

Collaborating to Develop a Rural Electronic Health Record

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Presentation Overview

- Special Considerations in Rural Areas
- Defining a Rural EHR
- Promoting a Rural EHR
- Regional Example
- Lessons Learned

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Special Considerations

- Health care providers contributing to EHR may be dispersed over a wide geographic area
- Often limited interaction between primary care providers and specialists
- Technology capabilities vary widely between clinics
- Patient identifiers are critical

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Defining a Rural EHR

- Driven by type of care delivered in rural areas
- Frequently primary care focused
 - Demographics
 - Visit histories
 - Test results
- Requires ability to incorporate data from specialists
- Must be easy and inexpensive to acquire, run and support

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Promoting a Rural EHR

- Promote collaboration
- Identify logical locus of health care activity for rural communities
- Identify existing patterns of care
- Identify relationships between rural primary care providers and urban specialists
- Promote rural EHR as mechanism to enhance existing relationships and patterns of care

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Example

**Regional Collaboration
to Establish a Rural
EHR**

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INHS is a not-for-profit 501(c)3 corporation, owned by the hospitals in Spokane and serving residents of WA, ID, MT, OR and Canada. We facilitate clinical care by:

- Improving clinical outcomes through information access and integrated clinical systems for physicians, hospitals, clinics and other health providers
- Acting as the “trusted party” and secure custodian for the regional clinical data repository and a community-wide electronic medical record
- Maintaining strict data structures and standardization to insure ability to share and compare data
- Leveraging collaborative assets to control costs and provide high levels of expertise using shared resources
- Utilizing advanced systems to increase patient safety

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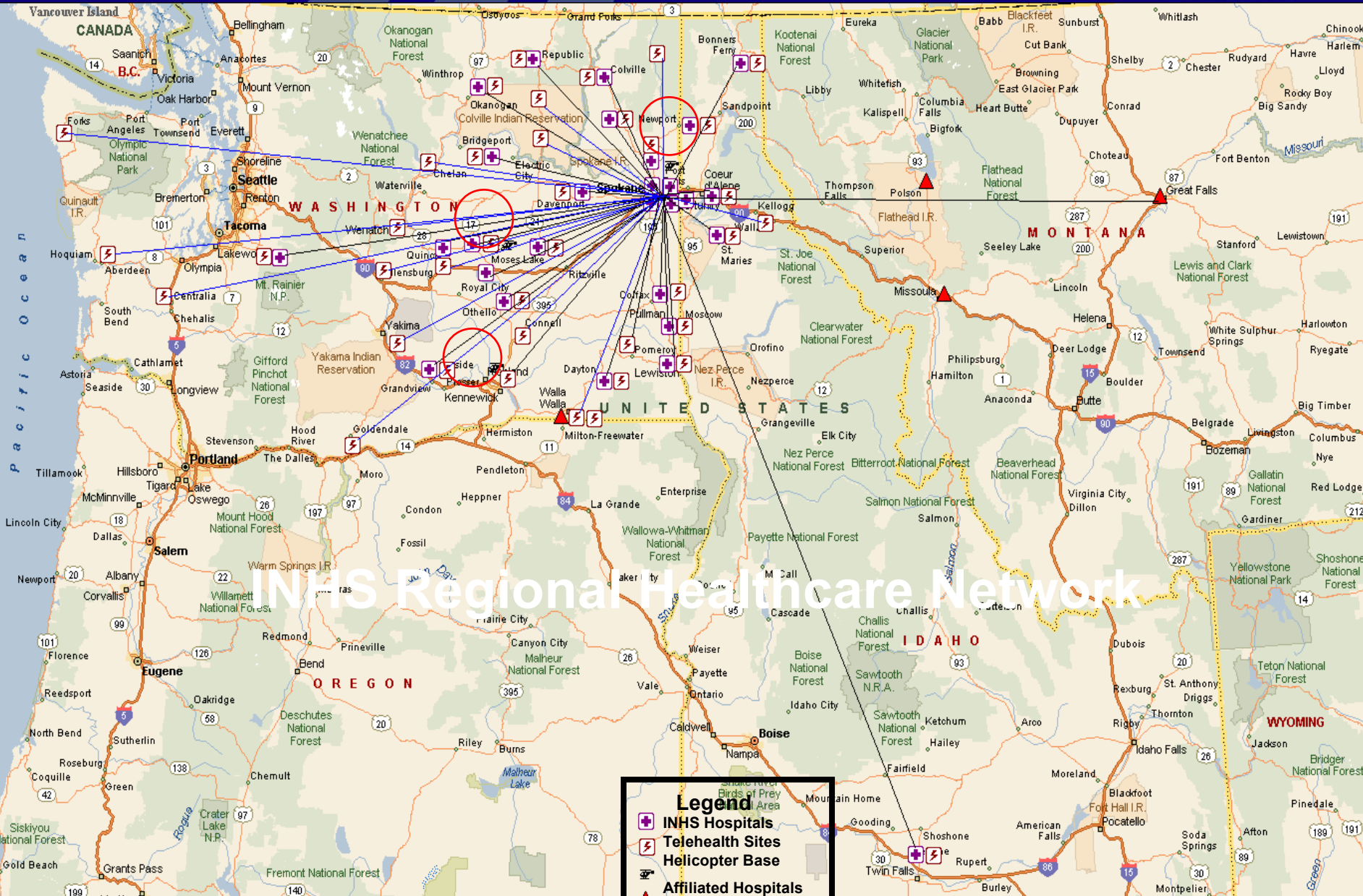
The INHS Case Study

