5G supporting future Preparedness and Resilience in Healthcare
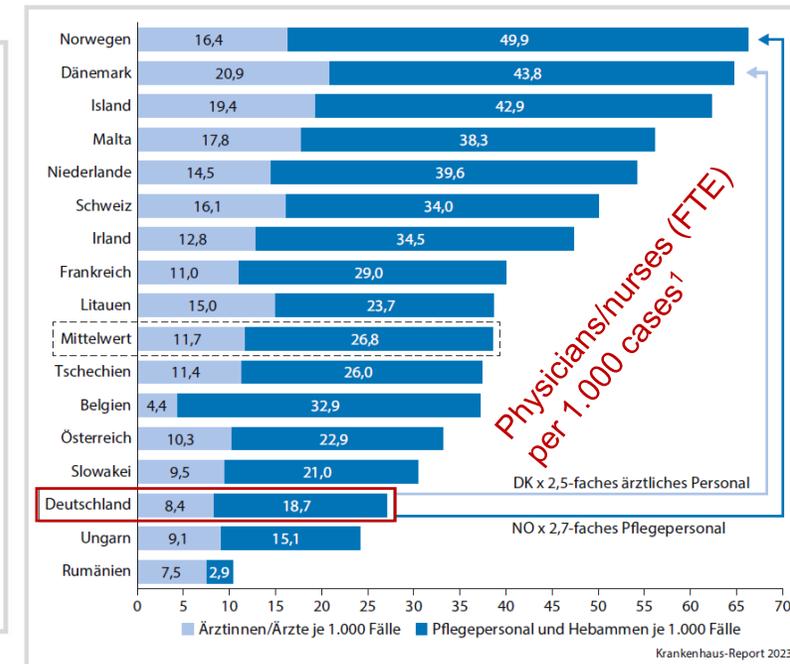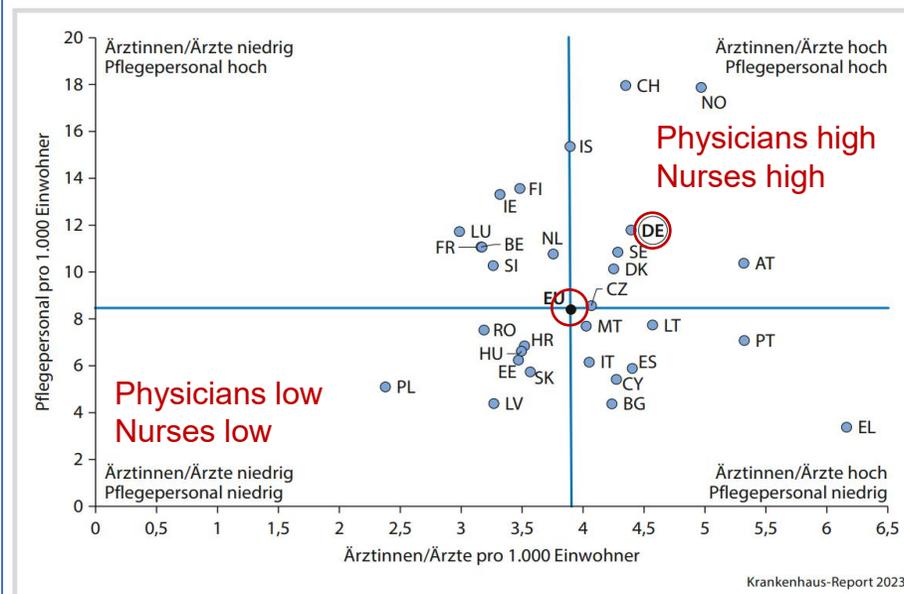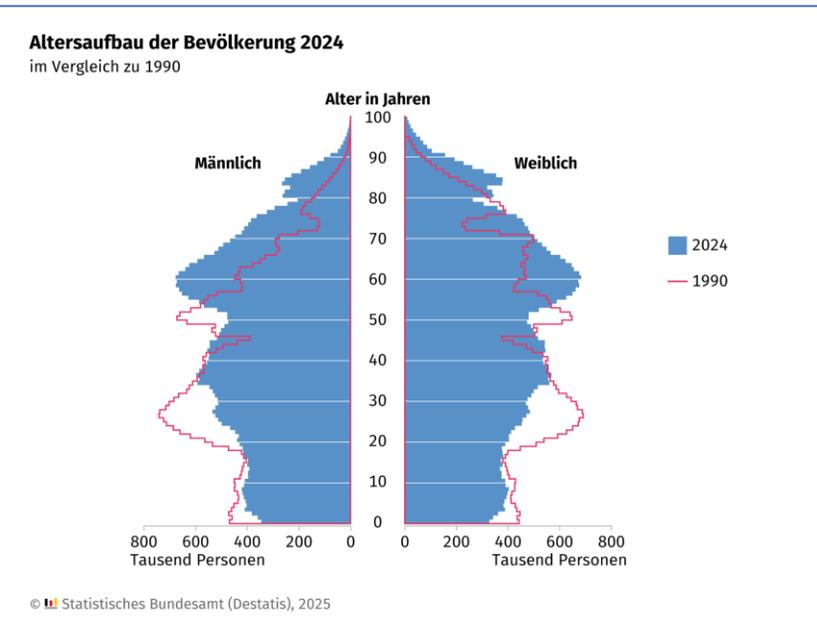
5GSC
2026 Healthcare Working Group

