

# 24/7 Pharmacist Coverage for Rural Minnesota Hospitals: Health Information Technology Demonstration Project

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# Evaluation Team



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# Presentation Outline

- Needs Assessment
- Problem Statement
- Project Goals
- SISU Network and EMR platform
- Description of Project
- Securing Funding
- Evaluating the Project
- Preliminary Results
- Summary



## Needs

- Institute of Medicine reports on patient safety related to medication process (in rural hospitals as well)
- JCAHO pharmacy standards for Community Access Hospitals (CAHs) and National Patient Safety Goals
- Northeast Minnesota CAHs lack 24/7 pharmacist coverage
- Relief pharmacists unavailable



# Problem Statement

**How can around-the-clock access to pharmacist expertise be provided at small hospitals in geographically remote rural communities...**

**... without burning out the hospital's existing pharmacist?**



## Project Goals

- **Goal:** Provide CAHs with around-the-clock access to pharmacist expertise
- **Objectives:**
  - Utilize telepharmacy technology to connect pharmacy operations of CAHs to a 24/7 hub pharmacy
  - Hire “circuit rider” pharmacist to provide on-site vacation relief coverage to CAHs




# SISU Network & EMR Platform

- **“Sisu”**

- A unique Finnish concept – no direct translation
- Roughly describes special strength and stubborn determination to continue and overcome in the moment of adversity
- Combination of stamina, courage, and obstinacy held in reserve for hard times

