



Infection Management and Antibiotic Stewardship

Hot Topic Session #2

Health IT Tools

April 17, 2024



Conflict of interest Disclosures

- ▶ The views and opinions expressed in this series are those of the speakers and do not reflect the official policy or position of any agency of the U.S. or NC government or UNC.
- ▶ Our speakers have NO financial relationships with manufacturers and/or providers of commercial services discussed in this activity.
 - ▶ Dr. Kistler served as a consultant for Base10, Inc on their UTI embedded clinical support tool and received funding from Pfizer to study pneumococcal carriage.
- ▶ The speakers do not intend to discuss an unapproved/investigative use of a commercial product/device in this series, and all COI have been mitigated.
- ▶ These slides contain materials from a variety of colleagues including CDC, WHO, AHRQ, etc.

Today's Team

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- ▶ Chrissy Kistler, MD, MASc - Geriatrics researcher and LTC expert, University of Pittsburgh



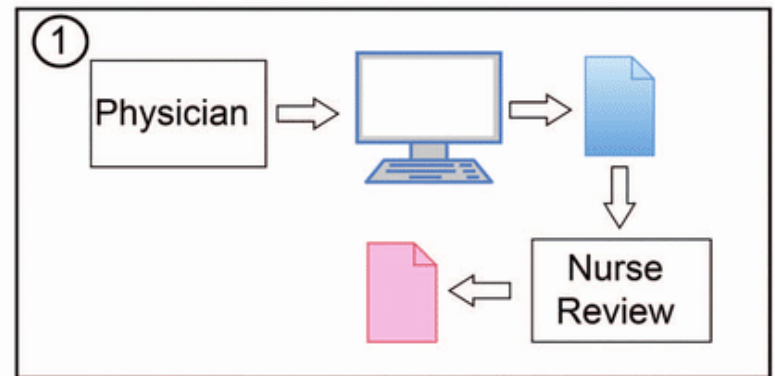
Session Objectives

1. Identify a practical, evidence-based way to improve nursing homes and hospital communication.
2. Identify practical suggestions for building a linkage with local hospitals.
3. Provide a one-pager for QI and staff education



