



BY ALAN  
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## UNDER MY SKIN

# A Grimm Scabies Tale

Once upon a time, in the little village of Dunkelkratz, there lived a woman named Mabel. Mabel taught third grade at Groovy Acres Elementary School.

One day Mabel had an itch. Nobody at home was itchy, just Mabel. She went to her ob.gyn.,

Dr. Livious, who told Mabel she had scabies, a nasty bug that burrows into the skin. Mabel felt very dirty, even though she showered every single day. The nurse sealed off the room where Dr. Livious had examined Mabel and disinfected it.

Mabel called her principal, Dr. Pollicy, and told him she couldn't come to Groovy Acres that day because she had scabies. Mabel got the scabies medicine Dr. Livious prescribed at Friendly Pharmacy and rubbed it all over her body. Then she bought insecticide at the Happy Pliers hardware store and sprayed it onto all the walls in her apartment. After that Mabel took all her coats and dresses to Mr. Spotless, the dry cleaner, who promised that in 3 days Mabel could pick them up for \$750.

But Mabel kept itching, so she visited Dr. Skrepping, her dermatologist. Dr. Skrepping examined Mabel, asked about the other people in her house, and told her she didn't have scabies. He suggested that she not apply the medicine to her skin for a fifth time and also that she wipe the insecticide off her walls.

Mabel called Groovy Acres right away to share the good news. Dr. Pollicy told her that he had already sent letters to the parents of all the families in Mabel's class to warn them that their

children had been exposed to scabies and should see their doctors right away.

Soon afterward, Friendly Pharmacy ran out of scabies medicine, the Happy Pliers ran out of insecticide, and Mr. Spotless the dry cleaner closed and retired to the Cayman Islands.

My most memorable teacher in medical school was a gravel-voiced ob.gyn. professor who liked to specify the consequences of mistakes.

"What's the worst that could happen if you did that?" he would growl. "The patient could die, Rockoff," he would say. "Is that bad?"

I was supposed to answer yes, that was bad.

Many mistakes have consequences, but there seems to be a widespread notion that the costs of getting a mere skin disease wrong don't amount to much. The Mabels of the world—you've met them, too—might say otherwise.

Here is what happens when an itchy Mabel visits a walk-in clinic: The doctor presumes that she is sexually active because she is breathing. He identifies her 3-inch linear excoriations as "burrows." He learns that she itches more at night.

QED: scabies.

And if it isn't, hey, what's the worst that could happen?

Actually, plenty: a gratuitous feeling of being unhygienic, unnecessary use of insecticides, ruinous dry-cleaning bills. And, oh yes—if it isn't scabies, not getting better.

The role of fomites in spreading scabies is not completely clear. Some sources say mites can live off the body

for a couple of days; others, that fomites are "not very important."

All agree that close physical contact is the most likely source of scabies transmission.

I recall reading years ago in Kenneth Mellanby's "Scabies" that British army researchers in World War II had subjects sleep in beds where scabies sufferers had slept the night before. Few contracted it.

The upshot is that, although just thinking about scabies makes people feel repulsive and itchy, it's really hard to catch mites from shaking hands, hanging your coat next to someone else's in a closet, or sitting on fresh table paper in an exam room just vacated by a person whom somebody else thinks may have scabies.

It would be unrealistic to expect busy primary or urgent care physicians to become adept at reading mite scrapings. Still, it would be nice if the word got out that diagnosing scabies can be tricky; many other things cause itch at night, and an incorrect designation of scabies can lead to major problems: medical, social, even financial. Physicians unsure of the diagnosis should, at a minimum, advise patients that if two applications of a scabicide haven't made much difference, then what's needed is not a third one, but a new diagnosis.

Mabel, by the way, took a second job as a meter maid to cover her dry cleaning bills and lived happily ever after. ■

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## GUEST EDITORIAL

# Crossing the Quality Chasm in Health Care

The safety and quality of health care today are far below the level we can and should achieve.

The Institute of Medicine, part of the National Academies, is a private organization that offers advice and recommendations to policy makers, health care professionals, and the general public on matters related to health. Five years ago we produced a report, "To Err Is Human," which concluded that every year tens of thousands of patients lose their lives in U.S. hospitals due to medical errors. To put this in perspective, if we counted errors as a cause of death, they would rank as one of the top 10 of causes of death in the United States.

The following year we released a second report, "Crossing the Quality Chasm," which laid out a blueprint for the steps we can take to achieve higher quality

and increased safety in our health care system. This report describes six requirements for high-quality care: It must be safe, effective, centered on patients' needs, delivered in a timely way, efficient, and equitable.

Behind these two reports are scores of studies documenting problems in the quality and safety of care, in virtually every setting: acute care, medical care, surgical care, chronic care, and preventive care. In all regions, in both outpatient and inpatient settings, we repeatedly find preventable er-

rors and deficiencies in patient safety.

There are several ways to think about this problem. When we focus on each physician's duty to individual patients, we may think about improving the selection and training of physicians. The idea here is that if physicians have a stronger ethical commitment to their patients, they won't make these mistakes.

A second model suggests that to achieve quality care, you need to offer incentives that lead to better quality, such as pay for performance. Various forms of pay for performance are going forward in many health care settings, offering financial rewards, or in some cases imposing financial sanctions, to improve the quality of care.

A third model notes that physicians often make clinical decisions when they are exhausted, working under great time pressure, coping with patients' intense emotions, and juggling several different tasks at once. The solution could be to reduce the cognitive and psychological burdens that contribute to errors. For example, we could shorten shifts and add computerized information support.

A fourth model suggests that we need to fundamentally train physicians better and give them the kind of tools and clinical expert knowledge that would lead to better decisions.

Each of these models is relevant and has something to contribute to the quality and safety of our health care system. But the analyses of those who have thought deeply about these issues suggest that all of these together will not be sufficient.

To really improve quality and safety, we must look at our situation from a systems perspective. This means that many errors aren't due to the failings of a single individual. In our current health care system, individuals, devices, and organizations all work together. Errors occur when necessary communications among all these components somehow fail.

We like to think of our health care system as fundamentally sound, although it produces an occasional error. In fact, we ought to think of this system as perfectly designed to produce the results it actually achieves. When we learn that we have a 3% error rate, then we have to face the fact that our system is designed to produce three errors per 100 cases. If we instead want three errors per 1 million cases, we have to redesign the system. We shouldn't focus on training clinicians who can do the right thing under all circumstances; instead, we should design systems that are incapable of doing the wrong thing.

Experts observe that any complex, tightly coupled system, such as an airplane or a hospital, is prone to error. All the parts are so closely related that one failure can cascade throughout the system.

When we approach medical safety from

this perspective, we see that certain principles can help us design safer systems. For example, we could design equipment so that it can't be misused. We could design an oxygen valve so that it connects to the oxygen supply tube but won't connect to any other tubing.

Within health care, reasonless variation is the source of many errors. Perhaps we could learn from the airlines and other industries that have introduced standardized ways to carry out essential functions. Before an airplane takes off, the pilot goes through a standard checklist and does it the same way every time. That's because consistency is the source of quality.

Anesthesiologists have standardized their practice patterns and dramatically reduced the risk of problems. During the 1980s, the risk of death due to general anesthesia was about one in 10,000; today it is closer to one in 200,000. To achieve this goal, they took a systematic look at safety issues and funded key research. They established a patient safety foundation where clinicians, device manufacturers, and regulatory bodies could freely discuss potential problems. Important new technology, such as pulse oximetry, was developed. All these things together contributed to a much safer system.

We should apply similar processes of communication, research, and standardization to other aspects of care. ■

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