Improving Research and Population Health

Carolyn Clancy, MD

Director

July 1, 2003

Health Technology Information

It's the Wave of the Future

RAND Study: Quality of Health Care Often Not Optimal

Patients' care often deficient, study says. Proper treatment given half the time.

On average, doctors provide appropriate health care only half the time, a landmark study of adults in 12 U.S. metropolitan areas suggests.

Medical Care Often Not Optimal

Failure to Treat Patients Fully Spans Range of What Is Expected of Physicians and Nurses

Study: U.S. Doctors are not following the guidelines for ordinary illnesses
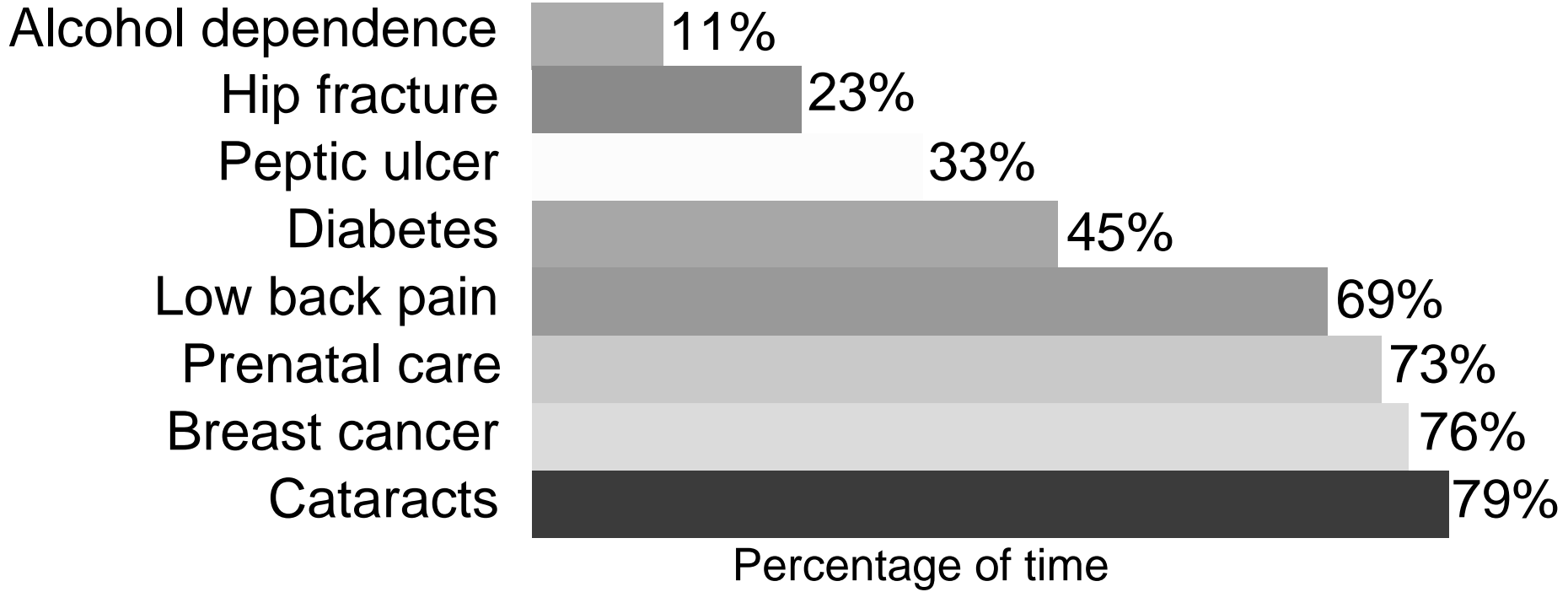
Medical errors corrode quality of healthcare system

The American healthcare system, often touted as a cutting-edge leader in the world, suddenly finds itself mired in serious questions about the ability of its hospitals and doctors to deliver quality care to millions.

