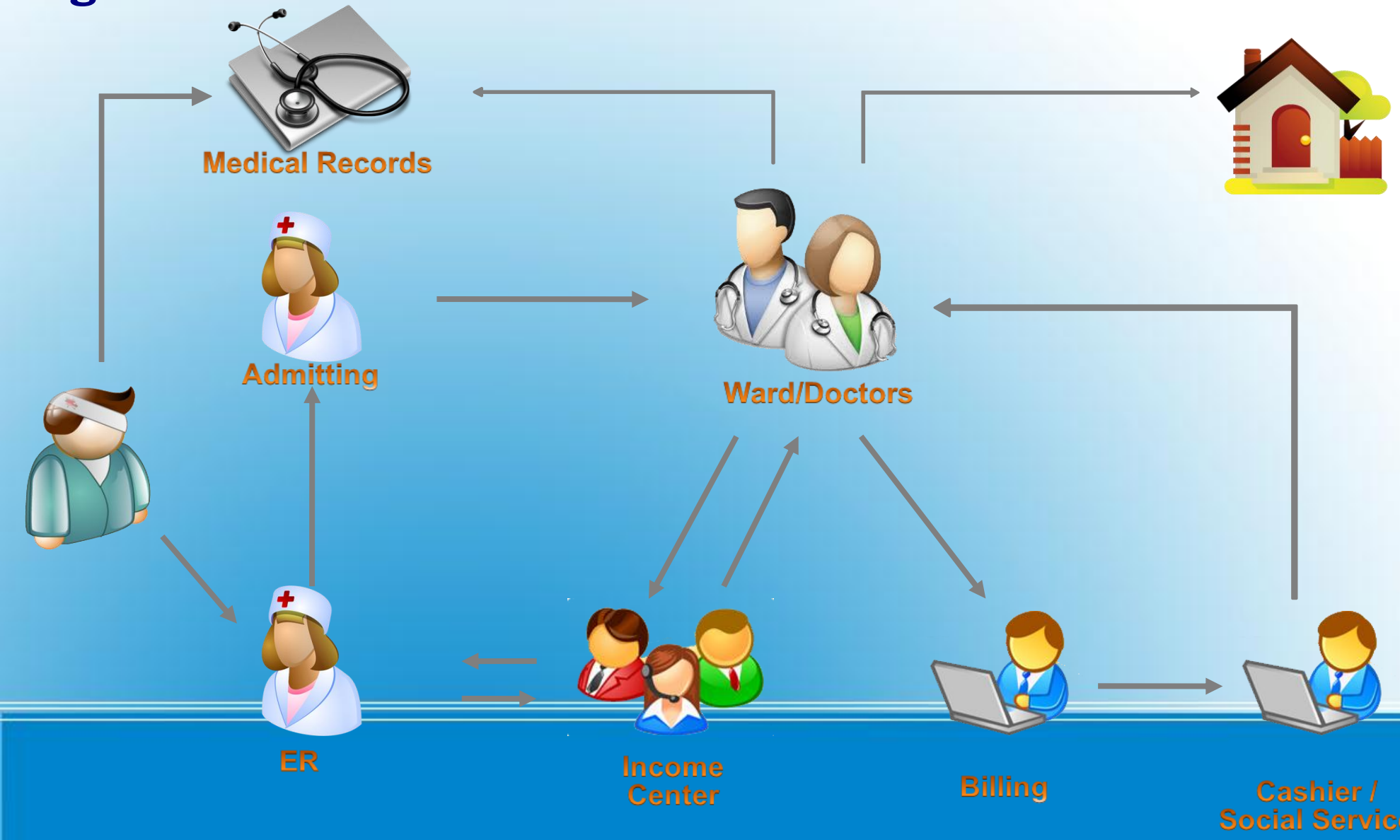
SegHIS ER / IPD Workflow



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SegHIS Features:

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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 instantanously recorded at billing

