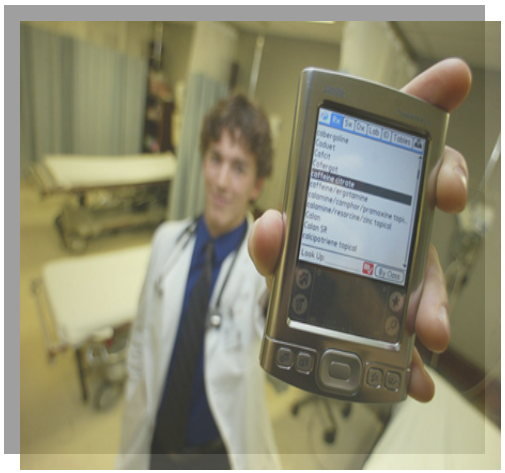
# Vision for Health Care Connectivity:
## *Broadband at the Point of Care*

**FCC: Healthcare Broadband Workshop**

**John Clarey, Chairman**
**National Medical Wireless Broadband Alliance**

*September 15, 2009*

# NMWBA: Who We Are



- Formed to provide high-speed wireless broadband access for nurses, doctors, healthcare and public safety workers, health IT specialists, patients and the communities they serve.
- Consists of more than 100 member hospitals nationwide, and growing.
- Focused on developing wireless broadband solutions via open access middle mile infrastructure.
- Management Team has extensive track record in deploying state-of-the-art, in-building wireless broadband systems.

# Challenge: Overcoming Broadband 'Chokepoints'

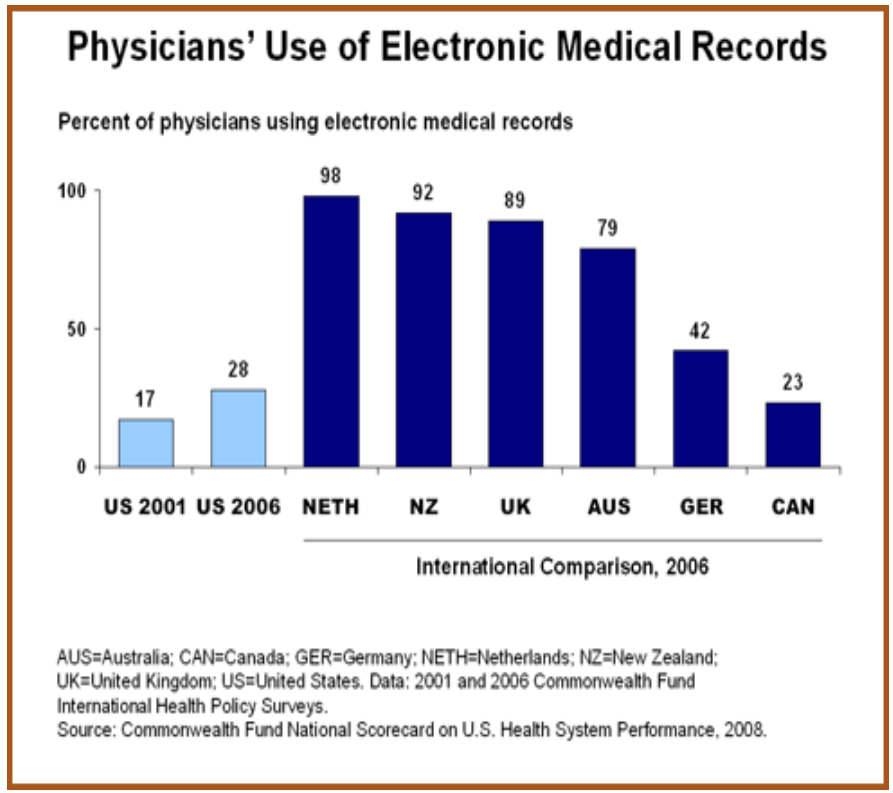
**Challenge**: Closed wireless systems in hospitals act as a choke-point to developing and using innovative technologies for patient care.

**Impact**: In-building chokepoints limit broadband adoption in hospitals and act as hurdles to:

- Cost savings
- Technology innovation
- Interconnectivity, upgradeability.

**Solution**: Technology-neutral, open access wireless broadband systems enable any wireless device in each facility to access any other wireless networks.