RAND Study: Quality of Health Care Often Not Optimal

- Doctors provide appropriate health care only about half the time

Alcohol dependence — 11%
Hip fracture — 23%
Peptic ulcer — 33%
Diabetes — 45%
Low back pain — 69%
Prenatal care — 73%
Breast cancer — 76%
Cataracts — 79%

Percentage of time

Potential of IT for Assessing Quality

- IT can enhance the precision and decrease the cost of measurement – i.e., getting to the "right" measures

- IT can also enhance translation of strategies to improve quality (e.g., decision support)

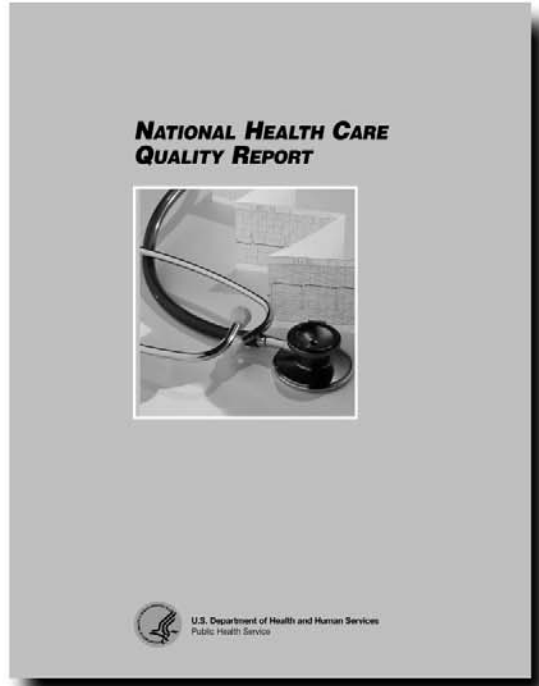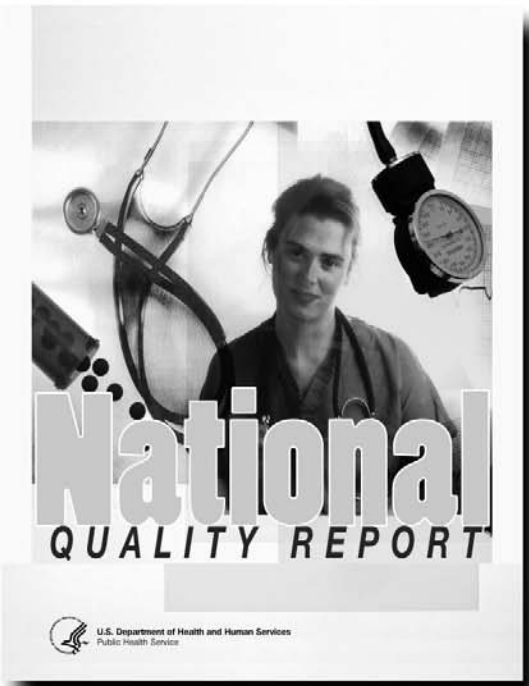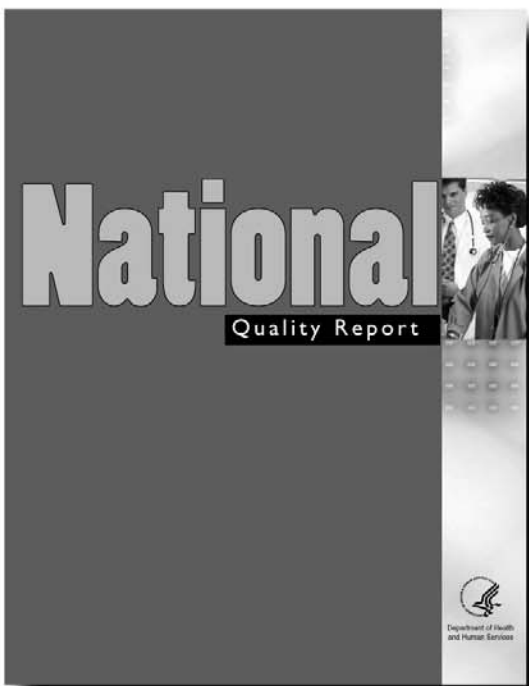- IT can greatly enhance the timeliness of data collection

HHS Quality Reporting

- Nursing Home Initiative

- Home Health Care Initiative*

- AHA-JCAHO-VHA .... Hospital reporting initiative*

- Patient experience in hospitals*

National

Quality Report

National

QUALITY REPORT

U.S. Department of Health and Human Services
Public Health Service

NATIONAL HEALTH CARE
QUALITY REPORT

U.S. Department of Health and Human Services
Public Health Service

Department of Health
and Human Services

"Potential is what you have when you haven't done it yet"

Darrel Royall
University of Texas
Football coach

Percent of Americans Saying "I Have A Chronic Condition"