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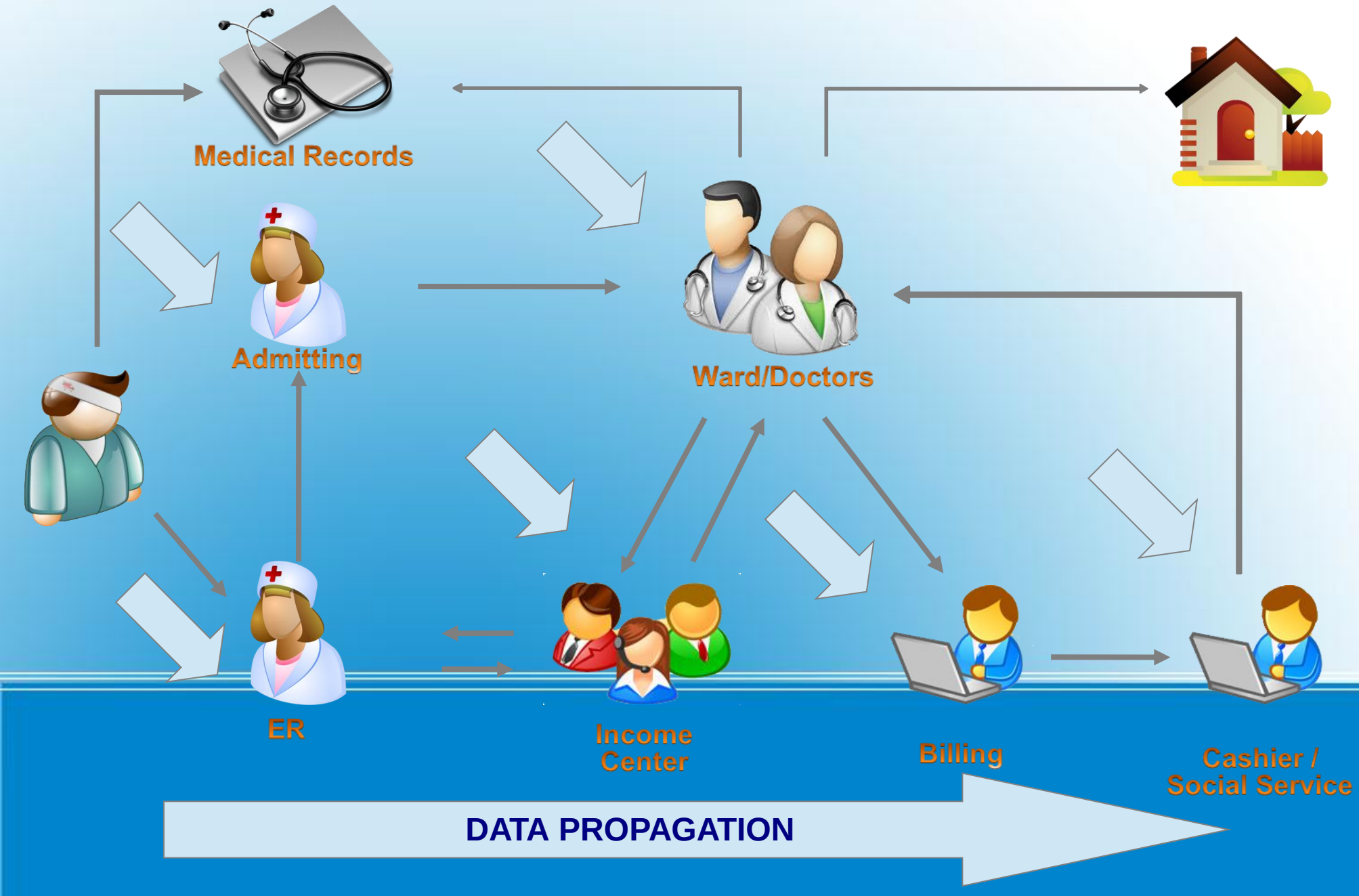

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SegHIS Features:

Fully Integrated

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

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SegHIS Features:

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- Embedded e-Claims

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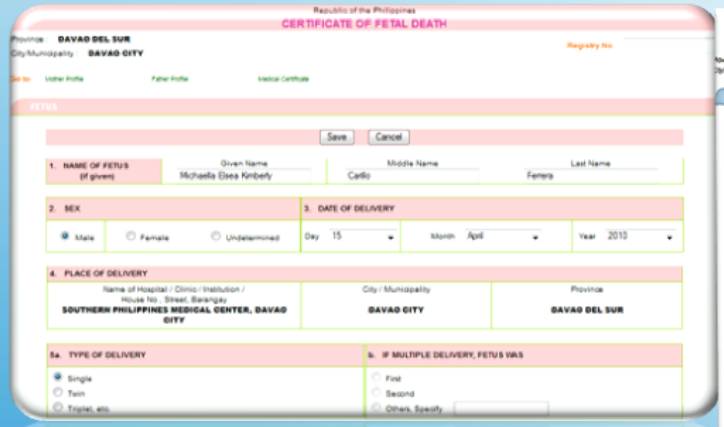
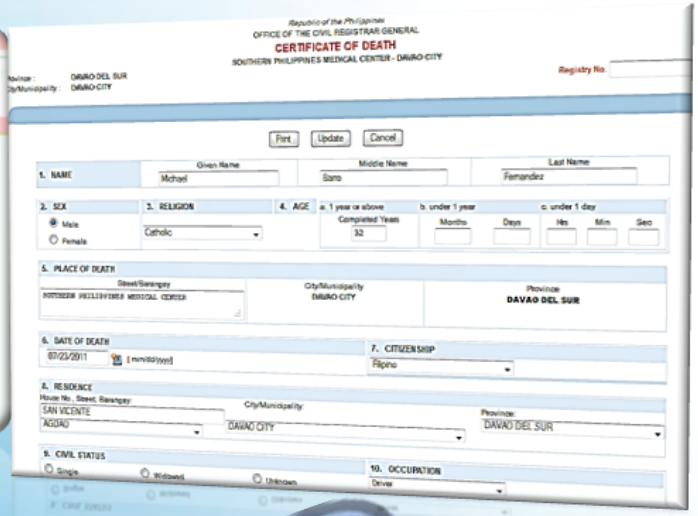
SegHIS Features:

