

# Integrated Healthcare Information System

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# Agenda

- Healthcare challenges
- Ericsson addressing the challenges
- Integrated Healthcare Information System in Croatia
- Conclusion

# Healthcare Challenges



Healthcare divide

Increasing Health Care costs  
Demographic change  
Scarce Resources  
Chronic Diseases  
Adverse Events

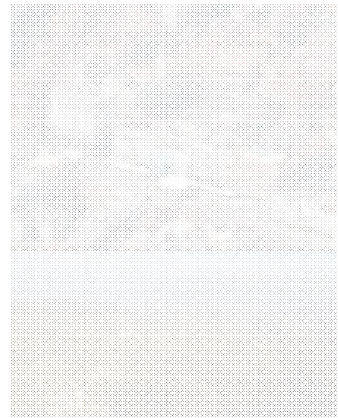


**Healthcare Systems Trends  
and Projections**



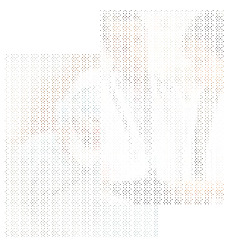
# Ericsson Addressing the Challenges

## Tools





Healthcare divide

Increasing Health Care costs  
Demographic change  
Scarce Resources  
Chronic Diseases  
Adverse Events



Healthcare Systems Trends and Projections

Increased no. of subscribers  
Fiber, VDSL2  
2G/GPRS/3G  
Gbyte HSPA  
>100 Mbit/s with LTE  
Multiple service support  
(Voice, broadband, TV...)



**Increased communication capabilities**



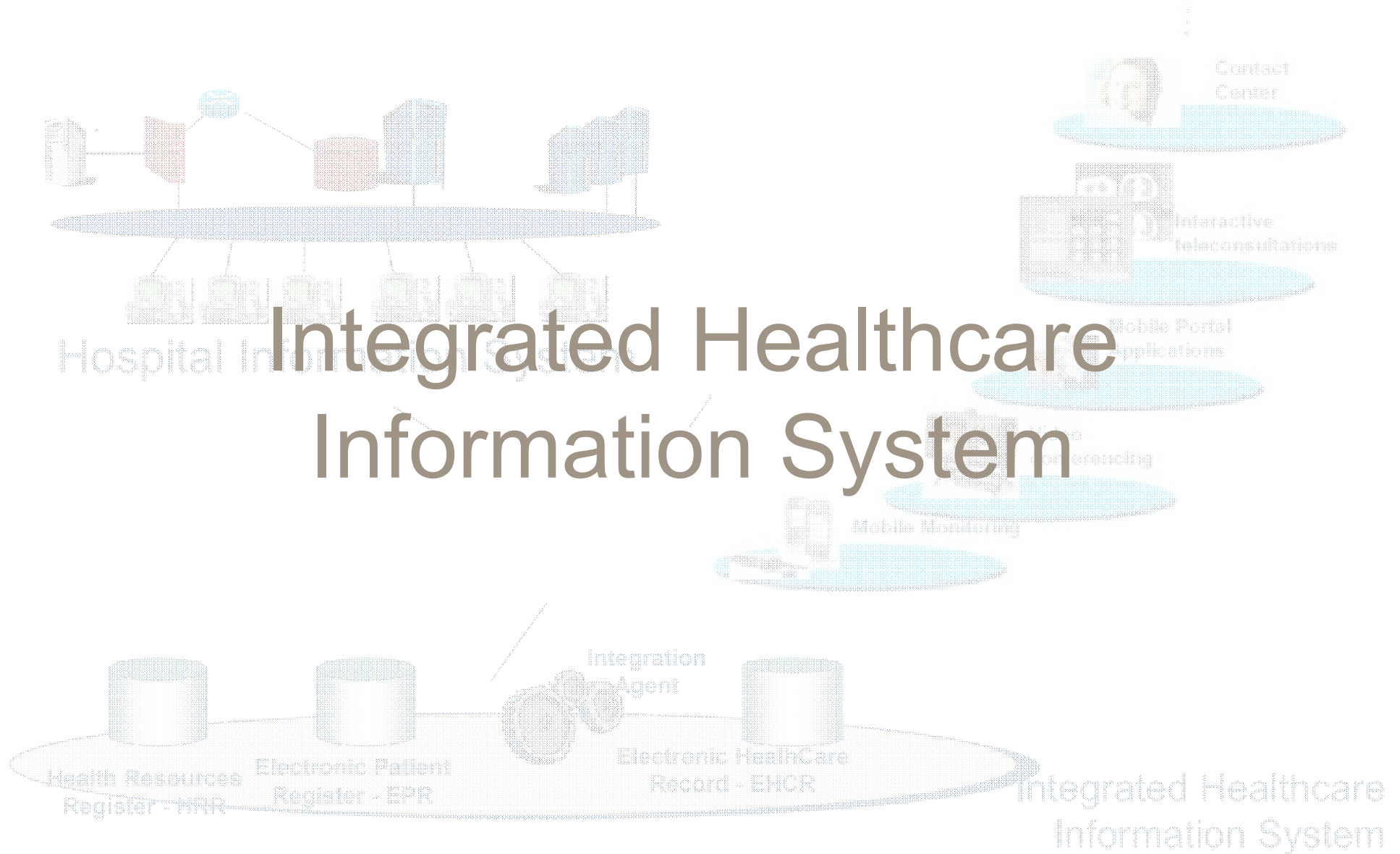
**Electronic Patient Records**  
**Healthcare collaboration**  
**Patient Registers**  
**Reporting and data communication**