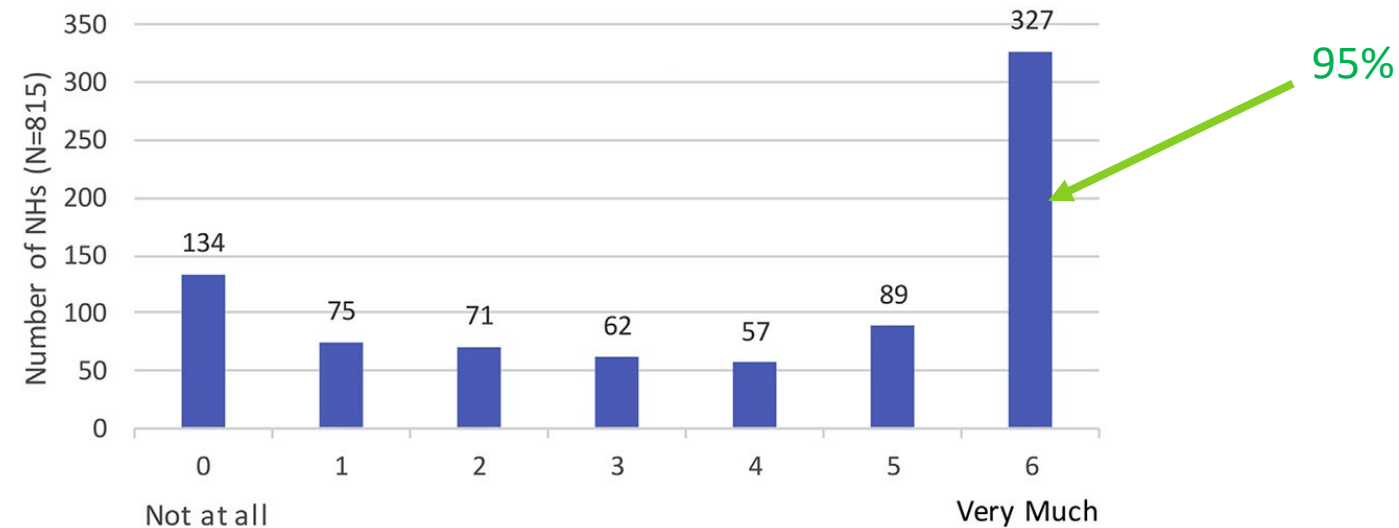
Ideal Model

- ▶ A nursing home resident is sent to the ER with altered mental status and signs and symptoms suggestive of a urinary tract infection (UTI).
- ▶ Hospital laboratory tests the culture sample and identifies E. coli as the causative organism.
- ▶ Hospital laboratory enters the results of the culture test into the hospital EHR system.
- ▶ Using the information in the EHR, the nursing home provider prescribes the appropriate antibiotic for the resident.



Background

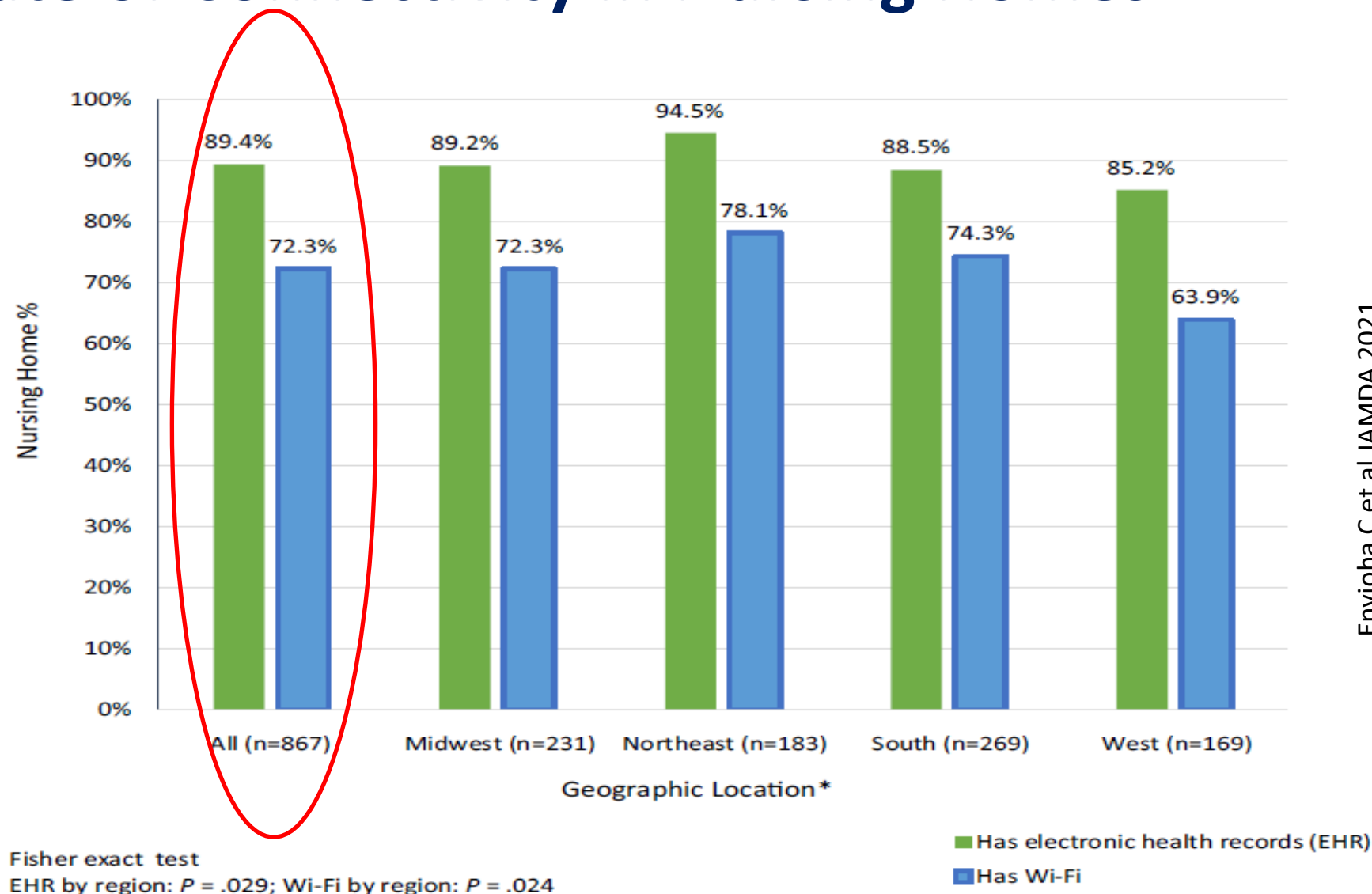
- ▶ Nursing home residents are at increased risk for developing infections, including those caused by multidrug-resistant (MDR) organisms.
- ▶ Hospital laboratory tests the culture sample to identify the organism causing the infection and to determine which antibiotics are effective against that organism.



