

---

## Communications

---

# Patient Satisfaction with Medical Students in Family Practice Offices

David E. Swee, MD, and Samuel W. Warburton, MD  
Piscataway, New Jersey, and Durham, North Carolina

The importance of preceptorship programs in medical education has increased dramatically in recent years. With Abraham Flexner's 1910 report to the Carnegie Foundation, medical education largely ceased outside university walls. It was not until the early 1970s that a significant increase in preceptorship programs occurred, most especially due to the influence of the 1972 and 1976 Health Manpower Acts.

The advent of preceptorship programs brought into clearer focus issues surrounding the patient-student interaction. Historically, students have had access to patients through the traditional clinic model, in which patient attitudes regarding the students were not questioned. However, it has become apparent that patients, through their right to refuse to have students in the office, can dramatically affect the preceptorship experience.

The presence and participation of medical students in the private office setting is a new experience for many patients. While there have been a few studies in Canada and the United Kingdom<sup>1-4</sup> evaluating the patients' attitude toward this experience, this subject has received very little attention in the United States. In consideration of this, the Department of Family Medicine at the College of Medicine and Dentistry of New Jersey-Rutgers

Medical School (CMDNJ-Rutgers) surveyed the attitudes of patients who were exposed to medical students in the office setting.

### Methods

The survey was conducted during a six-week family medicine preceptorship elective taken by pre-third year students in the summer of 1977. During a two-day period in July, 13 separate family practice offices in central New Jersey participated in the study. A total adult patient population of 325 was divided into two groups. One group in each office had a medical student visit the patient along with or under the supervision of the preceptor-physician. At the conclusion of the visit the patients were asked to complete a very brief questionnaire concerning their satisfaction with and attitudes about their visit. The patients were advised that the information volunteered would remain anonymous and confidential. The form was deposited in a sealed box located in each office. A second group of patients followed the same procedure with the exception that a medical student was not present during the office visit. All patients were selected randomly and were not matched. Data obtained were transferred to keypunch cards and analyzed by the computer. R<sub>2</sub> and F tests were used to determine statistical significance.

---

From the Department of Family Medicine, College of Medicine and Dentistry of New Jersey-Rutgers Medical School, Piscataway, New Jersey. Requests for reprints should be addressed to Dr. David E. Swee, Department of Family Medicine, CMDNJ-Rutgers Medical School, Piscataway, NJ 08854.

## Results

Of the total patient population surveyed, 59 percent were examined by a medical student and the physician, while 41 percent were examined by the precepting physician alone. Patients were sampled at seven solo sites, three group sites, and three family practice centers. Ten percent were from urban practices, 56 percent were from suburban practices, while 33 percent were from rural practices. Patient satisfaction with medical student presence in the office was not affected by practice type (solo, group), practice site (urban, suburban, rural), or frequency of attendance in the office (including initial visits).

The overall satisfaction of the patient with the physician's performance was 97 percent. This included patient satisfaction with thoroughness, explanation of condition, clarity of recommended treatment, time allotment, and interest in their problems. More importantly, there was no significant difference in satisfaction with the physician and patient alone as compared with the medical student present, regardless of the degree of patient satisfaction.

No patients disapproved of the presence of the student, although 11 percent of the patients indicated feeling a lack of privacy. Seventy percent of these same patients approved of the medical student's presence overall, while 30 percent remained neutral. Less than three percent of the patients seen with a student present reported feeling other emotional or physical discomfort or that time was wasted because of the student.

Approximately 70 percent of the patients preferred addressing the student as "Doctor." There was no significant difference in responses for male and female students. Sex of the medical student did not influence patient satisfaction.

