MOTIVATIONAL ENHANCEMENT THERAPY
A New Way to Improve Patient Compliance with PAP Treatment

Part of the
Lasting Impressions™
Therapy Assurance Program
Motivational Enhancement Therapy: A New Way to Improve Patient Compliance with PAP Treatment

Introduction

Motivational Enhancement Therapy (MET) improves adherence to Positive Airway Pressure (PAP) treatment in patients with Obstructive Sleep Apnea (OSA) using specific behavioral interventions and theories about behavior change. Briefly, patients are approached in a non-directive manner with knowledge and acceptance that they might be ambivalent about making a commitment to the treatment. The goal is to promote patient thought about the treatment ambivalence the patient might be feeling and sway the decisional balance toward the benefits of using the treatment. Enhancing self-confidence about therapy use is a strong predictor of long-term adherence.\(^\text{1}\) Studies corroborate that MET can be an effective method to improve PAP adherence, especially in patients who do not have a profound negative response to PAP.

OSA as a Serious Health Problem

OSA is a well-recognized clinical disorder characterized by repeated obstructions of the upper airway during sleep. OSA results in sleep fragmentation that disrupts the normal sleep architecture, causing periodic oxygen desaturations. Estimates of health care costs for patients with OSA are approximately twice those of patients without OSA.\(^\text{2}\) This increased cost of care has been related directly to the severity of the disease and can be evident several years prior to diagnosis. Moreover, severe OSA has been associated with a significantly higher mortality rate from co-morbidities than mild and moderate OSA.\(^\text{3}\) Both sleep fragmentation and oxygen desaturation often go unnoticed by patients, but can be related to the development of many concomitant physical and psychological problems.

Consequences of OSA include excessive daytime sleepiness, mood changes such as depression and irritability, and impairments in attention, concentration, and memory. Despite recent advances in physician recognition of the disorder, a large proportion of OSA patients remain undiagnosed and untreated. This is particularly troubling in light of the fact that patients with undiagnosed, or untreated, OSA, often have, or are at increased risk for, co-morbid conditions such as hypertension, cerebrovascular disease and cardiovascular disease.

The most common treatment for OSA is Continuous Positive Airway Pressure (CPAP). CPAP is delivered through a nasal interface, attached to a device which supplies positive air pressure to the upper airway, thus preventing the upper airway from collapsing during sleep. CPAP, at an appropriate pressure, eliminates nocturnal breathing disturbances and improves oxygen saturation and sleep architecture. The efficacy of CPAP treatment has been validated on functional measures including measures of daytime sleepiness, cognitive function, mood, and cost of care. Studies have shown a relationship between
the amount of time a patient uses CPAP and clinical outcomes. Despite its efficacy, roughly 25% of patients discontinue CPAP within the first year\(^4\) and, of those who continue to use CPAP, the majority do not use the treatment as prescribed (i.e., every night for the duration of sleep). Kribbs and colleagues found that during the first 3 months of treatment, fewer than 50% of patients used CPAP for a minimum of 4 hours per night on 70% of nights and only 6% used treatment for at least 7 hours per night on 70% of nights\(^5\). Symptoms of OSA may improve with average nightly compliance of 4.5 hours. However, alertness is impaired even with a single missed night of treatment.\(^6\) In addition, while clinical studies have shown that effective treatment of OSA may result in stabilization of blood sugar\(^7\) and the reduction of fatal and non-fatal cardiovascular events\(^3\), such results were not realized when participants in the clinical studies treated their OSA less than 4 hours per night, every night.

**Predictors of Adherence to PAP Therapy**

Although investigators have studied several potential demographic, disease severity, and psychological predictors of adherence, few consistent findings have been reported. Only one side effect, feeling “closed in” by the PAP mask, has been consistently predictive of poor adherence. Surprisingly, disease severity, age, and prescribed PAP pressure have all been unrelated to adherence. Psychological measures of behavior change constructs and early use have been identified as the most consistent and powerful predictors of long-term adherence\(^8\).

**Improving Adherence to PAP**

As part of the Respironics Lasting Impressions Therapy Assurance Program, we recommend implementation of MET in order to increase patient comfort and compliance. Aloia et al. found that an intervention using motivational interviewing principles driven by psychological theories of behavior change can significantly increase adherence over a 3-month period\(^9\). Recent studies have used these psychological theories to develop manualized therapies for adherence to PAP.

