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Spreading the Health: Americans' Estimated and Ideal Distributions of Death and Health(care)

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Working Paper 20-114

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Abstract

The 2010 Patient Protection and Affordable Care Act intensified debates over the role of government in the distribution of healthcare. A nationally-representative sample of Americans reported their estimated and ideal distributions of healthcare (unmet need for prescription medications) and death (gains in life expectancy). Respondents across the demographic and political spectrum wanted mortality and healthcare to be distributed more evenly among the rich and poor than they estimated them to be. For example, respondents estimated that Americans in the poorest quintile lived 1.5 months longer over the previous 20 years while those in the richest quintile lived 4.7 months longer, but reported ideal figures of 2.5 and 3.6 months – both were far more equal than the actual figures: -1.8 and 7.2 months. Despite heated debates about healthcare, Americans share a consensus belief that current disparities in death and healthcare are far from their ideals.

Keywords: health; healthcare; mortality; inequality; fairness; justice; equity

Recent and ongoing debates in the United States about universal healthcare – with some viewing the 2010 Patient Protection and Affordable Care Act (or "Obamacare") as a moral imperative but others viewing it as a government intrusion – have highlighted differences in opinion about how healthcare (and health outcomes more broadly) should be distributed among rich and poor Americans (Cerise and Chokshi 2009; Garrett et al. 2009; West-Oram 2013). The United States – alone out of thirty three developed nations in one survey – lacks universal healthcare, and the debate over coverage has become if anything more heated, as evidenced by not one but two challenges which reached the United States Supreme Court (*King v. Burwell* 2015; *National Federation of Independent Business v. Sebelius* 2012).

Healthcare coverage will likely continue to be a center of the debates in the upcoming presidential election in 2016 (Chozick and Haberman 2015; Corasaniti and Healy 2015). We suggest that these heated political debates may be obfuscating a shared consensus among Americans on their ideals for health and healthcare for their fellow citizens. While previous research has primarily explored perceptions of economic inequality (e.g., Bartels 2005; Côté et al. 2015; Cruces et al. 2013; Davidai and Gilovich 2015; Delli Carpini and Keeter 1996; Gilens 2001; Kiatpongsan and Norton 2014; Kluegel and Smith 1986; Norton and Ariely 2011), we explore Americans' understanding of the current distributions of health and healthcare, and assess their ideal preferences for those distributions. We further explore whether Americans show consensus in their ideals, as a function of their demographics (gender, age, income, education, race, and region) and beliefs (political affiliations, political views, and attitudes towards wealth inequality). Finally, we compare these estimates and ideals to the actual distributions of health and healthcare.

A national, probability-based, random sample of Americans estimated the distribution of health and healthcare for Americans in each of the five income quintiles in two domains: a) healthcare: unmet need for prescription medications (unable to obtain prescription medications due to cost within the past 12 months) and b) health: gains in life expectancy (average increase in the number of months people lived over the previous 20 years). Respondents also reported their ideal distributions: how they thought unmet need for prescription medications and gains in life expectancy *should* be distributed among rich and poor Americans.

Method

We recruited our respondents through a survey research firm which maintains a national, probability-based web panel of the U.S. population, the KnowledgePanel. Panel members are randomly recruited through address-based and probability-based sampling, and households are provided with access to the Internet and hardware if needed. Unlike Internet convenience panels, also known as "opt-in" panels, that include only individuals with Internet access who volunteer for research, the KnowledgePanel recruitment uses dual sample frames to construct the panel. As a result, panel members come from listed and unlisted telephone numbers, telephone and non-telephone households, and cell phone only households, as well as households with and without Internet access, which creates a representative sample. Only persons sampled through these probability-based techniques are eligible for the KnowledgePanel. Unless invited to do so as part of these national samples, no one can volunteer to be on the panel. The American Association for Public Opinion Research (AAPOR), through its Online Task Force and scientific comparison research, has validated the KnowledgePanel model as scientifically valid for accurate assessment of U.S. public opinion (GfK 2013). The KnowledgePanel has been used widely for health policy

and public policy research (Baker et al. 2003; Barry et al. 2012; Barry et al. 2013; Gollust et al. 2010; Harris et al. 2010; Morain and Mello 2013; Schlenger et al. 2002).

Respondents were U.S. non-institutionalized residents ages 18 years and older (see the demographic profiles in Tables 1 and 2). The survey was conducted online from March 13 to April 3, 2014. Email reminders to non-responders were sent on day three of the field period. Additional email reminders were sent on day nine, day sixteen, and day twenty of the field period. First, the invitation was emailed to members of the KnowledgePanel. After consenting and agreeing to participate, respondents proceeded to the survey. The first part of the survey provided an introduction to concepts of rankings and quintiles. These concepts were crucial for respondents to understand because many of the survey questions required them to report answers by income quintiles.