Mobile Field Force  
Monitoring devices & sensors

**eHealth Services, Mobile Data and Remote Access**

# Integrated Healthcare Information System



# IHCIS Background - Tender

- An international tender for informatization of Primary health was issued by Ministry of Health on spring 2003
  - Strong competition: IBM, Microsoft...
  - Ericsson Nikola Tesla has successfully demonstrated proof of concept in pilot work with real physicians and patients
    - + 20000 patients,
    - ~ 10000 encounters.
  - Ericsson Nikola Tesla solution was the best
    - Highest marks on technical and functional merits
    - IHCIS was not the cheapest solution
    - World Bank consultants included in decision process
- Contract signed on autumn 2003

# IHCIS Goals & Services Overview

## Goals

- Provide help in healthcare system management
- Make primary healthcare (PHC) system role stronger
  - Most of the problems must be handled in PHC (70 - 80 % )
    - Better results (from medical perspective)
    - Dramatically lower costs comparing to hospitalization
    - Shorter admission waiting time
- Empower public health institutions
- Drug consumption optimization
- Physician and nurse working hours optimization
  - Paperwork reduction
- Improve overall healthcare system quality

## Services

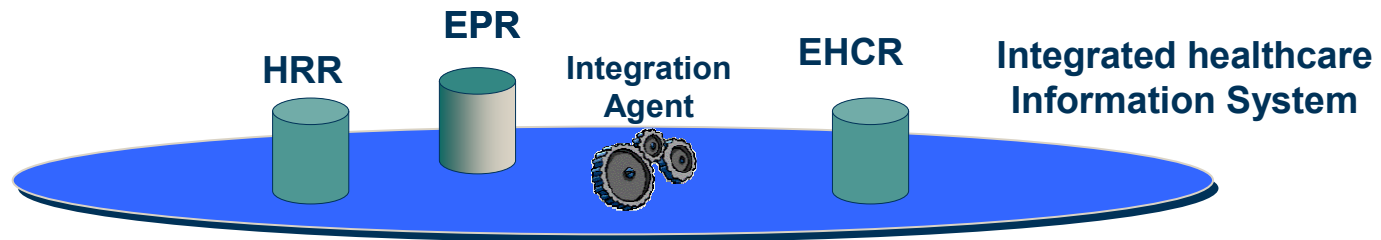
- Electronic Patient Records Management
- Public health reporting
  - Monitoring health trends (area, office, province or total population)
  - Emergency awareness with respect to: infections diseases, adverse reaction to drugs, increases in water born infections...
  - Diseases registries
- E – prescriptions & e - referrals
- Discharge letters & lab results
- Booking & Electronic claims
- Business intelligence
- Health insurance reporting
- Patient Administration
- Healthcare Resources Administration