Bar chart showing percent by age group:
- 18-29: 15%
- 30-39: 24%
- 40-49: 35%
- 50-64: 58%
- 65+: 66%

Y-axis: 0% to 70%
X-axis: Age
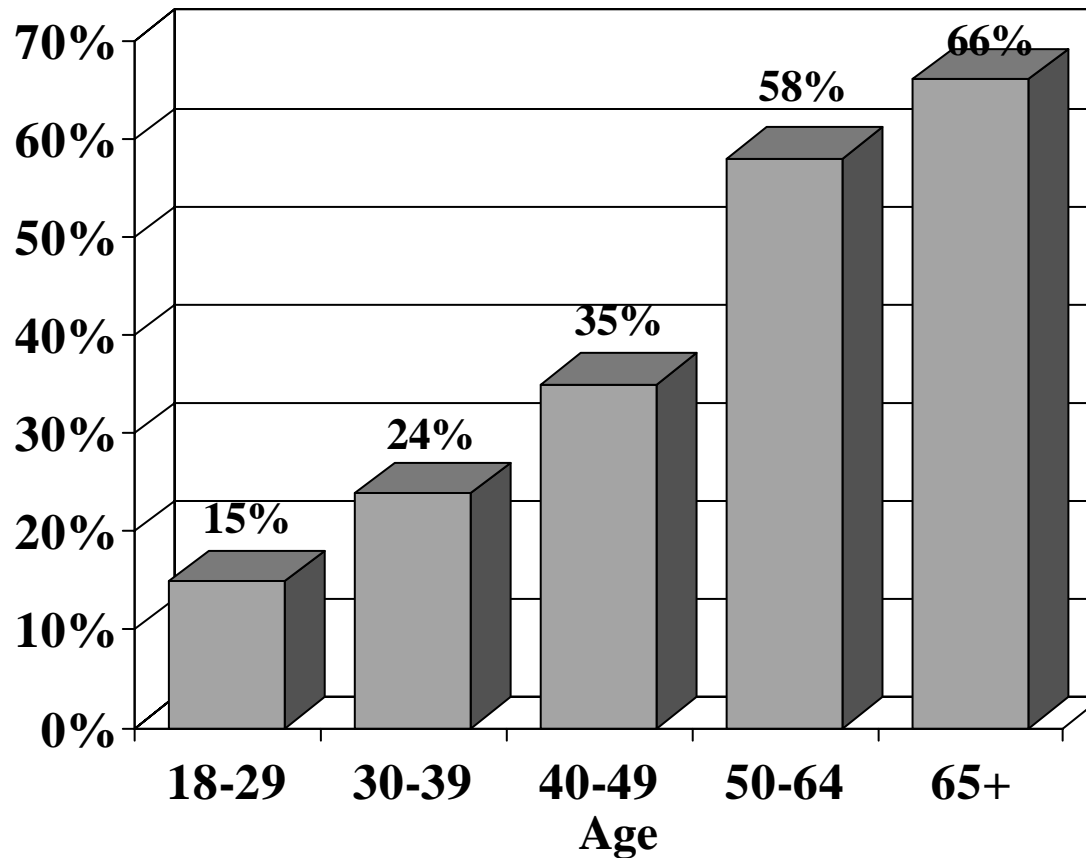
Source: Chronic Illness and Caregiving Survey, Harris 2000

Patient-Centered Care

- **Information technology can support:**
  - Communication
  - Clinical knowledge
  - Online support groups
  - Decreased hospitalizations and shorter lengths of stay
  - Improve health care outcomes
  - Improved quality of life

Gustafson et al. Am J Prev Med. 1999

IT and Research

- Identify and prioritize critical questions: e.g., clinical variations as a reflection of inadequate knowledge

