

Community Health

- What is it?
- Why should I care?

Definition of Community Pediatrics

Adapted from Robert J. Haggerty, MD

- **The unique feature of community pediatrics is its concern FOR THE ENTIRE POPULATION OF CHILDREN**
- Community pediatrics [seeks] to provide a more realistic and complete clinical picture by:
 - taking responsibility for all children in a community,
 - understanding the determinants and consequences of child health and illness,
 - providing preventive and curative services,
 - understanding the effectiveness of services provided.

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The main point we want you to take away for the 3 year community pediatrics curriculum is an ability to think about **THE ENTIRE POPULATION OF CHILDREN**

This is important both in understanding the individual child in front of you in the out patient setting, or in understanding what makes children un healthy in your community and figuring out how you can help make them more healthy.

The story of the man pulling children out of the river.

What is Health?

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.



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This is taken from the World Health Organization's web site. It is the WHO definition of health. Is this the definition of health we use in defining our practice in the Children's Hospital of New York?

It should be.

Ecological Model

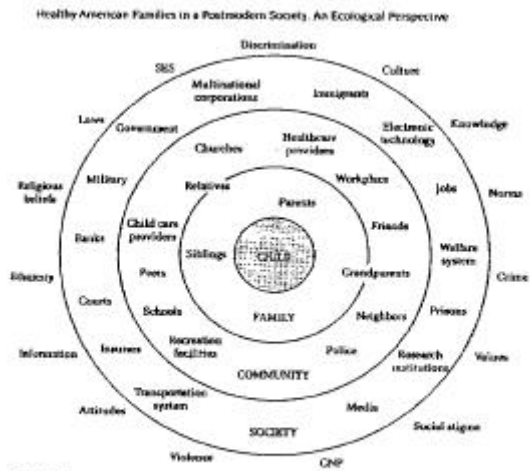


FIGURE 3.1
The ecosystems of the child and the family.
From: Health & Welfare for Families in the 21st Century, Editor: Helen Wallace, 1999

At the center of this circle could be either the individual child in front of you, or the children in the community you are responsible for

Why leave the office?

- Sitting in the office or hospital we miss:
 - Many high risk children
 - Many opportunities to prevent illness
 - Many opportunities to promote good health

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In addition to asking you to think about the patient in front of you in a broader context Community Pediatrics asks you to look for ways to bring your practice outside of your office. There are 3 good reasons for this.

Why leave the office?

Adapted from Judy Palfrey MD

- Pediatricians bring important skills to the table
 - Developmental perspective
 - Concept of differential diagnosis
 - Notion of normal variation
 - Prevention strategies and orientation
 - Tailored/Individualized Approach
 - Continuity

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There are two pitfalls we fall into when we leave the office and go into the community to work.

1) We are insecure and therefore arrogant. We present our selves (as we often do in the office) as the expert offering advice. In our heart we know that we are often not experts in how to solve a health problem at the community level.

2) We are insecure and we feel we have nothing to offer. It is the social workers job, or the teachers job or the politicians job to solve community level problems.

We need to come to the table willing to learn, but we also need to come confidently because as pediatricians we have something to offer.

Who is our 'community'?

- New York City?
- Washington Heights and Inwood?
- The Dominican Community?
- Medicaid patients?
- Children who have ever come to CPMC?

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Any of these are possible answers. Which you choose to use depends on your practice setting- an ICU attending might focus differently than a primary care practitioner. To be effective we need to be aware of what definition we are using in any given situation.

