



Perspectives on the Quality Chasm for Children

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How Do We Define Quality?

<u>Elements of Quality Care</u>	<u>Type of Quality Problem</u>
People get the care they need	Underuse
People need the care they get	Overuse

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<u>Elements of Quality Care</u>	<u>Type of Quality Problem</u>
People get the care they need	Underuse
People need the care they get	Overuse
Care is provided safely	Error
Care is timely	Delays
Care is patient-centered	Unresponsive
Care is delivered equitably	Disparities
Care is delivered efficiently	Waste

Overview of Talk

- Background
- Developing a comprehensive method for evaluating effectiveness of care for children
- Implementing a national study
- Improving care for children

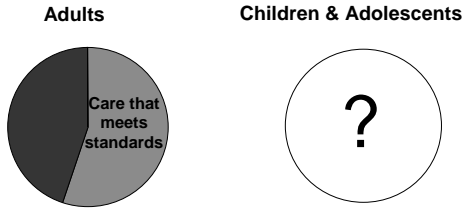
Background

- 1997 Conference on Improving Quality of Health Care for Children: An Agenda for Research
 - Published in 1998 as a supplement to *HSR*
 - Assessing quality of care was 1 of 7 key topics
- Major national studies and reports are based primarily on adults
- Measurement is essential for improvement
 - Nature and magnitude of the problem
 - If you don't think it is broken, you won't try to fix it

Limitations of Past Approaches to Quality Assessment

- Most approaches to quality measurement have been developed for:
 - One condition
 - One setting
 - One type of insurance
 - A small number of processes or outcomes
- These limitations lead to:
 - Uncertainty about the nature and extent of quality problems
 - Ease in denying that the problem is one any of us has to worry about
 - Focus on fixing one problem at a time

Is Quality for Children Better or Worse Than Adults?



Developing A Comprehensive Method

- Identify clinical areas
- Review the scientific literature (and guidelines)
- Develop indicators
- Select indicators (modified Delphi method)
- Design data collection tools

Conditions Represent Leading Causes of Morbidity & Utilization

<u>Chronic Care</u>	<u>Acute Care</u>	<u>Preventive</u>
Allergic rhinitis	Diarrhea	Well child care
Acne	Fever	Immunizations
ADHD	URI	Adolescent preventive services
Asthma	UTI	
Depression	Vaginitis/STDs	

Indicators Were Developed Based on a Review of the Scientific Literature

- Review articles and focused MEDLINE search
- Deliberate evaluation of screening, diagnosis, treatment, follow-up services
- Document strength of scientific evidence
- Adherence can be assessed from medical record

Evidence Base For Children's Effectiveness Indicators Differs from Adults

Level of Evidence	Children (%)	Oncology/HIV (%)	Adult Medicine (%)
Randomized trial	11	22	20
Non-randomized trial	6	37	11
Descriptive studies	73	26	64
Added by panel	10	15	5

RAND/UCLA Modified Delphi Method Used to Select Quality Indicators

- Solicited nominations from relevant specialty societies
 - Sought balanced panel membership
- Convened a nine-member panel
 - 4 general pediatricians
 - 2 family practice physicians
 - 2 adolescent medicine specialists
 - 1 infectious disease specialist
- Two rounds of ratings

Panel Rated the Validity of Indicators

- Adequate scientific evidence or expert opinion to support indicator
- Compliance with indicator confers significant health benefits
- Health systems/providers with higher levels of adherence are considered higher quality
- Health system/providers have significant control over determinants of adherence
- Validity score ranked between 1 and 9
 - 7 to 9 considered highly valid

Panel Rated the Feasibility of Indicators

- Information necessary to score indicator is likely to be available or should be available in the average medical record
- Scores based on medical record data are likely to be reliable and unbiased
- Failure to provide adequate documentation is itself an indicator of poor quality
- Feasibility score ranked between 1 and 9
 - Scores of 4 to 9 considered acceptable

RAND Pediatric QA Tool

- Indicators with an average validity score of less than 7 were dropped
- Indicators with an average feasibility score of less than 4 were dropped
- Indicators with substantial panel disagreement were dropped
 - e.g., 3 panelists ranked validity in the 1 to 3 range and 3 panelists ranked validity in the 7 to 9 range
- 81% of the originally drafted indicators were retained by the panel
 - 242 indicators in final quality assessment tool

Sample Indicators

- Asthma
 - Patients documented to be using a beta-2 agonist 3 times per day on a daily basis should be prescribed an anti-inflammatory agent
- Anemia Screening
 - A hemoglobin or hematocrit should be checked by the end of the 18th month of life
- Upper Respiratory Infection
 - Antibiotics should only be prescribed in a patient with pharyngitis if a rapid strep test or culture is obtained, or if there is evidence of a diagnosis of other bacterial infection

Example: Data Needed to Evaluate Adherence to Standards

During an episode of acute diarrhea, if while healthy the child was being breast fed, the health care provider should advise the parent to continue breast feeding if the child is able to feed orally.