- Wireless middle mile is only way realistically to quickly upgrade existing hospital infrastructure.



# Open Wireless Access Changes the Technology Paradigm

Open access platforms depart from an investment cycle in proprietary wireless systems that do not work across multiple technologies, networks and applications.

- These systems also do not allow connectivity within or across health care facilities.

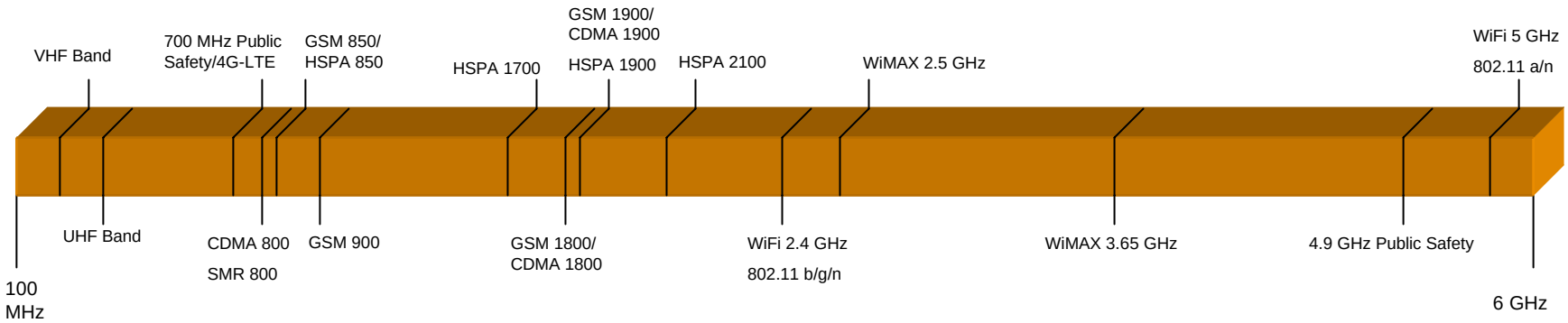
Middle mile solutions for wireless broadband provide a critical connection between diverse wireless systems, technologies and devices and in-building hospital applications.

- With technology-neutral platforms, health care providers do not carry new burdens of technology risk.
- Open platforms build a common broadband pipe to foster technology innovation in wireless medical applications.

# Wireless Connectivity

The following frequencies are used in hospitals in the US.

To ensure patient safety and maximize healthcare, all frequencies must have adequate signal strength throughout the facility.




- VHF Band = Public Safety, In-house Radios, Security Systems
- UHF Band = Public Safety, In-house Radios, Security Systems
- 700 MHz Narrowband = Public Safety Voice
- LTE 700 = Verizon (2009-10), AT&T (2010-2011), Public Safety Broadband
- CDMA 800/1800/1900 = Verizon, Sprint
- GSM/UMTS/HSPA 850/900/1700/1800/1900/2100 = T-Mobile, AT&T
- SMR IDEN 800 = Nextel
- WiMAX 2.5 GHz = Clearwire

# Open Access Changes Funding Paradigm

**"Our recovery plan will invest in electronic health records and new technology that will reduce errors, bring down costs, ensure privacy, and save lives."**

*President Obama, February 24, 2009, speech to Joint Session of Congress*

- In the past, hospitals installed 'a la carte' systems because they were subsidized by service providers.
- How much public funding is needed to facilitate this paradigm shift…depends on how quickly deployment happens.
  - Hospitals are in the business of providing health care, not telecom and IT, so funding options for broadband are limited.

The Alliance's open access approach addresses challenge of how hospitals build wireless broadband platforms.

- Interconnected and scalable
- Cost-effective: Platform is hospital-centric, not service-provider-centric.
- Fast:  Enables rapid deployment of new services
- Innovation-focused: Expedites adoption and use of electronic health records by health care providers within hospitals.

# Way Forward: Benefits of Wireless Broadband

- Remote pharmacy medical administration (tracking/accessing patient records);
- Remote EKG systems (quick reporting capabilities);
- Physician portals;
- Promotion of wireless innovation for end user devices and use of telemedicine.
- Public safety communications to and within health care facilities;
- Better network reliability and redundancy.