# Integrated Healthcare Information System - IHCIS

- IHCIS is comprehensive ICT enterprise platform that can support various healthcare delivery processes
  - Open standards: HL7v3, CEN ENV 13606
  - Ultimate data security and privacy
- Being the platform, IHCIS makes building different healthcare services easy
  - **Physician application**, **e – booking**, mobile access to medical information (community nursing), mobile access to immunization record, medical documentation access (for doctors committee)...
  - Data mining, Business intelligence, Evidence based medicine (anonymous nation health record is available)
  - **Public health processes support**
  - **Health insurance processes support**

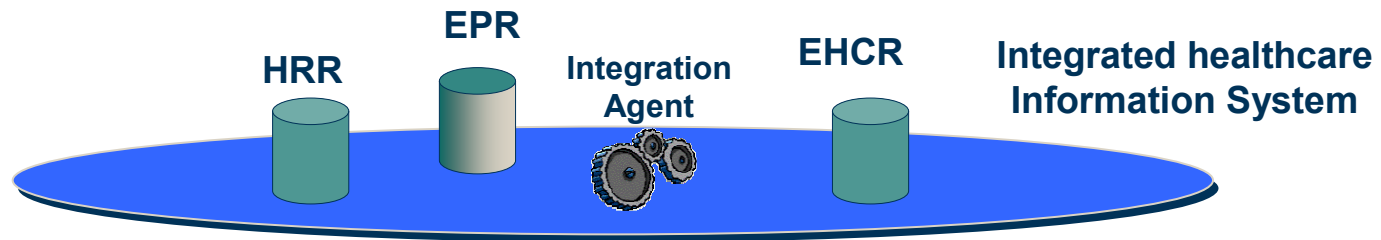


# Electronic Healthcare Record



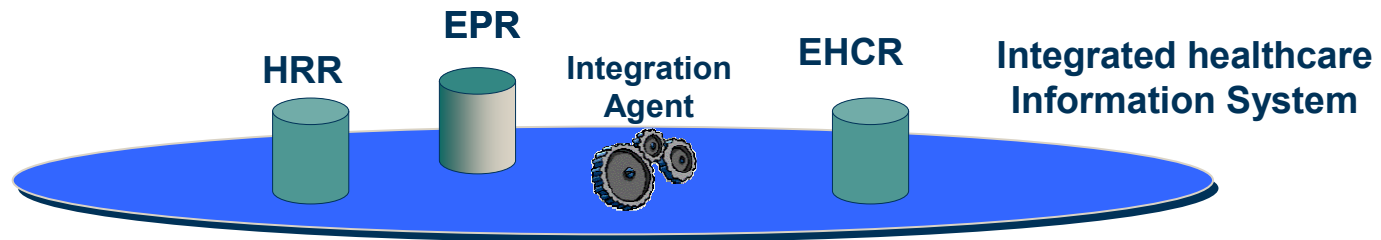
- Central system for patient's electronic healthcare records management
  - Comprehensive patient care record (anamnesis, allergies, diagnosis, medications, procedures, referrals)
  - International healthcare terminology (e.g. ICD10)
  - ENV 13606:2000 with HL7v3 standard

# Electronic Patient Record



- Patient data management
  - Patient demographics and administrative data
  - Health insurance information
  - Assigned physicians relationship management
  - User-friendly interface and platform independence
  - HL7v3 standard compliance