Concept	How to Identify the Data Element
Eligibility	
Acute diarrhea in a child < 2	<ul style="list-style-type: none"> • Child < 2 y.o. at time of the visit • Visit where problem is acute diarrhea
Child tolerating oral fluids	<ul style="list-style-type: none"> • Note in medical record
Child is normally breastfed	<ul style="list-style-type: none"> • Note in medical record
Scoring	
Recommended continued BF	<ul style="list-style-type: none"> • Note in medical record

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HEALTH



UW Medicine
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The Quality of Outpatient Care Received by Children and Adolescents in the United States

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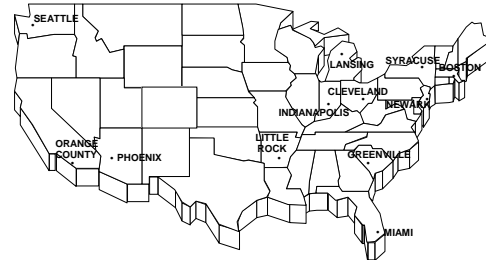
Objective

- **To assess the quality of outpatient care for children in the United States**
 - How often are recommended processes of care delivered?
 - Preventive care
 - Acute care
 - Chronic care

Study Approach

- Use the RAND Pediatric QA Tool to measure quality in a comprehensive and clinically detailed manner
- Conduct a study with a nationally representative sample of children

Nationally Representative Sample of Children



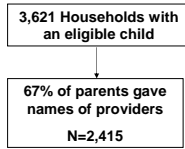
Data Collected

- Random digit dial telephone survey
 - Interviewed the adult in the household (parent or guardian) who knew the most about the child's health and medical providers
- Demographic data on parent and child
- Permission to access the child's medical records for all providers he or she had seen in the prior 2 years

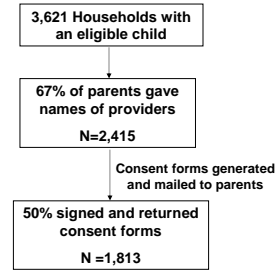
Participation Rates

3,621 Households with an eligible child

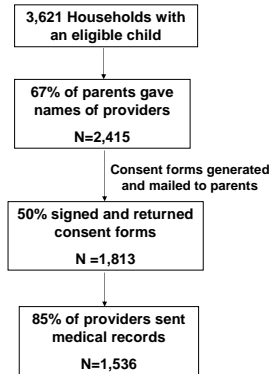
Participation Rates



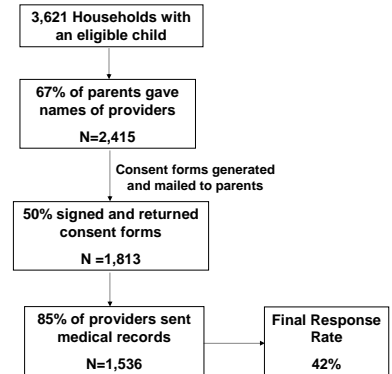
Participation Rates



Participation Rates



Participation Rates



Data Sources

- **Medical Records Data**
 - 1996 to 2000
 - Only children with \geq one reported visit in the prior 2 years
 - All providers seen by the child in prior 2 years
 - Variety of settings
 - Trained nurse abstractors extracted key data elements from medical records

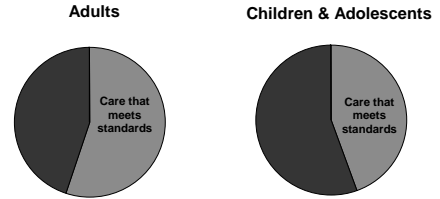
Sample Characteristics

<u>Child Characteristics</u>	<u>Participants (%)</u>	<u>US Population (%)</u>
Child gender (% male)	50	51
Child Age		
< 1 year	13	5
-1-2 years	12	12
-3-4 years	10	11
-5-11 years	36	40
-12-18 years	30	33
Child race/ethnicity white	77	64
Child privately insured	88	70
Child health very good or excellent	84	82
<u>Parent/Household Characteristics</u>		
Parent education HS or higher	84	85
Annual income 50K or higher	47	52

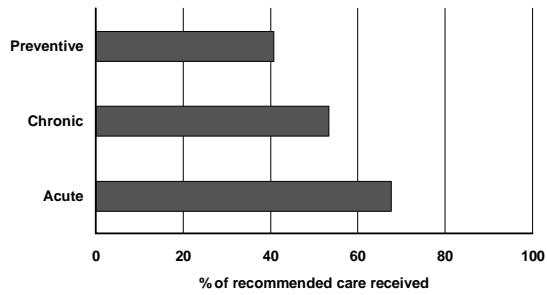
Constructing Quality Scores

Score = $\frac{\text{\# of times recommended care was given}}{\text{\# of times eligible to receive indicated care}}$

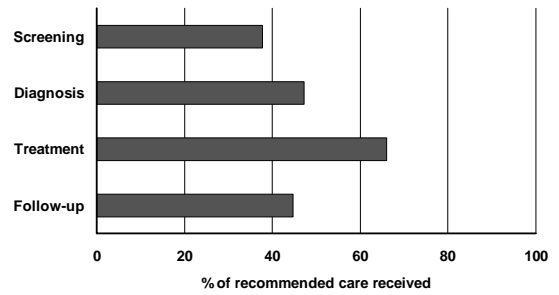
Overall, Children Receive Less than Half of Recommended Care