- Real Time Reports & Certificates

Medical Certificate



Birth Certificate



Death Certificate

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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

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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

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SegHIS Features:

- Best Practices
- Fully Integrated
- Real Time Reports & Certificates
- Embedded e-Claims

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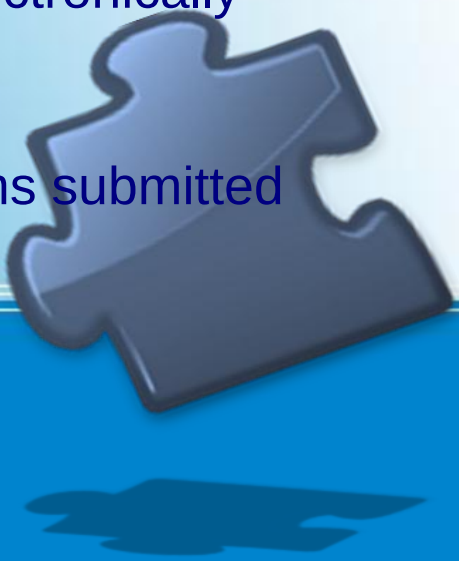
SegHIS Features:

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



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Embedded e-Claims:

- 0nline 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
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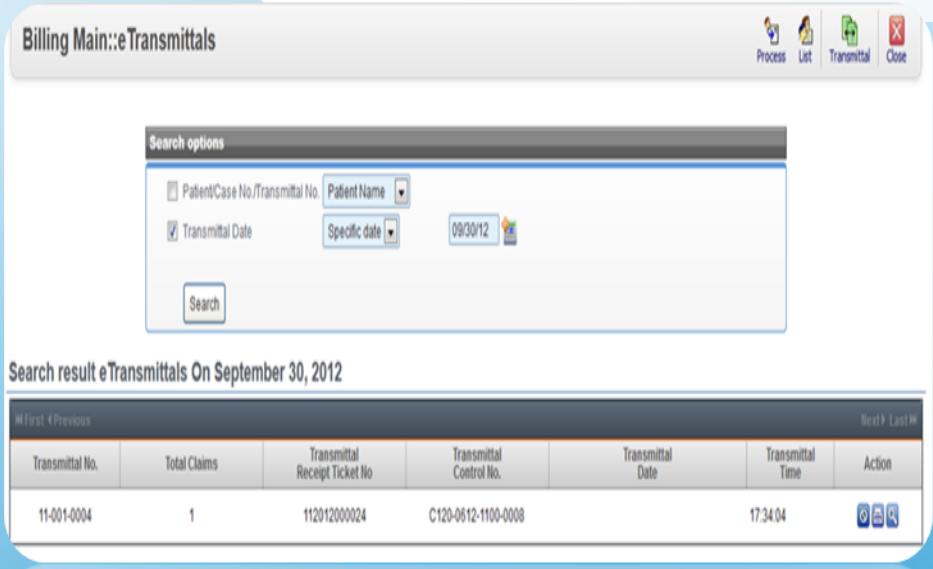
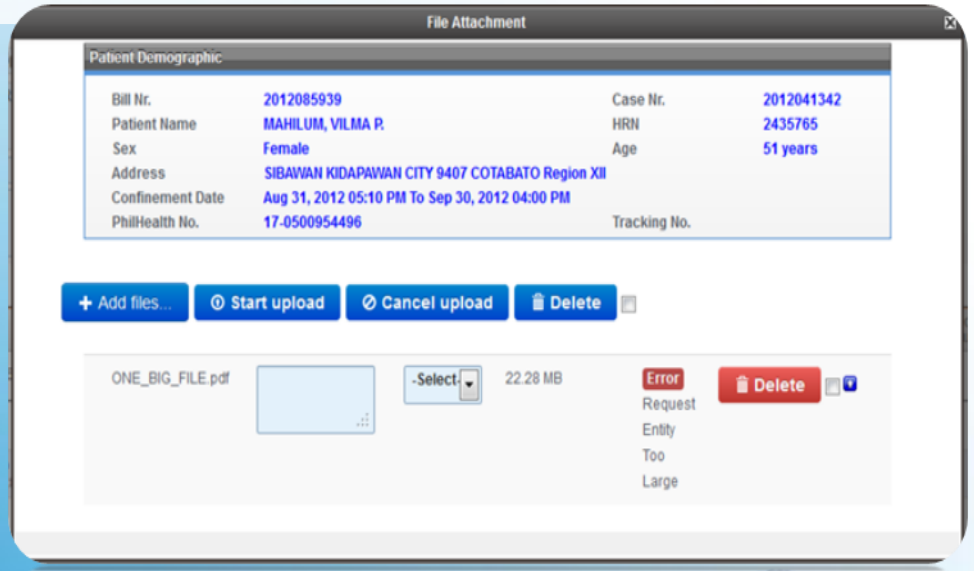
Embedded e-Claims:

- 0nline Claims Submission





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Embedded e-Claims:

- 0nline 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

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

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			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

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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 -

Segworks Technologies Corp.
segworks.com

wmnadela@segworks.com