Respondents were asked about distributions of healthcare (i.e., unmet need for prescription medications) and mortality (i.e., gains in life expectancy). We selected unmet need for prescriptions and gain in life expectancy based both on their capturing two different aspects of beliefs about the distribution of health and on the availability of data on their actual distributions by income quintile in the United States (Cristia 2009; Sanmartin et al. 2006).

For unmet need for prescription medications, respondents were accurately informed that on average, 10% of all Americans cannot obtain the prescription medications they need due to the costs of these medications (unmet need for prescription medications; Sanmartin et al. 2006). They were also informed that unmet need for prescription medications is not necessarily the same for the five income groups. They were then asked to estimate the actual percentage of Americans in each income quintile with unmet need for prescription medications during the past 12 months; the survey interface ensured that the average across quintiles remained 10% (see

Supplemental Figure 1a). We utilized the same survey questions to elicit ideal distributions, except that respondents reported what they believed the distributions ideally should be. Note that this meant that for ideals, respondents could not simply indicate that they wanted no unmet need; instead, reflective of current reality, the average unmet need was fixed at 10% and respondents were required to decide how that lack of coverage should be distributed (Supplemental Figure 1b).

For gains in life expectancy, respondents were accurately informed that Americans who live to be at least 35 years old are living 3.2 months longer on average than they did 20 years ago (Cristia 2009), and were asked to estimate what the actual life expectancy gain was (in months) for each of the income quintiles; the survey interface ensured that the average across quintiles remained 3.2 months (Supplemental Figure 2a). We designed the survey interface to allow respondents to input both positive and negative gains in life expectancy, with the scale ranging from a loss of 10 months to a gain of 10 months for each income quintile. Moreover, we specifically informed respondents that "people in any of the income groups may live more or less than 3.2 months longer on average." We utilized the same interface to elicit ideal distributions, with respondents reporting what they felt the distributions ideally *should* be. As before, fixing the average for ideals at 3.2 months meant that respondents could not simply indicate that they wanted everyone to experience large gains in life expectancy; instead, the average increase was fixed at 3.2 months and respondents determined how ideally to distribute that "extra" life among the rich and poor (Supplemental Figure 2b).

Respondents were randomly assigned to estimate actuals and then report ideals, or report ideals and then estimate actuals; order did not impact our results so we do not discuss this variable further.

Finally, respondents completed demographics and two questions assessing their attitudes towards inequality and redistribution of wealth, taken from Gallup (Newport 2013): (a) *Do you feel that the distribution of money and wealth in this country today is fair, or do you feel that the money and wealth in this country should be more evenly distributed among a larger percentage of the people?* (response options: "Distribution is fair" or "Should be more evenly distributed"); and (b) *People feel differently about how far a government should go. Here is a phrase which some people believe in and some don't. Do you think our government should or should not redistribute wealth by heavy taxes on the rich?* (response options: "Yes, should" or "No, should not").

Results

The statistical software package SPSS 21.0 (SPSS Inc., Chicago, IL) was used for all data analyses. Statistical significance was determined at $p < .05$. The study protocol was reviewed and approved by the Institutional Review Board at Harvard Business School.

