## APPENDIX

Table 1. Sociodemographic Variables, Type of Health Coverage, Survey Year, Utilization and Functional Indicators by Race/Ethnicity in Adults with Serious Psychological Distress aged 18 to 64 years in the United States, NHIS: 2006-2015.


| Federal Poverty Line |  |  | 11.4\%) |  |  | 18.6\% |  |  | 10.3\% |  |  | 41.0\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Healthcare Type |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No coverage | 625 | 40.7\% | $\begin{aligned} & 37.5 \%- \\ & 44.0 \% \end{aligned}$ | 1,236 | $\begin{gathered} 29.0 \\ \% \end{gathered}$ | $\begin{aligned} & 27.2 \%- \\ & 30.7 \% \end{aligned}$ | 445 | 34.3\% | $\begin{aligned} & 30.9 \%- \\ & 37.8 \% \end{aligned}$ | 68 | 35.0\% | $\begin{gathered} 25.8 \%- \\ 44.3 \% \end{gathered}$ | <. 0001 |
| Medicaid | 570 | 31.6\% | $\begin{aligned} & 28.4 \%- \\ & 34.8 \% \end{aligned}$ | 1,375 | $\begin{gathered} 28.1 \\ \% \end{gathered}$ | $\begin{aligned} & 26.0 \%- \\ & 30.1 \% \end{aligned}$ | 571 | 37.4\% | $\begin{aligned} & 34.0 \%- \\ & 40.8 \% \end{aligned}$ | 53 | 18.9\% | $\begin{aligned} & 12.1 \%- \\ & 25.6 \% \end{aligned}$ |  |
| Private Insurance | 379 | 27.2\% | $\begin{aligned} & 24.3 \%- \\ & 30.1 \% \end{aligned}$ | 1,671 | $\begin{gathered} 42.2 \\ \% \end{gathered}$ | $\begin{aligned} & 40.1 \%- \\ & 44.3 \% \end{aligned}$ | 232 | 26.8\% | $\begin{aligned} & 23.7 \%- \\ & 29.9 \% \end{aligned}$ | 104 | 45.7\% | $\begin{gathered} 35.6 \%- \\ 55.9 \% \end{gathered}$ |  |
| Medicaid and Private Insurance | 10 | . $37 \%$ | $\begin{aligned} & 24.3 \%- \\ & 30.1 \% \end{aligned}$ | 35 | . $61 \%$ | . $35 \%-87 \%$ | 14 | 1.2\% | $\begin{aligned} & .43 \%- \\ & 2.1 \% \end{aligned}$ | 1 | 23\% | 0\%-.70\% |  |
| Region of Residence ta interview |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North East | 337 | 17.7\% | $\begin{aligned} & 14.5 \%- \\ & 20.9 \% \end{aligned}$ | 787 | $\begin{gathered} 14.9 \\ \% \end{gathered}$ | $\begin{aligned} & 13.4 \%- \\ & 16.3 \% \end{aligned}$ | 206 | 13.8\% | $\begin{aligned} & 11.5 \%- \\ & 16.1 \% \end{aligned}$ | 44 | 18.8\% | $\begin{aligned} & 12.7 \%= \\ & 24.9 \% \end{aligned}$ | <. 0001 |
| Midwest | 145 | 8.9\% | $\begin{aligned} & 6.6 \%- \\ & 11.3 \% \end{aligned}$ | 1,324 | $\begin{gathered} 28.1 \\ \% \end{gathered}$ | $\begin{aligned} & 25.8 \%- \\ & 30.3 \% \end{aligned}$ | 299 | 20.2\% | $\begin{aligned} & 17.2 \%- \\ & 23.1 \% \end{aligned}$ | 37 | 15.5\% | $\begin{aligned} & 10.0 \%= \\ & 21.1 \% \end{aligned}$ |  |
| South | 615 | 33.8\% | $\begin{aligned} & 30.5 \%- \\ & 37.1 \% \end{aligned}$ | 1,894 | $\begin{gathered} 38.2 \\ \% \end{gathered}$ | $\begin{aligned} & 35.8 \%- \\ & 40.6 \% \end{aligned}$ | 895 | 55.4\% | $\begin{aligned} & 51.6 \%- \\ & 59.1 \% \end{aligned}$ | 57 | 22.9\% | $\begin{aligned} & 16.4 \%- \\ & 29.4 \% \end{aligned}$ |  |
| West | 722 | 39.4\% | $\begin{aligned} & 35.6 \%- \\ & 43.1 \% \end{aligned}$ | 1,116 | $\begin{gathered} 18.7 \\ \% \end{gathered}$ | $\begin{aligned} & 17.2 \%- \\ & 20.1 \% \end{aligned}$ | 192 | 10.5\% | $\begin{aligned} & 8.0 \%- \\ & 13.0 \% \end{aligned}$ | 118 | 42.6\% | $\begin{gathered} 34.3 \%- \\ 50.9 \% \end{gathered}$ |  |