Population perspective

Taking responsibility for all children in the community

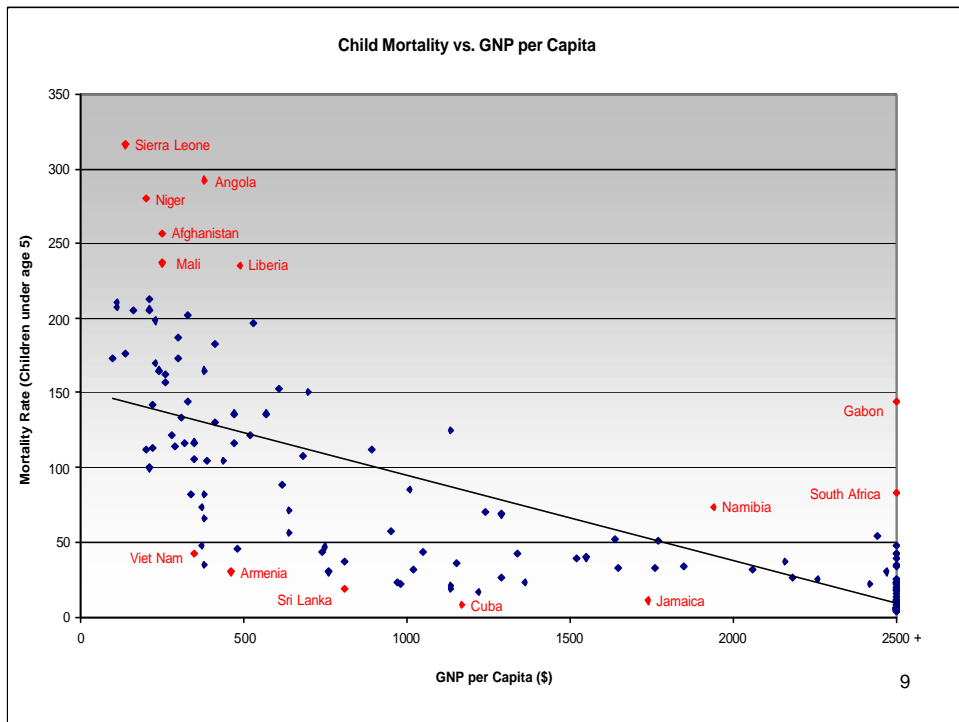
- **Determinants of Health**
 - Poverty is the single most important factor influencing health and disease at the population level
 - Race effects health outcomes independently of poverty
<http://www4.nationalacademies.org/onpi/webextra.nsf/web/minority?OpenDocument>

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If you look at data summarizing health of different groups - nationally, internationally or locally- you cannot help but be impressed that poverty is the single most important factor influencing health and disease.

If your goal is to save lives eliminating poverty would be much more effective than any medical interventions.

It is interesting that race effects health outcomes independently of poverty. This is true for all age groups and all SES groups. The web site is for the 2001 National Institute of Medicine report on this topic.



In the next few slides we look at some of the data that supports the statement that poverty is the single most important determinant of health status

Infant Mortality (deaths in a year of children age 0-12 months over the number of live births in that year) is considered a key indicator of health of the public in general and children in particular. The majority of deaths to children occur in this age group.

This slide shows the close relationship between Infant Mortality and a countries wealth (GNP).

The general trend is clear, but equally interesting are the exceptions to the rule. Countries highlighted in red have IM either higher or lower than expected for their GNP. Those with higher than expected IM are either at war, or countries with extreme disparities in wealth within their country. Those with lower than expected IM rates usually have excellent education available to everyone including women, and strong social welfare programs.

Table 2.1
Health Problems Among Low-Income Children

	Relative likelihood, compared to other children	
Asthma	Higher	☹
Neonatal mortality	1.5 times	☹☹
Low birth weight	2 times	☹☹
Bacterial meningitis		
Diabetic ketoacidosis		
Post neonatal mortality	2-3 times	☹☹☹
Complications of appendicitis		
Complications of bacterial meningitis		
Delayed immunizations	3 times	☹☹☹
Teenage births*		
Lead poisoning		
Rheumatic fever		
Child deaths	3-4 times	☹☹☹☹

*Estimated white/black differential

Source: Starfield B. and Newacheck P. Children's health status, health risks and use of health services. In Schlesinger MJ and Eisenberg L. (eds.) *Children in a Changing Health System. Assessments and Proposals for Reform*. The Johns Hopkins University Press, Baltimore, 1990, p. 12.

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Stepping away from infant mortality, this slide looks at the effect of poverty on other child health outcomes.

Here we can see the broad range of disease processes that are effected by poverty.

Many of these outcomes probably are related to disparities in access to care.

Environmental factors (nutrition, lead exposure, exposure to infectious illness) are also important.

Relationship of income to injury rates - Northern

Manhattan

- Injury rates higher in largely low income census tracts compared to census tracts with fewer low-income households-
 - Relative Risk 4x for assault and gun shot injury
 - Relative risk 2x for unintentional injuries

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Environmental factors are important also as demonstrated by these injury rate statistics.

