# SELF-ASSESSMENT IN FAMILY PRACTICE

Series Editor: Robert B. Taylor, MD
Compiled by Merle Pennington, MD, Associate Professor, Department of Family Practice, Oregon Health Sciences University School of Medicine, Portland, Oregon.

*This section of the Journal is designed to present clinical problems that focus on patient management, problem solving, and other elements integral to family medicine. The intent of this section is aimed more at teaching and learning than at self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references that appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as letters to the Editor.*

**Questions 1-5 each contain four suggested answers. Choose one or more of the four responses.**

*Mr. W. G. is a 33-year-old, white, married carpenter who presents to your office for the first time with a sprained ankle of two days' duration. He says he stepped off a curb, turning his ankle, but had little pain or swelling until the next day. The right ankle is markedly swollen and ecchymotic about the lateral malleolus and the lateral portion of the dorsum of the foot. He can bear weight on the foot only if the foot and heel are flat on the floor and externally rotated, and this effort produces sharp pain in the area of the lateral malleolus. His blood pressure is 168/90 mmHg. His hands show a slight tremor.*

1. Which of the following would you do at this time?

A. Order and personally examine x-ray films of the ankle, lower fibula, and midfoot.

B. Recheck blood pressure and inquire about a history of high blood pressure in the patient and his family.

C. Draw blood for chemistry screen and free thyroxine (T4).

D. Obtain and record resting pulse.

*There is no x-ray evidence of fracture. The blood pressure is 160/88 mmHg and 164/90 mmHg and nearly the same in both arms. The pulse is consistently 100 to 108 beats per minute on three different checks. The patient does not think he has ever had elevated blood pressure before, and there is no family history of hypertension.*

*There is a fine hand tremor, the palms are warm and moist, and there is no protuberance of eyes nor lid lag. You put on a well-padded short leg cast, arrange for crutches, and ask the patient to return in one week for the application of a walking heel.*

*Your patient returns as directed. You add a walking heel and take his blood pressure, which is 172/88 mmHg and 170/90 mmHg; the pulse is repeatedly over 100 beats per minute.*

2. Which of the following would be appropriate?

A. Instruct the patient on gradually resuming weight bearing and have him return in one week.

Continued on page 185

*Continued from page 183*

B. Start the patient on an antihypertensive drug regimen.

C. Obtain a limited social history.

D. Question the patient about his drinking habits.

*The queries reveal recent family discord, several minor injuries in the past five years, and some job instability, which is blamed on the construction slowdown. When asked about drinking, his response is "a couple of beers in the evening."*

3. Which of the following statements are true regarding alcoholism?

A. The prevalence of alcoholism in the general population in the United States is thought to be between 5 and 12 percent.

B. In stable, middle-class patient populations the percentage of alcoholics is less than 3 percent.

C. Alcoholics are usually friendly and outgoing, and rarely have other emotional problems.

D. The selection of the appropriate management technique is a strong determinant of outcome in the treatment of alcoholism.

4. Which of the following approaches would you recommend?

A. Deal only with the ankle problem.

B. Offer support and counseling regarding the marital discord in the hope of uncovering other information that would lead to patient realization and acceptance of alcohol as a problem.

C. Use a strong confrontational approach with referral to an outpatient alcohol program or to Alcoholics Anonymous (AA).

D. Give a calm summation of the inconsistencies regarding the injury, the persistent elevation of blood pressure and pulse, and the tremor and sweating. Express your desire to pursue these further, including blood tests, and since alcohol could also logically explain the findings, his filling out and returning a questionnaire in this area would be most helpful in providing appropriate diagnosis and management. You suggest that he, with the assistance of his wife, fill out the questionnaire and both come in in a week.

