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#584 - A New Mechanism Of Disease
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Numerous studies in England and the U.S. have shown consistently that a person's place in the social order strongly affects health and longevity.[1] It now seems well-established that poverty and social rank are the most important factors determining health --more important even than smoking.[2]

This conclusion has been a long time in the making. A British study in 1840 observed that "gentlemen" in London lived, on the average, twice as long as "labourers." Starting in 1911, British death certificates have been coded for social class based on occupation. (In the U.S., death certificates are coded for race or ethnicity without reference to class or occupation.) The British database of deaths coded by class has allowed many studies, which have shown consistently that lower social status is associated with early death.

For example, in 1980, Sir Douglas Black, who was then the President of the Royal College of Surgeons, published a study covering the period 1930-1970 in England. The so-called Black Report concluded that "there are marked inequalities in health between the social classes in Britain." Specifically, people in unskilled occupations had a two-and- a- half times greater chance of dying before retirement than professional people (lawyers and doctors).[1]

Furthermore, the Black Report showed that the gap in death rates between rich and poor had widened between 1930 and 1970. In 1930, unskilled workers were 23% more likely to die prematurely than professional people, whereas in 1970 they were 61% more likely than professionals to die prematurely.

Several subsequent studies confirmed the findings of the Black Report and demonstrated that, even within privileged groups, those with less status lived shorter lives. In other words, social rank affects health even among those who are well off. The so-called Whitehall studies in England examined the health of 10,000 British government employees (civil servants) over 2 decades and found a 3-fold difference in death rates between the highest and lowest employment grades. The Whitehall studies showed (and later a U.S. study confirmed) that conventional risk factors such as smoking, obesity, physical activity, blood pressure and blood-levels of cholesterol could explain only 25% to 35% of employment-grade differences in mortality.[2] In other words, social rank was more important a determinant of health than were all the conventional risk factors. In sum, being lower in the pecking order makes you sick and shortens your life.

Researchers have examined the opposite hypothesis, that perhaps health status determines social class --that being sick makes you poor, instead of the other way around. They have found that this explains only about 10% of the health disparities between social ranks.[1]

In the U.S., a study in Chicago during 1928-1932 examined death certificates in relation to place of residence at time of death. Chicago was categorized into 5 socioeconomic levels based on average monthly rental payments. The study showed a fairly smooth curve: the higher the rent, the lower the death rate for people of similar ages.

This study was redone in 1973, looking at changes between 1930 and 1960. There had been "no relative gain" in recent decades for those paying the lowest rents. So even though the general standard of living may rise, those lower on the income scale die at younger ages.

In 1986, researchers at the National Center for Health Statistics showed that Americans with annual incomes of $9000 or less had a death rate 3 to 7 times higher (depending on gender and race) than people with annual incomes of $25,000 or more. Furthermore, they showed that this situation had worsened between 1960 and 1986.[1]

In the U.S., within groups of people having similar incomes, African- Americans have worse (and worsening) health status, compared to whites, for many diseases including asthma, diabetes, hypertension (high blood pressure), major infectious diseases, and several cancers.[3] Among researchers who have studied these problems, the basis of these health differences is thought to be racism, not genetics.[1]

As we have reported previously (REHW #497), several studies have now revealed two important facts about the relationship of wealth to health:

1. Between countries, there is no relationship between gross domestic product (GDP) --a conventional measure of wealth --and health. In other words, comparing countries at similar levels of industrialization, it is quite possible for people in poorer countries to be healthier than people in richer countries. The absolute level of income does not determine health or longevity.

2. On the other hand, within individual countries there is a consistent relationship between health and the size of the gap separating rich from poor. Countries with the longest life expectancy at birth are those with the smallest spread of incomes and the smallest proportion of people living in relative poverty. Such countries (for example, Sweden) generally have longer life expectancy than countries that are richer but tolerate larger inequalities, such as the U.S.

Within the U.S., comparisons between states have come to similar conclusions: it is not the average level of income in a state that determines health status --it is the size of the gap between rich and poor in a state that determines health.

George Kaplan and his colleagues at the University of California at Berkeley measured inequality in the 50 states as the percentage of total household income received by the less well off 50% of households. [4] It ranged from 17% in Louisiana and Mississippi to 23% in Utah and New Hampshire. In other words, by this measure, Utah and New Hampshire have the most EQUAL distribution of income, while Louisiana and Mississippi have the most UNEQUAL distribution of income.

This measure of income inequality was then compared to the age-adjusted death rate for all causes of death, and a pattern emerged: the more unequal the distribution of income, the greater the death rate. For example in Louisiana and Mississippi the age-adjusted death rate is about 960 per 100,000 people, while in New Hampshire it is about 780 per 100,000 and in Utah it is about 710 per 100,000 people. Adjusting these results for average income in each state did not change the picture: in other words, it is the gap between rich and poor within each state, and not the average income of each state, that best predicts the death rate.

