

**Contactless in Healthcare –
The use of Contactless Smart Cards as a Personal
Portable Database
CTST The Americas - New Orleans - May 5, 2009**



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SCIENCE – NON FICTION

Agenda

- Electronic Medical Record challenges
- Product overview
- Benefits to Healthcare Providers, Patients and Insurers/Payers
- MediSmart implementation in Kenya:
 - The Technology
 - The Benefits
 - The Results



Health IT in America

“American consumers are accustomed to using technology to get better service in almost every sector of the economy except healthcare. Now they’re demanding that hospitals, clinics and insurance companies provide easier convenient online services, such as the ability to communicate with a doctor via e-mail or **pay a bill** on a Web portal.”

Quote from Howard Anderson, Executive Editor, Health Data Management Magazine

Medical Record Challenges

- 20-40% of all medical claims are subject to abuse (worldwide)
 - ID Fraud ie. “free” use of medical benefits
 - Over expenditure
 - Duplication of services, billing
 - **Non-guaranteed and cumbersome member authentication processes**
- Member benefit balances not known before treatment is given
- No single coordinated process of updating members records and availing it to all service providers
- Delays in encountering reports to allow early intervention



Solution: Contactless Device with Software Application

- Microprocessor based contactless chip in the patient card captures:
 - Patient's full personal and biometric identity
 - Emergency contact information
 - Medical history, current medical conditions, current medical treatments
 - Benefit status/insurance information
 - Electronic scripts, referrals, messages, sick notes, vouchers and chronic pre-authorization and application forms



Solution Security

- Secure encryption
- Remote encoding to effect benefit renewal/updates or member cancellation
- Patient authentication requirements may include:
 - PIN number
 - Biometric fingerprint scan with a fingerprint reader
- Authentication solutions also available for:
 - physician card
 - administrator card
- Operating system provides multi-application support



Solution Software Application

- Front end software solution
- Connects card readers/biometric fingerprint readers with legacy health IT platforms
- Data mapping and integration with legacy systems
- Downloads existing patient information from the patient card
- Uploads new patient information to the patient card
- Uses standards-based communication (HL7, CCR, CCD)
- Facilitates direct access to regional or national electronic health records utilizing pointers stored on the card

Benefits to Healthcare Providers – EMR

- Improve patient care while reducing costs
- Improve medical record maintenance
 - Decrease duplicate patient records
 - Decrease commingled patient records
- Reduce medical errors and adverse events
- Enhanced decision-making
- Faster treatment for emergency care patients
- Access to medical information of emergency care patients
- Continuity of care: track patients through medical encounters



Benefits to Healthcare Providers – Financial

- Increased cash flow
 - Reduce registration errors that lead to claim denials
- Fewer duplicate tests, lab work, procedures
- Enhanced workflow effectiveness: reduced administrative workload, enhanced employee efficiency
- Improved patient experience, increased patient affinity and loyalty



Benefits to Patients - Medical

- Medical record portability
- Emergency care access to patient medical info on the card
- Enhanced information transparency
- Continuity of care among various healthcare providers
- Potentially enhanced patient safety resulting from more accurate patient records

Benefits to Patients - Administrative

- Secure card
- Patient ownership of medical record
- Potentially faster care and resulting in more accurate patient records
- More accurate and faster registration
- Possibly faster service at healthcare provider through all points of care



Benefits to Insurers/Payers – Financial

- Fewer medical errors and adverse events
- Fewer duplicate tests, lab work, procedures
- Increased operational efficiency – spend fewer man hours processing claims
- Positive impression on patients
- Reduce medical fraud and medical identity theft

Benefits to Insurers/Payers – Administrative

- Verify eligibility and plan information
- Potential immediate adjudication at point of care
- Reduce claim denials
- Increase formulary compliance

OTI's MediSmart Implementation in Kenya

- The solution supports the management of various shared family benefit structures and options, eliminating a major financial risk to medical schemes
- At the same time the information is recorded on each patient's personal MediSmart card (or mobile data repository), relevant data is transferred to the corporate and insurer levels
- MediSmart prevents over-expenditure as members can only use the benefit balance on their cards



MediSmart: Smart Applications Kenya

- Multiple medical plans have licensed the MediSmart solution with several hundred thousand cards actively in use and growing
- 340 existing points of service at 220 sites across Kenya in the process of being extended to a total of 940 points of service at 420 sites enabling patient authentication, verification of benefits and claims processing in a seamless process

The Technology

- All members (employees and their dependants) are issued with a biometrically controlled smart card
 - The members fingerprint(s) are saved on the smart card at 1st encounter at a medical service provider
 - The registered fingerprint must be presented at all points of service for card to open
 - Specific family and/or member benefit categories are defined in pools held on the card eg. IN & OUT-Patient, Dental, Maternity
 - Benefits decrement in use and member cannot overspend



The Benefits

- All members can visit medical service providers of choice within the approved medical service provider list
- No need to give authority letters as pre-authorization details and requirements are stored and managed on the card
- No over expenditure
- The medical service providers will only treat the members with their smart cards and therefore discourage abuse
- Immediate information of medical spend and ease of data analysis in various parameters
- Allows management of expenditure for chronic illness

The Benefits

- **Automatic update of smart cards**
 - Refund in respect of rejected claims eg. claim submitted against incorrect pool
 - New benefits
 - Cancellations, suspension, missing member details like ID, or member contact

- **Ease of putting benefit on board – no need for photographs. Fingerprint is the key**
 - 24/7 support at all medical service providers

- **Multi-application card (guaranteed life of 10 years)**
 - IN & OUT Patient, In-House clinic Management (full medical)
 - Workplace canteen services – in line with shift hours
 - Time & attendance
 - Employee ID card

The Results

- Contribution/claim ratio reduced in certain instances from 150% to 50%
- Administration costs reduced significantly
- Call centre dependency reduced by 80%
- Reduced unmanaged private reimbursement, now only use contracted service provider network

Client Base Includes

- The National Social Security Fund
- Kenya Sugar Board
- Kenbright Healthcare Administrators
- Kenya Tourist Development Corporation
- Catering and Levy Tourism Fund
- The Teachers Service Commission
- AON Minet Insurance Brokers
- UAP Insurance Company
- Nairobi Bottlers Limited
- Co-operative Insurance Company
- Resolution Health
- Discovery Health
- Unilever Kenya
- Serena Hotels



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Thank You!

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