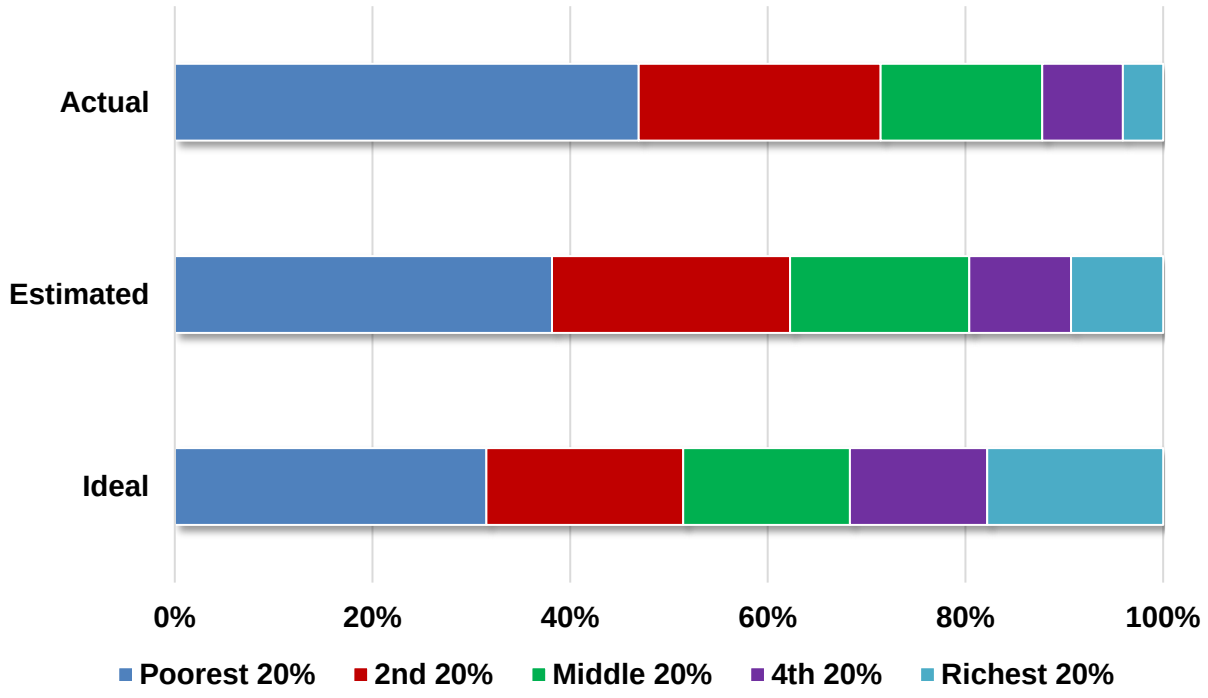
We targeted a total sample of 1,000 respondents. 1,680 panel members were randomly drawn from the KnowledgePanel and invited to participate. 1,130 responded to the invitation and 1,012 qualified for the survey, yielding a final stage completion rate of 67.3% and a qualification rate of 89.6%. We report results with post-stratification statistical weights based on demographic distributions from the most recent U.S. Current Population Survey in 2013. Results do not differ by the use of statistical weights.

Unmet need for prescription medications. Overall, respondents believed that unmet need was more equally distributed than it actually is, and reported ideal distributions that were more equal than both their estimates and the actual distribution. Figure 1 compares the actual,

estimated and ideal distributions of unmet need for prescription medications of each of the income quintiles.

For ease of explication, we focus on estimates and ideals for the poorest and richest quintiles. In actuality, 23.4% of Americans in the poorest quintile had unmet need for prescription medications (Sanmartin et al., 2006); our respondents estimated that just 19.1% (95% CI = 18.2-19.9%) had unmet need and ideally wanted just 15.8% (95% CI = 15.0-16.6%) to have unmet need (all t-tests *ps* < .001). At the other end of the income spectrum, whereas just 2.3% of Americans in the richest quintile had unmet need (Sanmartin et al. 2006), our respondents estimated that 4.7% (95% CI = 4.2-5.1%) had unmet need but ideally wanted 8.9% (95% CI = 8.2-9.5%) to have unmet need (all t-tests *ps* < .001).

Figure 1. Actual, estimated and ideal distributions of unmet need for prescription medications of Americans.