- Accelerate collection of relevant data

- Facilitate consistent measurement of key outcomes

- Enhance participation of communities and stakeholders

- *"Reinvent" dissemination and translation*
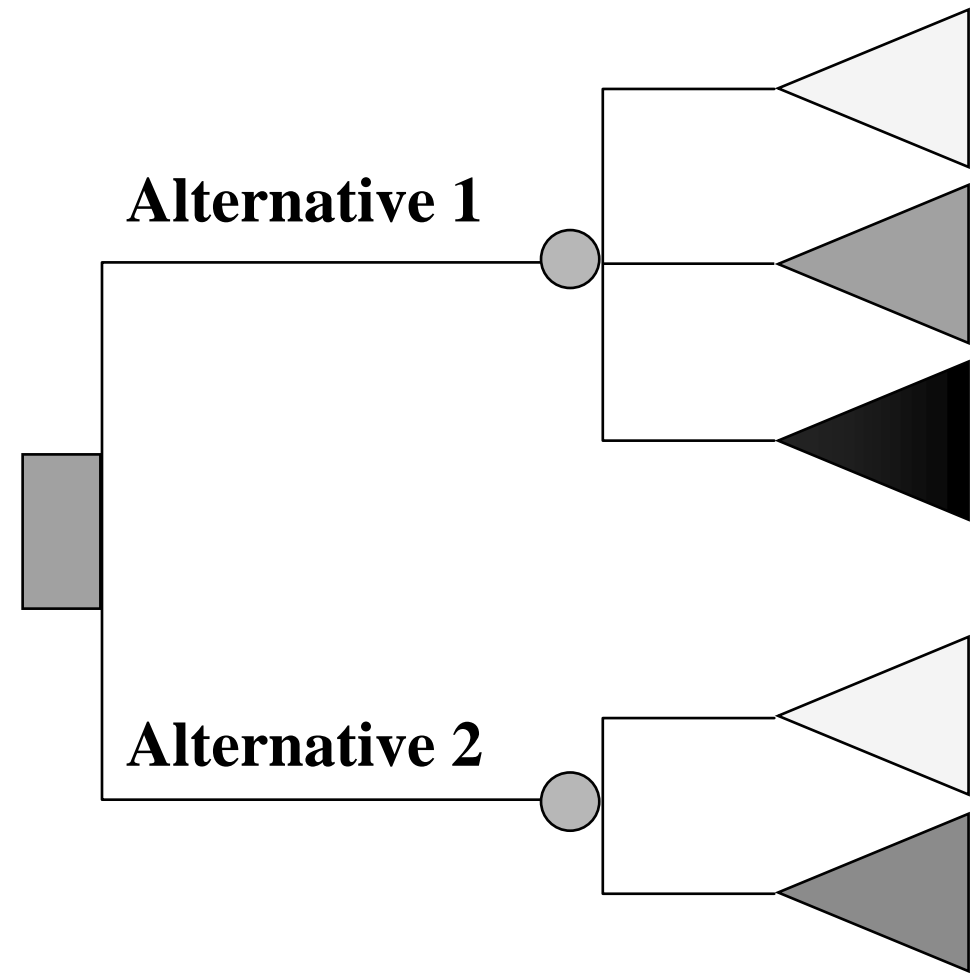
VARIATIONS ARE WIDESPREAD
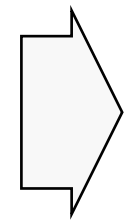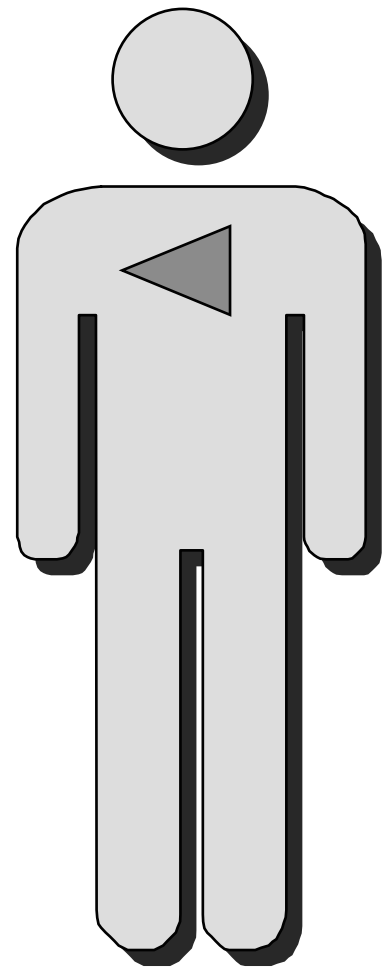

Coronary Angiography

Coronary Angiography Rate
per 1,000 Medicare Enrollees
by Hospital Referral Region (1992-93)