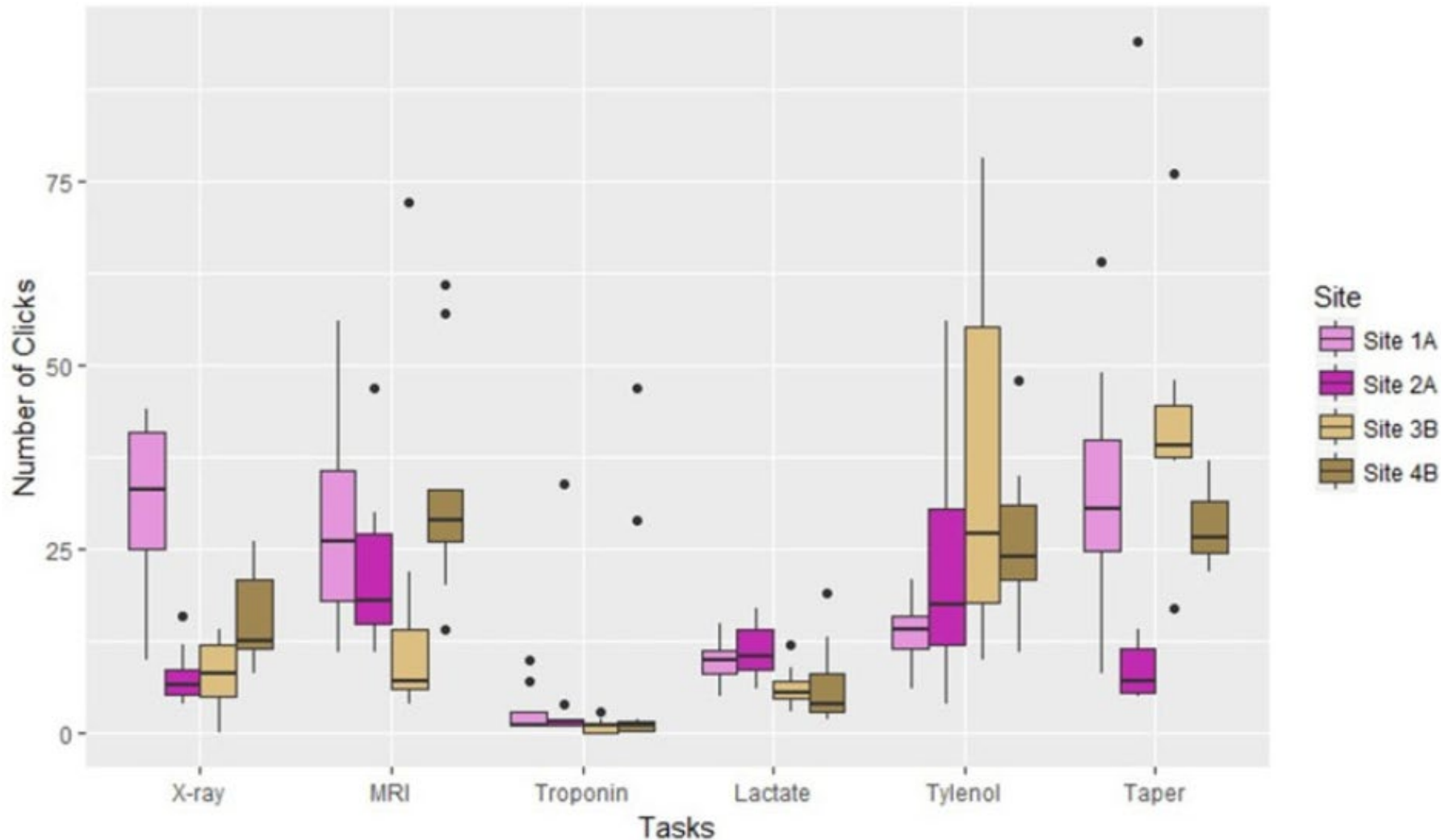
Powell KR, Deroche CB, Alexander GL. Health Data Sharing in US Nursing Homes: A Mixed Methods Study. J Am Med Dir Assoc. 2021 May;22(5):1052-1059.