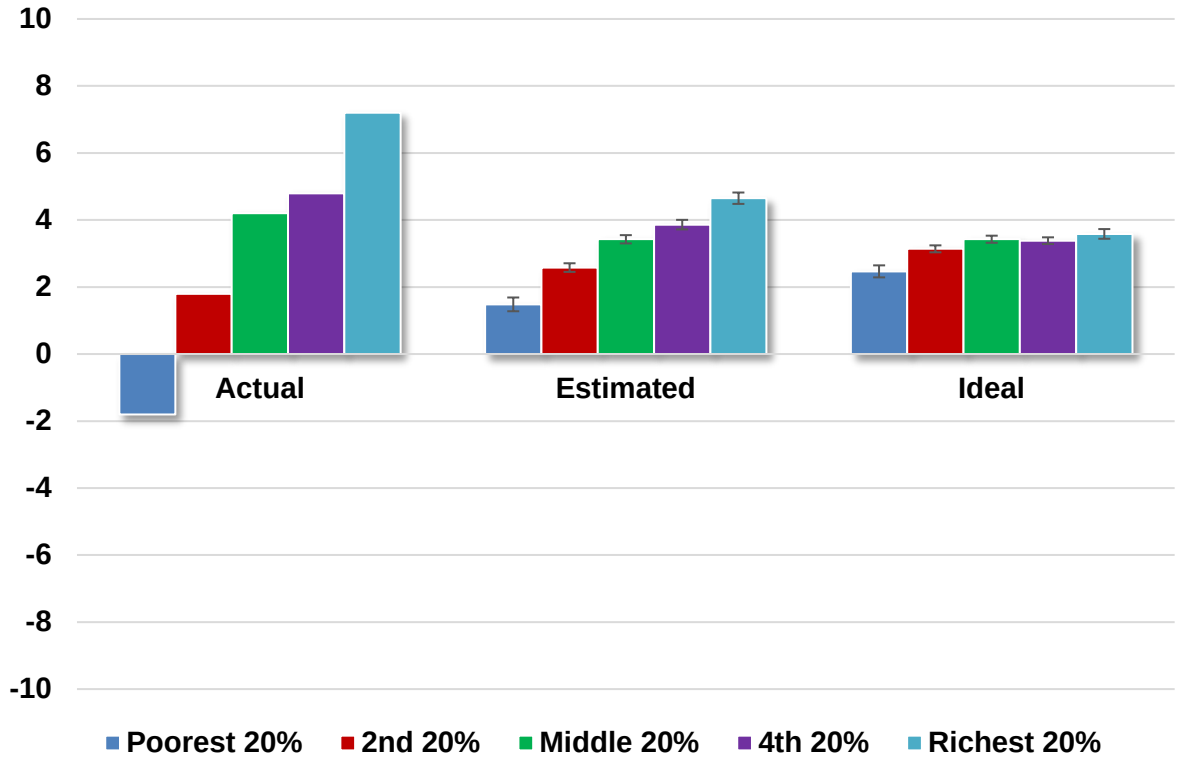


Gains in life expectancy. As with unmet need for prescription medications, respondents believed that gains in life expectancy were more equally distributed than is actually the case, and reported ideals that were more equal than their estimates and the actual distribution (see Figure 2 for full results; below, we again focus on the poorest and richest quintiles.) Over the previous 20 years, Americans in the poorest quintile actually lived *negative* 1.8 months longer (meaning they died sooner than before; Cristia 2009); in sharp contrast, our respondents estimated that they lived 1.5 months longer (95% CI = 1.3-1.7 months) and reported wanting them to live 2.5 months longer (95% CI = 2.3-2.6 months; all t-tests *ps* < .001). Whereas Americans in the richest quintile actually lived 7.2 months longer over the previous 20 years, respondents estimated that they lived 4.7 months longer (95% CI = 4.5-4.8 months) and reported an ideal increase of 3.6 months (95% CI = 3.4-3.7 months; all t-tests *ps* < .001).

Consensus. We examined the extent to which respondents agreed on these ideals as a function of their demographics and beliefs; in particular, we assessed whether the preference for smaller gaps in health and healthcare between the rich and poor were held consensually. As can be seen in Tables 1 and 2, all respondents – male and female, younger and older, rich and poor, less- and well-educated, White, Black and Hispanic, and conservative and liberal – desired more equal distributions of health and healthcare than the current actual distributions in the United States.

Respondents also reported general attitudes towards wealth inequality and redistribution of wealth at the end of the survey, using items from Gallup (Newport 2013): *Do you feel that the distribution of money and wealth in this country today is fair, or do you feel that the money and wealth in this country should be more evenly distributed among a larger percentage of the people?* (31% of respondents selected “Distribution is fair”; 67% selected “Should be more

Figure 2. Actual, estimated and ideal distributions of gain in life expectancy (in months) of Americans.



Note: Error bars represent two standard errors of the mean. Respondents reported their estiamted and ideals using an interface ranginf from from -10 to 10 months.

evenly distributed"); *People feel differently about how far a government should go. Here is a phrase which some people believe in and some don't.o you think our government should or should not redistribute wealth by heavy taxes on the rich?* (56% selected "Yes, should"; 42% selected No, should not"). Regardless of their demographics, political attitudes and answers to these questions, respondents desired more equal distributions of health between the rich and poor than the actual distributions in the United States (all t-tests *ps* < .001; Tables 1 and 2).

Table 1. Actual and ideal distributions of unmet need for prescription medications (%) as a function of respondents' demographics and beliefs

	Poorest	2nd 20%	Middle	4th 20%	Richest
Actual distribution	23	12	8	4	2
Ideal distribution (all respondents)	16	10	8	7	9
Gender (%)					
Female (52)	15	10	9	7	9
Male (48)	16	10	8	7	9
Age (%)					
60 and above (26)	16	10	8	7	9
45-59 (27)	16	10	9	7	8
30-44 (26)	15	10	8	7	9
< 30 (21)	16	10	9	7	9
Income (%)					
$100,000 and above (28)	15	10	9	6	10
$50,000 to $99,999 (31)	16	10	9	7	8
Less than $50,000 (41)	16	10	8	7	8
Education (%)					
Bachelor's degree and higher (29)	15	10	9	7	9
Some college (29)	16	10	8	7	9
High school and less (42)	16	10	9	7	8
Race (%)					
White, Non-Hispanic (66)	16	10	8	7	9
Black, Non-Hispanic (12)	15	10	10	7	8
Other, Non-Hispanic (6)	14	11	9	7	8
Hispanic (15)	14	9	8	7	10
Region (%)					
Northeast (18)	16	9	9	6	10
Midwest (22)	17	10	8	7	8
South (37)	16	10	9	7	8
West (23)	15	10	8	7	10
Political affiliation (%)					
Republican (28)	15	11	9	7	8
Democrat (37)	14	10	8	7	11
Independent (34)	18	10	8	7	8
Political view (%)					
Conservative (31)	15	11	10	7	8
Moderate (45)	16	10	8	7	9
Liberal (23)	16	10	7	7	11
Do you feel that the distribution of money and wealth in this country today is fair? (%)					

