MAXIMAL STRESS VALUES AND THE MIND-BODY-MEDICATION LIMITS

OF PATIENTS WITH CHRONIC PAIN

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ABSTRACT:

One of the key factors in treating chronic pain is to determine how much activity a given patient can endure within their physical restrictions, psychological barriers, and the limited pharmacological benefits their pain medications provide. If patients are well disciplined, acknowledge the boundaries or their minds and bodies, and understand the finite capacity of their prescribed medicines, then they may lead relatively active and rewarding lives. However, patients who do more than their bodies and minds can tolerate, or exceed the analgesic limits of their medication regimens, create acute flares of pain in excess of, and in addition to their chronic symptoms. This, in turn, may interfere with their ability to be compliant, and it complicates physicians' efforts to provide effective pain management. To help limit the occurrence of such events, this paper discusses a proprietary system that compares the predictive stress value (PSV) of various activities with their actual stress value (ASV), to estimate patient response to these events. It then calculates their maximal stress value (MSV), so patients can modify their activities ahead of time and not exceed their mind-body-medication limits (MBML).

KEY WORDS:

1.   Mind-Body-Medication Limits (MBML)

2.   Predictive Stress Value (PSV)

3.   Actual Stress Value (ASV)

4.   Maximal Stress Value (MSV)

5.   Chronic Pain Management Program (CPMP)

INTRODUCTION:

At our Chronic Pain Management Program (CPMP), patients are treated on an ambulatory, out-patient basis. Even though pain medications are prescribed, patients do not come to us just for the drugs. Being that we are located within the greater Miami, Florida, area, it is no secret that all of the medications we use are readily available through illicit sources on the streets or over the internet. However, patients at our CPMP are getting something much more important than pain relieving drugs. They are getting pain management.

In our CPMP, patients receive a multi-modal approach toward the relief and, when possible, the resolution of chronic pain. As such, medications are but one facet of our treatment armament. When providing chronic pain management to a patient, there are many other useful and important tools to employ, such as a proprietary tool we developed to help patients understand the limits of their bodies, minds, and prescribed medications.

Chronic pain patients suffer both physical and psychological problems. We have yet to treat anyone with just physical pain and no associated psychological consequences. On the other hand, none of our patients suffer only psychological problems, as such individuals are referred to psychiatric care. It is typical of our patients to have both long-term physical problems and varying degrees of insomnia, depression, anxiety, gastritis, and other mood altering complications. In terms of both intensity and duration, these adverse psychological effects vary from patient to patient, and flares in mood destabilizing factors can cause increases in their physical pain. The opposite is also true, with changes in physical pain preceding psychological problems, the interplay between mind and body often being too complex to say which came first. For example, is the patient's increased physical pain causing insomnia, or is their lack of sleep making their physical pain worse than usual? Whatever the

case, chronic pain patients have physical and mental limits beyond which they suffer complex body-mind reactions and interactions that diminish good pain management.

In addition to mind-body limitations, there are limits as to what a patient can and should expect from their pain medication. Our CPMP practices analgesia and not anesthesia, thus, prescribed medications are never intended to relieve all of a patient's pain. Medication levels that prevent a patient from feeling any discomfort might inhibit them from recognizing early warning signs of a new injury or trauma. Therefore, it is important for patients to have realistic expectations of their medications' limitations, so as to prevent further harm.

To assist patient safety, physicians often prescribe "activity as tolerated," which translates into "if it hurts to do that, then don't do it." Though this has been standard advice over the ages, it is by no means sufficient advice. In order to give patients at our CPMP more explicit instruction on how to approach their daily activities without exceeding their mind-body-medication limits (MBML), they are given a simple point-based system to use at home each night. This system helps patients predict when they have scheduled too much activity for the following day, so as they can alter their plans ahead of time and possibly avoid doing things which might otherwise exceed their MBML's.

DESCRIPTION:

Almost anything a patient experiences can cause physical and mental stress, and too much stress can lead to an increase in pain symptoms. Whether it is work, people we interact with, or changes in the weather, everything we do and come in contact with is a potential stress factor, some of these factors having more impact than others. If patients accumulate too much stress during the

day, they may exceed the relief provided by their medications and/or cause themselves further harm. To mitigate this, the following technique helps patients to predict when they will be subject to stress which surpass their MBML's. It is a point-based system which uses positive whole numbers (0, 1, 2, 3,...) and divides all experiences into three categories: people, places and things. It is practiced as a two step process, with each step occurring on successive nights as follows.

NIGHT 1: Patients begin at bedtime, by folding a piece of paper in half. They are instructed to leave the right side blank, and on the left side to write down all of the major events that could cause them stress during the next day. Remind patients that happy events can also be stressful, as they require a certain amount of energy and physical exertion, too. This list can include people they interact with, places they go, and other factors which may or may not be under one's control, such as weather, financial concerns, worries about personal relationships, etcetera. It is not necessary to list every minute detail. Just include the major events that might have a significant impact.

Once they have done this, patients then assign a point value to each individual item on their lists. These points are predictive stress values (PSV's), representing the patients' estimates of their physical and psychological reactions to each item. There are no absolute PSV's for any activity, as everyone reacts differently to a given situation. However, as a relative ruler against which to measure other events, patients can assign a PSV of "1" to getting dressed each morning. By representing the stress from getting dressed as "1," patients have a familiar standard against which to evaluate their other experiences. Driving to work may be three times as stressful as this standard (driving PSV = 3), and going food shopping may be seven times more stressful than getting dressed (shopping PSV = 7). Keep in mind that, in addition to no absolutes, there are also no maximum or minimum numbers for PSV's, as these are subjective estimates of what might happen and not a fixed "one-to-ten" scale.