Disparities in Child Health

- What are the mechanisms for poverty causing increased child morbidity and mortality?
- Why are Infant Mortality rates higher in poor communities?

Disparities in child Health

- IOM: 'Unequal Treatment'

Health Disparities:

...."racial or ethnic differences in quality of health care not due to access, clinical needs, preferences and appropriateness of intervention"

Root causes disparities

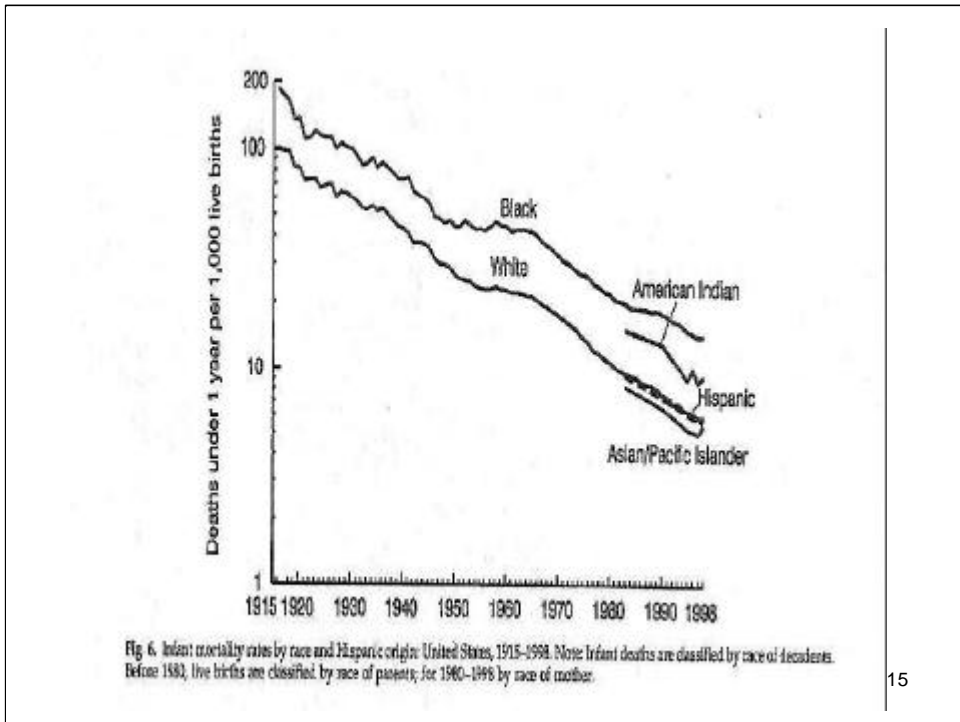
- Individual (child/parent/family): health beliefs, parental health, educational status,
- Health Systems (family, provider, local, National): SES, Cult comp, access, quality of care, medical technology
- Community (neighborhood, local government): SES, violence, social capital
- Societal: racism

Ref: Horn and Beal

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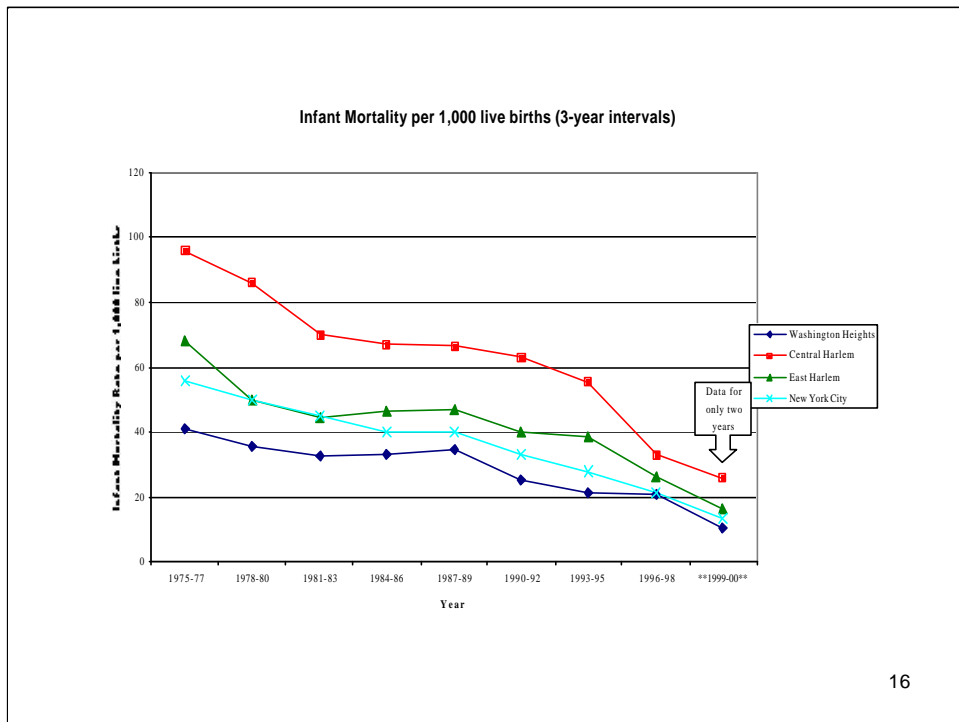
Individual:

Child: Health beliefs/behaviors, peer influence



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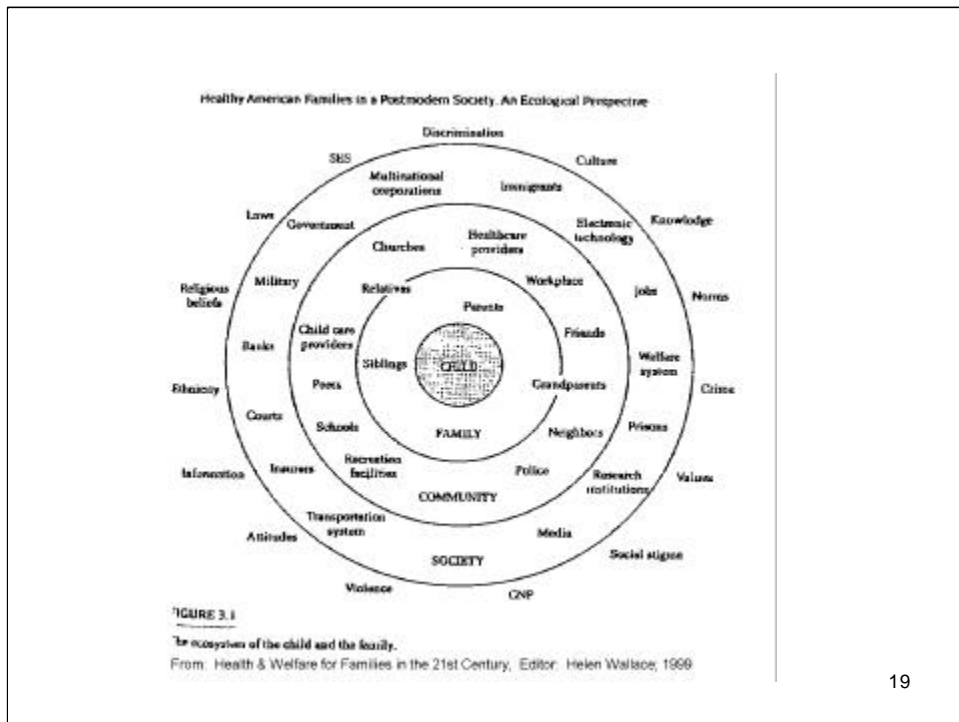
Infant mortality has fallen in the US, but racial disparities persist. Poverty is the primary factor in racial disparities, but African Americans do worse than Hispanics in most health indicators even in situation where poverty statistics are similar between the two groups.



This slide looks at Infant Mortality in 3 local communities - Harlem (red), Washington Heights (blue), East Harlem (green) and NYC as a whole (light blue).

Harlem is a primarily African American, poor community. There is a very high low birth weight rate. Also SIDS rates are higher. Recent improvement in the IM rate may be due to more recent immigrants from Africa (who have lower low birth weight rates). Washington Heights is a poor community whose residents are mostly recent immigrants from the Dominican Republic. East Harlem is a poor community where most residents are 2nd and 3rd generation immigrants from Puerto Rico.

The relatively poor health of infants in Harlem, the relatively good health in Washington Heights and East Harlem's status in between holds true for many other health statistics including asthma hospitalization and injury rates.