Distribution is fair (31)	17	11	8	7	8
Should be more evenly distributed (67)	15	9	9	7	10
Do you think our government should or should not redistribute wealth by heavy taxes on the rich? (%)					
Yes, should (56)	15	9	8	7	10
No, should not (42)	17	11	9	7	7

Table 2. Actual and ideal distributions of gains in life expectancy (in months) as a function of respondents' demographics and beliefs

	Poorest	2nd 20%	Middle	4th 20%	Richest
Actual distribution	-1.8	1.8	4.2	4.8	7.2
Ideal distribution (all respondents)	2.5	3.1	3.4	3.4	3.6
Gender (%)					
Female (52)	2.4	3.2	3.3	3.5	3.6
Male (48)	2.5	3.1	3.5	3.3	3.6
Age (%)					
60 and above (26)	2.5	3.1	3.3	3.6	3.5
45-59 (27)	2.5	3.2	3.5	3.2	3.6
30-44 (26)	2.5	3.2	3.4	3.3	3.6
< 30 (21)	2.4	3.1	3.4	3.4	3.7
Income (%)					
$100,000 and above (28)	2.5	3.1	3.4	3.4	3.7
$50,000 to $99,999 (31)	2.3	3.1	3.5	3.3	3.8
Less than $50,000 (41)	2.6	3.2	3.4	3.4	3.4
Education (%)					
Bachelor's degree and higher (29)	2.5	3.1	3.4	3.3	3.8
Some college (29)	2.5	3.3	3.4	3.3	3.5
High school and less (42)	2.4	3.1	3.5	3.5	3.5
Race (%)					
White, Non-Hispanic (66)	2.6	3.1	3.4	3.4	3.5
Black, Non-Hispanic (12)	2.8	2.8	3.4	3.4	3.6
Other, Non-Hispanic (6)	1.5	3.3	3.7	3.3	4.2
Hispanic (15)	2.1	3.4	3.4	3.3	3.8
Region (%)					
Northeast (18)	2.4	3.0	3.4	3.4	3.7
Midwest (22)	2.4	3.0	3.3	3.6	3.6
South (37)	2.4	3.2	3.5	3.4	3.5
West (23)	2.6	3.3	3.4	3.1	3.6
Political affiliation (%)					
Republican (28)	2.7	3.2	3.4	3.3	3.4
Democrat (37)	2.4	3.2	3.5	3.3	3.6

Independent (34)	2.3	3.1	3.4	3.5	3.7
Political view (%)					
Conservative (31)	2.6	3.2	3.5	3.3	3.5
Moderate (45)	2.3	3.0	3.4	3.6	3.7
Liberal (23)	2.6	3.3	3.4	3.1	3.5
Do you feel that the distribution of money and wealth in this country today is fair? (%)					
Distribution is fair (31)	2.4	3.1	3.3	3.5	3.7
Should be more evenly distributed (67)	2.5	3.1	3.5	3.3	3.5
Do you think our government should or should not redistribute wealth by heavy taxes on the rich? (%)					
Yes, should (56)	2.5	3.2	3.5	3.3	3.5
No, should not (42)	2.4	3.1	3.3	3.5	3.7

Discussion

Across demographic groups and varying attitudes towards wealth inequality, Americans underestimated the current extent of inequality of mortality and healthcare, and preferred both to be more equally distributed. This consensus is not unprecedented. Previous research shows that people underestimate the magnitude of inequality and overestimate upward economic mobility, and that there is surprising consensus among different groups for more equal distribution of wealth and income (Kiatpongsan and Norton 2014; Norton and Ariely 2011). Indeed while there is some debate over the *accuracy* of laypeople's awareness of *actual* economic inequality (e.g., Chambers et al. 2015), even researchers who disagree demonstrate that people's ideal distributions are more equal than their estimated distributions (Eriksson and Simpson 2012; Norton and Ariely 2013). While acknowledging that wealth and health are only two out of many dimensions of inequality (see Weeden and Grusky 2012), our results add to this literature demonstrating clear consensus for more equal distributions of health in the domains of mortality and healthcare.