■	19.3 to 37.5 (61)
■	16.6 to < 19.3 (61)
□	14.9 to < 16.6 (61)
□	12.9 to < 14.9 (61)
□	7.9 to < 12.9 (62)
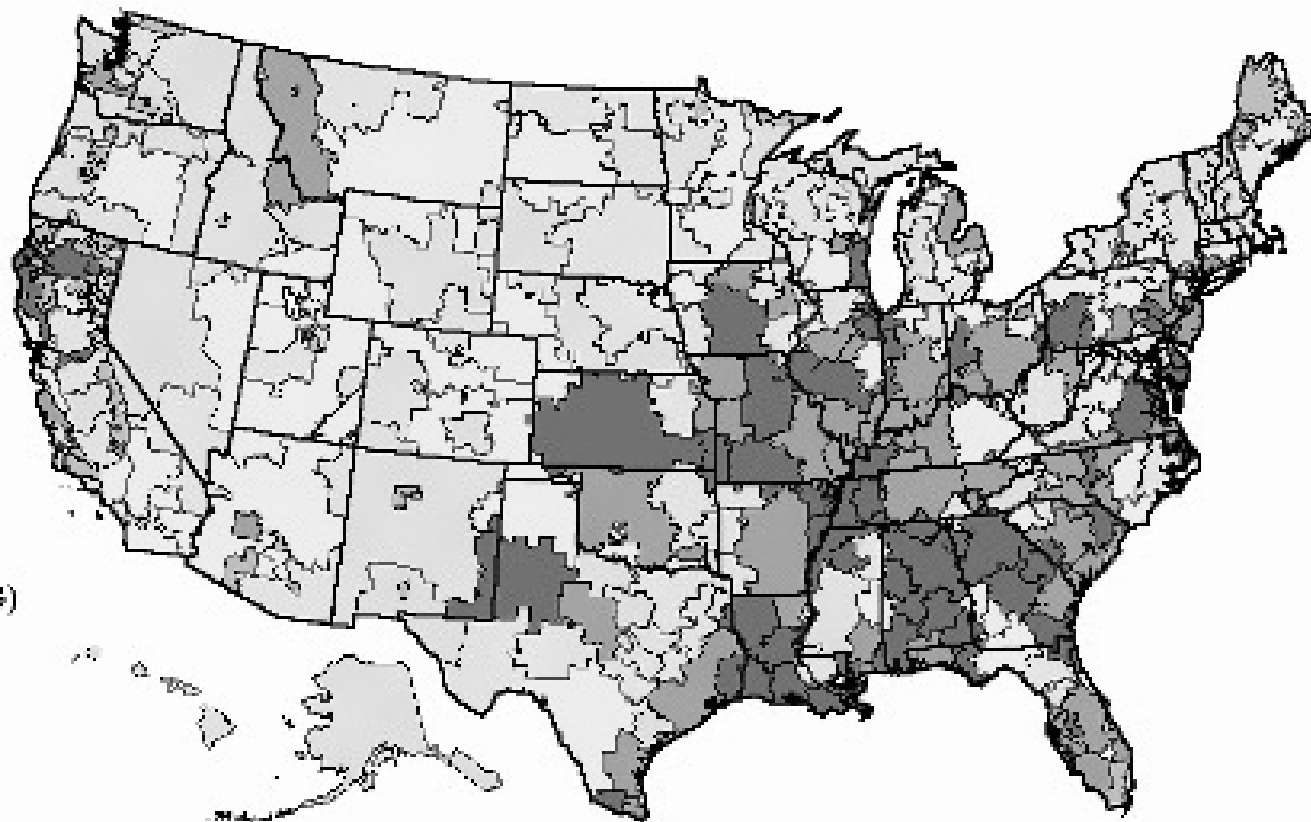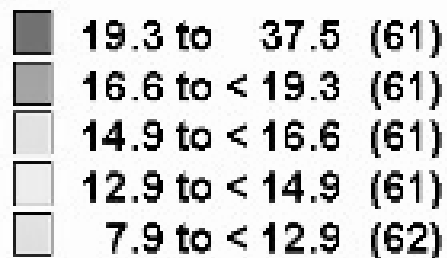
SHARED DECISION MAKING: DECISIONS AND OUTCOMES

Patient

Alternative 1

Alternative 2

New Report: *Safe Practices for Better Healthcare: A Consensus Report*

- Consensus on set of 30 evidence-based patient safety practices that should be universally used in health care settings

- For example:

  - **Inform patients that they are likely to fare better if they have certain high-risk elective surgeries at facilities that have shown superior outcomes**

  - Specify explicit protocols for hospitals and nursing homes to ensure adequate nurse staffing

  - Make sure hospital pharmacists are more actively involved in the medication use process