- We established a regional Master Patient Index standard that has allowed us to gather and distribute patient data to the caregivers in our region
- We established standard data sets, allowing comparison of clinical data and enhancing the longitudinal patient record
- We created a regional integrated information system that connects hospitals and clinics, providing a community Electronic Medical Record
- We connected Physicians throughout the region, directly in their offices and wirelessly within our hospitals, providing relevant clinical data when and where they need it
- We enhanced care in rural areas by connecting residents and clinicians to specialists through an extensive regional telemedicine network

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INHS Regional Healthcare Network



Scope of System

- 32 hospitals, with over 2500 beds, participating in the integrated information system
- More than 20 clinics receiving hospital, laboratory and imaging data via standard electronic messages
- More than 200 offices able to view hospital, laboratory and imaging data via a virtual private network.
- More than 500 physicians accessing patient records wirelessly in hospitals via personal digital assistants
- 55 hospitals, clinics and public health agencies connected to the region's telemedicine network

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Electronic Medical Record

- A common Electronic Medical Record system operates in all participating hospitals and clinics, providing one standardized clinical data structure and presentation
 - **Visit Histories**
 - **Cumulative Laboratory results**
 - **Radiology exam profile/reports**
 - **Transcription reports including e-Sign**
 - **Patient Demographics**
 - **Computerized Physician Order Entry**
- Each patient has a unique Master Patient Index (MPI) – one number, one regional record – currently 2, 601, 900 records in the system

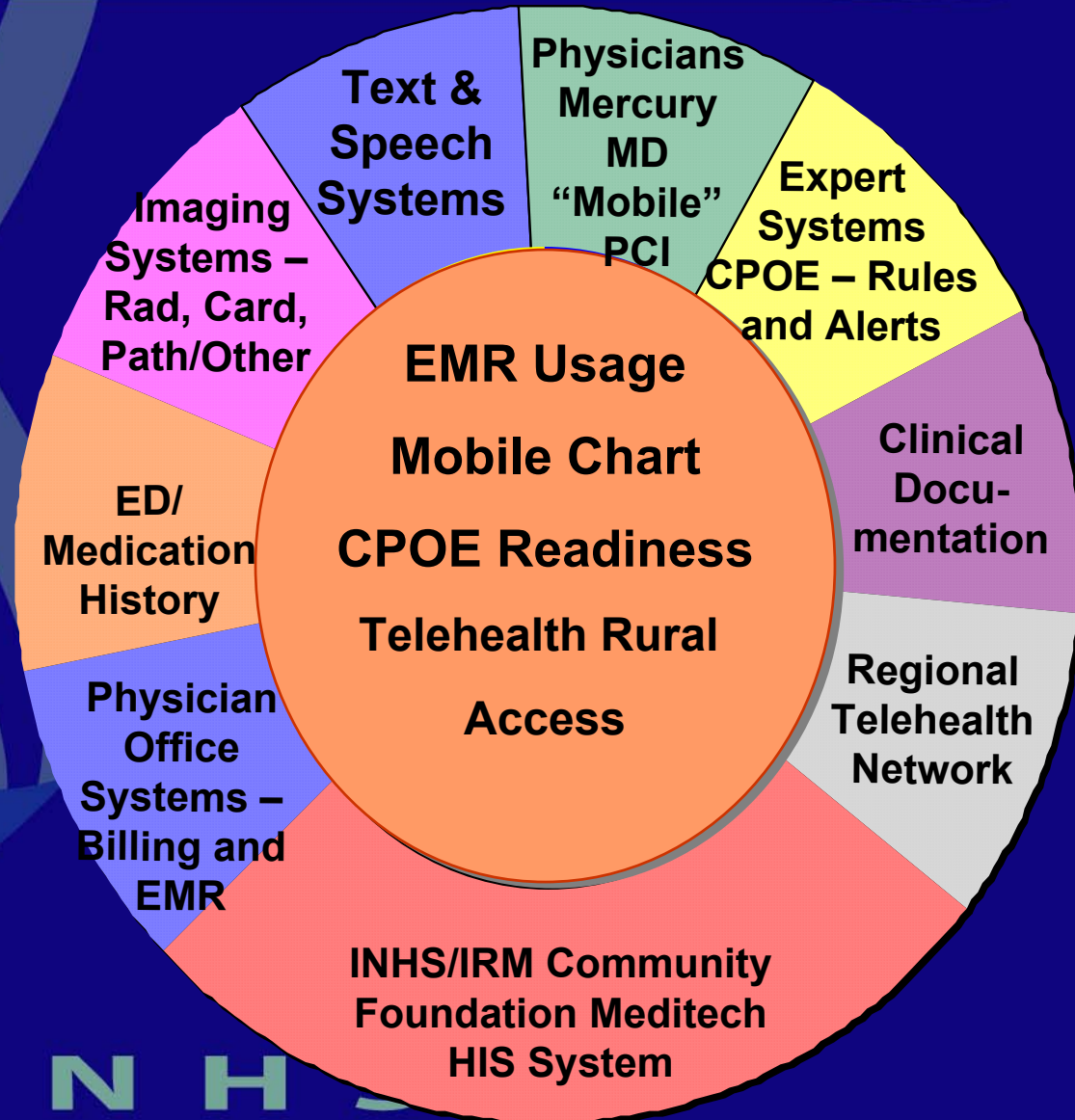
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Clinical System Usage and Strategy

