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# Improving patient retention of medical information: lessons from the contact dermatitis clinic

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## Abstract

Medical communication skills are widely recognized as important, especially for situations in which providers must present complex and detailed information. Although much research focuses on how providers can improve their delivery of medical information, an equally important part of communication is supporting patient retention of the information. We present several methods to improve patient retention of medical information that we have found successful in an allergic contact dermatitis clinic. Some recommendations address information transfer (follow effective structure, teach to different learning styles, provide written instructions, employ the teach-back method). Other methods are effective, focusing on the patient's emotional, social, and relational needs (include storytelling, metaphor, and analogy, allay negative emotions, listen deeply/know your patient). This list is not exhaustive, but we have found these methods effective when counseling patients with allergic contact dermatitis. Patient retention of medical information is an important part of effective health care, benefits both the provider and the patient, and is applicable to every medical practice.

*Keywords: communication, counseling, dermatitis, retention*

## Introduction

When patch testing revealed several relevant allergens for my teenage patient, I reviewed the allergens and the plan for allergen avoidance with the patient and her mother. I was thorough and

detailed; when I asked if they had any further questions, they said that they did not. I was very surprised, a week later, when I received a call from the patient's referring dermatologist who told me the patient did not remember being provided any information about her allergens and that she was completely in the dark about what to do next.

Unfortunately, almost every healthcare provider has a story like this, in which their patient does not recall information that was provided. This represents a common failure in communication. This incident inspired a review within the clinic of best practices for ensuring patient recall and integration of these practices into our clinical and educational workflow.

Research shows that good physician-patient communication improves patient understanding, satisfaction, and outcomes [1]. Although much medical communication research focuses on improving the way providers deliver information, this article is focused specifically on ways to improve patient retention of the medical information.

In allergic contact dermatitis practice, the treatment is centered on allergen avoidance, thus best practices for patient counseling are crucial to effective disease management. To improve, a patient must practice successful allergen avoidance. Successful avoidance starts with a clear understanding of potential sources of allergen exposure and a thorough understanding of how to avoid allergens. From our experience in allergic contact dermatitis, we have identified several communication principles to improve patient retention of medical information.

## Discussion

### Structure information

In conversations with patch testing patients, they have sometimes shared that in a previous patch testing appointment, they were simply provided with allergen handouts without further guidance. In other words, they were handed five handouts that explained where an allergen might be found and were then advised to avoid those allergens. This can obviously be challenging. With limited background knowledge, how can patients take and consolidate the information found on these multiple handouts?

This is why, in our contact dermatitis clinic, we focus on organizing information. Explicit structure has been shown to improve recall of medical information [2]. Instead of presenting a large body of information (such as five handouts), I follow a structure: explain each allergen to which the patient tested positive, explain where these allergens can be found, and give clear next steps about how the patient can avoid these allergens in their daily life.

I repeat this information in written materials. Each patient receives a handout about each of their allergens. Then, patients are provided with a written summary of next steps. I may write: "These are the next steps I would like you to take." Then I outline concrete actions such as: "Use only the skin care products on your safe product list" or "Stop your current eye drops—instead, use *this* product."

### Teach to different learning styles

Among the three main adult learning styles—auditory, visual, and kinesthetic learning—patient counseling typically relies on auditory learning. However, different patients will retain information better through other learning styles.

Visual aids help patients conceptualize information and are effective across many levels of health literacy [3,4]. There are multiple ways to incorporate visual and kinesthetic learning into our patient counseling practices. For example, when I recommend that a patient apply moisturizer for their hand eczema, I not only speak about it, I also demonstrate: "Because I wash my hands so many times a day, I focus on restoring moisture to my skin barrier. This is the hand cream that I use (as I reach into my pocket). After I

wash my hands, this is how I pat my skin, leave it partially damp, and then apply the moisturizer (while performing a demonstration)."

I also invite the patient to look at product labels together to show them what their allergen looks like on a bottle or in a list. For example, if a patient is allergic to quaternium-15, we circle that allergen in the ingredient list on their container of hand soap. If there is a particular body wash that they have been using, we might look it up online and then highlight in the ingredient list where their allergen is found. These exercises are visual demonstrations, but they also incorporate tactile elements which appeal to kinesthetic learners.