Current State of Connectivity in Nursing Homes

Nursing homes need connectivity, and it must be fast, reliable, and secure.



Challenges for Consideration: Implementation and integration with existing systems and workflows

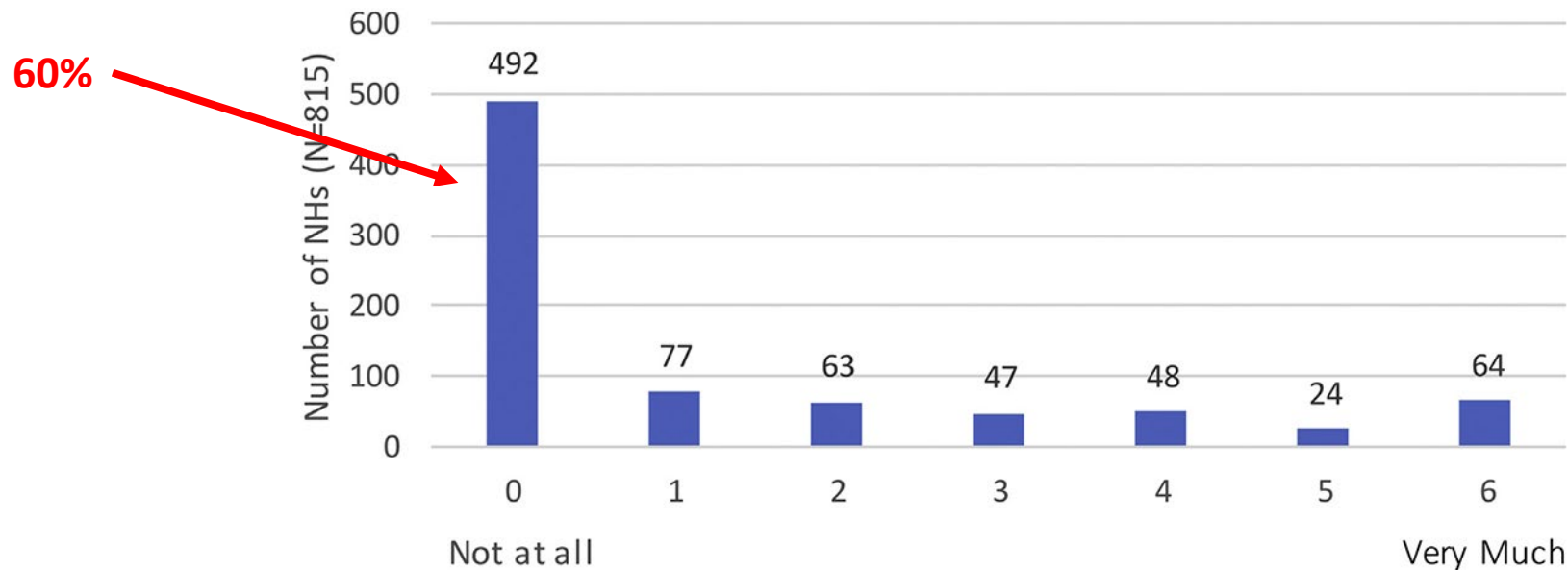


Evaluation of 2 EHR Vendors across 4 health systems (2 EPIC and 2 Cerner)

Ratwani et al. JAMIA July 2018.

Problem

- In the past, communication between nursing homes and hospitals can be inefficient and time-consuming
 - Leads to delays in the diagnosis and treatment of infections, which could have serious consequences for nursing home patients