## Discussion

The majority of studies of patient satisfaction with medical students in the office have been conducted in Great Britain and Canada. In many of these, patients were asked hypothetical questions regarding their feelings about having students present during their appointment. In Richardson's survey it was observed that 94 percent of the patients accepted the presence of the medical student in the office.<sup>1</sup> H. J. Wright surveyed 259 consecutive adult patients and found that while few patients declared reluctance to discussing physical

illness and smoking or drinking problems in the student's presence, many had inhibitions about discussing almost every other common component of consultation.<sup>2</sup> More than half of the younger women interviewed in his study preferred that students not be present at physical or pelvic examinations. Another study in England found that 68.2 percent of patients would not mind the medical student's presence when they see their physician, 23 percent would mind sometimes, and 8 percent would object.<sup>3</sup>

I. M. St. George found significant satisfaction among patients who had been seen by medical students under minimal supervision.<sup>4</sup> In fact, one half of the patients were able to identify "definite advantages in being attended by a medical student." In a similar US study, the experience in primary care education in Rockford, Illinois, demonstrated that 14 percent of patients preferred not seeing a student, while 43 percent had a definite desire or preference for medical student care.<sup>5</sup>

In the present study, in which the majority of testing sites were private practice offices in central New Jersey, students were encouraged to participate actively in the care of the patients but always under the supervision of the preceptors. A high level of patient satisfaction with the presence of medical students was clearly demonstrated. This level of satisfaction was similar to that found in more socialized health care systems.

The 97 percent overall satisfaction rate is similar to the rate found by Schroeder.<sup>6</sup> It should be remembered, however, that patients generalize their favorable or unfavorable attitudes regarding their physicians.<sup>7</sup> The high level of patient-student satisfaction may largely be due to this high overall satisfaction with the family physicians. Therefore, proper selection of preceptors is critical to patient acceptance of students in the office.

With the increasing number of women physicians, it is reassuring that the patients indicated equal acceptance of male and female medical students. It was also apparent that most patients preferred to address the student as "Doctor" rather than Mr./Mrs. or by their first name, regardless of whether the student was male or female. However, students are often uncomfortable being addressed as "Doctor"; in fact, a clarifying phrase identifying them as a student is the preferred introduction with the family medicine preceptors at CMDNJ-Rutgers Medical School.

In summary, this study observed that overall patient satisfaction with the family physician was excellent and was not affected by the presence of a medical student. These results should alleviate some of the anxiety the medical student experiences when seeing a patient as well as the anxiety of the family physician in introducing a medical student to patients in the office setting. Potential preceptors often mention their concern regarding patient acceptance of students and the disruption of the physician-patient relationship. These results will hopefully remove this hesitation. The data also indicate that the student should feel comfortable in being addressed as "Doctor," since this is the preference of a majority of the patients.

#### Acknowledgements

The work described here was supported in part by Department of Health, Education, and Welfare grant #PE-02-D-000, 039-03-0, and the Foundation of the College of

Medicine and Dentistry of New Jersey. The authors wish to acknowledge Drs. Suzanne Kabis, Charles Kaplove, and Joseph Thek, who, as third year students, collected and statistically analyzed the data.

#### References

1. Richardson IM: Patients and students in general practice. *J R Coll Gen Pract* 20:285, 1970
2. Wright HJ: Patients' attitudes to medical students in general practice. *Br Med J* 1:372, 1974
3. West London Faculty of the Royal College of General Practitioners: Patients' attitudes to the presence of undergraduate students in general practice. *Practitioner* 209:825, 1972
4. St. George IM: Patients and students: An attitudinal survey. *Can Fam Physician* 21(4):103, 1975
5. Pittman J, Barr D: Undergraduate education in primary care: The Rockford experience. *J Med Educ* 52:982, 1977
6. Schroeder R: Satisfaction of patients in two Air Force family practice programs. *J Fam Pract* 4:731, 1977
7. Ware JE Jr, Snyder MK: Dimensions of patient attitudes regarding doctors and medical care services. *Med Care* 13:669, 1975

---

# A Bibliography for a Family Medicine Clerkship or Preceptorship

Henry P. Parkman and David D. Schmidt, MD  
Cleveland, Ohio

As a community physician, one of the authors (D.D.S.) began to gather reading material for students who participated in a family practice preceptorship program in his office. These articles fo-

cused on the common problems encountered in this setting. This collection of reading material was expanded and catalogued according to the early frequency distribution data that came from the Rochester Family Medicine Program.<sup>1</sup> This collection has recently been updated utilizing the Virginia data<sup>2</sup> and is currently being used as references for a two-month clerkship at Case Western Reserve University School of Medicine. The bibliography and this particular use of the materials may be of interest to other educators involved in family practice preceptorships or clerkships.