And admittedly, inequalities in health and healthcare are far more complex and multidimensional than the two aspects we assessed (Chozick and Haberman 2015; Talev 2015);

we focused on unmet need for prescription medication and gains in life expectancy in our survey for several reasons. First, these two domains are familiar and accessible for our respondents. Second, because we wished to compare estimates and ideals to actual distributions, our choices were restricted to domains where the actual data were available (Cristia 2009; Sanmartin et al. 2006). Third, we chose one domain with a positive (gain) meaning and another domain with a negative (loss) meaning; consistently, our respondents overestimated how positive outcomes (life expectancy) and underestimated how negative outcomes (unmet need) were concentrated among the poor, and wanted these outcomes to be more equally distributed. Finally, note that we utilized two distinct elicitation methods: one that required estimating percentages (for healthcare) and one that required estimating averages (for mortality). Despite these differences, both methodologies revealed that people's ideals were more equal than the actual, suggesting that the gaps we observe are not merely an artifact of a particular elicitation method.

In our study, 67% of respondents agreed that the distribution of income and wealth in the U.S. today should be more even; in the latest Gallup poll conducted in 2013, 59% agreed; similarly, 56% of respondents agreed that the government should redistribute wealth through heavy taxes on the rich compared to 52% in the Gallup poll (Newport 2013). These results suggest that our respondents may prefer slightly more equal distributions than respondents in the Gallup poll; however, we note that our respondents preferred more equal distributions of health and healthcare independent of their attitudes towards wealth inequality.

In summary, estimated and ideal distributions of health and healthcare differ significantly, suggesting that Americans across the demographic, political and economic spectrum would prefer health and healthcare to be more equally distributed among the rich and poor. These results suggest that despite the heated debates about health coverage in the United

States, Americans do share a consensus belief that the current disparities in healthcare and health outcomes are far from their ideals. Of course, this shared consensus does not necessitate agreement by different constituencies on which policy solutions best close the gap between reality and ideals; still, our results offer a promising initial step toward admitting – and agreeing – that there is a problem.