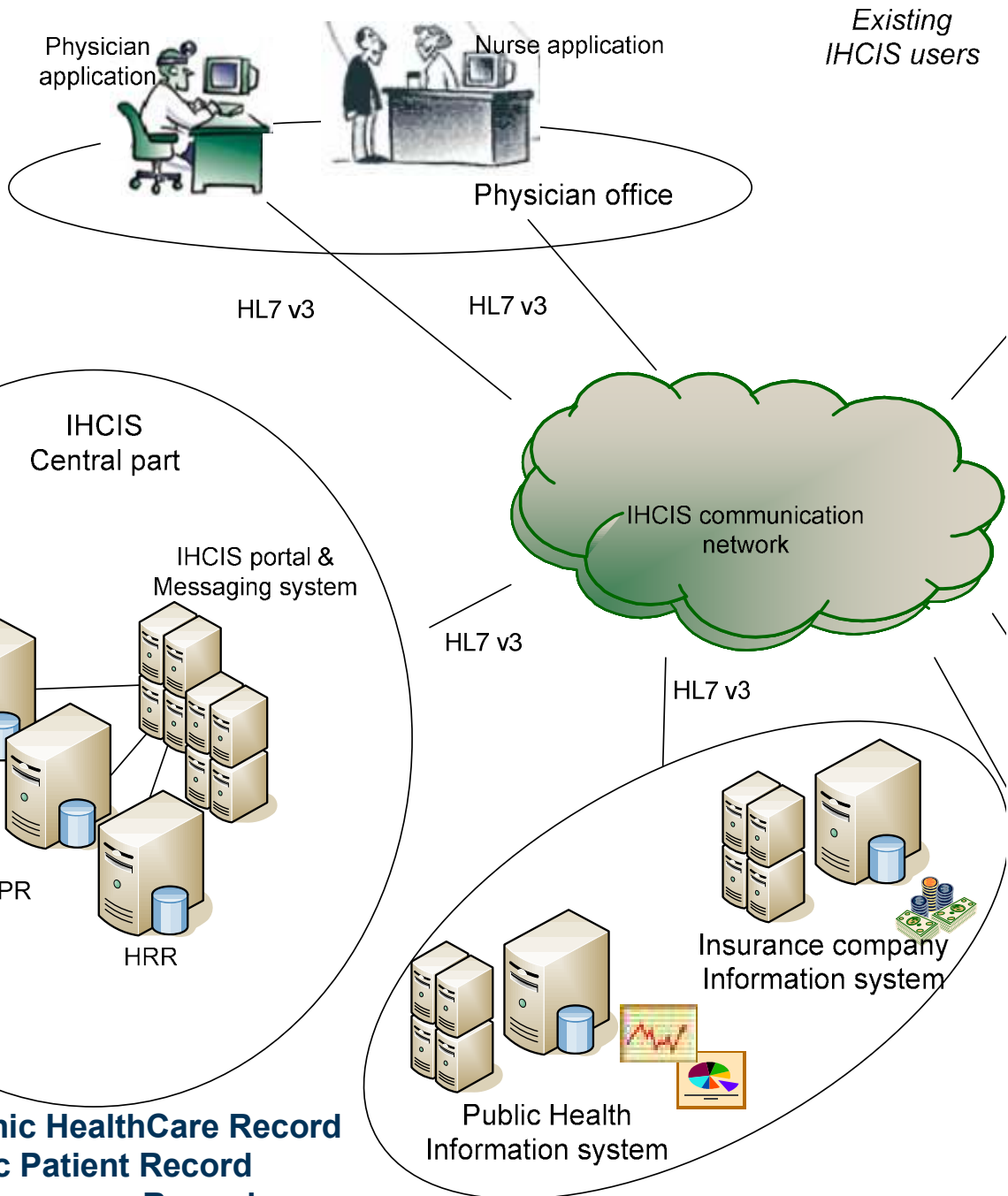
# Healthcare Resources Register



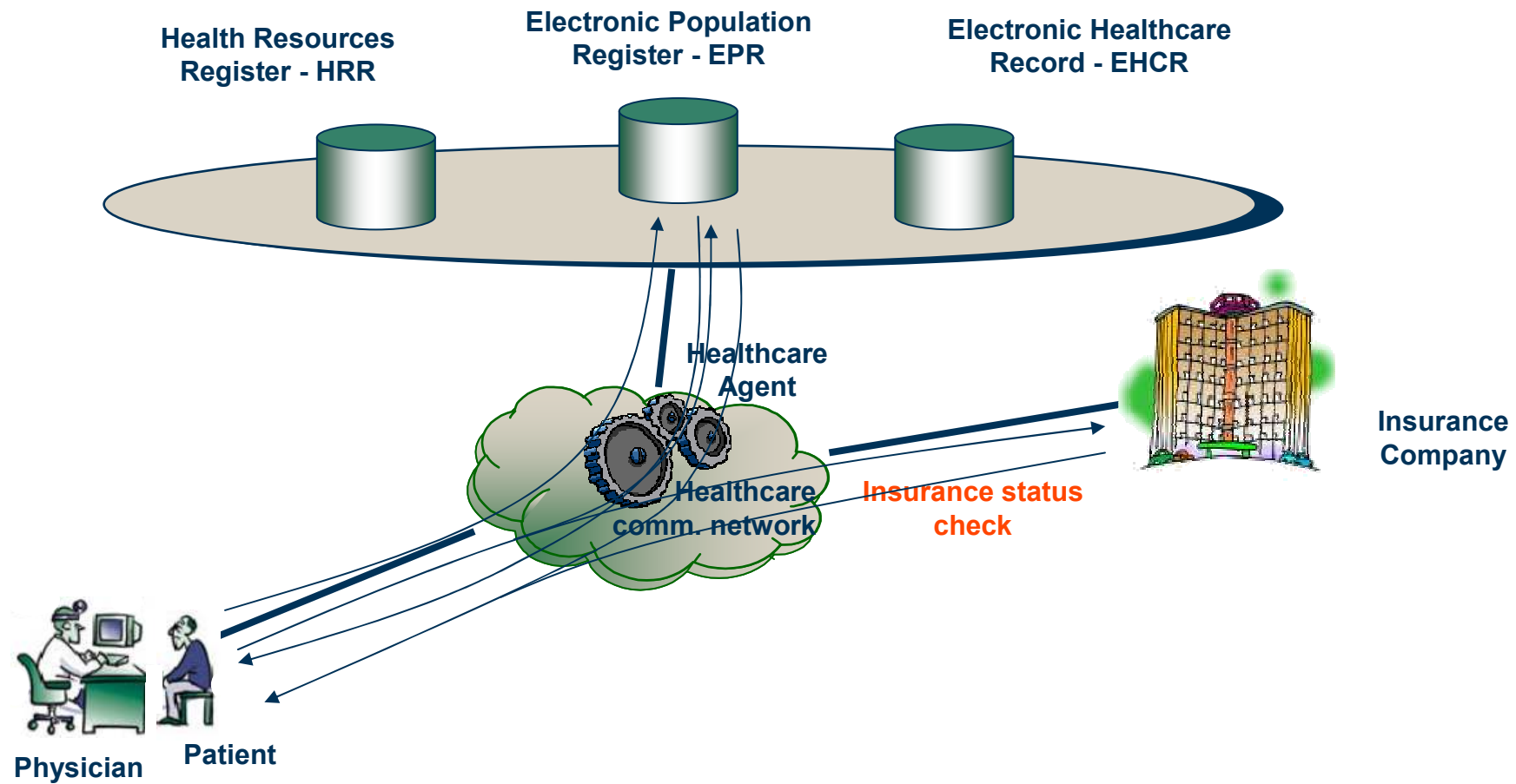
- Health resources data management
  - Health resources profiles - doctors, nurses, healthcare facilities, diagnostic devices, etc)
  - Access rights
  - License management (digital certificates)
  - User-friendly interface and platform independence
  - HL7v3 standard compliance

