

## **Attachment 6**

### **Documentation of Decision on Life Satisfaction Question for the NHIS**

Starting in 2021, life satisfaction is measured on the NHIS. Life satisfaction will be used as one of the HP2030 Overall Health and Well-being Measures (OHM, formerly called the Foundation Health Measures), which are broad, global outcome measures of overall health and well-being intended to assess the Healthy People 2030 Vision. The 2021 NHIS included two versions of a life satisfaction question: a version with an 11-point response scale and a version with 4 response categories.

Data from the first 6 months of 2021 were analyzed to determine which life satisfaction question should be retained in 2022. The analysis examined concurrent validity, measurement error, item response discrimination, response burden, item nonresponse, and context effects. Below is a summary:

- Concurrent validity: the 11-point item was slightly more correlated with most health measures than the 4-point item. Both items were weakly or not correlated with education and income.
- Measurement Error: Despite strong overall correlation between the two items, there was a wide range of responses on the 11-point scale for adults when compared to those who reported being dissatisfied or very dissatisfied on the 4-category item. This may suggest that some adults reversed the 11-point scale in their heads, incorrectly using 1 for very satisfied and 10 for very dissatisfied. In addition, there appears to be evidence of data quality issues with the 11-point scale that may be due to interviewer mis-keying. This raises concerns about increased measurement error with the 11-point item.
- Item response discrimination: The 11-point item appears to have good discriminatory power, with a clear linear relationship observed between the values of 3 and 9 such that higher values were associated with better self-rated health and social support, and with lower prevalence of anxiety, depression, serious psychological distress, chronic pain, food insecurity, and disability. However, responses at the ends of the scale did not adhere to these linear relationships, highlighting the potential measurement error described earlier. The 4-point item showed strong discriminatory power between satisfied and dissatisfied, and good discrimination between satisfied and very satisfied for all outcomes. However, little discrimination was observed between dissatisfied and very dissatisfied for most outcomes.
- Response Burden: The 11-point item takes almost twice as long to administer as the 4-category item. Longer response times were identified for adults with lower education and non-English interviews suggesting that the 11-point scale is more difficult to understand or answer.
- Item nonresponse: Item nonresponse was similar between the two items.
- Context Effects: No differential context effects were detected.

In summary, while the 11-point question may provide a more specific measurement of life satisfaction, the 4-point scale takes less time to administer and may be less prone to measurement error. In addition, the 4-point scale will provide comparable measurements to BRFSS which has adopted the same 4-point item. As a result, NCHS decided to drop the 11-point version of life satisfaction and continue the 4-category version of life satisfaction in 2022.