**Using Theory to Develop Treatment Strategies**

Theories of behavior change have been used to guide the development of more effective interventions to improve adherence in other medical populations. Rollnick et al. believe that behavior change involves three specific constructs\(^10\):

1) Readiness to change – Readiness refers to an individual’s motivation to change his/her behavior (e.g., begin to use PAP nightly).
2) Perceived importance of change – Importance refers to an individual’s belief that the benefits of changing behavior outweigh the costs and are relatively important in his/her life. This thought process is often referred to as the decisional balance, suggesting that the decision to change relies on weighing the benefits of change against its costs.
3) Confidence in one’s ability to change – Confidence refers to an individual’s perception of that individual’s ability to change his/her behavior under difficult circumstances.
Self-confidence appeared to be the strongest single psychological predictor of long-term adherence. Behavior change constructs are among the strongest predictors of PAP adherence in the literature to date.\(^{(1)}\)

**Rationale for Motivational Enhancement Therapy (MET)**

MET is an intervention that directly targets the constructs of readiness, importance, and confidence. It has been used successfully to alter behaviors such as excessive alcohol use and smoking. More recently, its application has been broadened to the maintenance of positive health behaviors. Studies show that MET has been successfully used in increasing adherence to CPAP therapy.\(^{(11)}\)

MET is based on the core principles and therapeutic process of Motivational Interviewing. MET, however, is adapted for medical settings which often have time-limited patient encounters and involve some form of feedback on the individual’s health or behavior compared with normative data. Adapted MET therapy is particularly useful to a homecare provider who has limited time to interact with patients when trying to ascertain and promote compliance with CPAP therapy.

**The MET Approach**

Motivational Enhancement is a patient-centered counseling approach that focuses on the concerns and perspectives of the individual and explores the individual’s ambivalence about behavior change in a supportive and non-confrontational manner. Patients are encouraged to think about the benefits and barriers to behavior change (i.e., regularly using PAP therapy). Patients then need to incorporate their feelings of confidence and recognition of the importance of change into their consideration of the identified benefits of, and barriers to, PAP treatment.

A key goal in motivational enhancement is to increase the amount of importance which the patient attaches to changing his/her behavior, while maintaining an empathic, supportive, and non-judgmental atmosphere. The provider does not directly advocate for behavior change (i.e., using CPAP as prescribed), but rather asks key questions to help the patient explore his/her conflicted feelings about change, weigh the pros and cons of change, and allow the patient to realize the discrepancy between the present risky behavior (i.e., not using CPAP as prescribed) and the patient’s self-identified goals and values.

This lack of direct advocacy is important when it comes to CPAP adherence. Patients will often speak of roadblocks to using CPAP. Commonly cited roadblocks to CPAP use include: 1) discomfort, 2) disturbance for a bed partner, and 3) travel. In a traditional medical model, the practitioner would offer advice on how to overcome each of these roadblocks. With MET the provider may use different methods such as:

- Open-ended questions and reflections to clarify the patient’s concerns.
- Strategic reflective listening. For example, the provider may ask the patient to switch roles and argue in favor of change (i.e., using CPAP as prescribed), instead of against...
change (i.e., continuing to not use CPAP as prescribed). The provider acts as a guide and a collaborator, not as an expert. The patient assumes the role of an active collaborator to identify issues, rather than a passive role in which information is received from an expert. Self-generated problem solving increases the patient’s intrinsic motivation and self-confidence for change, increases commitment to the idea of change, and enhances the likelihood that the patient will carry out the change. Resistance to change is a normal part of the change process, often the result of the interaction between patient and provider. If the provider can view the resistance as a signal to change strategies from directive to reflective listening, the likelihood of the patient carrying out the change increases.