T. Weber

12.02.2026

Current situation of the German healthcare system

- **Demographic shift** towards an aging society
- **Imbalance** between high personnel costs, shortage of healthcare professionals' and high workload
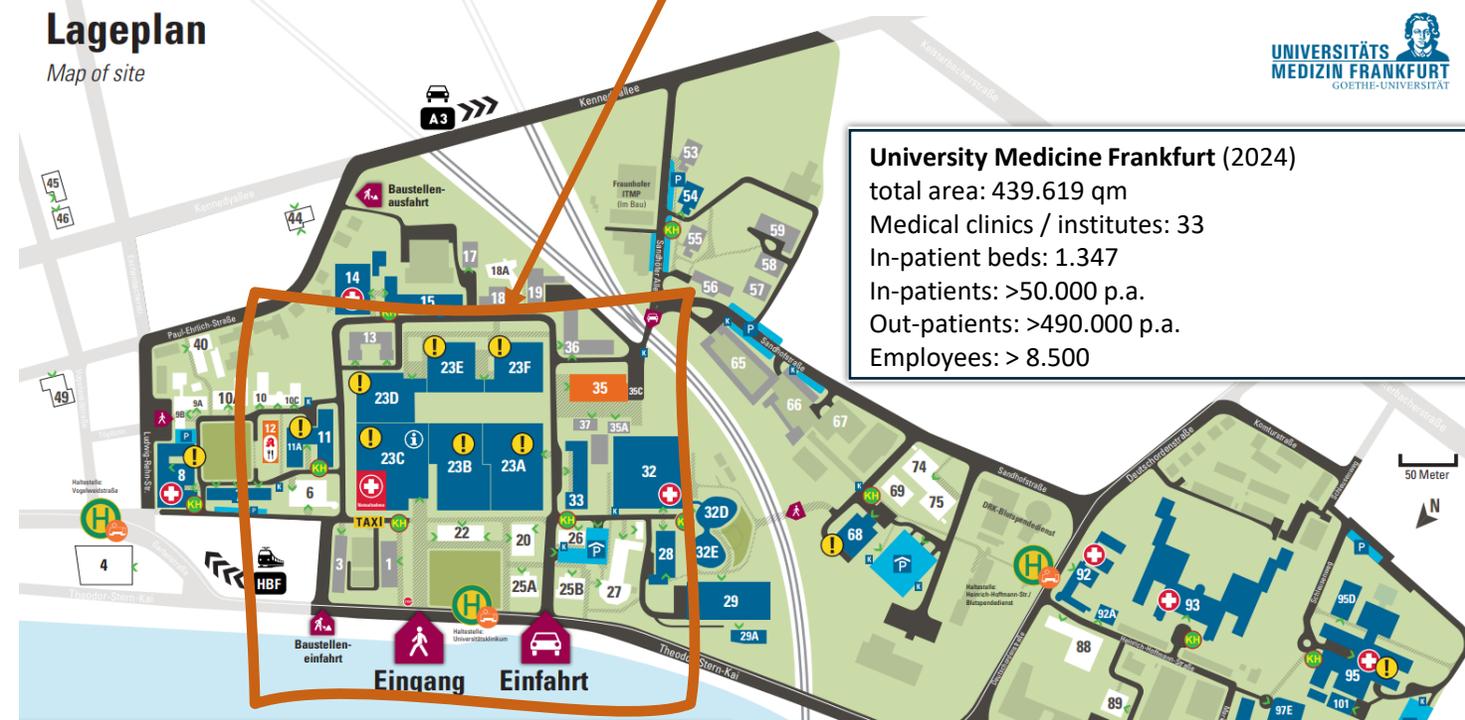
Demographic structure of Germany´s population

