measles is not required for matriculation. Students requesting religious, philosophical, or medical exemption are informed that they may be excluded from classes and other campus activities in the event of a measles outbreak. With current policies and enforcement procedures in place, a vaccination level of more than 95% can be maintained and future outbreaks prevented or limited.

If such policies were widely adopted, college students might be eliminated as an important source of measles transmission. This would contribute to the support of global measles eradication recently explored by the World Health Organization, the Pan American Health Organization, and the CDC.8 In that report the participants concluded:

Preventing measles outbreaks is more effective than trying to contain them. Mass vaccination campaigns undertaken in response to outbreaks are of limited usefulness ... because such efforts are costly, disruptive, and often ineffective by the time they are instituted.^{8(p17)}

We concur with this statement.

With the recent agreement by the CDC's immunization committee and the American Academy of Pediatrics' Committee on Infectious Diseases to recommend a second dose of measles vaccine any time longer than one month after the first, a recent editorial points out that the question of the optimal timing for the second dose may become moot as the goal of measles eradication is attained in the 21st century.9 In the meantime, although measles outbreaks are still a possibility, we support the use of PIRs to help prevent them and to lessen the costly effects of measles outbreaks in a college setting.

ACKNOWLEDGMENT

We are grateful to Carole Allen, RN, MSN, and Michael Short, RN, BSN, of the Whatcom County Health Department; Lisa McKenzie, RN, MPH, of the Jefferson County Health Department; Connie L. Copeland, EdD, of the WWU Office of the Vice President of Student Affairs; and Emily P. Gibson, MD, and the staff of the WWU Student Health Center for their assistance.

REFERENCES

- 1. Baughman AL, Williams WW, Atkinson WL, Cook LF, Collins M. The impact of college prematriculation immunization requirements on risk for measles outbreaks. JAMA 1994; 272:1127-1132
- 2. Williams WW, Heckson MA, Kane MA, Kendal AP, Spika JS, Hinman AR. Immunization policies and vaccine coverage among adults—The risk for missed opportunities. Ann Intern Med 1988; 108:616–625
- 3. American College Health Association. Position statement on immunization policy. J Am Coll Health 1983; 32:7-8
- 4. Hutchins S, Markowitz L, Atkinson W, Swint E, Hadler S. Measles outbreaks in the United States, 1987 through 1990. Pediatr Infect Dis J 1996; 15:31-38
- 5. Center for Disease Control. Measles prevention: recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR Morb Mortal Wkly Rep 1989; 38(No. S-9):1-13
- 6. Birkhead GS, Morse DL, Mills IJ, Novick LF. New York State's two-dose schedule for measles immunization. Public Health Rep 1991; 106:338-344
- 7. Markowitz LE, Preblud SR, Orenstein WA, Rovira EZ, Adams NC. Hawkins CE, et al. Patterns of transmission in measles outbreaks in the United States, 1985-1986. N Engl J Med 1989; 320:75-81
- 8. Centers for Disease Control and Prevention. Measles eradication: recommendations from a meeting cosponsored by the World Health Organization, the Pan American Health Organization, and CDC. MMWR Morb Mortal Wkly Rep 1997; 46(No. RR-11):1-20
- 9. Katz SL. Harmony on the second dose of measles vaccine (Editorial). Pediatrics $1997;\ 100:891-892$

'Virtual' Factitious Disorders and Munchausen by Proxy

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FACTITIOUS DISORDERS involve the feigning or selfinduction of ailments, physical, emotional, or both, in the service of assuming the "sick role." The form factitious disorders have taken, from simulated seizures to self-induced infections, are limited only by human creativity.² In Munchausen by proxy, also called "factitious disorder by proxy," persons may demonstrate equal ingenuity in falsifying or creating illness in others, the goal being to assume the sick role vicariously.³

The manner in which false illness is communicated is apparently relatively unconstrained as well. With the exponential increase in the number of people with internet access, "virtual" support groups have multiplied. Many of them, conducted by e-mail or internet postings and sometimes requiring a free subscription, have been established for persons with particular diseases. Typically, the members of such networks strongly support one another, communicating not only information but strong emotion founded on their personal battles with illness. It is now emerging, however, that these groups simultaneously provide an inexpensive, convenient, and readily accessible forum for people who choose to misrepresent themselves as ill. As far as we know, the cases that follow are the first to be reported in which persons have exploited the internet as their "highway" to patienthood.

Report of Cases

Patient 1

A participant in an e-mail support group for persons with cancer and their loved ones posed as an ordained monk in the Catholic Church. He claimed to have a rare, quickly progressing form of cancer and further asserted that, because of his vow of poverty and the constraints of monastic life, he was unable to seek treatment of his disease. He requested the assistance of the support group in dealing with his loneliness and his fears about dying. At one point, he discussed a visiting nurse who had begun to assist him in his daily activities. Over time, the energy

(Feldman MD, Bibby M, Crites SD. 'Virtual' factitious disorders and Munchausen by proxy. West J Med 1998; 168:537-539)

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level suggested by the person's lengthy and frequent communications to the participants, combined with his remarkable longevity without treatment, created suspicion among several members. One of them confronted him and, in a private response to that member, the man confessed that he had fabricated the information about his illness and his vocation. He withdrew from the list.

Patient 2

A participant in the same cancer support group claimed to be a woman with liver cancer. She discussed undergoing elaborate medical and surgical interventions that corresponded to those already described by others in the group. At times, she posed as her husband or one of her two daughters in her postings. Her communications were imaginative and richly descriptive. One series, in which she presented herself as her youngest daughter, involved detailed dispatches about a 12-hour surgical procedure, ostensibly as it was in progress. The "daughter" reported that her father was relaying information to her over the phone as he received updates from the surgical staff and that, at one point, her mother suffered a brush with death. As in patient 1, undeniable inconsistencies in the woman's story began to emerge, as did factual errors about cancer treatment. These observations, combined with notable similarities in the writing styles of the woman and her various "family members," led to a confrontation like that described in the case of patient 1. She, too, privately confessed her deception and promptly left the group.