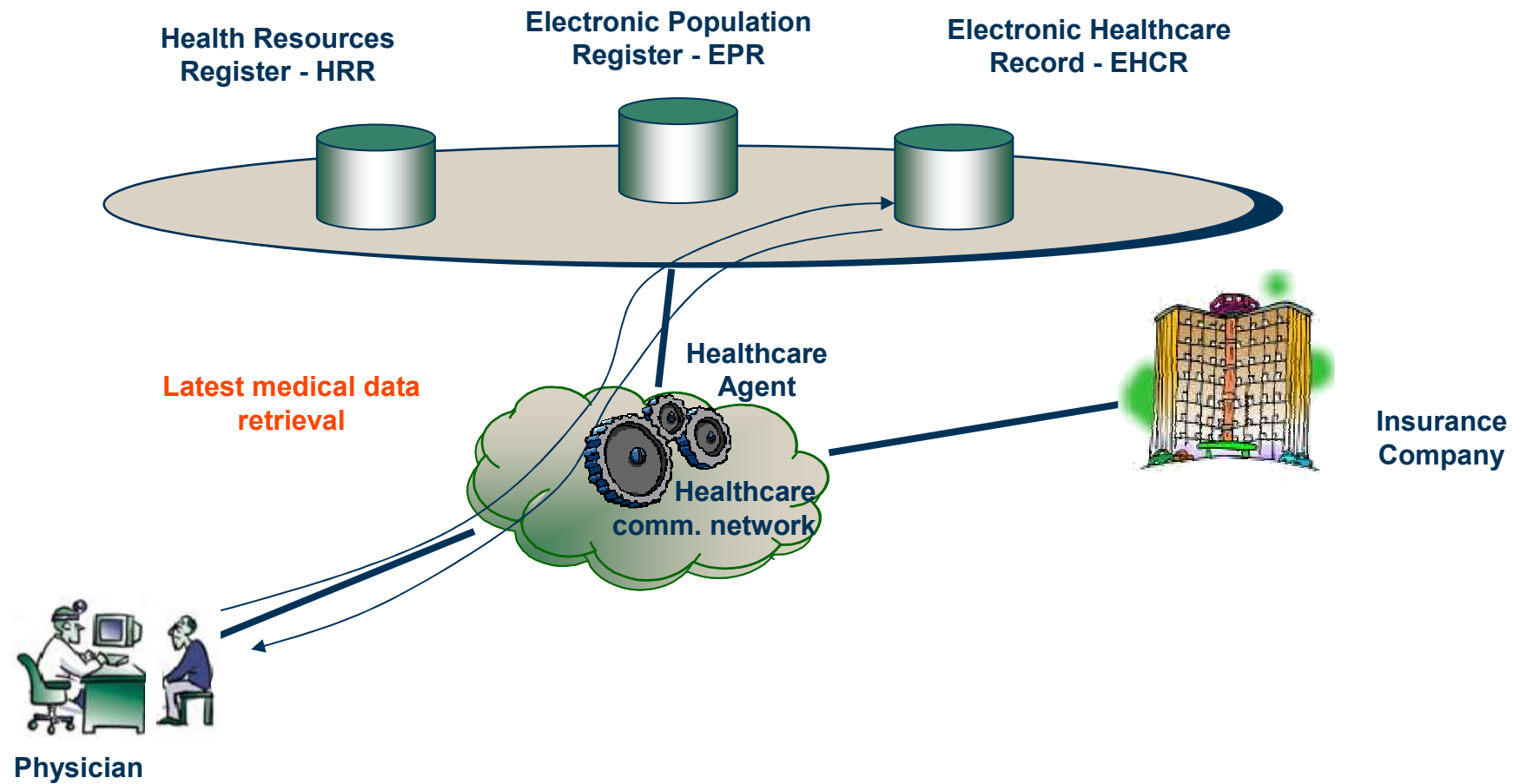
# IHCIS – Important facts

- **Distinctive features**
  - Nation – wide integration of all most important stakeholders in primary healthcare system
  - Complete coverage of most important business processes on primary healthcare level
  - System based on state-of-the-art standards
    - HL7v3 – ISO/ANSI (Clinical Data Exchange)
    - ENV 13606:2000 – CEN (Electronic Health Record)
  - Focus evenly distributed on medical, financial and management domain
- **IHCIS works**
  - Prime minister Mr. Sanader has officially opened the system on 20. February 2007
  - Over 2221 physician offices (of 2230 in total) already integrated