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Looking again at this diagram of how the environment impacts on a child or children in general we can see that the interrelationships are complex.

Since we all decided to be pediatricians rather than community activists we cannot, perhaps, change the fact that there are poor children. So what are we supposed to do with the information that poverty is such an important factor is health and in disease.

Looking at this diagram and at the layers closest to the child, the family is in the position to buffer the impact of all the outer layers of the circle. And in most cases it is the mother who is in the primary role.

This is another reason for us as pediatricians to begin to think about our role in supporting the health and well being of mothers and families.

How can we do that?

Maternal and Child Health

- Mother's health effects her child's health
 - Prematurity/Pregnancy outcomes
 - Depression
 - Smoking
 - Substance abuse
 - Parental availability (long work hours)
 - Child Development (e.g. literacy)
 - Child's environment depends on mother's resources

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Maternal and Child Health

- Potential Pediatrician impact on maternal health
 - Screen and refer for DV, depression
 - Child Spacing/family planning
 - Smoking
 - Developmental support for child
 - Expand horizons/knowledge of resources
 - Advocacy for better maternal health services

Community wide efforts can have a big impact

- Programs that mitigate the effect of poverty have the potential to improve health
 - Medicaid
 - Child Health Plus
 - Supplemental Social Security (SSI)
 - WIC
 - Head Start

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It is also important that we understand the importance of National programs that can mitigate the effect of poverty on children.

Here is a list of some of those programs. By the end of your Community Pediatrics education you should have a good understanding of what they are and how they impact on the patients you see in this community.

Community wide efforts can have a big impact

- Legislative efforts
 - make window guards the landlords responsibility,
 - package aspirin in small bottles,
 - require seat belt use and speed limits,
 - require vaccination for school entry

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Appropriately focused legislative interventions can be enormously effective. Pediatricians have often played an important role in focusing legislators on key issues and helping to draft effective interventions.

- Before the Children Can't Fly campaign in the early '70s falls from windows were a major killer in New York. A community wide education campaign (pilot in the Bronx, later city wide) was joined with legislation that made it the landlord's responsibility to put window guards in apartments where children lived or visited.
- A pediatrician and a senator teamed up to pass the national Poison Prevention packaging act of 1970 (safety caps and less than a lethal dose in a bottle).
- A Federal agency was established to address the number one killer - car accidents. Multi-faceted approach
- Requiring vaccines at school entry led to 90+% vaccination rates

Community wide efforts can have a big impact

- Results
 - Window guard legislation
 - Deaths fell by 50% in 2 years
 - Aspirin packaging
 - Ingestion rates fell by 50% in 2 years
 - Seat Belt laws enforced
 - Fatality rates dropped 20% vs. 8% in control states
 - Speed limit
 - Fatalities rose 19% in states that raised limit to 65 MPH (1987)

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Many lives were saved

Interestingly most states chose to allow increased speed limits despite data that fatalities increased.

Working with others, one MD can make a difference

**ADVOCACY PROJECTS ARISING
FROM MY PERSONAL EXPERIENCES**
Dr. Abraham B. Bergman MD

<u>Problem</u>	<u>Action</u>
Flammable fabric burns	Flammable Fabrics Act '67
Rampant tooth decay	Fluoridation of Seattle Water '68
Aspirin Poisoning	Poison Prevention Packaging Act '70
MD shortage in critical areas	National Health Service Corps '71
Power lawns mower injuries	Consumer Product Safety Commission '72
Poor care for Indian children	Indian Health Care Improvement Act '76

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Abraham Bergman is the Chairman of Pediatrics in Seattle. This is a list of legislation that he personally played a key role in developing, working frequently with Washington State Senator Magnuson (sp?).

A good example to show that one person can make a difference.

Community wide efforts can have a big impact

- Communities can mobilize resources to:
 - Make schools better
 - Create after school or sports programs,
 - Make quality child care available
 - Rebuild community institutions after a disaster

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Pediatricians can also play a role in strengthening their local community organizations.

There is now a lot of evidence that strong neighborhoods can greatly dampen the expected effect of poverty on health.

Pediatricians Role

- Physicians have a powerful voice
 - at the community
 - at the legislative level
- We have an obligation to use that voice to improve health of children