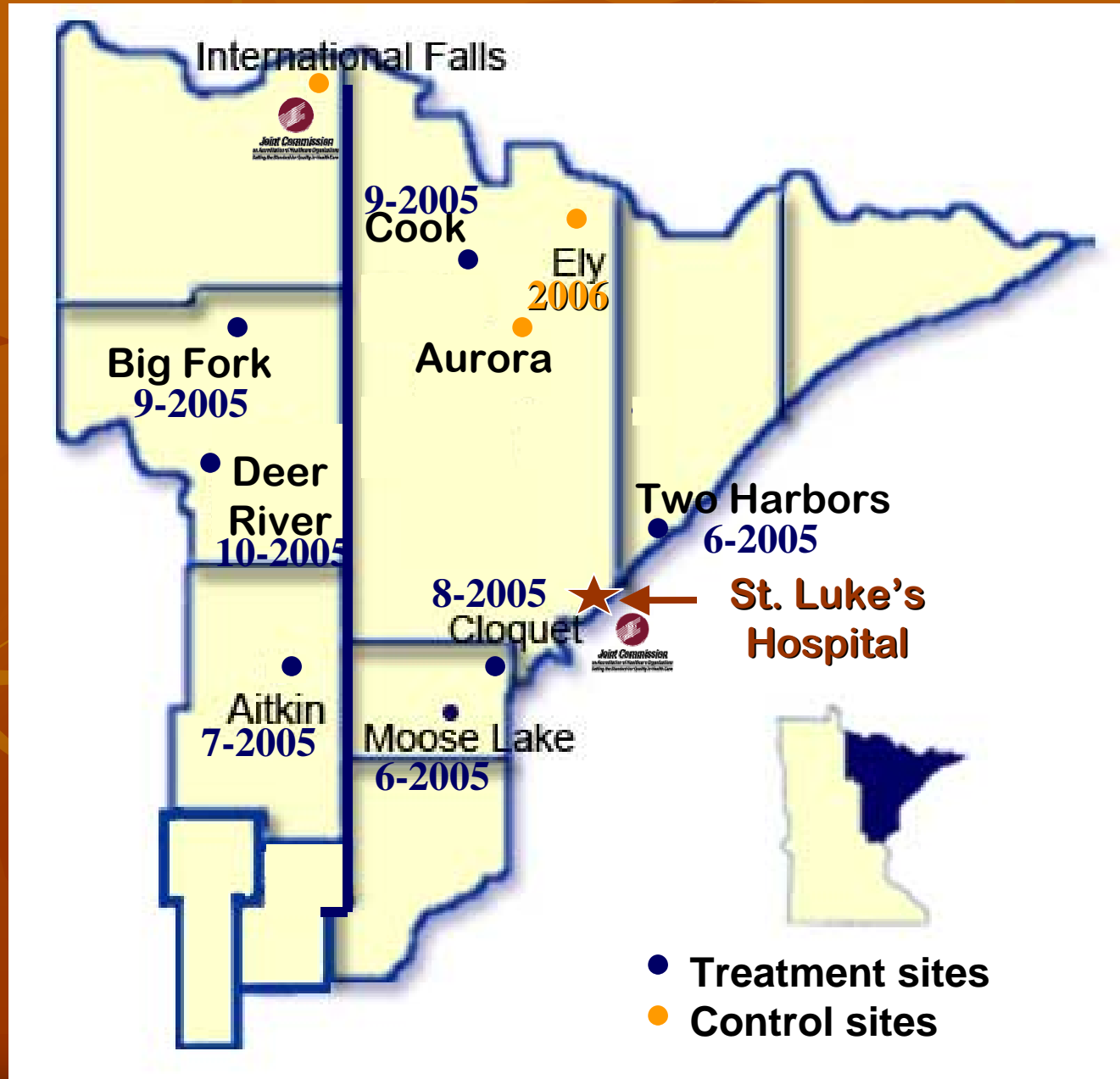
- **SISU Medical Systems:**

 Consortium of medical centers in Northern Minnesota (1982) incorporated as 501(e) nonprofit (1997) working together to share information technology resources