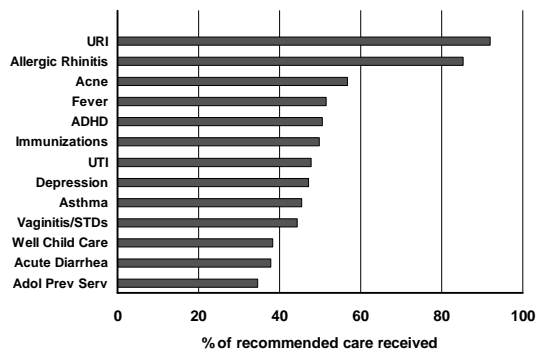
There Is Substantial Room for Improvement Across All Types of Care



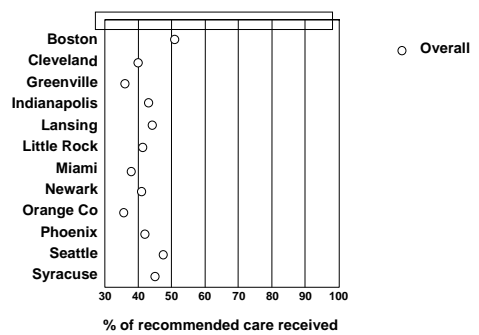
Quality Varies Significantly by Function of Care



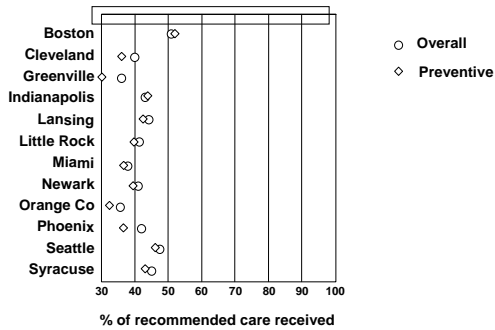
Quality Varies Substantially by Condition



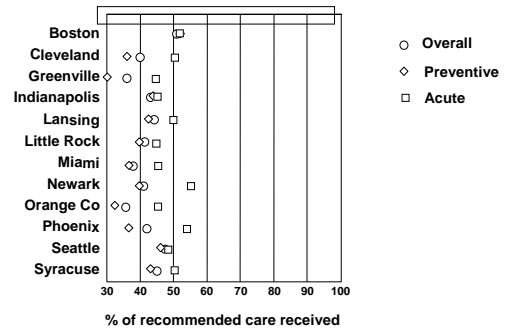
We All Have Substantial Room for Improvement



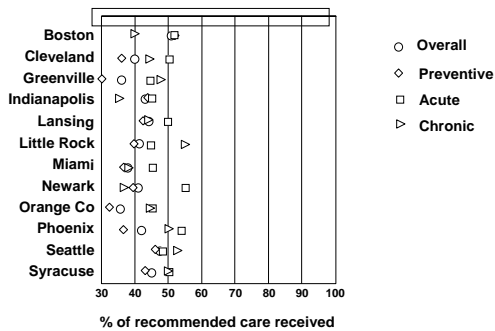
We All Have Substantial Room for Improvement



We All Have Substantial Room for Improvement



We All Have Substantial Room for Improvement



Serious Consequences Related to These Deficits in Care

Condition	What We Found	Consequences
Asthma	44% with persistent asthma received controller meds	Symptoms, mortality, use of ER & hospital, lost school & work days
Well Child Care	38% of children appropriately screened for anemia by age 2	Increased risk of poor cognitive outcomes
STDs	43% of sexually active adolescent girls tested for <i>Chlamydia</i>	40% untreated females will develop PID; infertility risk increased

Limitations

- Reliability of medical record documentation
- Response rate
- Rural areas not represented
- Families without telephones are not represented
- Outcome validation is needed

Conclusions

- American children receive less than half of recommended outpatient medical care processes
- Considerable variability within and across communities
- Considerable variability by condition
- Rates are the worst for preventive care
 - Most notably adolescent preventive services

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What's Needed to Improve Care for Children?

- **Routinely measure performance**
 - We can't improve if we don't know how well care is delivered in specific places
- **Regularly report on performance**
 - Transparency is important
- **Improve the organization of care delivery**
 - Proactively identify health care needs and whether those needs are being met
 - Planned follow-up visits for chronically ill children
 - Utilize support staff to enhance our ability to accomplish routine screening
 - Utilize prompts as a decision support tool for providers

What's Needed to Improve Care for Children?

- **Widespread adoption of health information technology**
 - Patient registries, EMRs, patient portals
 - Enhances our ability to use prompts for decision support
- **Re-alignment of financial incentives**
 - Reward quality not quantity
- **Improve the way we train pediatric residents**
 - Preventive care
 - Proactive management of chronically ill children