



**Figure 2. Stepped-Wedge Study Design Schematic.**

Participants are randomly assigned to receive the intervention at one of several times. Outcomes in each group are measured at each step. X denotes the intervention, and 0 control treatment.

among those given the opportunity to participate in the early phase 2 trials.

Representatives of regulators and ethics committees in Africa as well as of the U.S. Food and Drug Administration and the European Medicines Agency were at the meeting and agreed to work

 An audio interview with Dr. Lindsey Baden is available at NEJM.org

with industry and researchers to accelerate the evaluation, licensure, and availability of the candidate vaccines. The regula-

tors stressed that rigorous standards for clinical safety and efficacy will be applied. Another WHO-arranged meeting is planned for November to reevaluate the next necessary steps once preliminary results from the phase 1 trials are available.

Even if adequate safety and immunogenicity are demonstrated in the phase 1 studies, vaccines will not be available in substantial quantity until the first quarter of 2015 at the earliest. For that to

occur, funding must be secured for production. Even if an effective vaccine can be produced, it is not likely to be 100% effective, so to succeed in stemming the current outbreak, a coordinated effort to improve capacity and provide clinical care in affected countries needs to be scaled up urgently.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

Dr. Kanapathipillai is an editorial fellow at the *Journal*. Other authors are from the World Health Organization, Geneva.

This article was published on October 7, 2014, at NEJM.org.

1. Experimental Ebola vaccines: WHO consultation on Ebola vaccines. Geneva: World Health Organization, October 1, 2014 (<http://who.int/mediacentre/news/ebola/01-october-2014/en/>).
2. Stanley DA, Honko AN, Asiedu C, et al. Chimpanzee adenovirus vaccine generates acute and durable protective immunity against Ebolavirus challenge. *Nat Med* 2014 September 7 (Epub ahead of print).
3. Geisbert TW, Geisbert JB, Leung A, et al. Single-injection vaccine protects nonhuman primates against infection with Marburg virus and three species of Ebola virus. *J Virol* 2009;83:7296-304.

DOI: 10.1056/NEJMp1412166

Copyright © 2014 Massachusetts Medical Society.

## The Disease of the Little Paper

Suzanne Koven, M.D.

Toward the end of his life, my father tried to engage me in conversations about our shared profession. He presided over these sessions from an armchair, his legs tucked under a blanket against the air-conditioned Florida chill to which he'd retired.

"Seen any great cases?" he'd ask. This question set my teeth on edge. Our relationship hadn't been easy when I was young, and even well into middle age as I was then, it didn't take much

to fan the embers of my adolescent anger.

I'd explain — again — that I was a general internist, not a specialist as he had been, and derived my professional satisfaction from long and close relationships with patients and not from making obscure diagnoses.

He would give me a pitying look and shrug. Then he'd tell me some anecdote in which I heard him imply that he was more resourceful, wiser, and more devoted to and beloved by his pa-

tients than I could ever hope to be. About how, during the war, he recycled penicillin from patients' urine and injected it into other patients. About how, during a housekeepers' strike, he mopped floors and folded sheets and towels in the laundry room of the hospital where he was chief of staff.

The reminiscence I bristled at most, though, was about ladies — always they were "ladies" — with something he called *la maladie du petit papier*: the disease of

the little paper. They would come to his office and withdraw from their purses tiny pieces of paper that unfolded into large sheets on which they'd written long lists of medical complaints.

"You know what I did then?" Dad asked. I did, but I let him tell me again anyway. "I'd listen to each symptom carefully, and say 'yes' or 'I see' — that's all. And when a lady finally reached the end of her list, she would say, 'Oh doctor, I feel so much better!' The point is, all those ladies needed was someone to listen."

After my father died, I researched some of the things he'd mentioned to me. Data collection was crucial to my mourning process. I longed for evidence of my father other than my own memory of him. I wanted — irrationally, I know — written proof that he'd existed.

An article in *Time* magazine, dated September 11, 1944, reported a novel extraction method whereby 30% of the penicillin injected into one patient could be reclaimed from the urine and injected into another patient. Doctors at a military hospital on Staten Island, facing a shortage of the wonder drug, were using this technique in enlisted men with gonorrhea.

An American history website featured an interview with a labor activist who had organized low-paid hospital workers to strike in New York City in the 1970s.

