A new paradigm for a secure and streamlined healthcare industry

**Healthcare 2.0**

Total health spending in America is a massive $2.7 trillion every year

**Medical ID Theft**
- 2.3 million Americans were victimized in 2014
- Over 112 million records were compromised in 2015
- 65% of victims paid an average of $13,500 to resolve the crime
- A single stolen healthcare record on the cyber black market is worth $50

**Fraud & Abuse**
- Every year fraud and improper payment cost the U.S. Medicare and Medicaid programs $77 billion
- 48.2% of fraud losses across the globe come from U.S. card holders. But the U.S. contribution to overall card sales volume worldwide was only 21.4%
- Last year U.S. payment card issuers reported loses due to counterfeiting totaling $3.89 billion

**Patient Matching Errors**
- Today 12% of patient records are mismatched
- 19% of CIOs cite mismatching as the cause of adverse patient events
- An average hospital has 96,000 duplicate records

**Solutions to make healthcare more secure at every stage**

**Strong Authentication**
A secure chip-based identity verification process requiring multiple factors and a cryptographic protocol.

**Secure Payment**
A secure chip-based payment such as payment using the EMV technical standards.
Chip-based payments can reduce card-present fraud for healthcare payers and providers.

**Chain of Trust**
A technical process that begins with a trust anchor and assures the system as a whole is worthy of trust.
A chain of trust should guarantee the authenticity of the people, issuers, equipment, networks, and other components of the healthcare infrastructure.

**Accountability**
The process that ensures acceptance and responsibility for actions.
Within the healthcare chain of trust, an auditable review can highlight fraudulent or erroneous activity.

**Healthcare spending losses to fraud and abuse total $272 billion annually**

**Total health spending in America is a massive $2.7 trillion every year**

**Medical ID Theft**
- 2.3 million Americans were victimized in 2014
- Over 112 million records were compromised in 2015
- 65% of victims paid an average of $13,500 to resolve the crime
- A single stolen healthcare record on the cyber black market is worth $50

**Fraud & Abuse**
- Every year fraud and improper payment cost the U.S. Medicare and Medicaid programs $77 billion
- 48.2% of fraud losses across the globe come from U.S. card holders. But the U.S. contribution to overall card sales volume worldwide was only 21.4%
- Last year U.S. payment card issuers reported loses due to counterfeiting totaling $3.89 billion

**Patient Matching Errors**
- Today 12% of patient records are mismatched
- 19% of CIOs cite mismatching as the cause of adverse patient events
- An average hospital has 96,000 duplicate records

**Solutions to make healthcare more secure at every stage**

**Strong Authentication**
A secure chip-based identity verification process requiring multiple factors and a cryptographic protocol.

**Secure Payment**
A secure chip-based payment such as payment using the EMV technical standards.
Chip-based payments can reduce card-present fraud for healthcare payers and providers.

**Chain of Trust**
A technical process that begins with a trust anchor and assures the system as a whole is worthy of trust.
A chain of trust should guarantee the authenticity of the people, issuers, equipment, networks, and other components of the healthcare infrastructure.

**Accountability**
The process that ensures acceptance and responsibility for actions.
Within the healthcare chain of trust, an auditable review can highlight fraudulent or erroneous activity.

**Sources**
CHIME • The Economist • FBI • Government Accountability Office • Identity Theft Resource Center • National Center for Biotechnology Information • Nilson Report • Rosensweig Institute
Stages of Care

Each stage of healthcare has risks of fraud, errors, waste and abuse. An identity management solution based on smart card technology can help reduce these risks at each step to reduce fraud, improve quality of care and streamline workflow for healthcare entities.

Pre-Treatment
- Patient records mismatched
- Patient posed as another person
- False statements made on a health plan application
- Subscriber number used that does not belong to the patient
- Counterfeit card presented by patient

Patient Authentication

Patient Registration

Patient Eligibility

Patient Co-pay

Incorrect codes entered for encounter
- Misrepresented services sought or provided
- Prescriptions falsified or unnecessary
- Services provided that weren’t medically necessary
- Medical devices connected to the Internet not securely implemented

Encounter Code

Encounter Documentation

Prescription Creation

Patient Diagnosis

Patient Vitals

Pre-Treatment

Documentation

Prescription Creation

Patient Diagnosis

Patient Vitals

Service Billing

Insurance Claim Adjudication

Insurance Claim Payment

Insurance Explanation of Benefits

Billing

Post-Treatment

Patient Payment for services not provided

Insurance Claim Payment

Insurance Explanation of Benefits

Patient Payment of Additional Costs

Accounts

Providers

Insurers

Health plans

Government agencies

MISSED OPPORTUNITIES

RISK

SECURE SOLUTIONS

Patient records mismatched
- Patient posed as another person
- False statements made on a health plan application
- Subscriber number used that does not belong to the patient
- Counterfeit card presented by patient
- Incorrect codes entered for encounter
- Misrepresented services sought or provided
- Prescriptions falsified or unnecessary
- Services provided that weren’t medically necessary
- Medical devices connected to the Internet not securely implemented
- Services not provided billed to insurance
- Patient payment for services not provided

Sources:
- CHIME
- The Economist
- FBI
- Government Accountability Office
- Identity Theft Resource Center
- National Center for Biotechnology Information
- Nilson Report
- Rosensweig Institute

Secure Solutions:
- Strong Authentication
- Secure Payment
- Chain of Trust
- Accountability

Pre-Treatment

Billing

Post-Treatment