### Provide written instructions

Multiple research studies on the science of working memory have found that adults can only manipulate three to five pieces of information at a time [5]. When you must present information on five allergens, a patient who is trying to remember the first three allergens may find it hard to encode additional information. Additionally, in an experiment on patient recall in anesthesiology, patients could only spontaneously recall 25% of the information presented [6]. This demonstrates the limitation of counseling that relies on verbal information.

Prior to counseling, informing the patient that all important information will be written down and sent home with them can help improve retention. The patient's focus can be redirected from remembering every piece of information to actively listening and comprehending the information [6]. All important information from my counseling is provided to the patient in writing. Patients receive handouts about each allergen to which they tested positive, as well as a list of recommended products safe for their skin and a written summary about their next steps. They take these resources home and are provided a way to contact me with further questions.

### Employ the teach-back method

The teach-back method is a technique to verify successful counseling. It involves asking patients to repeat information from counseling back to you, which has been shown to be effective in confirming knowledge and clarifying misunderstanding [7]. In

the contact dermatitis clinic, we use the teach-back method by asking the patient if they remember where the allergen might be found and reiterating where they might have exposure to the allergen in daily life.

### **Include storytelling, metaphor, and analogy**

Storytelling has been found to be one of the most effective techniques for conveying information that is retained. For patients with hand eczema, instead of just providing a handout I share a story: "I have hand eczema myself. Because I have to wash my hands so many times a day, this is how I wash my hands and this is how I moisturize my hands."

In a similar way, research has found that metaphors and analogy can help patients link unfamiliar medical concepts to familiar/accessible concepts [8]. For example, when describing a contact dermatitis reaction, I might use an analogy: "This type of allergy is the same as poison ivy. If you went hiking on a Saturday and brushed up against poison ivy, you probably wouldn't see the rash until Monday or later. Some people have a similar allergy to ingredients in makeup."

### **Allay negative emotions**

Experienced physicians know how important it is to respond to a patient's emotions and take steps to decrease a patient's anxiety. Research shows that anxiety, stress, and other negative emotions can have a deleterious cognitive impact which may worsen patient retention of information [9].

Most physicians work in time-pressured environments and it is understandable that we might wish to focus on the transmission of important medical information. However, investing the time to manage a patient's emotions can improve patient retention of information, thereby improving treatment adherence and patient outcomes.

### **Listen deeply/know your patient**

With allergic contact dermatitis, we start by obtaining an extensive patient history. Appropriate testing and later counseling, begin by deeply listening to the patient. We listen to the patient talk about their skin history, their home environment, their job, every product or clothing item that makes

contact with their skin throughout the course of a day, and the context around their reactions (Were they exercising or sweating? What color and brand were the jeans that made their skin react? Have they changed their skin care products recently?).

Once I understand a patient's life in context, I carefully translate my recommendations to the patient's reality and daily life. If the patient is a neonatal nurse who needs to wear gloves for work, we will find them the appropriate gloves to avoid allergens while providing the protection and dexterity they need to do their work. If the patient is a young mother with hand dermatitis and allergy to multiple skin care preservatives, we will factor that in when making recommendations for her skin products, as well as her baby.

*Cultural humility* is a term that lives in the same realm as *cultural competence*, *cultural sensitivity*, and related concepts. For health care providers, cultural humility is understanding that a person's background and life experiences impact their health behaviors. This understanding motivates us to adopt culturally appropriate approaches when treating patients and to make medical recommendations that fit into the patient's life context [10].

## **Conclusion**

In this commentary, we present methods to improve patient retention of medical information drawn from our own experience in counseling patients with contact dermatitis. The methods (follow effective structure, teach to different learning styles, provide written instructions, employ the teach-back method, include storytelling, metaphor, and analogy, allay negative emotions, listen deeply/know your patient) are by no means exhaustive, but are central practices in our clinic. Improving patient retention of medical information is key to successful counseling and leads to both short- and long-term benefits such as patient satisfaction and health outcomes.

## **Potential conflicts of interest**

The authors declare no conflicts of interest.

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