---

From Case Western Reserve University School of Medicine and the Department of Family Medicine, Case Western Reserve University School of Medicine, Cleveland, Ohio. At the time this paper was written, Mr. Parkman was a second year medical student. Requests for reprints should be addressed to Dr. David D. Schmidt, Family Practice Center, Department of Family Medicine, University Hospitals of Cleveland, 2065 Adelbert Road, Cleveland, OH 44106.

0094-3509/80/030531-03\$00.75  
© 1980 Appleton-Century-Crofts



Students participating in the Case Western family practice clerkship during the fourth year have already completed the core clerkships on hospital services. The patient population seen in tertiary care centers is highly selected and quite different from that of a family practice. Prior to this clerkship, few students have experience with common medical problems. Standard textbooks frequently devote little space to discussions of primary care issues. A major goal behind this project is the attempt to present to the student the intellectual excitement that can be generated by closely examining the current data on which family physicians make daily decisions concerning common problems.

### The Bibliography

The Virginia Study<sup>2</sup> evaluated the health care problems of 88,000 patients as presented to 118 family physicians over two years. This profile of patient problems presented to the family physician is ranked in order of frequency. From this ranking were selected the top 28 important reasons for visits to family physicians and these were used as headings for reading material. (The broad subject of obstetrics was excluded in this material because many standard texts cover the subject well.) The articles selected contained the principles that the student should understand when handling each particular problem in an office setting. The areas covered in each heading were: (a) presenting symptoms of the patient; (b) diagnostic approach; (c) treatment; (d) prognosis; (e) incidence in the population; (f) basic sciences involved; and (g) any additional information particularly important to the family physician.

These articles were collected in a variety of ways, including a literature search in *Index Medicus* (covering the last five years) and consultation with other team members of a family practice center, including the nutritionist, social worker, senior residents, and faculty. Each article was read by a faculty member and a medical student. The faculty perspective assures that the important issues for each problem are included. The student's review of the articles assures that those

selected are written in a style appropriate for his/her level of training.\*

### Suggested Use of This Reading Material

At Case Western Reserve University, photocopies of the listed references are placed in loose-leaf notebooks and indexed by problem. A copy of this "textbook" is given to the student at the beginning of the clerkship, along with a problem check list. During the two-month rotation, each student is expected to participate in the care of at least one patient from each of the top 28 categories.

Following each patient encounter, the patient and his/her problem are discussed with a faculty preceptor. This teaching exercise is then supplemented by the student's reading of the references provided for each topic. Once students accomplish this, they will possess a familiarity with over 50 percent of all patient problems encountered in family medicine.<sup>2</sup>

This approach can be illustrated with the specific problem of pharyngitis. To describe how a family physician approaches a patient with a sore throat requires a short protocol. To understand *why* the physician behaves in this manner requires considerably more detail. The bibliography includes: (a) A review of the perplexity and precision in making the diagnosis of streptococcal pharyngitis (Wanamaker L: Perplexity and precision in the diagnosis of streptococcal pharyngitis. *Am J Dis Child* 124:352, 1972); (b) The basic sciences of streptococcal infections (Peter G, Smith AL: Group A streptococcal infections of the skin and pharynx. *N Engl J Med* 297:311, 365, 1977); (c) The family's influence on individual susceptibility (Meyer RJ, Haggerty RG: Streptococcal infections in families: Factors altering individual susceptibility. *Pediatrics* 29:539, 1962); (d) The problem of patient compliance with penicillin treatment (Chaney E, Bynum R, Eldredge D, et al: How well do patients take oral penicillin? A collaborative study in private practice. *Pediatrics* 40:188, 1967); (e) The cost effectiveness of the management of pharyngitis in relation to rheumatic fever prevention

\*The current list of references is available on request by writing to Dr. David D. Schmidt, Family Practice Center, Department of Family Medicine, University Hospitals of Cleveland, 2065 Adelbert Road, Cleveland, OH 44106.