I found *la maladie du petit papier*, too. It's defined, in an online medical dictionary (<http://medical-dictionary.thefreedictionary.com/La+Maladie+du+Petit+Papier>), as a condition in which "an exhaustive list of purported ailments — [is] carried around by

a neurotic patient, often accompanied by extensive documentation of each bowel movement or sip of water." The term, probably coined in the clinic of Jean-Martin Charcot at the Salpêtrière in the late 19th century, has never been complimentary. In an anti-Semitic treatise, one disciple of Charcot described a Jewish list-maker with scorn. He wrote, "In a voluminous batch of filthy scraps of papers that never leaves him, he shows us prescriptions from all the universities of Europe and signed by the most illustrious names."<sup>1</sup> Sir William Osler was more restrained but no less dismissive. He observed, "A patient with a written list of symptoms — neurasthenia."<sup>2</sup> In recent years, one doctor updated the diagnosis to "*la maladie du grand print out*," a nod to the indispensability of the Internet to the modern hypochondriac.<sup>3</sup>

In a 1985 *Journal* article, primary care internist John F. Burnum challenged the notion that the disease of the little paper is a disease at all. He reported the results of an informal study he conducted in his own practice. Of 900 patients he saw in a 4-month period, 72 (8%) brought in lists of concerns. Burnum observed no higher incidence of mental illness and no lower incidence of physical illness in his list-making patients than in the non-list-makers. He concluded that patients who make lists aren't neurotic, but simply "seeking clarity, order, information, and control."<sup>4</sup>

Of course I was familiar, from my own practice, with the phenomenon of patients making lists, but I'd never known it had a name. I confess that these lists

sometimes irritate me, as they do many doctors. Especially irksome is the sight of my last name without my title, scrawled at the top of a list — evidence that to my patient I am often merely another stop in a series of tedious errands guided by similar lists headed "GROCERIES" or "TO DO." I steal an upside-down glance, in hopes that the list will be short, or at least that we'll have covered most of the items by the time the little piece of paper makes its appearance. Each checkmark floods me with relief: "Prescriptions, you filled them . . . that mole on my thigh, you looked at it . . . we talked about that weird dizzy thing . . ."

Why should these little pieces of paper bother me? I know that often patients, sensibly, bring lists to make the most of hard-to-schedule and ever-shorter visits with their doctors — indeed, in recent years they've been encouraged to do so. I'm aware of the studies that show the mere act of jotting symptoms down can ameliorate them. As a writer, I surely understand the urge to put pen to paper.

I wonder if I resent these lists because they threaten me. The "control" that Burnum thought patients reasonably sought is wrested, in part, from the doctor. When a patient pulls out that little piece of paper, I feel a shift in the exam room: the patient taking charge of the agenda, my schedule running late, the reins of the visit loosening in my hands.

I'm ashamed of my resentment, which is as unjustified as it is unbecoming. I know these lists aren't really threats to me. They're not about me at all. They are, like all writing, forms of

self-expression. I remember the mathematician who handed me spreadsheets of his blood pressures with the mean and standard deviation calculated; the flamboyantly dressed woman who favored hot pink clothing and penned her lists in ink to match; the savvy businessman, many years ago, who clicked through his list on an early mobile device.

It turns out that my father was right: often, even when I have no explanation for the headache, upset stomach, or itch documented on the back of an envelope or punched into a smartphone, a patient feels better just having presented me with his or her recording of it. Perhaps naming our demons and saying their

names aloud helps make them less frightening. Perhaps the shorthand of the list somehow abbreviates the anxiety associated with its entries.

Or maybe lists bring still deeper comfort. Concerns set in ink are made concrete, less likely to be ignored. Those little pieces of paper are declarations: I'm human, and my suffering is real. Writer Susan Sontag, a self-described compulsive list-maker, might have agreed. She once wrote that in writing lists, "I confer value, I create value, I even create — or guarantee — existence."<sup>5</sup>

Strange that writing this, 10 years after my father's death, makes me miss him more, yet also lessens the pain of missing

him. Sometimes a lady really does just need someone to listen.

Disclosure forms provided by the author are available with the full text of this article at [NEJM.org](http://NEJM.org).

From Massachusetts General Hospital and Harvard Medical School — both in Boston.

1. Meige H. *Le juif-errant à la Salpêtrière: étude sur certains neuropathes voyageurs*. Paris: L. Bataille, 1893.
2. Osler W. *Aphroisms*, collected by Robert Bennett Bean; edited by William Bennett Bean. New York: H. Schuman, 1950.
3. Muir Gray JA, de Lusignan S. National electronic library for health (NeLH). *BMJ* 1999;319:1476-9.
4. Burnum JF. La maladie du petit papier: is writing a list of symptoms a sign of an emotional disorder? *N Engl J Med* 1985;313:690-1.
5. Sontag S. *As consciousness is harnessed to flesh: journals & notebooks, 1964-1980*. New York: Farrar, Straus and Giroux, 2012.

DOI: 10.1056/NEJMp1411685

Copyright © 2014 Massachusetts Medical Society.

#### INTERACTIVE PERSPECTIVE

## Ebola Virus Disease — Current Knowledge

 An interactive graphic is available at [NEJM.org](http://NEJM.org)



This interactive graphic covering our current knowledge of the Ebola virus and the history of disease outbreaks has now been updated with information on convalescent therapies and on drug and vaccine development.