5G for University Hospital (5G4UH) – key facts

- The goal: implementing a 5G infrastructure as redundant & secure highspeed network for medical data

- Call: Connecting Europe Facility CEF-DIG-2021-5GSMARTCOM

- Partners: University Hospital Frankfurt (UKF) & Vodafone

- Project duration: 01/2023 – 12/2025

- Funding: 3,3 Mio.€ (88% Vodafone; 12% UKF)

Encapsulated 5G network

Lageplan
Map of site

University Medicine Frankfurt (2024)
total area: 439.619 qm
Medical clinics / institutes: 33
In-patient beds: 1.347
In-patients: >50.000 p.a.
Out-patients: >490.000 p.a.
Employees: > 8.500

5G4UH as an enabler for healthcare resilience - Implemented medical use cases -

- **Real-time teleconsultations (TELEHEART)**
  - images and video telephony directly at the bedside
  - location-independent access to the electronic health record (EHR)
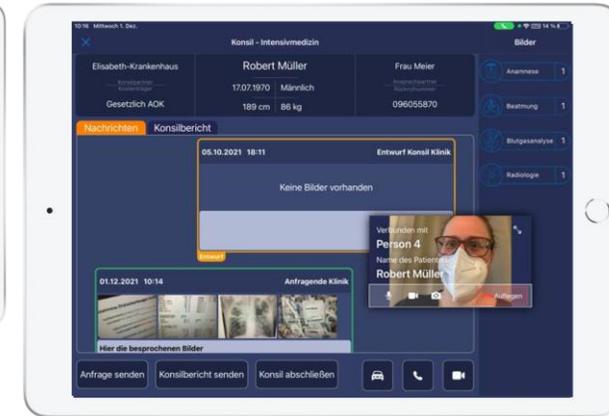
- **Real-time teleconsultations (LUMIFY)**
  - Real-time exchange of ultrasound images between medical professionals
  - On time diagnosis
  - Second expert opinion

University Center for Digital Healthcare

5G4UH as an enabler for healthcare resilience
- Blueprint for further implementations -

5G inherent potential (examples)

- Redundant high-performance networks
- New patient care concepts – e.g. long-term ECG
- Telemedicine – diagnosis e.g. mobil 5G ultrasound
- Video consultation - decentralized and more effective use of resources
- Collaboration between healthcare providers
- Home care monitoring (outpatient ward)
- Patient & medical device tracking
- Emergency alerting (rescue & resuscitation team)

5G supports initiatives aiming to:

- Hospital digitalization: German *Hospital Future Act (KHZG)* or *NextGenerationEU*
- Quality improvement & regional care networks: German *Hospital Care Improvement Act (KHVVG)*

Image created with copilot 08/02/26