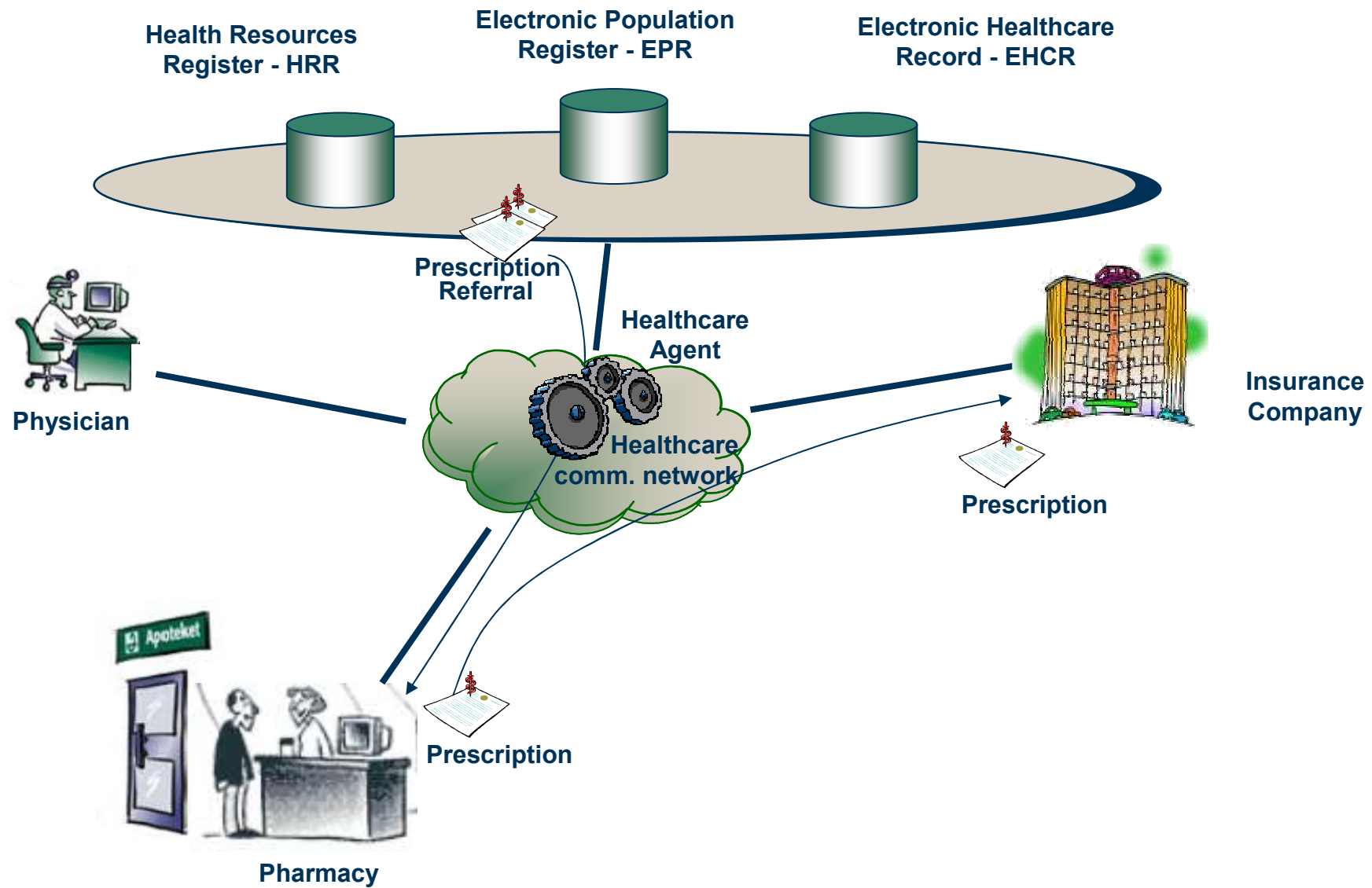
**EHCR – Electronic HealthCare Record**  
**EPR – Electronic Patient Record**  
**HRR – Health Resources Record**