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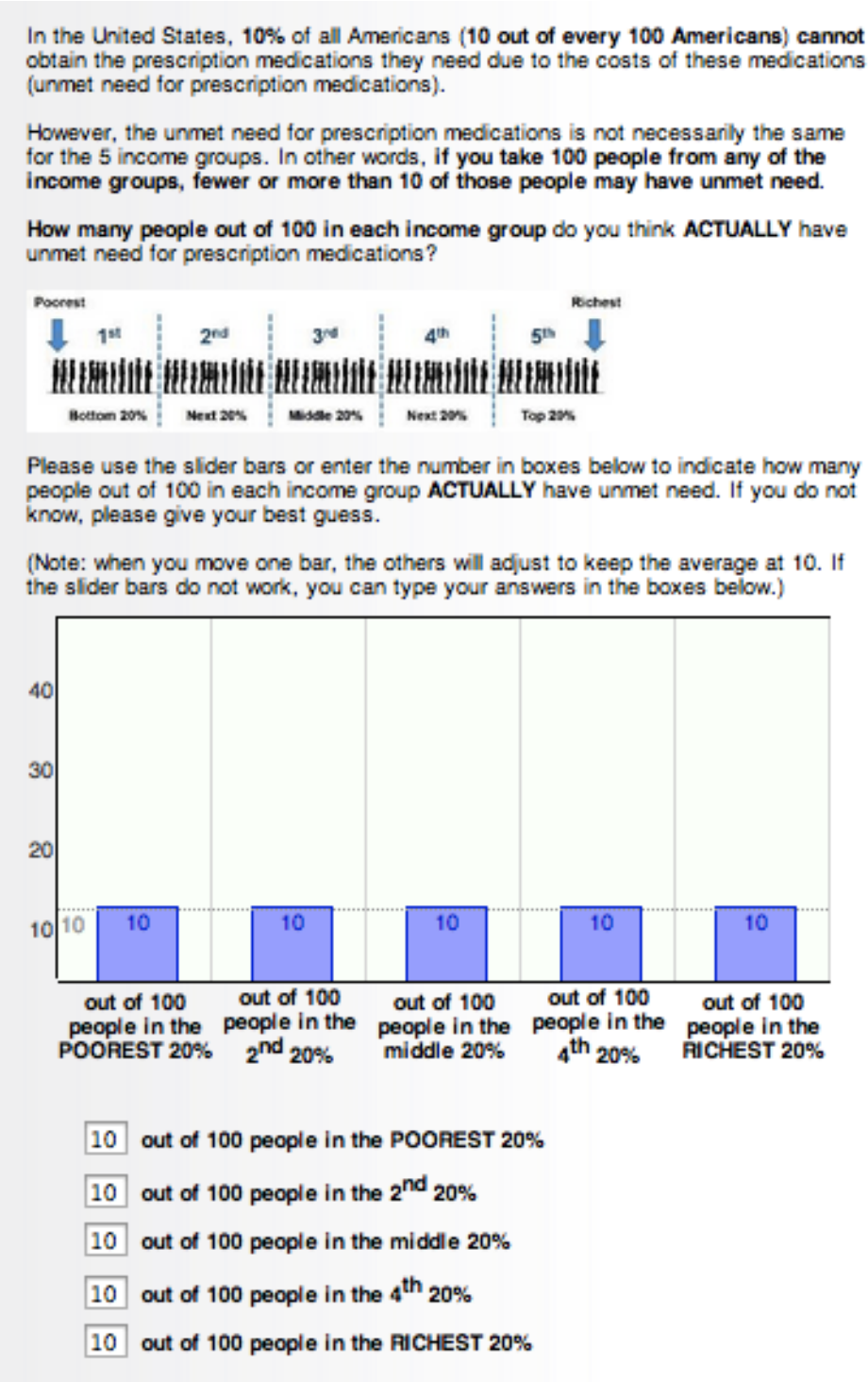
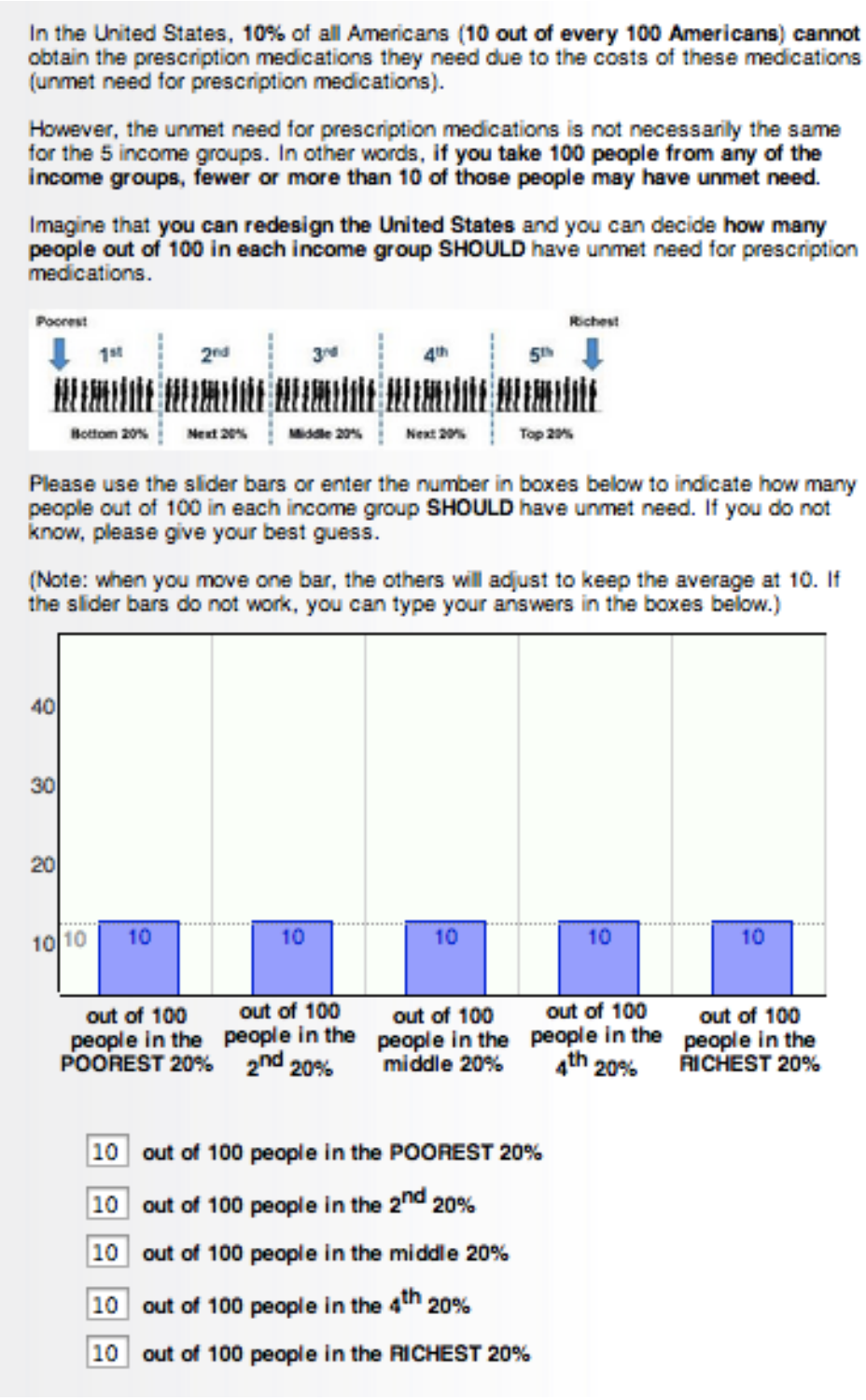
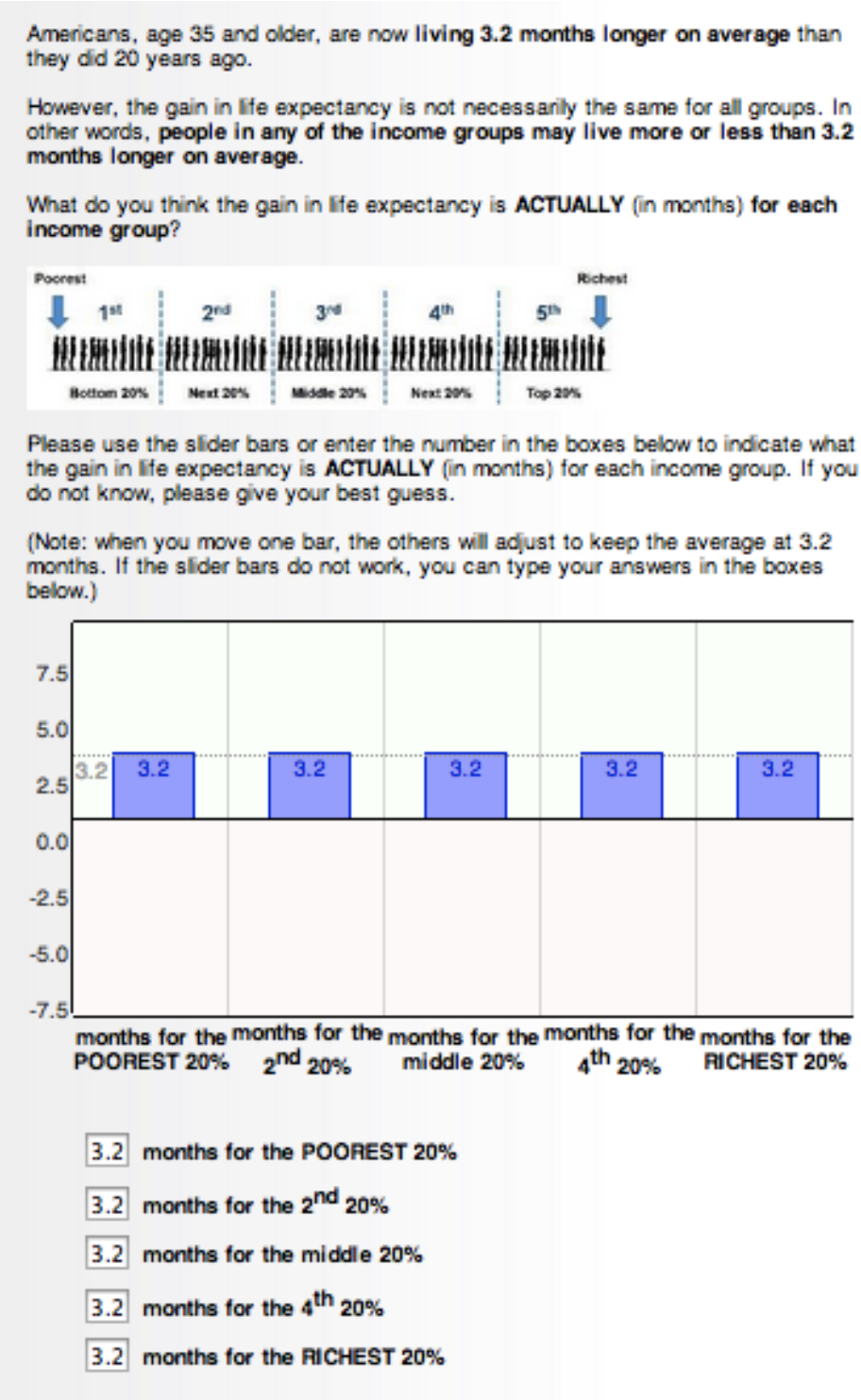
Supplemental Figure 1a. Survey interface for estimated distributions of unmet need for prescription medication.



Supplemental Figure 1b. Survey interface for ideal distributions of unmet need for prescription medication.



Supplemental Figure 2a. Survey interface for estimated distributions of gains in life expectancy.



Supplemental Figure 2b. Survey interface for ideal distributions of gains in life expectancy.