(Tompkins RK, Burnes DC, Cable WE: An analysis of the cost-effectiveness of pharyngitis management and acute rheumatic fever prevention. *Ann Intern Med* 86:481, 1977); and (f) A discussion of infectious mononucleosis, which is appropriate from the point of view of differential diagnosis (Fernbach DJ, Starling KA: Infectious mononucleosis. *Pediatr Clin North Am* 19:957, 1972).

Approaching common problems by this examination of the literature will also demonstrate the challenge for the discipline of family medicine to

help resolve the many controversies that currently surround patient management in primary care settings.

#### References

1. Froom J: Design of curriculum based on morbidity data. In Proceedings of the Society of Teachers of Family Medicine Conference, November 6, 1973, pp 59-63
2. Marsland DW, Wood M, Mayo F: A data bank for patient care, curriculum, and research in family practice: 526,196 patient problems. *J Fam Pract* 3:25, 1976

## Neonatal Intestinal Obstruction Due to Torsion of an Ovarian Cyst

Raymond A. Dieter, Jr, MD, William Kindrachuk, MD, and Richard P. Muller, MD  
Glen Ellyn and Elmhurst, Illinois

Intestinal obstruction in the neonate is a life threatening situation arising from many causes. The most common causes are rotation anomalies of the fetal alimentary tract, meconium ileus, and intrauterine vascular accidents of the mesenteric vessels. The following case represents an unusual etiology: intestinal obstruction on the basis of volvulus of the small bowel due to membranous adhesions to a large ovarian cyst which had undergone 360 degree torsion.

### Case Report

A six-pound-female infant was delivered at Memorial Hospital of DuPage County, Elmhurst, Illinois, after a full-term uneventful pregnancy and delivery. The delivery room record noted some meconium staining of the amniotic fluid. The nurs-

ery course was completely uneventful with a normal feeding pattern, weight change, meconium stools, and no vomiting. Examinations by an experienced pediatrician were unremarkable both on admission to and on discharge from the nursery. The baby was discharged with her mother at 1:30 PM on the third day.

At 5:00 PM the same day, she was seen in her pediatrician's office because of swelling of the abdomen accompanied by two violent episodes of vomiting. The pediatrician observed green vomitus and abdominal distension. Gastric aspiration delivered 5½ oz of bile-like fluid. On hospital admission the infant was alert, in no distress, and well hydrated. Examination was unremarkable except for a sense of fullness in the left midabdomen and relative emptiness in the right lower quadrant. X-ray examination of the abdomen demonstrated small gas bubbles in the stomach and proximal small bowel. The remainder of the abdomen showed a homogeneous ground glass appearance. Hemogram, urinalysis, and serum electrolytes were normal.

As soon as a blood type and cross match were obtained and gastric suction and intravenous fluids

From the Departments of Surgery and Pediatrics, Glen Ellyn Clinic, Glen Ellyn, and the Department of Pediatrics, Memorial Hospital of DuPage County, Elmhurst, Illinois. Requests for reprints should be addressed to Dr. Raymond A. Dieter, Jr, Department of Surgery, Glen Ellyn Clinic, 454 Pennsylvania Avenue, Glen Ellyn, IL 60137.

were started, the baby was taken to surgery with the presumptive diagnosis of intestinal obstruction, probably high small bowel, most likely on the basis of malrotation. At laparotomy the small bowel appeared to be slightly dusky in color, the cecum was in its usual location, and no obstructive bands were found as the entire gut was inspected. A large smooth hemorrhagic mass measuring 4×4×3 cm was found deep in the left lower quadrant adherent to the small bowel. After the membranous adhesions were dissected, the color of the bowel returned to normal. The mass was identified as a left ovarian cyst with a 360 degree torsion of the ovary, cyst, and fallopian tube. The mass was resected, and the postoperative course was uneventful. The pathological report confirmed the diagnosis of a benign infarcted cyst of the left ovary. The infant was discharged on her fourth postoperative day, and has been well in the succeeding months.