The integrated information system and common MPI gives the region a foundation for innovative tools, including:

- Computerized Physician Order Entry (CPOE)
- Clinical Documentation Systems for Nursing Notes
- Decision-Support Tools
- Anywhere, Anytime Physician Access to Images
- Remote Consultations and Support for Rural Residents



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INHS Telemedicine System

- Nursing courses and education with universities and community colleges addressing Nursing Shortages
- Rural hospital TelePharmacy program providing remote Pharmacist services
- TeleER program assisting rural trauma doctors with ER cases remotely
- Physicians provide remote Clinical Consults in Neurology, Pathology, Psychiatric services, and many other areas
- Prison Based Health Services receive specialist care
- Statewide Diabetes Education Program Including Native American Tribes

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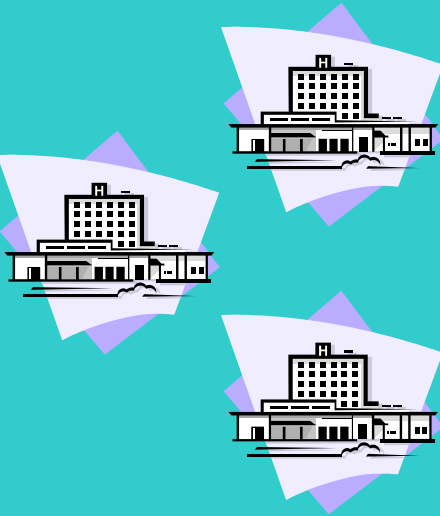
How INHS Promoted Rural EHR

- Rural hospitals recognized that through collaboration they could save money
- Hospitals serve as the locus of health care activity in many rural communities
- In rural communities there is often one hospital, one or two clinics, and a few independent physicians. The majority of care is delivered between these groups.
- Primary care providers refer patients to specialists in nearby larger towns or cities
- Because the hospitals and the urban specialists are sharing information, rural clinics and providers become more willing to utilize EHRs that will give them better access to information

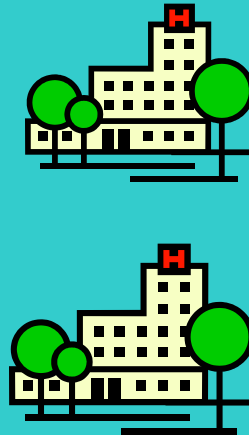
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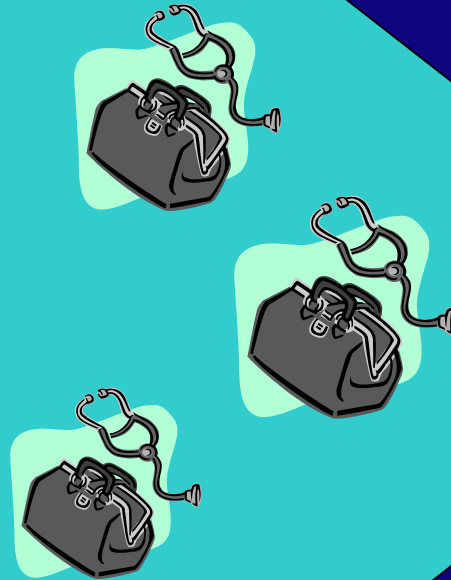
Trends in EHR Adoption



Urban Hospitals



Rural Hospitals



Rural Physicians

Increasing Connectivity Increases Value in Being Connected

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Benefits of Regional Approach

- Patient care is improved through better availability of more complete medical records at all points of care
- Medical errors are decreased through use of innovative technology including bar-coded medication verification and electronic nursing documentation
- Rural health care is enhanced and health personnel shortages addressed through video and data connectivity to regional experts
- Hospital operation is more efficient through integrated billing and clinical information systems
- Overall health system savings are achieved through creative use of shared services and resources

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Obstacles and Challenges

- Current funding model relies significantly on INHS sponsors
- Limited funds from rural hospitals slows their adoption of key clinical systems
- Minimal physician office automation has slowed the longitudinal EHR
- Lack of healthcare industry data standards for clinical data exchange

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Lessons Learned

- Someone has to get the collaboration started, including seed money.
- Collaborations must be based on real business needs of all participants.
- EHRs must meet business needs as well as patient care needs.
- Focus on developing a critical mass of EHR users in a community.
- If you build it, they will come.

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Thank You

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