Patients continue this process for each item on their list until they all have an associated PSV. It does not matter if their predictions are right or wrong. It is just important that they write down their best estimates of how stressful each item will be. Once this is done, they should add up all of the PSV's to get a total PSV for the following day, then put their lists away and go to bed. This ends the first step in using this technique. A sample finished list might look as follows:

	ITEM	PSV		(Right Side of Paper Blank)
People:	Spouse	3		
	Children	5		
	Best Friend	1		
	Co-worker	2		
Places:	Work	12		
	Gym	4		
	Dining Out	2		
Things:	Snowy Weather	15		
	Rent Due	7		
	Vacation Planning	2		
	TOTAL PSV:	53		

Notice that this is a short list of three to four items per category. A patient's actual list might have many more items than this. Also, though getting dressed may be the standard for "1" PSV, it

may be left off the list if the patient does not consider it to be a significant stress factor.

NIGHT 2: The second step in this process occurs the following night. Before going to bed, patients take out the predictive lists they created the previous evening. On the blank right side of the page, they now write down all the actual people, places and things that were a major part of their day. Next to each item, they assign an actual stress value (ASV), now using getting dressed as a standard for "1" ASV. Complete this task by adding up the ASV's on the right side of the page to get the day's total ASV. Finally, under the total ASV, instruct patients to write whether or not they felt good (stayed within their MBML) or bad (exceeded those limits) at the end of the day. Thus, when finished on the second night, a sample piece of paper might look as follows:

	ITEM	PSV		ITEM	ASV
People:	Spouse	3		Spouse	5
	Children	5		Children	3
	Best Friend	1		Best Friend	0
	Co-worker	2		Co-worker	2
Places:	Work	12		Work	7
	Gym	4		Gym	5
	Dining Out	2		Dining Out	4
Things:	Snowy Weather	15		Snowy Weather	15
	Rent Due	7		Rent Due	7
	Vacation Planning	2		Vacation Planning	0
				Broken Tooth	20

TOTAL PSV: 53 | TOTAL ASV: 68

                           |
                           | END OF DAY: BAD

Patients should be forewarned that, as shown above, their PSV's and ASV's for any given day may differ significantly, especially during the first few weeks of practicing this technique. In the example above, some items where as stressful as predicted (co-worker, snowy weather and rent due), some were more stressful than predicted (spouse, gym and dining out), some were less stressful than predicted (children and work), and some were postponed to another day (best friend and vacation planning) which caused "0" stress. In addition, the actual list may contain unanticipated items that could not have been foreseen the night before (broken tooth). It should be of no surprise that, in the beginning, PSV's and ASV's differ. Patients should not be discouraged by this, and continue this process for at least two weeks. Each night they complete the ASV's for the corresponding PSV's they began the night before, to determine why a day was good or bad with respect to their MBML's. Then, on a new piece of paper, they start over by listing PSV's for the next day.

RESULTS:

No study has been done to define objective outcomes from using this technique. However, patients using it at our CPMP report the following results. First, barring any major unexpected events such as a broken tooth, after a few weeks, patients' predicted lists began to look very similar to their actual lists. They became very adept at estimating the amount of stress they would experience the

next day. These estimates provided them early warnings of when they might surpass their MBML.

Second, after a few weeks, patients identified a new and important number: their maximal stress value (MSV). The MSV is derived by finding the highest total ASV on a list marked "good" at the end of the second night (see example above). The highest total ASV associated with a good day is the MSV: the maximal daily stress tolerated without exceeding the MBML. For example, after two weeks a patient had eight good days with total ASV's of 19, 19, 20, 22, 22, 24, 25, and 25, and six bad days with total ASV's of 29, 30, 32, 35, 35, and 43. The patient's MSV is 25, as this was the highest total ASV on any given good day. By periodically reviewing lists from prior weeks, patients can update their MSV's, so as to reflect any ongoing fluctuations in their MBML's.

While no system is perfect, and broken teeth are hard to foresee, this technique provides a degree of precognition into the coming day's stress. Through practice, patients learn to accurately assign PSV's to items on their lists. They can then adjust their schedule for the next day, so their total PSV's do not exceed their MSV's. This may help patients to stay within their MBML's and avoid further aggravation of their chronic pain conditions. It gives patients the opportunity to modify events before they happen - rescheduling some, changing others - so their total ASV's are less likely to exceed their MBML's. This system may defuse problems which might otherwise affect patients' compliance with prescribed regimens and physician attempts to provide adequate pain management.

CONCLUSIONS:

Chronic pain management is a long-term, day-to-day battle that patients fight with the aid of their physicians. Many powerful tools are available to assist these efforts, including but not limited

to medications, physical therapy and surgical intervention. This paper has outlined an inexpensive and easy to use adjunctive technique which patients can use to predict when they might harm themselves by exceeding their limits. It gives them the opportunity to intervene on their own behalf, thereby decreasing the complications and consequences of overexertion. Though no system is perfect, this may be an effective aid to offer patients when they ask, "How much is too much?"

DEDICATION:

I dedicate this paper to all of my patients, for they continually inspire and challenge me to reeducate myself about chronic pain management.