e-Health in Austria
Experiences from Implementation of EHR and Supplemental Applications

DI Hans-Jörg Seeburger

ITAPA 2008 International Congress
„Government 2.0 – Breaking with Traditions“
Agenda

- e-Health Vision
- The Austrian e-card Project
- ELGA - The Austrian EHR
- Drug seat belt with the Austrian e-card
Siemens e-Health Vision
…the most remarkable feature of this twenty-first century medicine is that we hold it together with nineteenth-century paperwork

US Secretary Tommy G. Thompson, remarks offered at the Health Information Technology Summit, Washington DC. May 6, 2004.
“By 2015 all necessary health data as well as medical knowledge will be available electronically for authorized persons independent of time and location in an optimized form fast and secure”

The Austrian e-card Project
The legal base for e-Health

1999

Authorization of the Austrian Main Association of Social Security Institutions to build up an chip card based system for administrative purposes by a social insurance law (56. ASVG-Novelle).

2000

Data protection law.

2004

E-Government law for a citizen card.

2005

Healthcare telematics law (GTelG) for the use in e-Health.
The Austrian e-card Project
Advantages of the e-card

- Easier access to medical assistance
- Protected privacy
- Efficient use of IT
- Lower administration costs
- No issue of healthcare vouchers
- Reliable verification of entitlements
- Lower administration costs

Replacement of 42 million vouchers per year
The Austrian e-card Project
e-card in figures

facts & figures

- **8,4 million e-cards** for insurance holders and dependents
- **24,000 health professional cards** incl. PIN/PUK mailings
- **up to 700,000 new issues** per year (loss, theft, changes of names)
- e-card infrastructure for **approx. 12,000 medical practices**
- Almost **500 training courses** at regional level
- Estimated **600,000 calls** to the service line per year
- qualified certificates on e-card used for **public administration**

**e-card transactions ("Consultations")**

- accumulated requests since 03/2005: **309 Mio**
- daily average: **470,000**
- all time high: **614.292**
ELGA - The Austrian EHR
Overview of Basic Components and Main Applications

Preconditions for ELGA
- Legal Measures Data Protection
- Consumers’ Acceptance Management
- Organizational Measures

ELGA Basic Components
- ELGA Basics
  - Master Patient Index: nationwide compatible with EU
  - HSP Index roles
  - Network
  - Standards
- Citizen / Patient: Portal
  - Health Information Current Topics
  - HSP Information
  - Health Promotion
  - Portal Applications
- Storage and Filing
  - Document Registry: centralized
  - Repository: decentralized

ELGA Core Applications
First Implementation Phase
- e-Medication: (doctor, hospital, pharmacy)
- e-Report: (radiology)
- e-Report: (laboratories)
- e-Medical Summary

Source: Feasibility Study; ARGE-ELGA 2007

Copyright © Siemens AG 2008. All rights reserved.
Siemens IT Solutions and Services
ELGA - The Austrian EHR
Siemens in Projects of Detail Planning Phase

Source: ARGE-ELGA 2008
Drug seat belt with the Austrian e-card
The very first application of ELGA

Architecture

Pharmacy
- POS System
- LAN-CCR
- GINA

E-MDB Client:
- GUI & Integration

VPN
Health Information (called GIN)

Internet

E-MDB Portal:
Patients query
- Medication History
- Interaction Documentation

E-MDB Check-Server:
- Authorization
- Medication History
- checks (interaction, duplicate, compliance)
- consumption store
- logging, history

Web Browser:
Patients query
- Medication History
- Interaction Documentation

Citizen / Patient

Pharmazeutische Gehaltskasse für Österreich
Das Sozial- und Wirtschaftsinstitut der österreichischen Apotheker

Copyright © Siemens AG 2008. All rights reserved.
Siemens IT Solutions and Services
Drug seat belt with the Austrian e-card

Overview

- Potential **savings of € 150 million** in medical costs.
- **Rescue** of more than **1,000 lives** per year in Austria.
- Checks **drug interactions**, compliance and many more.
- Both **prescribed drugs** and **OTC** (over the counter) products.
- The **participation** of patients is **voluntary, free**, revocable at any time.
- In more than **1,200 public pharmacies** and **50 pharmacies in hospitals** the drug seat belt will be available.
- In pilot more than **80% of drug adverse events** could have **solved** by the pharmacist immediately.
- The most common serious interactions: Marcoumar / Aspirin, multivitamin supplements / osteoporosis drugs and cholesterol-lowering / antibiotics.
Siemens & e-Health Activities

Austria

- Leading of one working groups of the Austrian e-Health Initiative
- technical cooperation with the ARGE ELGA
- Leading working group healthcare of the ICT Austria
- Member of the Austrian Standards Institute
- Cooperation with the „Semantic Web Company“

International

- Founding member of IHE world
- Industry co-chair and steering committee IHE Europe
- CEO of COCIR and board members
- Member of the ICT Standardization Policy Focus Group of the DG Industry of the European Commission
- Expert in DG Information Society working on the large scale pilot for Smart Open Systems (S.O.S.)
e-Health: The big Picture

Integration inside Organization
Integration between Organizations: Applications (administrative & clinical)
Integration between Organizations: EHR
Health Management

Health Portal

Legal Framework

Identify ✓✓✓✓ Register ✓✓✓✓ Provide ✓✓✓✓

Technical Framework

Security
- Confidentiality
- Integrity
- Availability

Connectivity
- Standards
- Network
- Interface

Source
Regulator Payor Provider

Business Intelligence

Citizen
Contact

Hans-Jörg Seeburger
Prinzipal Consultant Healthcare
Siemens AG Österreich
Siemens IT Solutions and Services
Dietrichgasse 27-29; A-1030 Wien; Austria
Mobile: +43 676 4912871

hans-joerg.seeburger@siemens.com