Powell KR, Deroche CB, Alexander GL. Health Data Sharing in US Nursing Homes: A Mixed Methods Study. J Am Med Dir Assoc. 2021 May;22(5):1052-1059.

Solution

- One way to improve communication between nursing homes and hospitals is to provide nurses with read-only access to the hospital's electronic health record (EHR) system.
- This allows nurses to view the results of culture tests and other relevant clinical information in real time.



Clinical Decision Support in Nursing Homes: Case Study



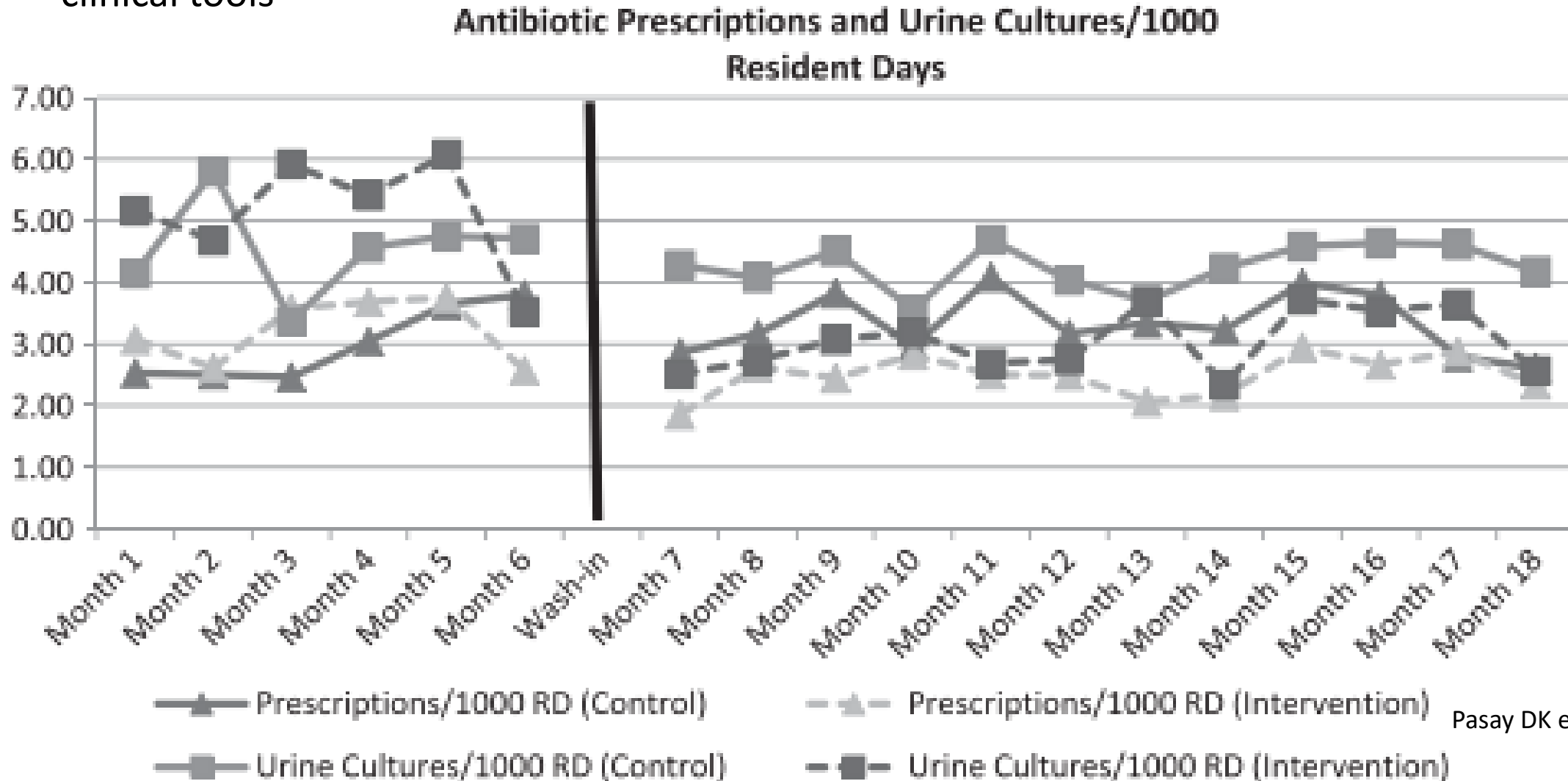
Rural nursing home with a high population of residents with multiple chronic conditions and complex medication regimens. You want to implement a rule-based CDSS integrated with their EHR system.