Patient 3

A member of an internet list dealing with the chronic fatigue syndrome claimed to be battling the problem of the syndrome. As did patient 2, she often posed as others, such as her sister-in-law, her husband, and a family friend, the first and last of whom reported having the syndrome. At times, using different internet accounts, the woman simultaneously signed onto the group as all of these persons, and often they argued publicly among themselves, diverting attention from other members. The emphasis of some of them on their conflicts and the severity of their chronic fatigue syndrome generated considerable attention and sympathy from other members. At one point, in an emotional post, the woman claimed that her sister-in-law had "committed suicide in despair" after finding the group members insufficiently supportive, an implied warning about herself contained in the message. Several members began to recognize that such dramatic and exotic claims came continually from this person, that they seemed to increase when other members' reports were mobilizing nurturance, and that much of the content was transparently false. As in the case of patient 2, a few also noted remarkable stylistic consistencies in the writing of each person. When they confronted the woman, she alternately evaded the questions, denied the behavior, or accused others. She, her "husband," and the "friend" subsequently stopped posting to this particular newsgroup, all at the same time. Due to continuing conflict among members, some of whom remain resolute in their loyalty to the woman, the moderator has imposed a strict ban on further discussion of the matter.

Patient 4

A woman contacted a consultant in Munchausen by proxy to request more information about the psychological underpinnings of this disorder. She indicated that, as the parent of two children with an uncommon genetic disorder, she had found support by communicating through the internet with other parents of similarly afflicted offspring. As her virtual encounters with others developed, she became especially close to one woman, whose children apparently suffered from the same ailment. As their friendship blossomed, she offered more and more personal information. She was writing now, however, because she had just learned from a reliable third party that, in reality, her newfound friend had lost custody of her children because of Munchausen by proxy: she had repeatedly misrepresented them to health care professionals as ill both with the genetic disorder and other medical problems. Unwilling to continue to communicate with the woman, but wishing to avoid a direct confrontation, the mother of the two affected children quietly reduced the frequency of her own postings. She finally withdrew entirely from the on-line support group. The experience left her deeply shaken.

Discussion

In the cases of patients 1, 2, and 3, messages were posted to internet support groups alleging personal illnesses that they did not have. In the case of patient 4, the fallacious claim involved illness in others and represented a continuation of behavior known to have occurred in other settings. Feldman and Smith have written about the immense toll factitious disorders and Munchausen by proxy can have on family members, friends, and caregivers. 4 Reports such as those just described make it clear that the repercussions can resonate further, coming to involve persons who have never met, who live in disparate parts of the world, and who know each other only as they have chosen to depict themselves in virtual support groups. Patients 1 and 2, for instance, had a profound effect on the newsgroup subscribers, a reaction exacerbated by an episode in the same group in which a member had masqueraded as a physician. Some members became globally suspicious and started accusing others of deception, sending hostile missives (called "flaming" in internet vernacular). Others expressed feelings of shame and hurt about having been duped or discussed their anger at the perpetrators of the ruses, each of whom had exited shortly after the falsehoods were exposed. In the case of patient 3, conflict among the woman's supporters and detractors led the moderator to ban the topic from discussion.

People who misuse internet support groups to mobilize attention may, like factitious disorder patients in general, communicate knowledgeably, but also strike others as unduly vehement about the extent of their personal struggles. They may offer information that is flatly contradicted by the experience and knowledge of members suffering from the maladies under discussion or that appears suspect only as inconsistencies accumulate. In addition to reports of an unusually severe or complex manifestation of the illness under discussion, there may be dramatic tales of personal triumph or tragedy. Such elaborate but false claims mirror the pseudologia phantastica⁵ of patients with Munchausen syndrome, the most chronic and extreme form of the factitious disorders.⁶ Although any of these features can facilitate detection, it is likely that many spurious claims are never exposed.

Patient 4 continues to present herself as the beleaguered parent of children afflicted with the genetic ailment. The current circumstances of the other imposters in our case reports are unknown, but clearly their needs for recognition and solace were met only temporarily: in two of the cases, their participation ended with their being firmly—albeit privately—chastened whereas

patient 3 was confronted publicly. Still, the availability of thousands of on-line support groups makes it possible that, like the Munchausen patient who seeks out an emergency department in an unfamiliar town, these persons will find new settings in which to carry out their deceptions. The challenges of attempting to intervene in factitious behavior, already daunting,⁷ are even greater when the patient is faceless, anonymous, and as transitory as a packet of electronic data.

REFERENCES

- 1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, 4th Edition. Washington (DC): American Psychiatric Association; 1994
- 2. Feldman MD, Ford CV. Patient or Pretender: Inside the Strange World of Factitious Disorders, New York (NY): John Wiley & Sons: 1995
- 3. Meadow R. Munchausen syndrome by proxy-The hinterland of child abuse. Lancet 1977; 2:343-345
- 4. Feldman MD, Smith R. Personal and interpersonal toll of factitious disorders. In: Feldman MD, Eisendrath SJ, eds. The Spectrum of Factitious Disorders. Washington (DC): American Psychiatric Press; 1996, pp 175–194
 - 5. King BH, Ford CV. Pseudologia fantastica. Acta Psychiatr Scand 1988; 77:1-6
- 6. Reich P, Gottfried LA. Factitious disorders in a teaching hospital. Ann Intern Med 1983; 99:240-247
- 7. Folks DG. Munchausen's syndrome and other factitious disorders. Neurol Clin 1995; 13:267-281