Inequality is growing throughout the world, both between countries and within countries. As of 1996, 89 countries (out of 174) were worse off, economically, than they had been a decade previously. In 70 developing countries, incomes are lower now than they were in the 1960s and 1970s. [5] And the level of inequality is already astonishing. For example, in 1996, 358 billionaires controlled assets greater than the combined annual incomes of countries representing 45 percent of the world's population (2.5 billion people).[5] Between 1961 and 1991, the ratio of the income of the richest 20% of the world's population to the poorest 20% increased from 30-to-1 to 61-to-1.[2]

Within the U.S., inequality is wider than it has been for 50 years, and it is getting worse. The U.S. now finds itself among a group of countries, including Brazil and Guatemala, in which the national per capita income is at least four times as high as the average income of the poorest 20 percent.[5] In the U.S. between 1980 and 1990, inequality of income increased in all states except Alaska.[1] Inequality in the distribution of income and wealth[6] has been increasing in the U.S. for about 20 years.[7,8,9,10] In 1977 the

wealthiest 5% of Americans captured 16.8% of the nation's entire income; by 1989 that same 5% was capturing 18.9%. During the 4-year Clinton presidency the wealthiest 5% have increased their take of the total to over 21%, "an unprecedented rate of increase," according to the British ECONOMIST magazine.[11]

Inequality in the distribution of wealth in the U.S. is even greater than the inequality in income. In 1983, the wealthiest 5% of Americans owned 56% of all the wealth in the U.S.; by 1989, the same 5% had increased their share of the pie to 62%.[10,pg.29]

These tremendous inequalities translate directly into sickness and death for those holding the short end of the stick.

As Dr. Donald M. Berwick, a Boston pediatrician, said recently, "Tell me someone's race. Tell me their income. And tell me whether they smoke. The answers to those three questions will tell me more about their longevity and health status than any other questions I could possibly ask."[3]

Isn't it time that the public health community --physicians, public health specialists, and environmentalists --recognized that poverty, inequality and racism cause sickness and death? Given what science now tells us, medical policy --including medical training --should aim to combat and eliminate poverty, inequality, and racism just as it now aims to combat and eliminate infectious diseases and cancer.[2] With U.S. health care costs now exceeding $1 trillion each year, anti- poverty and anti-racism initiatives would be economically efficient as well as humane.

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)

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[1] Oliver Fein, "The Influence of Social Class on Health Status: American and British Research on Health Inequalities," JOURNAL OF GENERAL INTERNAL MEDICINE Vol. 10 (October, 1995), pgs. 577-586.

[2] Andrew Haines, Michael McCally, Whitney Addington, Robert S. Lawrence, Christine Cassel, and Oliver Fein, "Poverty and Health: The Role of Physicians," ANNALS OF INTERNAL MEDICINE (in press).

[3] Peter T. Kilborn, "Black Americans Trailing Whites in Health, Studies Say," NEW YORK TIMES January 26, 1998, pg. A16.

[4] George A. Kaplan and others, "Inequality in income and mortality in the United States: analysis of mortality and potential pathways," BRITISH MEDICAL JOURNAL Vol. 312 (April 20, 1996), pgs. 999-1003.

[5] Barbara Crossette, "U.N. Survey Finds World Rich-Poor Gap Widening," NEW YORK TIMES July 15, 1996, pg. A3.

[6] Wealth is the net worth of a household, calculated by adding up the current value of all assets a household owns (bank accounts, stocks, bonds, life insurance savings, mutual fund shares, houses, unincorporated businesses, consumer durables such as cars and major appliances, and the value of pension rights), then subtracting the value of all liabilities (consumer debt, mortgage balances, and other outstanding debt).

[7] Sheldon Danziger and others, "How the Rich Have Fared, 1973-1987," AMERICAN ECONOMIC REVIEW Vol. 79 (May, 1989), pgs. 310-314.

[8] McKinley L. Blackburn and David E. Bloom, "Earnings and Income Inequality in the United States," POPULATION AND DEVELOPMENT REVIEW Vol. 13, No. 4 (December, 1987), pgs. 575-609.

[9] Johan Fritzell, "Income Inequality Trends in the 1980s: A Five-Country Comparison," ACTA SOCIOLOGICA Vol. 36 (1993), pgs. 47-62.

[10] Edward N. Wolff, TOP HEAVY; A STUDY OF THE INCREASING INEQUALITY OF WEALTH IN AMERICA (New York: Twentieth Century Fund, 1995). Although this is a study of wealth inequality, chapter 6 deals with income inequality.

[11] "Up, down and standing still," THE ECONOMIST February 24, 1996, pgs. 30, 33.

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