Goal: to reduce the number of urinary cultures and improve antibiotic prescribing

Case Study

Intervention sites received on-site staff education, physician academic detailing, and integrated clinical tools



Pasay DK et al IC & HE 2019.

Benefits

There are several benefits to providing nurses with read-only access to the hospital's EHR system:

Improved communication: Nurses would be able to access the results of culture tests and other relevant clinical information in real-time

Reduced risk of delays: Nurses would no longer have to wait for the hospital to call them with the results of culture tests

Improved patient care: Nurses would be able to use the information in the EHR to make better-informed decisions about patient care

Benefits

There are several benefits to providing nurses with read-only access to the hospital's EHR system:

Critical function during patient transfer

Independent assessment upon admission

Collaboration with physicians and other healthcare providers

Integration with other healthcare systems

Getting Started

What is needed?

- Memorandum of Understanding
- Data Use Agreement
- Equipment

Who to contact to get the process rolling?

Discussion points + Value Proposition w/ Hospital:

- Limited resources
- Compatibility issues
- Security concerns
- Workflow changes

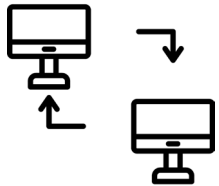
Actionable Recommendations



Get buy-in from management



Know the specific needs of your nursing home



Work with the hospital to develop a data-sharing plan



Invest in training for nurses

Best Practices

1. Administrators

- Establish a clear **understanding** of the benefits and risks of sharing data
- Develop a **data-sharing** agreement with the hospital

2. IT Support Team

- Implement technical **safeguards** to protect patient privacy

3. Director of Nursing and Nursing Educators:

- Provide **training** to staff on the new data-sharing process
- **Monitor** the data-sharing process and make adjustments as needed

Takeaway



Providing nurses with read-only access to the hospital's EHR system can improve communication between nursing homes and hospitals, reduce the risk of delays in diagnosis and treatment, and improve patient care.

Questions and Discussion



- Find session slides at <https://spice.unc.edu> → ncclasp
→ nursing homes