



CMAG-1

7

Modified Morisky Scale



CHAPTER 7: MODIFIED MORISKY SCALE

In this Chapter we will review the following:

- ✓ Define the Morisky Scale.
- ✓ Understand the difference between the Morisky Scale and the Modified Morisky Scale.
- ✓ Understand when to utilize the Modified Morisky Scale.



CHAPTER 7: MODIFIED MORISKY SCALE

In the mid-1980s, Morisky and colleagues developed a brief questionnaire to aid practitioners in prospectively predicting adherence with anti-hypertensive medications (Morisky, 1983). Subsequently, the instrument was validated in a number of studies and demonstrated to have good psychometric properties. Independent researchers have further expanded the application of this instrument to other disease states including diabetes and chronic obstructive pulmonary disease (Simpson, 2002; Gregiore, 2002; Knobel, 2002; Ren, 2002; Matthees, 2001; Pratt, 2001; Gao, 2000; Sen, 2000; Miller, 1997). The 4 items and their scoring algorithm are shown in Table 3.

| | | |
|--|-----|----|
| 1. Do you ever forget to take your medicine? | Yes | No |
| 2. Are you careless at times about taking your medicine? | Yes | No |
| 3. When you feel better do you sometimes stop taking your medicine? | Yes | No |
| 4. Sometimes if you feel worse when you take your medicine, do you stop taking it? | Yes | No |

Table 3. Original Morisky Scale.

To score the Morisky Scale, each question that is answered with a NO receives a score of 1. The possible scoring range is therefore 0 to 4. Patients with higher scores are predicted to be more adherent to prescribed medication therapies. Patients with lower scores are at greater risk for nonadherent behavior.

The Modified Morisky Scale

In considering application of the original Morisky Scale to the CMAG-1 guidelines, several potential deficiencies were noted. Specifically, although the original Morisky Scale had demonstrated the ability to predict medication-taking behavior as well as outcomes, it was not designed to explain persistence (the patient's long-term continuation of therapy), which is a significant factor in the long-term management of chronic diseases. Also, the scale was not originally designed to classify patients into a high/low continuum for knowledge and motivation. Consequently, 2 new questions were added to create the Modified Morisky Scale (MMS). The MMS is shown in Table 4.

The MMS is used for patients who are already receiving medication therapies and for those who have been previously assessed with

ADHERENCE-SUGGESTION:

No single approach is better than another, combination of approaches works best.

NOTES:

ADHERENCE-SUGGESTION:

Involve patients in their care through self-monitoring.

NOTES:

CMAG-1 tools described in earlier chapters of these guidelines. When the MMS is used, patients are assigned to an adherence intention quadrant as follows:

Questions 1, 2, and 6, which measure forgetfulness and carelessness, are considered to be indicative of motivation (or lack thereof) and consequently impact the motivation aspects of adherence intention.

Questions 3, 4, and 5, which measure if patients stop medications and understand the long-term benefits of continued therapy, were considered to be indicative of knowledge (or lack thereof) and consequently impact the knowledge aspects of adherence intention.

By using the MMS as an indicator of both *motivation and knowledge*, it is possible to use the scale ratings when assigning an adherence intention quadrant for the evaluated patient.

| Question | Motivation | Knowledge |
|---|--------------|--------------|
| 1. Do you ever forget to take your medicine? | Yes(0) No(1) | |
| 2. Are you careless at times about taking your medicine? | Yes(0) No(1) | |
| 3. When you feel better do you sometimes stop taking your medicine? | | Yes(0) No(1) |
| 4. Sometimes if you feel worse when you take your medicine, do you stop taking it? | | Yes(0) No(1) |
| 5. Do you know the long-term benefit of taking your medicine as told to you by your doctor or pharmacist? | | Yes(1) No(0) |
| 6. Sometimes do you forget to refill your prescription medicine on time? | Yes(0) No(1) | |

Table 4. Modified Morisky Scale.

Scoring

All questions on the MMS are answered on a "yes" or "no" scale.

For the motivation domain, each "no" answer (questions 1, 2, 6) receives a score of 1 and each "yes" answer receives a score of 0. This provides a scoring range of 0 to 3 for the motivation domain. If a patient's total score is 0 to 1, the motivation domain is scored as *low*. If the score is >1 , the motivation domain is scored as *high*.



For the knowledge domain, "no" answers for questions 3 and 4 receive a score of 1 and "yes" answers for questions 3 and 4 receive a score of 0. On question 5, a "no" answer receives a score of 0 and a "yes" answer receives a score of 1. This provides a scoring range of 0 to 3 for the knowledge domain. If a patient's total score is 0 to 1, the knowledge domain is scored as *low*. If the score is >1 , the knowledge domain is scored as *high*.

After MMS scoring is completed, an adherence intention quadrant for the CMAG-1 guidelines is identified, along with recommendations for an adherence improvement plan. Similar to the quadrant assignment procedure for new patients, many disease states and patient types (eg, HIV, schizophrenia) may require modification of adherence improvement plans. Chapter 8 provides the case manager with specific adherence-plan modifiers for patient types who may benefit from modified adherence improvement interactions.

ADHERENCE-SUGGESTION:

Present most important instructions first.

NOTES: