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Primary Prevention in the New Millennium: The Challenge of Translating Knowledge into Action

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In a thoughtful essay on prevention, Leon S. Robertson (1998) recently observed that constructing elaborate theoretical models of disease is intellectually appealing to academics and other scientists, but if resources are used mainly to further specify causal paths rather than to test the effectiveness of preventive interventions, considerable unnecessary harm may occur in the interim. Robertson notes that multifactorial analysis of causal pathways does not necessarily lead to prevention, and can even interfere with prevention by becoming an excuse to do nothing. He further points out that one needs only to identify a necessary condition for a disorder and eliminate it to prevent the disorder from occurring, regardless of whether or not the "web of causes" is fully understood. Moreover, although we have identified a number of technical strategies to control known hazards to health, such as guns, tobacco, and adverse work conditions, the most effective approaches are those undertaken at the government or corporate level, and they are infrequently implemented (Robertson, 1998). Although policy interventions and environmental changes have greater impact, the emphasis has been on preventive actions at the individual level (Brownson, Newschaffer, and Ali-Abarghoui, 1997).

A major challenge for primary prevention in the new millennium is to translate what we know about the deleterious influences of poverty, discrimination, and other social inequalities into effective preventive interventions. Consider, for example, the relationship between poverty and major depression in low-income women. Major depression is highly prevalent among women, and is associated with significant impairment in functioning, including parenting (Weissman and Olfson, 1995). Women are overrepresented among the poor, and higher rates of depression have consistently been found among both Black women and White women of lower socioeconomic status (Blazer et al., 1994; Williams et al., 1992). Bruce et al. (1991)

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report that the poor are more than twice as likely to be depressed as those who are not poor, after controlling for gender. Poverty increases the likelihood of exposure to the acute and chronic stressors associated with depression, such as personal experiences of violence, residing in a dangerous neighborhood, unemployment and low-wage work, limited opportunities, and poor physical health; and is also associated with decreased access to the material and emotional resources that could buffer the impact of stressful life events and conditions, such as money for goods and services and the presence of a supportive partner (Bassuk, Browne and Buckner, 1996; Hobfoll et al., 1995; Padgett, 1997). Yet, although the relationship between poverty and depression in women is well-established, interventions to prevent depression have not targeted poverty as a specific hazard to be eliminated. While we do not yet fully understand the causal pathways through which poverty operates to influence major depression, given the consistent finding that it is a potent risk factor, preventive trials aimed at the elimination or reduction of poverty among low-income women would appear to hold considerable promise for reducing at least a proportion of the public health burden of this disorder.

Similarly, a number of recent studies have shown that despite a strong economy, food insecurity and hunger remain major problems in the United States (Bidlack, 1996; Alaimo et al., 1998; Bickel, Carlson, and Nord, 1999). In 1998, the national prevalence rate for hunger was 10.4% in single-woman headed families, and approximately 31 million people experienced some degree of household food insecurity, and (Bickel, Carlson and Nord, 1999). Food insufficiency has been associated with low intake of essential nutrients (Rose and Oliviera, 1997), and a recent study found significant relationships between food insufficiency and self-rated health, physical limitations, and major depression in low-income mothers (Siefert et al., 1999). Research has also shown that hunger is associated with psychosocial dysfunction and academic impairment in poor children, as well as with aggressive behavior and school dropout in adolescence (Murphy et al., 1998; Kleinman et al., 1999). Although the exact causal pathways through which hunger influences the health and mental health of poor women and children have yet to be specified, preventive trials in this area seem warranted. For example, although a number of studies have attempted to prevent psychosocial problems in children through behavioral and psychosocial interventions, none have focused specifically on eliminating household food insufficiency as a preventive measure.

Finally, a growing body of research implicates discrimination as a factor detrimental to health and mental health, although we do not understand the mechanisms through which damage occurs. For example, African-Americans have comparable or lower rates of mental illness than Whites, (Robins and Regier, 1991; Kessler et al., 1994), but several recent studies by David R. Williams and his colleagues have documented that Blacks report more experiences of racial discrimination, which is in turn associated with psychological distress, depressive symptoms, and major depression (Ren, Amick and Williams, 1999; Williams et al., 1997;

Kessler, Michelson and Williams, 1999). If we wait until the "web of causation" is fully specified before attempting to intervene to remove discrimination as a health hazard, significant harm is likely to continue. This too is a promising, but neglected, area for preventive intervention.

In sum, there is substantial research evidence that poverty, hunger, and discrimination are significant hazards to health in the United States. Although we do not fully understand the causal pathways through which these risk factors operate, as Robertson (1998) observes, if we fail to intervene preventively in the face of compelling evidence, much unnecessary human suffering is likely to occur. In its recent statement on priorities for prevention research, the National Advisory Mental Health Council (1998) recommended broadening the targets for preventive strategies to increase interventions with larger social units. In addition, the Council recommended developing research on how changes in social and economic systems, policies, and laws might affect prevention. A preventive trial of policies and programs that provide adequate income, household food, and counter the damaging effects of current and historical discrimination could do much to improve the public's health in the new millennium.

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