

## SOAPP<sup>®</sup> Long Form vs. SOAPP Short Form: Tradeoff in Accuracy

In general, there is a trade off between the length of a questionnaire and its accuracy as a screener. Thus, to achieve a shorter form, one must live with poorer sensitivity and specificity. Naturally, the question becomes, “how much accuracy is traded for a shorter form?” The table below compares the Standard 14-item statistics with those of the SOAPP V.1-SF. In our view, while these parameters are clearly not as good as for the full 14-item scoring, the reduction in sensitivity, specificity, positive and negative predictive values and likelihood ratios suggests that the five-item version retains most of the predictive validity of the Standard SOAPP version. As with any screener, the scores above a cutoff will necessarily include a number of patients that are not really at risk. Scores below the cutoff will, in turn, miss a number of patients at risk. A screening measure like the SOAPP generally endeavors to minimize the chances of missing high-risk patients. This means that patients who are truly at low risk may still get a score above the cutoff. The values in the table show that the SOAPP short form, like the Standard SOAPP, is a sensitive test. This confirms that the SOAPP is better at identifying who is at high risk than identifying who is at low risk. Clinically, a score of 4 or higher will identify 86% of those who actually turn out to be at high risk (compared to 91% for the 14-item version). The Negative Predictive Values for a cutoff score of 4 is .85, which means that most people who have a negative SOAPP are likely at low-risk. Finally, the Positive likelihood ratio suggests that a positive SOAPP score (at a cutoff of 4) is more than two and half times (2.59 times) as likely to come from someone who is actually at high risk (compare with 2.94 for the Standard SOAPP). Note that, of these statistics, the likelihood ratio is least affected by prevalence rates. All this implies that by using a cutoff score of 4 will ensure that the provider is least likely to miss someone who is really at high risk. However, one should remember that a low SOAPP score suggests the patient is really at low-risk, while a high SOAPP score will contain a larger percentage of false positives (about 33%), while at the same time retaining a large percentage of true positives. The SOAPP is less good at identifying who is not at-risk. Thus, the SOAPP V1-SF appears to strike a reasonable balance between length and ability to detect future aberrant behavior. *Please note the 14-item version is simply the 14-items that are scored in the 24-item version. The 14-item version does not contain the additional 10 questions some clinicians may find useful.*

SOAPP Version	SOAPP Cutoff Score	Sensitivity	Specificity	Positive Predictive Value	Negative Predictive Value	Positive Likelihood Ratio	Negative Likelihood Ratio
5Q Short Form	Score 4 or above	.86	.67	.69	.85	2.59	.20
14 & 24 Q Standard	Score 7 or above	.91	.69	.71	.90	2.94	.13