| Health Care Utilization Indicators |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insufficient money for medications | 369 | 18.7\% | $\begin{aligned} & 16.5 \%- \\ & 20.8 \% \end{aligned}$ | 1,342 | $\begin{gathered} 26.0 \\ \% \end{gathered}$ | $\begin{aligned} & 24.5 \%- \\ & 27.5 \% \end{aligned}$ | 360 | 23.7\% | $\begin{aligned} & 20.8 \% \\ & 26.6 \% \end{aligned}$ | 39 | 13.5\% | $\begin{aligned} & 8.9 \% \\ & 18.1 \% \end{aligned}$ | <. 20001 |
| Insufficient money for mental health counseling | 369 | 18.7\% | $\begin{aligned} & 16.5 \%- \\ & 20.8 \% \end{aligned}$ | 1,342 | $\begin{gathered} 26.0 \\ \% \end{gathered}$ | $\begin{aligned} & 24.5 \%- \\ & 27.5 \% \end{aligned}$ | 360 | 23.7\% | $\begin{aligned} & 20.8 \%- \\ & 26.6 \% \end{aligned}$ | 39 | 13.5\% | $\begin{aligned} & 8.9 \%- \\ & 18.1 \% \end{aligned}$ | <. 00001 |
| Seen or talked to a mental health provider in the last 12 months | 574 | 30.0\% | $\begin{gathered} 27.2 \%- \\ 32.7 \% \end{gathered}$ | 2,205 | $\begin{gathered} 41.5 \\ \% \end{gathered}$ | $\begin{aligned} & 39.7 \%- \\ & 43.4 \% \end{aligned}$ | 573 | 34.4\% | $\begin{aligned} & 31.5 \%- \\ & 37.3 \% \end{aligned}$ | 66 | 22.6\% | $\begin{aligned} & 15.7 \% \\ & 29.5 \% \end{aligned}$ | <. 20001 |
| Delay in care | 558 | 28.3\% | $\begin{gathered} 25.5 \%- \\ 31.0 \% \end{gathered}$ | 2,088 | $\begin{gathered} 37.0 \\ \% \end{gathered}$ | $\begin{gathered} 35.2 \%- \\ 38.9 \% \end{gathered}$ | 542 | 30.5\% | $\begin{aligned} & 27.5 \%- \\ & 33.4 \% \end{aligned}$ | 68 | 21.5\% | $\begin{aligned} & 15.7 \%- \\ & 27.3 \% \end{aligned}$ | <. 0001 |
| Insufficient money for healthcare | 547 | 27.7\% | $\begin{aligned} & 25.0 \%- \\ & 30.3 \% \end{aligned}$ | 1,839 | $\begin{gathered} 32.7 \\ \% \end{gathered}$ | 30.9\%-34.4\% | 574 | 32.5\% | $\begin{array}{r} 29.5 \% \\ 35.5 \% \end{array}$ | 53 | 17.6\% | $\begin{aligned} & 11.9 \% \\ & 23.3 \% \end{aligned}$ | <. 20001 |
| Visited a doctor ten times or more in past 12 months | 606 | 30.0\% | $\begin{aligned} & 27.2 \%- \\ & 32.7 \% \end{aligned}$ | 2,134 | $\begin{gathered} 39.2 \\ \% \end{gathered}$ | 37.5\%-40.0\% | 614 | 34.7\% | $\begin{gathered} 31.8 \%- \\ 37.6 \% \end{gathered}$ | 61 | 22.3\% | $\begin{aligned} & 15.3 \%- \\ & 29.3 \% \end{aligned}$ | <. 0001 |
| Changed usual place of care | 141 | 8.8\% | $\begin{aligned} & 6.9 \%- \\ & 10.6 \% \end{aligned}$ | 642 | $\begin{gathered} 12.5 \\ \% \end{gathered}$ | 11.3\%-13.7\% | 177 | 10.3\% | $\begin{aligned} & 8.3 \%- \\ & 12.3 \% \end{aligned}$ | 26 | 10.1\% | $\begin{aligned} & 5.3 \%- \\ & 14.9 \% \end{aligned}$ | <. 01 |
| Changed usual place of care due to insurance | 67 | 4.6\% | 3.1\%-6.1\% | 194 | 3.7\% | 3.1\%-4.3\% | 70 | 4.3\% | $\begin{aligned} & 2.9 \%- \\ & 5.6 \% \end{aligned}$ | 13 | 6.7\% | $\begin{aligned} & 2.3 \% \\ & 11.0 \% \end{aligned}$ | Not significant |

