Invited Commentary

Invited Commentary: The Search for Explanations of the American Health Disadvantage Relative to the English

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Although Americans make up just 5% of the world's population, they represent more than half of every medical dollar expended on the planet. Yet, American life expectancy appears near the bottom of rankings by the Organization for Economic Cooperation and Development, and American adults live in poorer health than most Europeans. In this issue of the Journal, Martinson et al. (Am J Epidemiol. 2011;173(8):870) provide us with further evidence of the generality of this phenomenon, showing a pattern of poorer health in the United States relative to England across the entire life course. Recent research points at single risk factors such as smoking as potential explanations, but such hypotheses are of limited scope to explain the pervasive US health disadvantage across the entire life course. In this commentary, a potentially promising line of inquiry based upon differences in social policy contexts is proposed. Life in the United States can be distinguished from that of the rest of the member countries of the Organization for Economic Cooperation and Development in terms of the weakness of its social safety nets, the magnitude of social inequalities, and the harshness of poverty. The authors argue that broadening the scope of their inquiry to include the social and policy contexts of nations might help to solve the puzzle of the US health disadvantage.

England; Europe; health status disparities; internationality; life expectancy; morbidity; United States

Abbreviation: OECD, Organization for Economic Cooperation and Development.

The observation that Americans are sicker than the English (or indeed for that matter, most of the industrialized world) comes as a surprise to many people who are unused to looking at health statistics. Americans are accustomed to seeing themselves at the top of various “league chart” rankings of nations, whether in terms of per capita income, Nobel Prize winners, or medal counts at the summer Olympics (1). The United States also leads the world in healthcare expenditure. Although Americans make up just 5% of the world’s population, they represent more than half of every medical dollar expended on the planet. Yet for all that effort, American life expectancy appears near the bottom of rankings by the Organization for Economic Cooperation and Development (OECD).

The study by Martinson et al. (2) in this issue provides further evidence of this phenomenon. In a side-by-side comparison of the health status of Americans versus the English, the US health disadvantage applies not just to older Americans, as was previously reported by Banks et al. (3), but also is a generalized phenomenon observed across the entire life course. So what could explain the stunted health performance of Albion’s seed?

Before exploring substantial explanations for this puzzle, we need to consider at least 3 artifactual explanations for US–English differences. First, physicians in the United States may be more aggressive in diagnosing certain conditions than their English counterparts, leading to higher self-reported morbidity in the United States compared with England. Although this may contribute to the pattern for some conditions such as hypertension (4), Martinson et al. (2) and others (3) observe that the US health disadvantage applies not just to self-reports but also for a wide range of biomarkers including cholesterol level, C-reactive protein, and hemoglobin A1c. Thus, it is unlikely that these findings...
are the sole product of differential detection or reporting. Second, the higher prevalence of chronic conditions in the United States might result from better survival after diagnosis compared with England. Crimmins et al. (5) explore this question and find little evidence for this hypothesis, because the United States has both higher prevalence and mortality from several chronic conditions than other high-income countries. Finally, the United States differs markedly from England in terms of race/ethnic, socioeconomic, and immigrant composition. Analyses by Martinson et al. (2) and others (3, 6, 7) address this issue in stratified analyses and find that the US health disadvantage is consistent across race and socioeconomic strata, so that even white, wealthy, or highly educated Americans have a worse disease profile compared with that of the English or Europeans. Indeed, in the paper by Banks et al. (3), English people belonging to the lowest income tertile exhibited a more favorable profile for some diseases (e.g., diabetes) compared with Americans in the top income group, suggesting the thought experiment that “exporting” the poorest English to America might improve the average health status of both countries! Although in the absence of fully comparable data definitive assertions are not possible, most of the evidence points to a robust disparity that cannot be accounted for by variations in diagnosis practices, selective survival, or population composition.

### SEARCHING FOR THE ANSWERS TO THE PUZZLE OF AMERICAN HEALTH DISADVANTAGE

What then are the potential explanations of the US health disadvantage relative to the English or other Europeans? The study by Martinson et al. (2) is timely and complements the findings of a recent study completed by the National Academy of Sciences aimed at understanding the diverging trends in life expectancy among developed nations, most notably between the United States and other high-income countries (8). Among the explanations examined by the National Academies study are differences in the structure and coverage of the health-care system; the distribution of classic behavioral risk factors including smoking, obesity, alcohol consumption, and physical activity; differences in the levels of social contacts and social integration; and within-country inequality by socioeconomic status and geography. With the exception of smoking, the report concludes, none of these potential pathways emerges as a powerful explanation, and those that do so seem to contribute relatively little to explaining US excess mortality. Although a larger share of Americans are uninsured or underinsured relative to populations in England or other European countries, even groups with good access to health insurance experience worse health compared with corresponding Europeans (3, 6), a finding replicated by Martinson et al. (2). Obesity, physical activity, and alcohol consumption vary between the United States and other countries, but the differences and potential magnitude of their effects on cross-national health variations do not suggest a central role (3, 6, 9, 10). These findings are in line with those from Martinson et al. (2), who find that excess morbidity in the United States compared with England persists even after restricting the comparison to individuals with similar risk factor profiles. The level of social contacts and social integration varies remarkably little between the United States and England, and associations with health outcomes do not seem consistent or sufficiently strong to explain the US–England health gap (11). Although there is considerable variation in health across geographic regions and socioeconomic groups within the United States, even the healthiest regions or high socioeconomic groups within the United States appear to have worse health than many Europeans (3, 6, 7). The puzzle therefore remains largely unresolved, and the lone suspect fingered by the National Academies study was cigarette smoking.