**Key Concepts of MET**

**Developing Discrepancy** – This refers to the discrepancy reflecting the patient’s ambivalence to making the change from not using CPAP to using CPAP. Most patients will have some idea that changing their behavior and using CPAP as prescribed is positive, but they will also see the barriers to use and, thus, will be ambivalent about whether to make the change. The provider tries, in a supportive manner, to help the patient see the discrepancy between the patient’s current risky behavior and the patient’s self-identified goals and values. The patient’s recognition that their behavior is hindering attainment of their goals or is not consistent with their values may make the patient feel some anxiety as they realize they are not meeting their goals. The desire to reduce that anxiety and to meet their goals becomes the impetus of change for the patient.

*Be aware that pointing out this discrepancy may raise the defenses of certain patients, making the process by which it is done critical.*

*Example of therapeutic response to above:* “You said that losing weight, not using CPAP, is the most important goal for you right now. You also said that you can’t seem to exercise because you are tired all of the time. I’m wondering, do you think there is any connection between using CPAP and losing weight? How can using CPAP facilitate losing weight? How can using CPAP hinder losing weight?”

**Expressing Empathy and Avoiding Argumentation** – These methods can help the provider avoid being pulled into a debate over PAP use. Change does not come from making a person feel bad about their behavior. The goal is not to play the expert but to provide useful information the patient wants, allowing the patient to feel comfortable exploring the patient’s conflicts about change. Information is never provided without consent from the patient. Be careful to express understanding of the patient’s difficulty with the behavior change at hand (e.g., increasing CPAP use). The goal is to align yourself with the patient’s approach to change, not to confront the patient on the patient’s poor adherence. Argument for change will, paradoxically, decrease the likelihood of patient change. The ambivalent patient will want to assert autonomy, especially within the context of not feeling in control of his/her health.
Example of therapeutic response to above:
Provider: “You seem to have a lot on your plate right now. You feel that using CPAP adds additional stress.”
Patient: “I don’t believe my OSA is that bad that I need to use CPAP.”
Provider: “You are saying your OSA hasn’t caused you any problems.”
Do not say: “The test results are accurate and indicate you need to use CPAP.” This is a non-therapeutic response that will provoke an argument from the patient.

Roll with Resistance – Resistance is expected when an ambivalent person is approached with information pointing to the need to change. The counselor must not resist in kind, but must roll with this resistance, supporting the patient’s autonomy by emphasizing that it is the patient’s choice as to whether or not the patient wants to change. Change can never be forced.

Example of therapeutic response to above: “As your health care practitioner, I recommend that you use CPAP all night every night in order to achieve the best health results; however, the decision to do this is entirely up to you.”

Support Self-Confidence – Self-confidence is the patient’s perceived ability to change a particular area of behavior. Patients are bound to have some successes in their past that will point to their ability to change. Promoting self-confidence involves highlighting those moments of past success and having the patient set small but achievable goals which will motivate the patient to achieve future success.

Example of therapeutic response to above: “Most people take awhile to adjust to CPAP and to build the use of it into their daily lives.”

Together these concepts help guide the provider in what is often a difficult task – changing behavior.
Guiding Principles of MET and their Application to OSA Patients

Following are six guiding principles in MET therapies\(^{(12)}\). The provision of feedback is a key factor in MET therapy as it distinguishes MET from other educational therapies. Responsibility is given to the patient to change or not to change. As a provider of MET therapy, your role is to assist as needed. This can easily be accomplished during set-up or follow-up calls with the patient. One method of assisting is by providing advice when asked by the patient. The provider’s role is always to empathize with the patient’s barriers to change. The expression of empathy is key to MET. Also, remember that poor self-confidence is among the greatest limitations to behavior change.

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<thead>
<tr>
<th>Guiding Principle</th>
<th>Example</th>
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<tr>
<td>I. Feedback</td>
<td>Conduct a thorough assessment and offer personalized feedback about changes in clinical measures of OSA between the diagnostic PSG and titration PSG.</td>
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<tr>
<td>II. Responsibility</td>
<td>Emphasize that it is the patient’s personal choice/responsibility to decide whether or not to use the CPAP machine.</td>
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<tr>
<td>III. Advice</td>
<td>Let patients know that, for health reasons, you recommend using CPAP, but that the decision is ultimately theirs.</td>
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<td>IV. Menu</td>
<td>Patient chooses two different strategies that the patient can use to attempt to improve compliance (e.g., record changes in mood and sleepiness every day).</td>
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<td>V. Empathy</td>
<td>Empathize with the patient’s stated barriers to CPAP use and reinforce that these are common among other patients with OSA.</td>
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<tr>
<td>VI. Self-Confidence</td>
<td>Highlight the statements of self-confidence that the patient expresses during the session and the success the patient has had thus far.</td>
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Implementation of MET