IT and Population Health

- <u>Enhance healthy behaviors</u> – e.g., exercise, diet

- Facilitate data sharing within and across communities regarding potential threats to public health

- Facilitate registries (e.g., immunizations) and exchange of information *across* systems

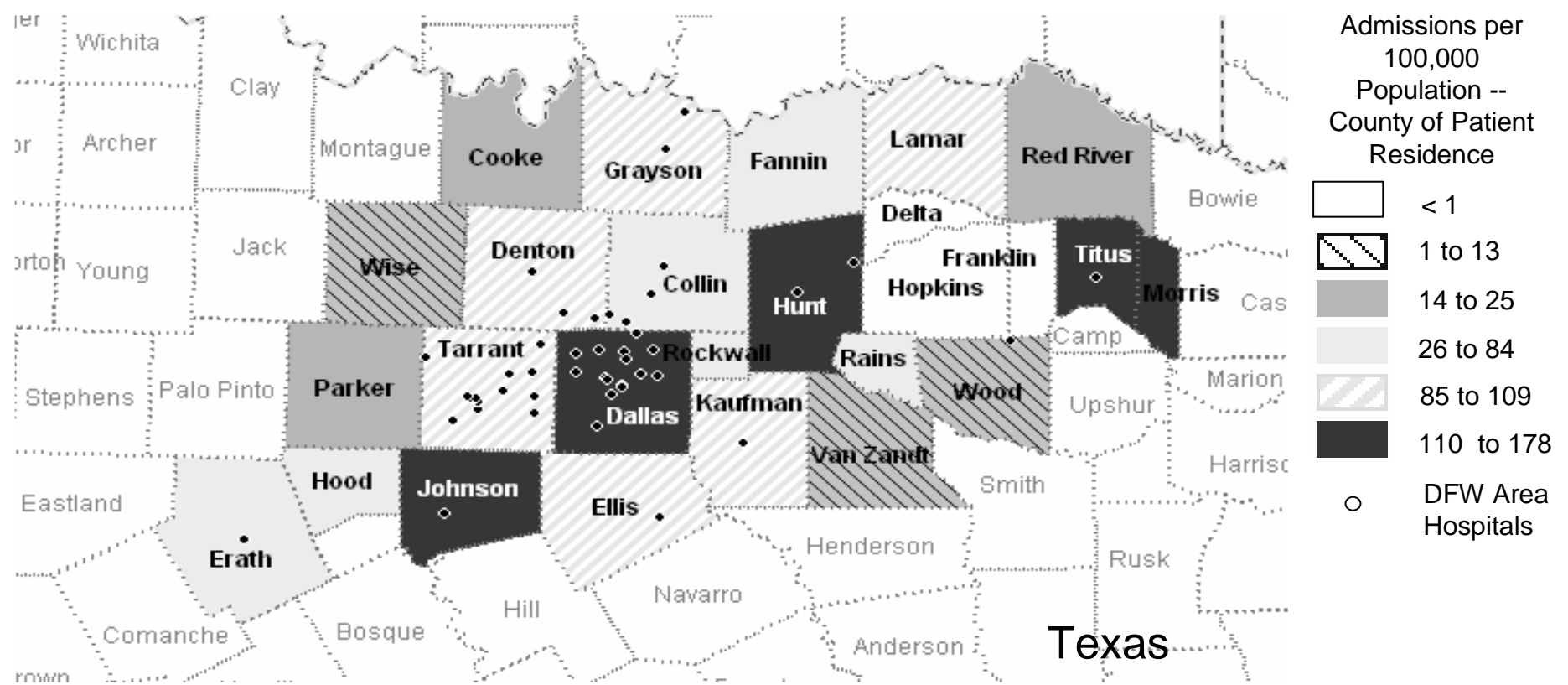- Linking data sources: <u>target</u> improvement efforts

EXAMPLE

- "Dorothy*", a very obese 32 year old women, is seen for a suspected UTI and found to have diabetes

- Her physician provides information about diet and exercise – but is only cautiously optimistic

- One month later, Dorothy returns, having lost 30 lbs – and shows Dr. C how she is using a customized application for her Palm Pilot to track her progress with diet and exercise

Diabetes - Long Term Complications

Admissions per 100,000 Population -- County of Patient Residence

- < 1
- 1 to 13
- 14 to 25
- 26 to 84
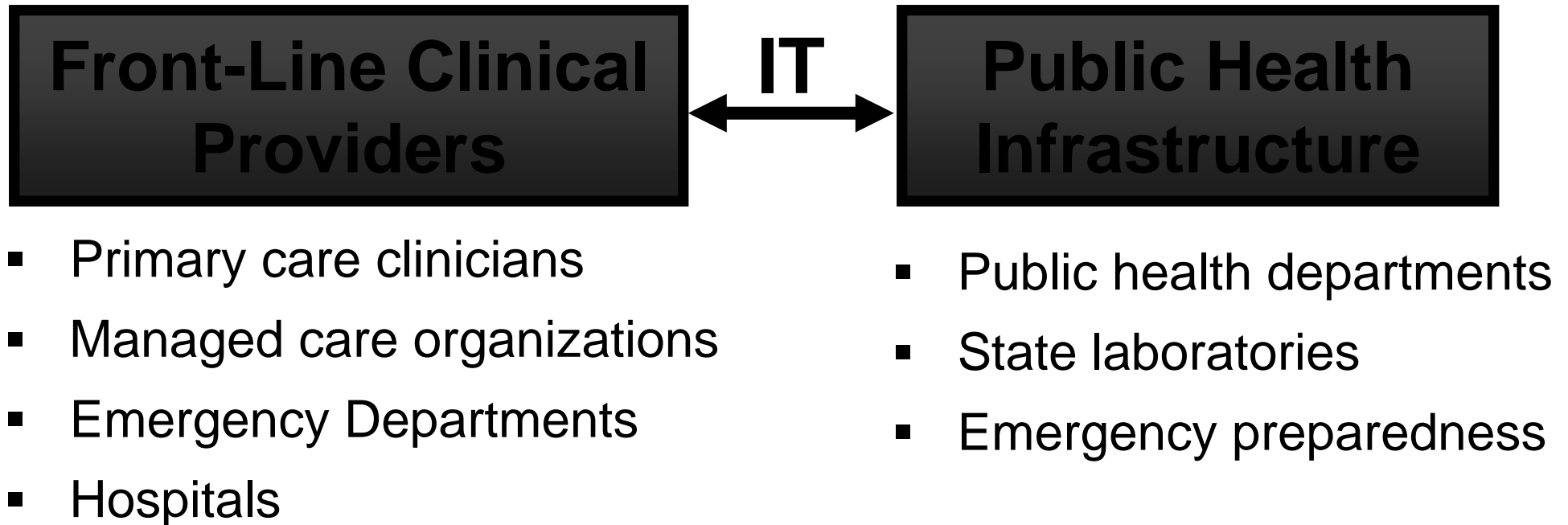- 85 to 109
- 110 to 178
- ○ DFW Area Hospitals

Texas

Dallas-Fort Worth Hospital Council -- Data Initiative -- 2000 Hospital Discharge Data

September 26, 2002

Bioterrorism Preparedness: Improved Coordination Through IT

Front-Line Clinical Providers	IT	Public Health Infrastructure

- Primary care clinicians
- Managed care organizations
- Emergency Departments
- Hospitals

- Public health departments
- State laboratories
- Emergency preparedness

Critical Challenges

- Common data elements and definitions; build capacity to make improvements

- <u>Clear rules of the road</u>: Who owns the data? Who decides what is in a record? Who can make changes? IRB's

- Transparency of purpose of data collection anduse

- Making it <u>easy</u>

SchoolNet C/S Food Service Cafeteria [Lunch line]

File   Settings   Volume Sales   Help   Date: 11/24/1998

☑ E   Account   Ident   **Search**

☐ D   [Student ▼]   [   ]   **Clear**

Cash   **Student**   **Faculty**   **Adult**   **Child**

Meals Remaining   Bal Fwd   [0.00]

Description	Amount	

Reset

Undo...

Save

Worker   1st Meal   [   ]

Additional   [0.00]

Payment   [**0.00**]

Balance   [0.00]

Counts

Lunch | ala Carte | ala Carte

Lunch   **"No Charge" >ONLY<**   **Milk >ONLY<**

Fruit Juice   **French Fries**   **Hot Ham & Cheese**

Extra Milk   **CheeseBurger**   Corn Dog

   Fresh Fruit   Pizza

   Nachos   **Sandwich**

Quit

Secretary Thompson
March 21, 2003

In the modern era, every century has had its major advance that has brought medical science another giant step forward. …. What will the major advance of the 21st century be?

I am convinced that the medical revolution of our children's lifetimes will be the application of information technology to health care.