COMMENTARY

The Art of Precepting

Socrates or Aunt Minnie?

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As clinicians and as teachers we are asked to be efficient and effective. In pediatric outpatient departments, this sometimes seems like a tall order, especially when trainees are lined up to present cases. They expect excellent teaching and families expect excellent care for their children.

Editor's Note: I think that Socrates would really like Aunt Minnie and vice versa. I doubt that you could get to Aunt Minnie without having experienced Socrates, but Socrates becomes obsolete in a harried setting—which is no place for teaching beginners. For them, I'd try a Socrates sandwich on Aunt Minnie, ie, begin with Aunt Minnie, switch to Socrates, and then back to Aunt Minnie. Hold the mayo.

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Tradition has given us the Socratic method: the trainee performs a complete medical history and physical examination and presents the case with all details to a preceptor. The trainee then lists the diagnostic possibilities and the 2 engage in a discussion of the pros and cons of each diagnosis. Facets of the history and examination are discussed and there is a process of elimination until the most likely diagnosis is chosen. The method is thorough but time consuming. In the past, the preceptor may not actually have seen the patient.

We have reconsidered the traditional method. To Socrates we have added another model to help guide our teaching. Her name is Aunt Minnie.

PATTERN RECOGNITION

Aunt Minnie is the name facetiously given by Sackett et al and others[1-3] to pattern recognition: If the lady across the street walks like your Aunt Minnie and dresses like your Aunt Minnie, she probably is your Aunt Minnie, even if you cannot identify her face.

Consider the 2-year-old boy with a fever and a runny nose who is playing happily on his mother's lap. He probably has a upper respiratory tract infection. The 2-month-old infant with a temperature of 40°C lying listlessly in his mother's arms may have a virus, but you had better exclude bacteremia and meningitis. Finally, consider the 5-year old girl who looks well but has had stomach aches "around the belly button" for a month. She probably has functional abdominal pain. These are common patterns that are quickly recognized by experienced clinicians.

How does this apply to our trainees and the medical care we help them to provide? It has modified the method we have used lately for precepting in our outpatient department. For example, we often have trainees give only the chief complaint and their presumptive diagnosis when presenting a case (30 seconds). While the trainee begins the write up, the preceptor evaluates the patient (5 minutes), discusses the case with the trainee (1-5 minutes), and reviews and signs the medical record (1-2 minutes).

After Sackett et al, we have dubbed this technique "the Aunt Minnie method" and found that it works. It works with third-year medical students, third-year pediatric residents, and everyone in between. We have not measured its effectiveness or polled trainees for their opinions. Most of them seem to like it, although many are surprised the first time they are asked for a diagnosis prior to a recitation of the complete history and physical examination.

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Evasions and verbal circumlocutions are common as they think out loud, running down a list of diagnoses before committing themselves. But, with persistence, it does not take long before they come to the preceptor prepared with a diagnosis and the data to support it. Usually they are right and their competence can be confirmed. When they are wrong we matter-of-factly give them the correct diagnosis and the clinical features that support it. This is the way they learn.

Traditionalists—including us—may be uneasy about what seems to be superficial treatment of patients and trainees. Perhaps McCormick will put them at ease: " . . . the diagnostic process is simple, straightforward, and in need of demystification."[4] He pokes some fun at the traditional workup and emphasizes that most diagnoses occur by simple recognition based on a few facts from a quick history and physical examination. No need for an exhaustive history and detailed examination followed by Socratic dialogue. He further suggests that the compulsive workup can do more harm than good by inhibiting communication. Davies,[5] Leaper et al,[6] and their colleagues suggest that the lengthy, stereotyped workup may actually reduce diagnostic accuracy by diverting clinicians with extraneous information. Sackett et al believe that " . . . medical students should be taught how to do a complete history and physical but must also be taught never to do one."[1]

Campbell[7] believes in the Socratic approach to teaching diagnosis, but in practice his suggestions are similar to McCormick's and Sackett's: do not overdo the history and physical; focus the physical examination on the problem at hand instead of performing a lengthy routine; do not overdo the write up. He also emphasizes the importance of open communication and tells us to listen to the patient. Finally, he acknowledges that gamesmanship, professional status, and defensive medicine are at fault for long, mindless workups.

How can rapid diagnosis be taught to trainees who have little or no experience? Campbell[7] thinks that students can be introduced to diagnostic problems early in their careers. Neufeld et al[8] showed that students have the facility for clinical reasoning (listing and excluding diagnostic possibilities) on arrival at medical school. Diagnostic accuracy is learned with the acquisition of knowledge and experience. Higgins[9] suggests that this occurs when students are exposed to real clinical problems, make their own diagnoses, and have them confirmed or denied by experienced clinicians.

RESERVATIONS ABOUT AUNT MINNIE

Clinicians, including us, embrace Aunt Minnie with varying degrees of enthusiasm. Traditionalists wonder if trainees under their tutelage will fail to learn how to do a complete history and physical examination. They worry that trainees will make snap judgments. They fret that skill in differential diagnosis will fail to develop. Perhaps the best response to these concerns is that Aunt Minnie—rapid pattern recognition—is the method most experienced clinicians themselves use most of the time. Occasionally a brief history and physical examination fails to yield a working diagnosis. On these occasions the clinician must start again, ask some more questions, and listen more carefully. The same process can be taught to trainees, who learn that initial impressions may be incorrect and that they sometimes must return to other components of the history and physical examination. Gradually they build a diagnostic repertoire by seeing patients, reading, and discussing cases with colleagues.

In the interest of broadening their experience trainees often place a premium on "good teaching cases," meaning patients with rare or complex illnesses. Bob Meechan, MD, former director of the University of Oregon Pediatric Clinic, liked to say, "Every case is a good teaching case." He usually said it when the residents were grumbling about endless well-child check ups, upper respiratory tract infections, etc. The wisdom of his axiom lies in the contribution every child and every family makes to the reservoir of a clinician's experience, no matter how ordinary the problem is. It is against a background of the ordinary that good clinicians recognize what is extraordinary, " . . . those pieces of information that are odd or discordant and ring warning bells to say things may not be what they seem."[4] Illingworth said it another way: "Know the normal, or else. . . ."[10] Aunt Minnie is an efficient way to get trainees to know the common and the normal. When appropriate, we can always turn to Socrates.

FEEDBACK AND EVALUATION

Trainees should have some means of knowing whether they are acquiring the appropriate clinical skills. Traditionally, faculty preceptors are supposed to have facilitated this by means of timely feedback in the form of written and oral evaluations and grades. Ende[11] has drawn on the fields of personnel management and education to provide clinical teachers with guidelines for providing feedback to trainees: (1) teacher and trainee are colleagues and allies; (2) feedback is an impersonal process directed to the clinical tasks at hand; and (3) feedback is given routinely and promptly.

Aunt Minnie seems well adapted to these principles. Her focus is always on the patients and their families. The job at hand is to reach the correct diagnosis. Feedback is immediate. Most of the children seen in our clinic have common problems and in most instances trainees have working diagnoses that are readily confirmed by the preceptors. When the preceptors disagree (usually regarding the examination of tympanic membranes) they give their diagnosis and compare notes with the trainees. There is immediate reinforcement when trainees are correct and immediate correction when they are not.

We are still learning how to use Aunt Minnie, but one of the pleasant surprises has been the matter-of-fact quality of the feedback process. Trainees are less likely to feel they have been interrogated or subjected to personal criticism. They quickly learn to recognize common clinical problems and they seem to acquire an appropriate degree of self-confidence; however, imple-

mentation of this method has 3 important corollaries:

1. The teacher must see the patient. This may seem obvious, but we have seen recitation, dialogue, and decisions between teachers and trainees without patient and preceptor interaction.

2. The teacher must know the correct diagnosis. This also may seem obvious, but it assumes a good fund of clinical experience and must be considered in tandem with the third corollary.

3. When the teacher is uncertain he or she should be willing to admit it. The air of omniscience is a snare for all teachers, regardless of the pedagogical method. Clinical diagnosis is not an exact science. Clinical circumstances are highly variable and so are the perceptions of clinicians. There is usually room for doubt and we should not be afraid to share this with trainees. A clinical diagnosis is a working diagnosis, whether we are led to it by Socrates or by Aunt Minnie.

Grades may seem tangential to this discussion, but the way trainees are graded has implications for precepting methods and vice versa. This is a contentious subject that evokes ambivalence in our own faculty group. Some of us see grading as a good thing, some as a necessary evil, and some as an unnecessary intrusion into the process of teaching and learning clinical pediatrics. This discussion will leave the issue unsettled, but we think it is very important to ask these questions: To what extent are our teaching methods guided by the drive to give grades and stratify trainee performance? Does the grading process distract from teaching and learning clinical pediatrics? Some of us think that it does.

CONCLUSIONS

In the clinical setting with trainees Socratic dialogue is inevitable and we do not propose its elimination. We know that trainees must learn all the components of the complete medical history and physical examination, and develop a knowledge base that includes rare and complex diagnoses. Nevertheless, in the hurly-burly of an outpatient department we have found—serendipitously—that many cases seen by our trainees can be managed with concise histories and physical examinations using the principle of pattern recognition—the Aunt Minnie method. We suspect that our experience is not unique. But we agree with Sackett et al, McCormick, and others that Aunt Minnie offers a useful method for diagnosis and for teaching clinical trainees.

Socratic dialogue is honored by time and tradition, but to our knowledge it has not been subjected to formal study as an educational method. Neither has Aunt Minnie, but clinicians in both academic and community settings are increasingly being called on to care for patients and teach trainees in an efficient and effective manner. It is possible that Aunt Minnie will work better than Socrates. Trainees who see patients quickly can see more patients and increase the reservoir of experience that is essential to becoming a skilled clinician. Finally, the method provides excellent patient care by combining the examination skills of trainees and seasoned clinicians.

Peterson[12] is the patron saint of bird watchers and *A Field Guide to the Birds* is their bible. When it was first published in 1934 this book, based on Peterson's drawings, highlighted the field patterns and distinctive markings that could be used to identify birds in the wild. Before its publication, bird identification was a matter of massive tomes, a shotgun or net, and in-hand examination of the specimens. Peterson's handbook, with its system of simplified drawings and concise descriptions, has made the pleasures of humane bird study accessible to generations of amateurs.

Peterson and Aunt Minnie are kindred spirits. We can all learn from them—trainees and teachers alike.

Accepted for publication August 6, 1998.

We thank John Andrake, MD, George Starr, MD and the members of the State University of New York Faculty Development Group for helpful discussions, and Kelli Piotrowski for preparation of the manuscript.

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REFERENCES

1. Sackett DL, Haynes RB, Tugwell P. *Clinical Epidemiology*. Boston, Mass: Little Brown & Co Inc; 1985:3-15.
2. Diagnosis: logic and psycho-logic [editorial]. *Lancet*. 1987;1:840-841.
3. Barondess JA. Diagnosis. In: Walton J, Beeson PB, Scott RB, eds. *The Oxford Companion to Medicine*. Vol 1. New York, NY: Oxford University Press Inc; 1986:308-311.
4. McCormick JS. Diagnosis: the need for demystification. *Lancet*. 1986;2:1434-1435.
5. Davies P. Diagnosis: the need for demystification. *Lancet*. 1987;1:630.
6. Leaper DJ, Gill PW, Staniland JR, Horrocks JC, Dombal FT. Clinical diagnostic process: an analysis. *BMJ*. 1973;3:569-574.
7. Campbell EJM. The diagnosing mind. *Lancet*. 1987;1:849-851.
8. Neufeld VR, Norman GR, Feightner JW, Barrows HS. Clinical problem-solving by medical students: a cross-sectional and longitudinal analysis. *Med Educ*. 1981;15:315-322.
9. Higgins RM. The process of diagnosis. *Lancet*. 1989;1:1146-1147.
10. Illingworth RS. Know the normal or else . . . . *Arch Dis Child*. 1979;54:849-851.
11. Ende J. Feedback in clinical medical education. *JAMA*. 1983;250:777-781.
12. Peterson RT. *A Field Guide to the Birds*. 4th ed. Boston, Mass: Houghton Mifflin Co; 1980.