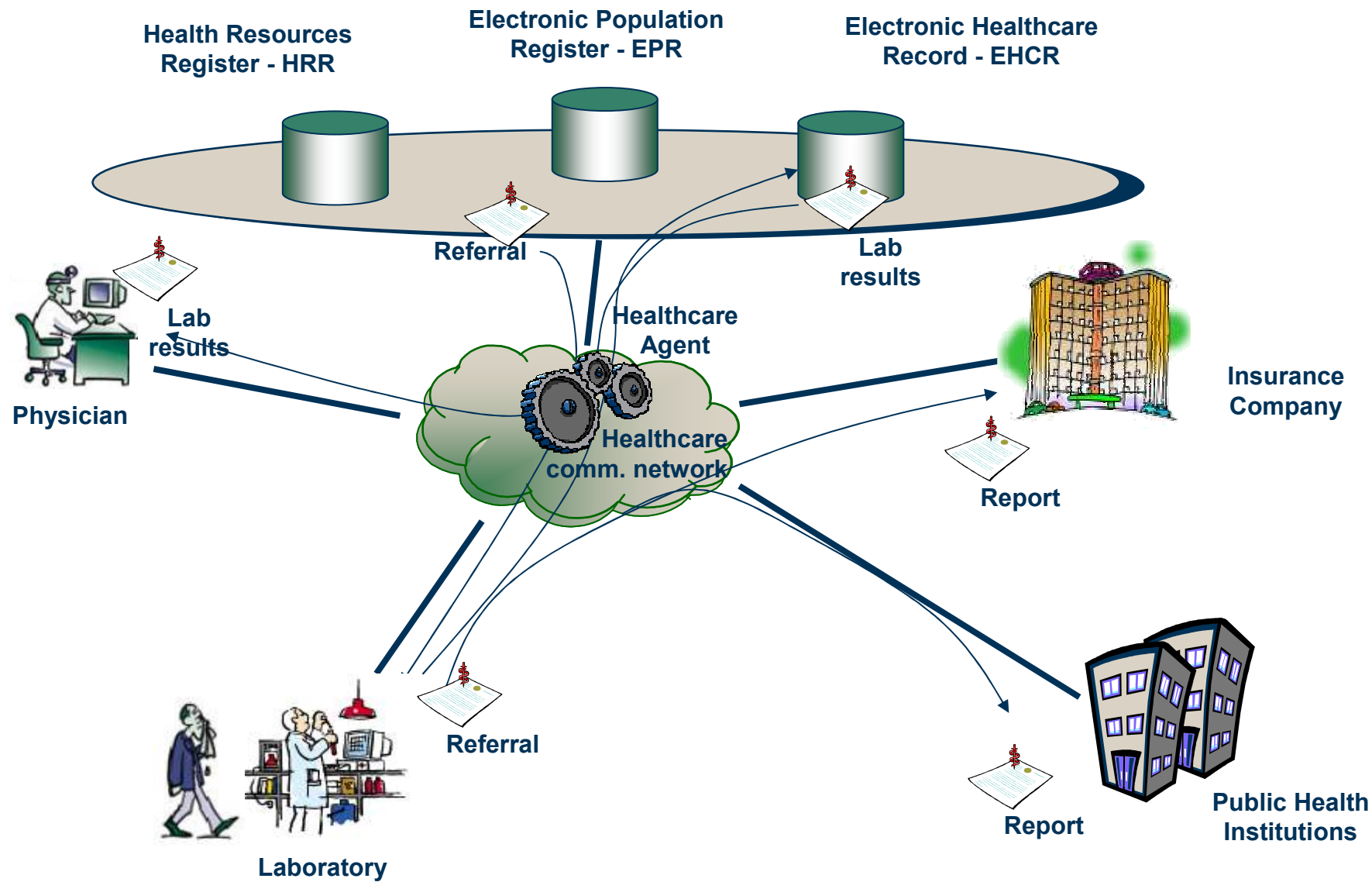




Physician enters only medical data  
All the reports are generated automatically



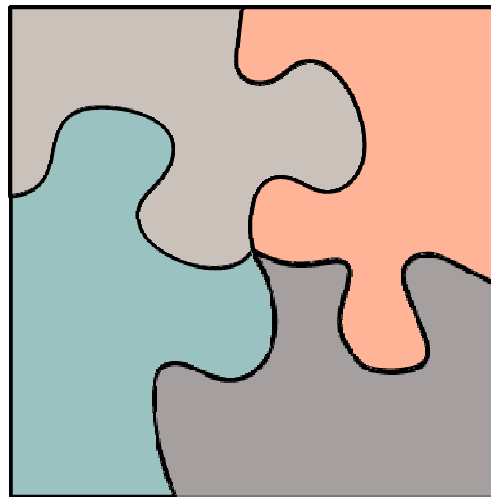




# Integrated Healthcare IS

## *Benefits*

**Structured view and creation of the health solution**



**Immediate and continuous information availability**

Controlled and focused actions

*Health campaigns for prevention*

*Controllable care system*

**Continuous predictability**

*Population health care*

*Drugs*

*Investments*

**Efficient resource utilization**

**Organizational efficiency and control**

**Improved Healthcare provision quality**

# Contact Information

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