Addressing Disparities in Health Care: The Role of Quality Improvement

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Causes of Health Disparity

- **Differential Risk**
  - Exposures
  - Biology

- **Differential Access to/Use of Effective Interventions**
  - Financial Access
  - Different providers/systems
  - Different care, same system
    - Racism
    - Communication, values, patient centered care
  - Preferences and values
Asthma Prevalence

Prevalence Age 5-12

Year

Cases per 1000


20 70 120

White
Black

NICHQ
Asthma Hospitalization (by race)

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Asthma Age Adjusted Mortality

NATIONAL CENTER FOR HEALTH STATISTICS, FINAL MORTALITY STATISTICS REPORT, 1979-2001
Why Disparities in Asthma Outcomes?

- Difference in risk?
  - Inherent (genetic)?
  - Exposures:
    - Indoor allergens (cockroaches)
    - Indoor pollutants
    - Outdoor pollutants (e.g., diesel fumes)
    - Crowding/infectious disease
    - Environmental tobacco smoke exposure
      - Prenatal
      - Postnatal
Why Disparities in (Asthma) Outcomes?

- Differences in access to effective interventions?
  - Access to care/# visits, sites of care
  - Content of care: diagnosis
  - Content of care: treatment
  - Follow up
  - Preferences
Racial and Ethnic Differences in Asthma Management

Among low-income children with asthma insured by Medicaid during 1999, black and Latino children were equally or more likely to have primary and specialty care visits and to receive a written plan to help them manage their asthma symptoms compared to white children. Yet, black and Latino children were less likely to be regularly using preventive medication when indicated to control their asthma symptoms.

Source: 1999 Asthma Care Quality Assessment Project, telephone survey with parents (N=1,658) and computerized medical records and claims data, as reported by Lieu et al. (2002).
Prime Directive

- Each System Perfectly Designed to Achieve the Results It Gets
Quality Improvement

- Systematic program to improve care, either through error reduction, reducing variability, or innovation
Specific Aims for Health Care

- Safe
- Effective
- Efficient
- Timely
- Patient Centered
- Equitable
The Chain of Effect in Improving Health Care Quality

Patient and Community Experience

Aims (safe, effective, patient-centered, timely, efficient, equitable)

Micro-system Process

Simple rules/Design Concepts (knowledge-based, customized, cooperative)

Organizational Context Facilitator of Processes

Design Concepts (HR, IT, finance, leadership)

Environmental Context Facilitator of Facilitators

Design Concepts (financing, regulation, accreditation, education)
Model for Improvement

What are we trying to accomplish?
How will we know that a change is an improvement?
What changes can we make that will result in an improvement?
African Americans have higher rates of LBW infants

Maternal smoking increases rates of LBW

Programs addressing maternal smoking will:
  a. Decrease disparities
  b. Increase disparities
  c. Not change disparities

Conclusion:
Disparate Impact of Technologies

- SSD and CF
- Web based medical records and communication
CF and SSD mortality

Median age at death, by year

CF
SSD

NICHQ
There is significant variation in outcomes from one CF Care Center to the next.

Percentage of children below 5th percentile for weight, by center.
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Summary

- QI has potential to address disparities
- Application of care model at microsystem can promote:
  - Standardization when appropriate (delivery system design and decision support)
  - Patient centered, culturally competent care (self management support)
  - Development and connection to community resources
- Use of quality improvement at microsystem and organizational level can address disparities
  - Appropriate aims, measures, and tests
- Application of improvement efforts at societal level must be informed by awareness of disparities, allocation of resources