memorandum

to: MAINE SIM TEAM

from: COLIN PLANALP, SHADAC

subject: FUNCTIONAL HEALTH STATUS MEASURES

date: DECEMBER 9, 2016

cc:

This memo is in response to Maine’s request for examples of functional health measures similar to the Patient-Reported Outcomes Measurement Information System (PROMIS) and the Medicare Health Outcomes Survey, as well as evidence regarding the strength of the measures (i.e., reliability and validity). We hope this information is helpful, and we are happy to answer any follow-up questions you may have on these resources and measures, or to provide additional follow-up technical assistance.

**PROMIS and Health Outcomes Survey**

Through a scan of research on the PROMIS tool and the Medicare Health Outcomes Survey, we found several research studies investigating their reliability and validity, as well as studies discussing similarities with other tools.

Studies of the PROMIS Global Health Scale found that it performed similarly well in estimating overall physical and mental health compared to comparison tools used to measure health-related quality of life and had the additional benefit of being shorter than some alternatives, potentially making it easier to administer,[[1]](#footnote-1),[[2]](#footnote-2) and that the reliability and validity of related item-specific PROMIS tools (e.g., physical function) were not affected when the surveys were conducted via difference methods, such as paper or computer-based surveys.[[3]](#footnote-3)

The Medicare Health Outcomes Survey (HOS) is based largely on the Medical Outcomes Survey Short Form 36 (SF-36), although it excludes some questions from the full SF-36 survey and includes some questions from other sources, such as the U.S. Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System, Healthy Days Measures. While we did not encounter research specifically on the HOS, our scan did find research on these related tools that are incorporated into the HOS. Similar to the PROMIS Global Health tool, the SF-36 includes questions related to both physical and mental health, and the impact of these health components on people’s functioning. Studies have found the SF-36 to have relatively high reliability and validity in estimating physical and mental health.[[4]](#footnote-4) While researchers have noted some limitations of the SF-36 because it excludes certain areas of functioning (e.g., cognitive, sleep, sexual) and quality of life (e.g., communication, self-esteem, recreation), other concerns have been raised about the length of the survey, with some proponents favoring shorter tools such as the 10-item PROMIS Global Health or a shortened version of the SF-36, the SF-12.1,4 Regarding the CDC Healthy Days Measures, studies have this tool to be reliable and valid as health-related quality of life measures to assess health status and the impact on people’s activities,[[5]](#footnote-5) and that the Healthy Days Measures similarly reflect physical and mental health in comparison to the PROMIS Global Health Tool.[[6]](#footnote-6)

**Other similar measures**

In the process of scanning for evidence on the two tools being considered by Maine, we encountered several other tools mentioned in research literature as similar in their measurement of health-related quality of life and functional status. These include:

* U.S. Centers for Disease Control and Prevention’s Health Related Quality of Life-14 Healthy Days Measures[[7]](#footnote-7)
* Dartmouth Coop Functional Health Assessment/World Organization of National Colleges, Academies and Academic Association of General Practitioners (COOP/WONCA)[[8]](#footnote-8)
* Duke Health Profile[[9]](#footnote-9)
* EuroQol EQ-5D[[10]](#footnote-10)
* Functional Status Questionnaire (FSQ)[[11]](#footnote-11)
* Short Form Surveys (SF-36,[[12]](#footnote-12) SF-12,[[13]](#footnote-13) SF-8[[14]](#footnote-14))

1. Hays, R., Bjorner, J., Revicki, D., Spritzer, K., and Cella, D. “Development of Physical and Mental Health Summary Scores From the Patient-Reported Outcomes Measurement Information System (PROMIS) Global Items.” Quality of Life Research. 2009; 18: 873-880. [↑](#footnote-ref-1)
2. Revicki, D., Kawata, A., Harnam, N., Chen, W., Hays, R., and Cella, D. “Predicting EuroQol (EQ-5D) Scores From the Patient-Reported Outcomes Measurement Information System (PROMIS) Global Items and Domain Item Banks in a United States Sample. Quality of Life Research. 2009; 18: 783-791. [↑](#footnote-ref-2)
3. Bjorner, J., Rose, M., Gandek, B., Stone, A., Junghaenel, D., and Ware, J. “Method of Administration of PROMIS Scales Did Not Significantly Impact Score Level, Reliability, or Validity.” Journal of Clinical Epidemiology. 2014; 67: 108-113. [↑](#footnote-ref-3)
4. Ware, J., Gandek, B. “Overview of the SF-36 Health Survey and the International Quality of Life Assessment Project.” Journal of Clinical Epidemiology. 1998; 51(11): 903-912. [↑](#footnote-ref-4)
5. Moriarty, D., Zack, M., and Kobau, R. “The Centers for Disease Control and Prevention’s Healthy Days Measures – Population Tracking of Perceived Physical and Mental Health Over Time.” Health and Quality of Life. 2003; 1(37). [↑](#footnote-ref-5)
6. Barile, J. Reeve, B., Wilder Smith, A., Zack, M., Mitchell, S., Kobau, R., Cella, D., Luncheon, C., and Thompson, W. “Monitoring Population Health for Healthy People 2020: Evaluation of the NIH PROMIS Global Health, CDC Healthy Days, and Satisfaction With Life Instruments.” Quality of Life Research. 2013; 22(6): 1,201-1,211. [↑](#footnote-ref-6)
7. CDC HRQOL-14 “Healthy Days Measure”. Accessible at: <http://www.cdc.gov/hrqol/hrqol14_measure.htm> [↑](#footnote-ref-7)
8. Dartmouth Coop Functional Assessment Charts. Accessible at: <http://www.fairview.org/HealthLibrary/Article/1653> [↑](#footnote-ref-8)
9. Duke Health Profile. Accessible at: <http://www.integration.samhsa.gov/clinical-practice/dukeform.pdf> [↑](#footnote-ref-9)
10. EQ-5D. Accessible at: <http://www.aaos.org/uploadedFiles/EQ5D3L.pdf> [↑](#footnote-ref-10)
11. Functional Status Questionnaire: <http://geriatrictoolkit.missouri.edu/funct/FSQ.pdf> [↑](#footnote-ref-11)
12. SF-36. Accessible at: <https://www.rand.org/content/dam/rand/www/external/health/surveys_tools/mos/mos_core_36item_survey.pdf> [↑](#footnote-ref-12)
13. SF-12. Accessible at: <https://www.hss.edu/physician-files/huang/SF12-RCH.pdf> [↑](#footnote-ref-13)
14. SF-8. Accessible at: <http://www.pihn.org/CAP_Tools/sf8survy.pdf> [↑](#footnote-ref-14)