Table 2. Associations between Healthcare Utilization and Rec/ethnicity Adjusting for Number of Chronic Health Conditions and Sociodemographic Characteristics from Multivariate Regression Models Among Adults with Serious Psychological Distress Age 18 to 64 Years of Age: NHIS 2006-2015.

|  | Insufficient Money for Medications |  | Delay in Care |  | Insufficient Money for Healthcare |  | Visited a doctor <br> More Than Ten Times |  | Changed Usual Place of Care |  | Changed Usual Place of Care Due to Insurance |  | Having Seen a Mental health Provider in the last 12 months |  | Insufficient Money for Mental Health Care |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Adjusted Odds Ratios (Confidence Intervals) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female (Reference: <br> Male) | $1.3^{* *}$ | 1.1-1.6 | 1.2* | 1.0-1.4 | 1.2* | 1.0-1.4 | 1.2* | 1.0-1.4 | 1.2* | $\begin{gathered} 1.0- \\ 1.5 \end{gathered}$ | 1.1 | .81-1.5 | 1.1 | $\begin{aligned} & .97- \\ & 1.3 \end{aligned}$ | 1.3*** | 1.1-1.6 |
| Hispanic (Reference: non-Hispanic black) | . 61 ** | . $48-.78$ | .74* | .58-. 94 | .67* | .53-85 | . 85 | .68-1.0 | . 82 | $\begin{aligned} & .58-1 \\ & 1.1 \end{aligned}$ | . 99 | .55-1.7 | . 84 | $\begin{aligned} & .68 \\ & 1.0 \\ & 1.0 \end{aligned}$ | . $61 * * *$ | . $48-.78$ |
| non-Hispanic white | 1.2* | 1.0-1.5 | 1.5*** | 1.2-1.8 | 1.1 | .95-1.3 | 1.1 | .95-1.3 | 1.1 | $\begin{aligned} & .90- \\ & 1.5 \end{aligned}$ | . 83 | .54-1.2 | 1.3* | $\begin{gathered} 1.1- \\ 1.6 \end{gathered}$ | 1.2* | 1.0-1.5 |
| Other Race/Ethnicities | .46* | .27-.78 | .59* | .38-.93 | .45* | .27-.73 | . 62 | .36-1.0 | . 95 | $\begin{aligned} & .51- \\ & 1.5 \end{aligned}$ | 1.7 | .75-3.9 | . $59 *$ | $\begin{aligned} & .36- \\ & .96 \end{aligned}$ | . $46 *$ | .27-.78 |
| 1 Health Condition (Reference: 0 conditions) | 1.2** | 1.0-1.5 | 1.3** | 1.1-1.6 | 1.4** | 1.1-1.6 | 1.5** | 1.2-1.7 | 1.1 | $\begin{aligned} & .87- \\ & 1.4 \end{aligned}$ | 1.0 | .69-1.4 | 1.1 | $\begin{aligned} & .95- \\ & 1.3 \end{aligned}$ | 1.2** | .10-1.5 |
| 2 or more Health Conditions | $\begin{gathered} 1.5^{* *} \\ * \end{gathered}$ | 1.2-1.8 | 1.4** | 1.1-1.7 | 1.5* | 1.2-1.8 | $\begin{aligned} & 2.7 * * \\ & * \end{aligned}$ | 2.3-3.3 | 1.2 | $\begin{aligned} & .99- \\ & 1.6 \end{aligned}$ | 1.1 | .76-1.6 | 1.1 | $\begin{aligned} & .95- \\ & 1.2 \end{aligned}$ | 1.5*** | 1.2-1.8 |
| 45 to 64 Years (reference: 18-44 years) | $.71^{* *}$ | .60-.84 | 1.2*** | 1.1-1.4 | 1.2* | 1.0-1.4 | $\begin{aligned} & 1.4^{* *} \\ & * \end{aligned}$ | 1.2-1.7 | . 88 | $\begin{aligned} & .70- \\ & 1.1 \end{aligned}$ | 1.0 | .78-1.4 | .82* | $\begin{aligned} & .71- \\ & .96 \end{aligned}$ | .71*** | .60-. 84 |