The timing of MET is not necessarily crucial. However, there is now significant data suggesting that early intervention with PAP therapy may be best and that long-term adherence to PAP is often established early in the course of treatment. Timing MET to capitalize on the earliest teachable moment and the critical period of the development of adherence patterns can maximize use of the intervention. Perhaps the best time to start MET is when one begins discussing therapy itself. Much of the intervention, educating the patient on how the patient can benefit from treatment and learning what is important to the patient, can begin when treatment is being discussed. It should be noted, however, that MET is designed to be applicable at any point during treatment or even after treatment has been refused. A study by Weaver showed that skipping CPAP for two or more nights within the first week of treatment signals potential for non-adherence and emphasizes the need for close follow-up during this period of time.\(^{(13)}\) The first week to month of home therapy appears to be the most critical phase for intervention and securing long-term compliance.

The use of MET can offer a great return on time spent by the home care provider in terms of increasing patient compliance and acceptance of therapy.

Areas of MET questioning when the patient is going home with their CPAP device include:

- Assessing the patient’s readiness and confidence to use CPAP as recommended.
- Determining which aspects of health are important to the patient.
- Providing information to the patient regarding the aspects of sleep apnea that are related to the patient’s health concerns. INFORMATION IS ONLY PROVIDED IF THE PATIENT AGREES TO RECEIVE IT.
- Using feedback from the patient’s own sleep study to place the severity of the patient’s apnea in context for the patient.
- Using the patient’s titration study to demonstrate the stark difference between the patient’s baseline apnea and the patient’s apnea when treated with CPAP.
- Assessing where the patient is in his/her preparedness to use CPAP regularly.
- Developing goals for CPAP use over the next week.

The following are specific MET questions that can be asked when the patient is going home with their CPAP device:

1. On a scale of 1-10, how important is it to treat your sleep apnea?
   a. No matter what number the patient gives you, ask why it’s not higher, then ask why it’s not lower, to elicit critical thinking on the patient’s part.

2. How much (in hours) would you like to use CPAP on average each night?

3. On a scale of 1-10, how confident are you that you can use treatment even when you may find the treatment uncomfortable?
Areas of MET discussion at follow-up within first week of use to first month of use include:

- Assessing where the patient is in his/her readiness to use CPAP regularly.
- Determining the consequences of OSA that are of primary concern to the patient.
- Providing visual feedback if possible (e.g., graphs, etc.) demonstrating the role that OSA might play in these health consequences. DO NOT FOCUS ON THE CONSEQUENCES OF OSA THAT ARE NOT OF CONCERN TO THE PATIENT.
- Reflecting with the patient on the patient's feelings about the feedback you are providing.
- Comparing the patient's actual CPAP adherence with established goals from the first session.
- Developing discrepancy between established goals and actual use, being careful not to confront the patient with poor use.
- If use is far below goals, discussing barriers to reaching goals and consideration of changing goals.
- Reinforcing any use and any approximations to meeting goals, even if on a day-to-day basis (e.g., On Tuesday you met your established goals. That is great. How was Wednesday for you?).
- Again, assess where the patient is in his/her preparedness to use CPAP regularly.

The following are specific MET questions that can be asked at follow-up within first week of use to first month of use:

1. On a scale of 1-10, how important is it to treat your sleep apnea?
   a. No matter what number the patient gives you, ask why it's not higher, then ask why it's not lower, to elicit critical thinking on the patient's part.
   b. If the patient gives you a number indicating that the patient does not consider treating the patient's sleep apnea to be important, spend a minute talking about why it's important to the patient's health to use CPAP regularly.
   c. Go back to the 1-10 number that the patient gave you at the beginning of the conversation, and ask if the patient would still use that number.

2. Restate to the patient the patient's original CPAP goals. Ask if the patient thinks those goals are still good goals for him/her.
   a. Reinforce with the patient each instance (i.e., day) in which the patient successfully achieved the patient's CPAP goals; discuss the positive aspects of meeting those goals, and what the patient could use from those days to meet the patient's CPAP goals on more days in the future.
   b. Ask what is important to the patient in terms of health and relate this information to OSA.

