Connected health-IT - Germany’s Telematics Infrastructure

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gematik
Gesellschaft für Telematikanwendungen
der Gesundheitskarte mbH
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gematik GmbH

- Founded in January of 2005
- Design of
  - Telematics Infrastructure (TI)
  - Components and central services
  - Electronic Health Card (eHC)
  - Applications
- Conformance testing and approval of components
- Roll-out and operation
- Central coordination and communication hub for eHealth
- Today: 260 IT experts, application specialists and project managers
- CEO of gematik is Alexander Beyer
The German healthcare system

- General Practitioners
- Pharmacists
- Medical Specialists
- Dentists
- Patients /
  insured persons
- Hospitals
- Physicians Association
- Health Insurance
- Psychotherapists
- Medical Specialists
- Dentists
- Health Card (eHC)

- 118 Statutory Health Insurance Companies
- 90% (~70 Mio) Statutory Insured People
- 2,000 Hospitals
- 20,500 Pharmacies
- 217,000 GPs/Medical Specialists/Dentists
- 80.2 Million People
- 2,3 Million other Health Professionals
Interoperability of the Telematics Infrastructure

We build the data highway for the German healthcare system

The gematik is mandated by

- § 291a German Social Code Book V to create an interoperable and secure communication and information infrastructure for the electronic health insurance card (telematics infrastructure).

- § 291b SGB V to license the components and services of the telematics infrastructure. The gematik grants the authorization for the health telematics, after approved and successful testing. The gematik is testing the functionality and interoperability on the basis of publicly known and published testing criterias.
Architecture: Secure components, central services

Physicians, Dentists, Specialists, Pharmacists

Central services

Application services
Industry partners: public tenders, contractors
Roll-out: Phase I + Phase II

Testing phase of the initial applications (Phase I)
- Infrastructure, central services, secure access, cards
- Insurance data (eHC) online update
- Qualified electronic signature (HPC)
- Secure communication between health professionals

More applications (Phase II + ..)
- Link to healthcare data services
  - Electronic Case Records (ECR)
- Emergency data management
- Medication plan
- Organ donation declaration

Other projects / applications
- Telemedicine, electronic health record
- Standards repository for interoperability
Secure access to medical data: eHC + HPC
Secure communication: privacy, end-to-end encryption
Digital signatures: authenticity and integrity
Thank you! Any questions?

Christof Gessner

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## Medication plan for the patient

**Medikationsplan**

<table>
<thead>
<tr>
<th>Wirkstoff</th>
<th>Handelsname</th>
<th>Stärke</th>
<th>Form</th>
<th>Einheit</th>
<th>Hinweise</th>
<th>Grund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metoprolol</td>
<td>Metoprolol retard 144 mg/vial</td>
<td>55 mg</td>
<td>Tablel</td>
<td>1</td>
<td>0 0 0 Block</td>
<td>Hypertonus</td>
</tr>
<tr>
<td>Ramipril</td>
<td>Ramipril retard 2 mg/vial</td>
<td>0 mg</td>
<td>Tablel</td>
<td>1</td>
<td>0 0 0 Block</td>
<td>Bluthochdruck</td>
</tr>
<tr>
<td>Clopidogrel</td>
<td>Clopidogrel Zerviar</td>
<td>75 mg</td>
<td>Tablel</td>
<td>1</td>
<td>0 0 0 Block</td>
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<tr>
<td>Flavoprazol</td>
<td>Flavoprazol retard 40 mg/vial</td>
<td>20 mg</td>
<td>Tablel</td>
<td>1</td>
<td>0 0 0 Block</td>
<td>Bluthochdruck</td>
</tr>
<tr>
<td>Insulin aspari</td>
<td>Insulin aspari 20 U/ml</td>
<td>100</td>
<td>Tablel</td>
<td>0 20</td>
<td>0 0 0 Block</td>
<td>Diabetes</td>
</tr>
<tr>
<td>Simvastatin</td>
<td>Simvastatin retard 100 mg/vial</td>
<td>40 mg</td>
<td>Tablel</td>
<td>0 1</td>
<td>0 0 0 Block</td>
<td>Bluthochdruck</td>
</tr>
<tr>
<td>Etoracoril</td>
<td>Etoracoril retard 2 mg/vial</td>
<td>6 mg</td>
<td>Tablel</td>
<td>1</td>
<td>0 0 0 Block</td>
<td>Bluthochdruck</td>
</tr>
</tbody>
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**zu besonderen Zeiten einnehmende Medikamente**

<table>
<thead>
<tr>
<th>Wirkstoff</th>
<th>Handelsname</th>
<th>Stärke</th>
<th>Form</th>
<th>Einheit</th>
<th>Hinweise</th>
<th>Grund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorphenirmin</td>
<td>Chlorphenirmin TEVA®</td>
<td>250 mg</td>
<td>Tablel</td>
<td>10 St.</td>
<td>0 0 0 Block</td>
<td>Bronchitis</td>
</tr>
<tr>
<td>Methylsalazin</td>
<td>Methylsalazin retard 100 mg</td>
<td>10 mg</td>
<td>Tablel</td>
<td>100 St.</td>
<td>0 0 0 Block</td>
<td>Arthritis</td>
</tr>
<tr>
<td>Methylsalazin</td>
<td>Methylsalazin retard 100 mg</td>
<td>10 mg</td>
<td>Tablel</td>
<td>100 St.</td>
<td>0 0 0 Block</td>
<td>Arthritis</td>
</tr>
</tbody>
</table>

**Selbstmedikation**

<table>
<thead>
<tr>
<th>Wirkstoff</th>
<th>Handelsname</th>
<th>Stärke</th>
<th>Form</th>
<th>Einheit</th>
<th>Hinweise</th>
<th>Grund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myrox</td>
<td>Myrox retard 150 mg/vial</td>
<td>120 mg</td>
<td>Baps</td>
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</tr>
<tr>
<td>Johanniskraut</td>
<td>Johanniskraut retard 100 mg</td>
<td>800 mg</td>
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<td>Stimmung</td>
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<tr>
<td>Clonazepam HCI</td>
<td>Clonazepam HCI retard 100 mg</td>
<td>50 mg</td>
<td>Tablel</td>
<td>1</td>
<td>0 0 0 Block</td>
<td>Schlafstörungen</td>
</tr>
</tbody>
</table>

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Emergency data management

NFD
Notfalldatensatz
Notfallrelevante medizinische Informationen

DPE
Datensatz Persönliche Erklärungen
Hinweise auf den Aufbewahrungsort von Organspendeausweis, Patientenverfügung und Vorsorgevollmacht

Gesundheitskarte