 Uses Meditech to provide technology solutions to its members



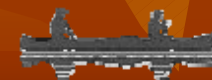
# Rural Telepharmacy



# HIT It!

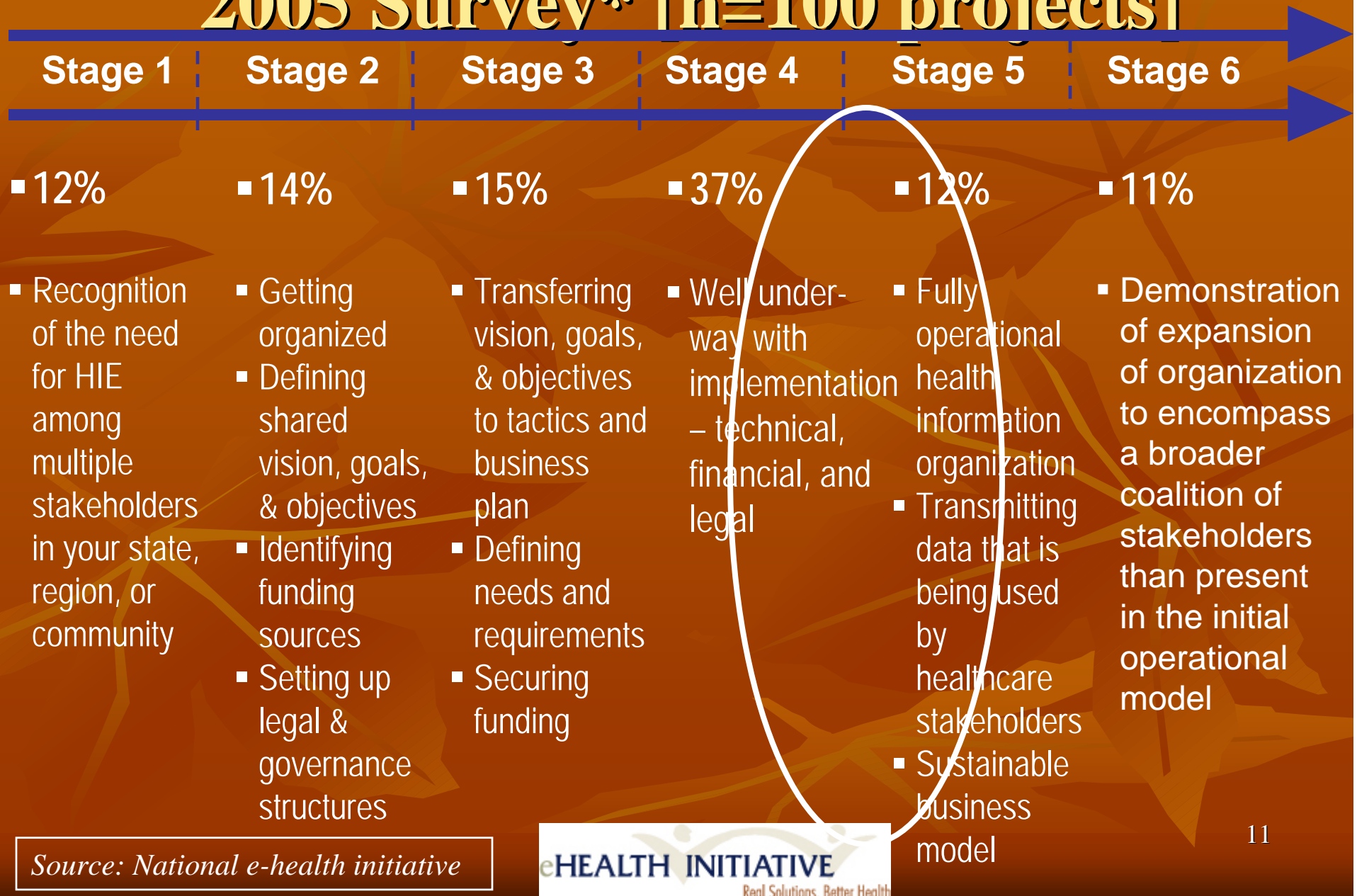
Deer River

Duluth



# Stage of Health Information Exchange

## 2005 Survey\* [n=100 projects]



Source: National e-health initiative

# Securing Funding

- Collaboration between MWHCC, SISU, St. Luke's Hospital (Duluth), College of Pharmacy-Duluth
- Hired grant writer from Health Planning & Management Resources, Inc. (Edina, MN)
- Collaborating parties met face-to-face, then by e-mail
- Proposal submitted to AHRQ



# Securing Funding

- Awarded \$1.37 million over 3 years
- 80% of funding helps pay for pharmacist, technician time at hub hospital (decreasing match)
- 20% of funding used to purchase, install technology
- Fund vacation coverage pharmacist
- AHRQ continues to play active role in project



## Meanwhile, behind the scenes...

- Order entry techs recruited/hired/trained
- SLH RPhs trained in remote order entry
- Remote order entry P&Ps developed, reviewed and approved by RPhs
- Secured approval of remote order entry P&Ps/variance from Board of Pharmacy
- Needs assessment/lottery/pricing for RPh vacation coverage at remote CAHs
- Develop P&P website for remote CAHs



# Evaluation Approach

- Evaluation team of three Ph.D.-trained pharmacists
- Pre-post implementation quasi-experimental approach (some post-implementation only)
- Natural experiment possible
- Retrospective and prospective data collection
- Patient admission is unit of measure for clinical outcomes



## Evaluation Plan – Theoretical Framework

- Donabedian's model for evaluating the quality of health care:
  - Structure
  - Process
  - Outcomes

Donabedian, A. 1966. "Evaluating the Quality of Medical Care."  
*Milbank Memorial Fund Quarterly: Health and Society* 44 (3): 166-203.



# Importance/Feasibility Matrix

		Feasibility Scale		
		<i>1-Feasible</i>	<i>2-Moderate Effort</i>	<i>3-Not Feasible</i>
Importance Scale	<i>1-Very Important</i>	(1)	(2)	
	<i>2-Moderately Important</i>	(3)	(4)	
	<i>3-Not Important</i>	(5)		

# Evaluation Metrics

- **Structure:** RPh coverage impacted by project?
- **Structure:** CAHs have Pharmacy P&Ps in place as intended by licensing/accrediting agencies?
- **Process:** What pitfalls are encountered in implementing HIT?
- **Process:** Impact on number of 1<sup>st</sup> doses given without RPh apriori review?
- **Process:** Impact on time lag from order written to 1<sup>st</sup> dose administered?
- **Process:** Impact on staff satisfaction with medication process at CAHs
- **Outcomes:** Impact of RPh Clinical Interventions

## Evaluation Plan – Lessons Learned

- Apply KISS principle
- Follow gut feelings regarding feasibility of collecting data for a given metric
- Be sure that Project Team members all on “same page” re: project goals
- Difficult to “let go” of a “good idea”



## Preliminary Results: The Devil's in the details....

- IV labels print remotely, or do they?
- System flexibility: A double-edged sword
  - Different CAHs enter medication orders under MEDS, FORM(ulary) or PO/IV
  - One CAH chose not to enter “prn” into Meditech med directions dictionary
- Scheduling
  - Hub hospital scheduled to cover holidays, but what about those Mondays after Sunday holidays?



## Preliminary Results:

What's wrong with the way we do it now?

- Nursing generally reports that new system requires longer from time of order to time of drug administration.
- Fear is that nursing will circumvent new system and go back to the old way of doing things.



# Preliminary Results: Potential train wreck looming....

CAHs don't want to pay  
for pharmacist services  
they are not using...



...and hub hospital cannot  
afford to keep pharmacists on  
shift that are not being paid for.



# Summary

- **Challenge:** Provide 24/7 RPh coverage to network of geographically dispersed rural hospitals
- **One solution:** Telepharmacy from tertiary referral facility
- **Lesson:** Not for the faint of heart or light of pocketbook
- **Lesson:** Keep evaluation plan simple
- **Lesson:** New system must be at least as easy as what staff currently does
- **Lesson:** Difficult recruiting circuit-rider relief pharmacists



# Questions?

