

ori, a 31-year-old woman with a history of bipolar disorder, fibromyalgia, and migraine headaches, presents for follow-up in the office after visiting the emergency department (ED) with a severe headache. She has presented to the ED 13 times in the past year with varying complaints. She reports almost daily

headaches, which are intermittent but often last "for days." An increase in stress, depressive symptoms, and medication changes have all confounded recent headache activity. She has consumed all of her triptan abortive medication. Where do you begin?

Caring for patients like Lori who have multiple complaints but offer vague or confusing information can be a challenge. Making sense of the disorganized details of the patient's history is often limited not only by time available at the appointment but also by the patient's insight, recall bias, and anxiety.

One strategy for improving information-gathering during the patient encounter is the use of symptom diaries.

Definition and benefits

Symptom diaries, or patient logs, are simple tools patients can use to record their symptoms or activities in an organized manner over a defined period of time to augment the diagnostic and therapeutic process. The patient's chief complaint and the objectives of keeping the diary

determine much of the information included. However, key features usually include symptom timing, duration, associated symptoms, triggers, alleviating factors, and lifestyle considerations.

Symptom diaries offer several benefits:

- Patient engagement and control. Keeping a symptom diary gives the patient a sense of control and direct involvement in the treatment plan. For some patients, the process of writing out their symptoms, experience, and emotions provides a therapeutic behavioral benefit as well.
- **Time savings.** The amount of time it takes a physician to review a one-page diary is substantially less than the time it takes to verbally interview a patient for the information.
- Focused information gathering. A diary can organize the patient's history for more meaningful clinical interpretation.
- **Trigger identification.** A diary can help the physician identify nuances of symptoms within a disease process and can directly lead to activity modification and lifestyle changes that optimize overall function.
- **Visual assessment.** Visual learners can quickly scan the document and digest the information.
- **Cost savings.** Symptom diaries can create a more thorough history, which has the potential to limit unnecessary laboratory and radiographic testing.

Paper, Internet, and mobile options exist. Simple paper

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handouts are effective and can be returned during or prior to a follow-up visit. (See the paper examples below.) Alternatively, electronic diaries have more sophisticated designs to gather and sort information, and mobile applications offer the convenience of point-of-symptom logging, but they often have a fee. (See the electronic resources listed on page 26.) Patients should be able to select the format that suits them best, based on their time constraints, health literacy, computer skills, etc.

Six popular uses

In the primary care setting, there are six common uses for symptom diaries or patient logs. (See below for information about downloading samples of the following symptom diaries.)

Headache diary. A headache diary can be a useful tool for identifying the type of headache a patient is experi-

Examples of paper-based symptom diaries Six symptom diaries can be downloaded from the online version of this article at http://www.aafp.org/fpm/2013/0500/p24.html. SLEEP DIARY EXERCISE LOG FOOD DIARY GENERAL SYMPTOM DIARY Duration (1-10) Triggers

encing, addressing concerns about serious complications, assessing triggers, developing a treatment plan, and tracking the effectiveness of treatments. Clinical decisions regarding the adjustment of abortive and prophylactic treatments can easily be made based on a summary of the information within the diary. As patients become engaged in tracking their symptoms, this often leads to improved trigger avoidance and better control. Comparing previous diary entries with more current ones can help illustrate progress to the patient.

Food diary. Food diaries are a powerful way to help patients realize what they are actually consuming and recognize opportunities for lifestyle modification. In a study of 1,685 patients with an average weight of 212 pounds, those who actively used a food diary and tracked their food intake achieved twice the amount of weight loss as those who did not track their food intake. In this case, the diary itself can be as simple as the patient recording

the food consumed on a calendar or taking a picture of his or her plate with a mobile device.

Exercise diary. Exercise diaries can help patients who are struggling to begin or maintain an exercise lifestyle change. Use of an exercise diary encourages accountability, helps define a safe progression of activity, and documents improvement, which can be motivating. The diary can also be used to reinforce progress, address obstacles to exercise (such as busy schedules or bad weather), and set reasonable goals and expectations.

Sleep diary. Sleep diaries can be helpful in correctly diagnosing underlying sleep conditions such as insomnia, obstructive sleep apnea, restless leg syndrome, and circadian sleep disorders. Without a sleep diary, getting the specific quantitative and qualitative information needed to assess a patient's sleep patterns is time intensive and difficult. Patients tend to be vague in their descriptions and only remember extremes, perhaps because the worst nights of sleep are the easiest to recall.

A sleep diary can also be a therapeutic tool for patients to acknowledge their own sleep patterns and the factors contributing to sleep disruption. It can even support sleep hygiene interventions, such as going to bed at the same time each day or avoiding naps, which may provide major symptom improvement.

Voiding diary. Voiding diaries have a role in identifying conditions such as lower urinary tract symptoms, benign prostatic hypertrophy, interstitial cystitis, incontinence, and urinary

Symptom diaries, or patient logs, are available in both paper and electronic formats.

A general symptom diary can be helpful for patients with vague somatic complaints.