| PIR < 100\% (reference: $400 \%$ or more of the Federal Poverty Line) | 2.2** | 1.6-3.0 | 2.7*** | 2.0-3.6 | 3.1*** | 2.3-4.2 | 1.0 | .78-1.3 | . 65 | $\begin{aligned} & .45- \\ & .96^{*} \end{aligned}$ | . 89 | .49-1.6 | . 87 | $\begin{aligned} & .66- \\ & 1.1 \end{aligned}$ | 2.2 | 1.6-3.0*** |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 100\%-199\% | $1.8 * *$ $*$ | 1.3-2.4 | 2.3*** | 1.7-3.1 | 2.6*** | 1.9-3.5 | . 82 | .64-1.0 | .65* | $\begin{array}{r} .45- \\ .96 \end{array}$ | 1.3 | .78-2.3 | .73* | $\begin{aligned} & .56- \\ & .95 \end{aligned}$ | 1.8** | 1.3-2.4 |
| 200\% - 399\% of PIR | $2.0 * *$ $*$ | 1.5-2.7 | 2.0*** | 1.5-2.6 | 2.0*** | 1.5-2.6 | 1.0 | .81-1.3 | . 74 | $\begin{aligned} & .52- \\ & 1.0 \end{aligned}$ | . 71 | .40-1.2 | . 79 | $\begin{aligned} & .61- \\ & 1.0 \end{aligned}$ | 2.0*** | 1.5-2.7 |
| No Health Coverage | $3.1^{* *}$ | 2.5-3.8 | 3.5*** | 2.9-4.2 | 4.3*** | 3.5-5.1 | $.42 * *$ | . $34-51$ | . 75 | $\begin{aligned} & .52- \\ & 1.0 \end{aligned}$ | 1.3 | .81-2.1 | .59*** | $\text { . } 78 \text { - }$ | 3.1*** | 2.5-3.8 |
| Medicaid (reference: <br> Private Insurance) | .78* | . $62-.99$ | .43*** | . $35-.54$ | .54*** | .43-68 | 1.4** | 1.1-1.7 | .74* | $\begin{aligned} & .55- \\ & .98 \end{aligned}$ | 1.0 | .63-1.6 | 1.7*** | $\begin{aligned} & 1.3- \\ & 2.0 \end{aligned}$ | .78* | .62-. 99 |
| Private Insurance and Medicaid | 1.0 | .43-2.4 | . 67 | .28-1.5 | . 76 | .31-1.8 | 1.7 | .75-3.9 | 1.0 | $\begin{aligned} & .77- \\ & 1.3 \end{aligned}$ | 1.9 | .53-7.4 | 1.9* | $\begin{aligned} & 1.0-1 \\ & 3.7 \end{aligned}$ | 1.0 | .43-2.4 |
| Midwest(reference: <br> Northeast) | 1.2 | .93-1.5 | 1.2 | .98-1.7 | 1.2 | .96-1.6 | . 80 | .64-1.0 | 1.1 | $\begin{aligned} & .82- \\ & 1.6 \end{aligned}$ | 1.4 | .77-2.7 | . 93 | $\begin{aligned} & .75- \\ & 1.1 \end{aligned}$ | 1.2 | .93-1.5 |
| South | 1.0 | .80-1.3 | 1.3* | 1.0-1.7 | 1.2 | .93-1.5 | . 81 | .66-1.0 | 1.0 | .80- | 1.1 | .66-2.0 | .65*** | .53- | 1.0 | .0-1.3 |


|  |  |  | " |  | , |  |  |  |  | 1.4 |  |  |  | . 78 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| West | 1.5** | 1.1-2.0 | 1.4** | 1.1-1.9 | 1.3* | 1.0-1.7 | . 88 | .70-1.1 | 1.1 | $\begin{aligned} & .81- \\ & 1.5 \end{aligned}$ | 1.2 | .67-2.2 | . 84 | $\begin{aligned} & .69- \\ & 1.0 \end{aligned}$ | 1.5 | 1.1-2.0 |
| Survey Year (reference: 2006) | . 97 | .95-1.0 | . 98 | .96-1.0 | . 97 | .95-1.0 | .96* | .94-.99 | 1.0 | $\begin{aligned} & .98- \\ & 1.0 \end{aligned}$ | 1.0 | .97-1.0 | . 98 | $\begin{aligned} & .96 \\ & 1.0 \end{aligned}$ | . 97 | .95-1.0 |

The reference level for utilization and functional indicators was their absence.
${ }^{5}$ Independent variables included Gender, Race/Ethnicity, Gender, Number of Chronic Health Conditions, Poverty Index Ratio, Region of residence at the time of interview and Survey Year. *P $\leq 05$
**P < .001
***P <. 0001