3. On a scale of 1-10, how confident are you that you can use treatment during your entire sleep period (all through the night, every night)?
   a. No matter what number the patient gives you, ask why it's not higher, then ask why it's not lower, to elicit critical thinking on the patient's part.
   b. If the patient gives you a number indicating that the patient has low confidence about using CPAP during the entire sleep period, ask what barriers to compliance the patient anticipates.

It is important to note if scaled numbers decrease in follow-up call from set-up. It may signal a need for the patient to re-evaluate his/her goals.
Overall Goals of MET

The overall goal of MET is to approach patients at their level of readiness to make the desired change in behavior and to guide them toward the desired change with pertinent information. All along this continuum are opportunities to address the natural ambivalence they may have about changing their behavior. Great care must be taken in developing the discrepancy between set goals and actual behavior as too forward of an approach could make patients defensive. Alternatively, an approach that does not develop this discrepancy will be limited in its efficacy.

Summary

The greatest strength of MET is that it is based on an empirically-validated theory of health behavior change. A second strength is that the intervention is brief, can be performed during initial dispensing of the CPAP device as well as during the routine follow-up call in the first week/month of use, and is cost-effective. Patients will generally express appreciation for the support and additional attention given to this important health issue. Since this intervention has proved to be efficacious, the time commitment of asking a few questions is minimal considering the likely benefits of enhancing adherence to a treatment that has many positive downstream effects. A third strength is that MET can be provided within the sleep clinic, resulting in greater continuity of clinical care. Finally, MET is more patient-centered and less instructional than traditional methods of healthcare provider-patient interaction.
Further Training on MET

True MET therapy is designed to be delivered by trained motivational therapists. Centralized training courses exist and the motivational interviewing website – www.motivationalinterviewing.org – lists trained therapists across the country. However, anyone with general knowledge in healthcare delivery can be trained to use MET. Trainers are often psychologists, nurses, and therapists. Sleep technologists can also be trained for such work within a sleep laboratory.

The amended approach laid out in this monograph is intended to enhance a patient’s intrinsic motivation to adhere to CPAP use bearing in mind that the “counselor” will most likely be employed as a home care provider who has time constraints and is not able to perform MET to the level of a trained therapist dedicated to behavioral modification therapy.
Bibliography


Motivational Enhancement Therapy Post-Test

Write in or check off the answer using blue or black ink for each of the following questions.

1. Despite its efficacy, roughly 25% of patients discontinue CPAP within the first year.
   True____  False____

2. The goal of MET is to elicit critical thought about treatment ambivalence to sway the decisional balance toward the pros of using treatment.
   True____  False____

3. Disease severity, age, and prescribed PAP pressure are all strongly related to adherence.
   True____  False____

4. Name the 3 specific constructs needed to make a change in behavior.
   1________________________________________
   2________________________________________
   3________________________________________.

5. Change does not come from making a person feel bad about their behavior.
   True____  False____

6. The expression of empathy by the counselor is key to MET therapy.
   True____  False____

7. Timing of MET intervention is not necessarily crucial, but study data suggests early intervention may be best.
   True____  False____

8. Examples of MET questions and two specific times when it is suggested these MET questions be used are when the patient is first going home with their device and at follow-up within the first week of use to first month of use.
   True____  False____

9. Resistance is expected when an ambivalent person is approached with information pointing to the need to change.
   True____  False____

10. A strength of using MET intervention is that it can be brief and cost-effective.
    True____  False____
Evaluation Form

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Rate the teaching effectiveness of the monograph using the scale below:
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Organization of monograph_______
Content of the monograph_______

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Please rate the degree to which you believe you achieved the educational objectives for each section of the monograph by placing a check mark in the appropriate space corresponding to each:

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<tr>
<th>I achieved this activity’s educational objectives:</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>Importance of use of therapeutic response with examples</td>
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Part 3: Program Integrity

Indicate your agreement with the following statement by checking the appropriate response:

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Strongly Agree_______ Agree_____ Disagree_____ Strongly Disagree_____

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