## Discussion

Ovarian pathology is a fairly common clinical problem in the adult, including cyst formation, dermoid tumors, and carcinoma. Teenage and prepubertal ovarian disease processes are seen with less frequency. Newborn and neonatal ovarian pathology is quite rare. Isolated single or multiple case reports are noted in the literature, however, describing ovarian cysts or tumors in patients under the age of two years.<sup>1-3</sup> Torsion of the ovarian cysts and/or adnexa presenting acutely is very rare.<sup>4-8</sup>

This child was delivered in a busy community hospital where obstetric and gynecologic problems are frequently seen. During a recent 30-month period, 13 patients were treated surgically for torsion with secondary infarction of the ovary and tube. These patients ranged in age from 10 to 51 years, with seven of them under 25 years of age. The admitting diagnosis for these patients was pancreatitis, appendicitis, abdominal tumor, renal colic, acute surgical abdomen, or gynecological problem. Also, three patients had either a benign dermoid or teratoma. This is the youngest patient seen at this hospital with a torsion and secondary tumor infarction of an ovarian cyst.

Neonatal and childhood ovarian cysts were reviewed by Ahmed in 1971.<sup>2</sup> He found 53 neonatal ovarian cysts reported in the world literature. Only 7 of these 53 ovarian cysts developed torsion of the fallopian tube. In addition, he located two cases of torsion in stillborn children. Other complications of neonatal ovarian cysts include rupture with hemoperitoneum, ascites, and incarceration in a hernia,<sup>3</sup> and volvulus.<sup>6</sup> Karrer<sup>7</sup> and Cox<sup>8</sup> have stressed the potential gravity of the torsion and secondary infarction with fluid retention and hemorrhage into the cyst. In addition, symptoms of bowel obstruction rapidly become apparent.

The female child presenting with an intra-abdominal catastrophe, a questionable mass, and initial good feeding habits should not have the diagnosis of an ovarian cyst excluded. The amount of blood and fluid lost in these cysts may be significant and may be a cause of death when not treated promptly in the newborn infant. Differential diagnosis may include mesenteric or duplication cyst, hydronephrosis, renal cyst, urachal cyst, distention of the bladder, dermoid of the ovary, and intestinal obstruction.

## References

1. Bechamps G: Torsion of normal uterine adnexa. *J Pediatr Surg* 8:4, 1973
2. Ahmed S: Neonatal and childhood ovarian cysts. *J Pediatr Surg* 6:6, 1971
3. Mainolfi FG, Standiford JW, Hubbard TB Jr: Ruptured ovarian cyst in the newborn. *J Pediatr Surg* 3:5, 1968
4. Grosfeld JL: Torsion of normal ovary in the first two years of life. *Am J Surg* 117:726, 1969
5. Schultz L, Newton W Jr, Clatworthy HW Jr: Torsion of previously normal tube and ovary in children. *N Engl J Med* 266:7, 1963
6. Tai HTT: Volvulus bij een neonatus ten gevolge van een intra-uterien getordeerde ovariumkyste. *Ned Tijdschr Geneesk* 116:28, 1972
7. Karrer FW, Swenson SA: Twisted ovarian cyst in a newborn infant. *Arch Surg* 83:921, 1961
8. Cox HD, Campbell RM, Vishniavsky S, et al: Huge ovarian cyst with torsion in a newborn infant. *Va Med Mon* 96(2):96, 1969