Proponents of the smoking hypothesis suggest that tobacco consumption could explain up to three-fourths of the US life expectancy disadvantage relative to other OECD countries (12, 13): The smoking epidemic started earlier and reached a higher peak in the United States than in England or other European countries. Because of the time lag of several decades between smoking and lung cancer incidence, proponents of this view argue that the worse health and higher mortality of US adults are a reflection of their smoking histories, most notably among US women, who started smoking earlier and smoked longer than European women. This story line fits with the finding by Martinson et al. (2) that the US–England difference is somewhat more pronounced for women than for men and for diagnoses such as stroke and heart attack. At the same time, the story does not fit well with other findings reported by Martinson et al. Even if smoking were central to the poor health of some American cohorts, why do we observe a US health disadvantage for younger cohorts that have not yet been exposed to smoking, or that have enjoyed lower levels of tobacco exposure than Europeans? Although there are potential pathways through which smoking might exert an effect on the health of Americans of all ages, for example, through maternal smoking or second-hand tobacco exposure, the generality of the US health disadvantage across a wide spectrum of diseases and biomarkers (many of them unrelated to smoking) makes cigarettes alone an unconvincing culprit. Disentangling the historical role of smoking is also challenging, because smoking trends during the last decades are contemporaneous with other major societal changes. For example, among women, decreasing trends in smoking prevalence in the last 40 years are strongly correlated with increasing trends in labor force participation. Correlations for different age cohorts range from −0.68 (P < 0.0001) for ages 20–24 to −0.94 (P < 0.0001) for ages 45–49 (Figure 1), so that the estimated effect of smoking might be confounded by work-related exposures.

### GOING BEYOND THE CIGARETTES EXPLANATION

The results from Martinson et al. (2) point to more structural mechanisms that may influence the health of US men and women at all ages. Most research in this area has adopted a reductionist approach by exploring single risk factors as plausible explanations, but no convincing framework has
been put forward to address the fundamental causes of the generalized pattern of US health disadvantage. From a cross-national comparative perspective, America is often noted for its “exceptionalism.” We draw attention here to the exceptionally bad policy context within which American families and workers lead their lives. As several commentators have remarked on previous occasions (1, 14), life in the United States can be distinguished from that of the rest of the OECD countries in terms of the weakness of its social safety nets, the magnitude of social inequalities, and the harshness of poverty. Compared with the United States, Europe and the United Kingdom have been more committed to income redistribution and poverty reduction (14, 15). European tax systems are more progressive, enabling more generous social policy programs that reach a larger share of the population. These differences in policy extend across the entire life-course spectrum starting from childhood and extending to old age. For example, child benefits have traditionally been available for parents in many European countries regardless of income, while comprehensive family allowances for middle-class Americans remain limited (14, 15). Government spending on subsides and transfers has been much larger in European countries than in the United States. For example, in 1960, the United States spent 5% of its gross domestic product in subsidies and transfers, as opposed to 9% in the United Kingdom, 13% in Germany, and 14% in France. By 1998, the percentages had grown to 16% in the United Kingdom, 21% in France, and 11% in the United States, where government expending was about half of that in the European Union as a whole (14). US social programs are most often restricted to the very poor, while European programs are progressive yet reach to all citizens. As a result of different policy orientations, the United States has lagged behind England and Europe in several major social indicators. For example, the United States has higher absolute and relative poverty rates than England or other European countries; particularly striking are cross-national differences in child poverty. In 2005, 21% of children in the United States lived in poverty, compared with 10% in the United Kingdom, 4% in Sweden, and 8% in France (15). Levels of educational deprivation in the United States were 5% in the same year, as opposed to 1% in France and 2% in Sweden and the United Kingdom.

The labor market context in the United States may also be crucial to understanding the US health disadvantage relative to Europeans. The OECD compiled an indicator of employment protection (restrictions on the ability of enterprises to terminate employees) that ranges from 0 (less stringent) to 6 (most restrictive). In 2008, the United States had a score of 0.21, as opposed to 0.75 in the United Kingdom, 1.87 in Sweden, and 3.05 in France, suggesting substantially higher employment protection levels in Europe. Unemployment benefits are also less generous in the United States than Europe. In 2005, wage replacement rates for long-term unemployment insurance for a single-earner married couple with 2 children were 48% in the United States compared with 78% in the United Kingdom, 95% in Sweden, and 81% in Germany (15). Labor standards for working parents also differ dramatically between the United States and Europe. In 2006–2007, the duration of paid maternity and paternal

Figure 1. Female daily smoking prevalence at age ≥15 years and labor force participation (LFP) trends by age group at ages 20–49 years in the United States during 1965–2006. Data on daily smoking prevalence come from OECD Health Data 2010: Statistics and Indicators (17); data on labor force participation come from the OECD Statistics Database (15). OECD, Organization for Economic Cooperation and Development.
leave was 9.3 weeks in the United Kingdom, 47.1 weeks in France, and 62.4 weeks in Sweden, compared with none in the United States (16). In sum, although US policies may arguably yield stronger incentives to maintain high levels of labor force participation, the ultimate price may be more insecurity and poorer health.

The paper by Martinson et al. (2) brings a new life-course perspective to cross-national health differences and suggests that the United States lags behind England, and most likely other developed nations, by a considerable margin. Several of the usual explanations for this phenomenon have proved to be of limited scope. We have suggested a potentially promising line of inquiry based upon differences in social policy contexts. However, the challenge is obviously to identify the particular social and labor policies that have a causal impact on health and that may contribute to cross-national health differences. For example, do the more generous parental leave policies in Europe contribute to their comparative health advantage? Have employment protection policies contributed to the better health of European workers compared with their US counterparts? The great variation in policy reform during the last 50 years across Europe and the United States provides us with a potentially fruitful set of natural experiments to consider. Broadening the scope of our inquiry to include the social and policy context of nations might help to solve the puzzle of the US health disadvantage.

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