If a patient will not complete a basic symptom diary, this may signal that the patient is struggling with larger issues. frequency. When evaluating incontinence, leak episodes and volumes should be attained. The duration of the diary can range from 24 hours to two weeks depending on the purpose of the evaluation. The timing of voids in relation to oral intake can identify the most problematic times of the day and help the physician address behavioral aspects of management. In addition, the diary can establish a baseline for quantifying the effects of bladder drills, retraining, and pharmacologic interventions.

General symptom diary. Perhaps one of the most useful purposes for a symptom diary is for patients to document vague somatic complaints such as general pain syndromes, irritable bowel syndrome, fatigue, gastrointestinal disorders, menstrual irregularities, cardiac symptoms, or neurologic complaints. A general symptom diary (see a sample on page 27) may help to identify a more objective trend to solidify an underlying diagnosis or syndrome.

A general symptom diary can also allow more focus on the patient by obtaining critical aspects in a presentable, concise format. Fatigue and pain symptoms are unique and personal experiences for patients. Reviewing the diary directly with the patient validates his or her complaints, demonstrates caring and trust, and provides an excellent foundation for setting reasonable expectations. This, in and of itself, enhances the therapeutic relationship with these patients, who may be perceived as being difficult. Identifying the ups and downs

associated with their problem can also help illustrate the course of illness and promote patient resiliency.

Other uses. Symptom diaries can be helpful with other conditions as well, such as endometriosis, heart failure, asthma, chronic pain, chronic obstructive pulmonary disorder, heartburn, hypertension, blood glucose disorders, breast feeding disorders, and menstrual disorders.

Challenges

When using symptom diaries with patients, physicians may encounter the following challenges.

Patient nonadherence. Adherence rates vary widely. Use of simplified formats individualized to the needs of the patient and direct physician instruction can improve compliance rates. However, certain patients simply will not complete the diary. This should signal to the clinician that the patient may be struggling with larger issues, and it may even serve as a prognostic indicator.

Symptom recall. A study of healthy females found that symptom diaries resulted in increased recall of daily symptoms and increased perception of symptom severity.² This tendency is something physicians should keep in mind as they interpret the data.

Perceived dismissal of the patient's concerns. Many patients are conditioned to getting a quick solution to their health care

Free electronic reso	urces
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Symptom Name		Website	Mobile app	Features		
Headache	iHeadache	http://www.iheadacheapp. com/	Blackberry, iPad, iPhone,	Point-of-symptom entry; detailed symptom entry; email reports		
Food/Activity	Calorie Count	http://caloriecount.about. com/cc/mobile.php	Android, iPad, iPhone	Food, activity, water, and weight- loss logs; dashboard displays; community support forums		
	MyFitnessPal	http://www.myfitnesspal. com	Android, Blackberry, iPhone, Windows	Food, activity, and body log; reports; forums and community		
Sleep	Sleep Diary http://www.patient.co.uk/mobile.asp		iPad, iPhone	Questionnaire allows for automated data collection and reports		
Voiding	Voiding iP Voiding Diary http://www.ip-voiding-diary com/		iPhone	Simplified icons; graph displays		

GENERAL SYMPTOM DIARY

Patient's name:	Date of birth: /	/	Medical record #:	

Date	Symptom	Time	Duration	Intensity (1-10)	Triggers	Treatment used	Response

Family Practice Management®

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Help patients understand why a symptom diary may be a helpful tool in their diagnosis and treatment.

Make sure the diary isn't too complicated; even simple paper tools can be effective. problems. Chronic conditions without a clear explanation are a challenge for patients, and they may be frustrated with the assignment of keeping a symptom diary. The manner in which the plan is delivered to the patient should explain why this may be a helpful tool and how it can augment the treatment plan.

Complicated schematics. Some symptom diaries, particularly elaborate electronic ones, may be too complicated for certain patients to use. A symptom diary needs to be intuitive and simple enough to complete quickly and easily.

Too many options. There are numerous resources to choose from, especially for fitness-and nutrition-related tracking apps, but there are limited uniform resources with validation. The best approach is to familiarize yourself with a few options that you can offer to your patients.

A low-cost, low-risk tool

A symptom diary is a simple, effective, clinical tool to augment the diagnostic and therapeutic process for patients in the outpatient setting.

Patient logging of specified symptoms or activities in an organized manner improves history taking with minimal risk and cost. It may even help patients avoid unnecessary laboratory tests, radiographic procedures, and pharmacologic interventions, as well as the associated costs and potential harms. While format unification and validation would further legitimize outpatient use, physicians need not wait for the perfect resource. Even simple paper-based symptom diaries, such as those presented with this article, can yield tremendous benefits.

- 1. Hollis JF, Gulilon CM, Stevens VJ, et al. Weight loss during the intensive intervention phase of the weight-loss maintenance trial. *Am J Prev Med.* 2008;35(2):118-126.
- 2. Ferrari R, Russel AS. Effect of a symptom diary on symptom frequency and intensity in healthy subjects. *J Rheumatol.* 2010;37(11):2387-2389.

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