**Context**

Mitchel's Plain Community Health Center

One of the largest communities in Cape Town, SA

Majority of population has a middle school education

90% of population speaks Afrikaans

20% has HIV/AIDS

3,000 HIV/AIDS patients per month

“Hospitals and doctors will often require immediate payments for their health services.”

**Background on HIPAA Security Rules**

**Technical Safeguards**

**Access Control.** A covered entity must implement technical policies and procedures that allow only authorized persons to access electronic protected health information (e-PHI).24

**Audit Controls.** A covered entity must implement hardware, software, and/or procedural mechanisms to record and examine access and other activity in information systems that contain or use e-PHI.25

**Integrity Controls.** A covered entity must implement policies and procedures to ensure that e-PHI is not improperly altered or destroyed. Electronic measures must be put in place to confirm that e-PHI has not been improperly altered or destroyed.26

**Transmission Security.** A covered entity must implement technical security measures that guard against unauthorized access to e-PHI that is being transmitted over an electronic network.27

**Self-identifying information includes**: name, address, dates related to an individual (including birth date, admission date, discharge date, date of death and exact age if over 89), telephone numbers, fax number, email address, Social Security number, medical record number, health plan beneficiary number, account number, certificate/license number, any vehicle or other device serial number, device identifiers or serial numbers, web URL, internet Protocol (IP) address numbers, finger or voice prints, photographic images, and any other characteristic that could uniquely identify the individual.

Talking point:

-SEMRS adheres to HIPAA standards because it encrypts all self-identifying information (SII)

**Problem Statement**

Due to the living conditions in Mitchell’s Plain, many patient files get lost or damaged. This can delay or hinder treatment progress, because without any reference to the patient’s current regiment, treatment will come to a halt. Confidentiality of patient files and data integrity is also at risk. Missing files are a great security concern. We are doing this project because Mitchell’s Plain Community Healthcare Center currently keeps patients records in hard copy only. Ultimately, we want to ensure that the patients have a secure and hassle free treatment process.

**Motivation**

Improved medical records management system

Secure -

Easy to use -

Proposed Solution

Enforce patient confidentiality -

Ensure data integrity -

HIPAA -

MCHC is one of the few public health clinics in South Africa,

Only 2 physicians

**WHAT** - Solve the problem of displacement and damage to patients’ files

Eliminate identity theft

Ensure patient stays on the right regiment

**EMR Systems**

\*\*\*\*Need Pro’s and Con’s\*\*\*\*

\*\*\*\*table/chart\*\*\*\*

Earliest dates back to 1995; VistA

Background info on

VistA- Veterans health info systems and technology Architecture

Used throughout the US Dept of Veteran Affairs

80 different clinical fxns, including: Mental Health, Blind Rehab, Ambulatory care, Radiology, Pharmaceutical, etc, etc etc

Software modules for clinical care and financial fxns

Currently the largest medical system in the US, provides care to 8 million veterans

Already had automated data processing previously, but added a GUI in 1997.

One of the first client-server architectures, that allowed health care providers to review and update a patient’s electronic medical record

THIRRA-  project title Portable System for**T**eleHealth and **H**ealth **I**nformatics for **R**ural and **R**emote **A**reas.

Started in 2007, Written in PHP, with a PostgreSQL database backend.

ZEPRS- The **Zambia Electronic**[**Perinatal**](http://en.wikipedia.org/wiki/Perinatal)**Record System** (**ZEPRS**)

- For an obesity clinic

-lacks security measures (i.e. encryption)

OpenEMR V 1.0 released in June 2001

-3700 downloads p/month

**Overview**

Enforce patient confidentiality

Ensure data integrity

HIPAA

It is important to weigh patient confidentiality against a public responsibility to support national priorities.

HIPAA – Health Insurance Portability & Accountability Act

Pros:

- Hospitals/Clinics more efficient

- Reduce medical errors

- Lower healthcare costs

**Proposed Implementation**

Much simpler than OpenEMR, removed many unneeded features.

Onsite Access through intranet (LAN).

SSL Encryption

**Solution Highlights**

User group access control

Encryption and description algorithms

Secure transmission via openSSL

Audit log

Automatic log off

**Summary**

Lightweight

Secure EMR System

* [Reiterate our main points]
* [point 2]
* [point 3]

Portability of a streamlined secure system

Possible Future Work

Ability to upload existing hardcopy files

Prescriptions:

* Add
* Update
* Control dispensing

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