*Despite the expressed skepticism, he and his wife return. The ankle is doing well. The Self-Administered Alcoholism Screening Test (SAAST) indicates a number of alcohol-related problems and a familial tendency. The couple indicate a number of episodes of depression in the past. The family discord and job problems have been largely related to drinking.*

5. Which of the following would you do next?

A. Refer him to AA.

B. Arrange for the patient's admission to an inpatient alcoholism treatment program.

C. Refer him to a behavioralist specializing in alcohol rehabilitation.

D. Set up a one-hour counseling session by you for husband and wife to be continued with regular follow-up.

## Answers and Discussion

1. A, B, and D are all necessary. C would probably not be helpful at this time. The story of the injury and absence of early pain are inconsistent with the marked swelling and ecchymosis. The elevation of blood pressure on a single reading may not be significant but, coupled with other findings, might suggest an alcohol relationship.[1] The tendency of physicians to overlook alcohol as a contributing factor to illnesses and injuries has been repeatedly documented.[2,3]

2. A, C, and D are all correct. A alone would mean ignoring the possibility of alcohol as an etiologic factor in the presenting complaint. Kaim et al[4] point out that elevated blood pressure, tachycardia, moist palms, and fine tremor in the absence of hyperthyroidism suggest recent excessive intake of alcohol. B would be inappropriate, since an etiology for the elevated blood pressure and tachycardia cannot be assumed at this time.

3. A is rather generally accepted, though difficult to determine precisely.[3] B, C, and D are common misconceptions unsupported by critical evaluation. A study of Mayo Community Internal Medicine Clinic providing care to a local, middle-class adult population found that 7 to 8 percent of adult patients could be identified as alcoholic or having alcohol-related problems.[4] Ramsay et al[3] in Burlington, Vermont, by very conservative criteria, found about 30 percent of individuals with emotional problems also had problems with alcohol; other studies have indicated an even higher relationship with depression. Skinner et al[1] cited several studies suggesting that different forms of treatment seem to produce very similar levels of success, at least for those individuals who have advanced to the later stages of alcohol abuse.

4. There is no absolutely correct answer. A is the equivalent of giving iron to an anemic 55-year-old man and not looking for a source of blood loss. B may be justified in a tentative physician-patient relationship. C may be effective in dealing with some individuals. D is very straightforward and honest. The Michigan Alcoholism Screening Test (MAST)[5] and the Self-Administered Alcoholism Screening Test (SAAST)[6] are excellent tools for the detection of alcoholism and alcohol-related problems and for placing the individual on the continuum between social drinking and end stage alcoholism. The National Council on Alcoholism (NCA) criteria[7] are too heavily weighted to the severely degenerative end of the scale to be of much help in early detection and prevention.

5. Any or all may be correct. However, the review article by Skinner et al[1] makes a good case for the primary physician to provide comprehensive assessment with limited counseling and follow-up, especially for individuals in the earlier stages of excessive drinking.

### References


1. Skinner HA, Holt S, Israel Y: Early identification of alcohol abuse. Can Med Assoc J 1981; 124:1141
2. Solomon J, Varga N, Morgan JP, Joseph P: Emergency room physicians recognition of alcohol abuse. J Stud Alcohol 1980; 41:583
3. Ramsay A, Vredenburgh J, Gallagher RM: Recognition of alcoholism among patients with psychiatric problems. J Fam Pract 1983; 17:829
4. Kaim SC, Brill H, Cloud LA, et al: Criteria for the diagnosis of alcoholism. Ann Intern Med 1972; 77:249
5. Selzer ML: The Michigan alcoholism screening test. Am J Psychol 1971; 127:1653
6. Hurt RD, Morse RM, Swenson WM: Diagnosis of alcoholism with a self-administered alcoholism screening test—SAAST. Mayo Clin Proc 1980; 55:365
7. Pattison EM: The NCA diagnostic criteria: Critique assessment alternatives. J Stud Alcohol 1980; 41:965

# Self-Assessment in Family Practice

Series Editor: Robert B. Taylor, MD
Compiled by Anita D. Taylor, MA, Ed, Department of Public Health and Preventive Medicine, The Oregon Health Sciences University, Portland, Oregon.

*This section of the Journal is designed to present clinical problems that focus on patient management, problem solving, and other elements integral to family medicine. The intent of this section is aimed more at teaching and learning than self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references that appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as Letters to the Editor.*

**Questions 1-5 each contain four suggested answers. Choose one or more of the four responses.**

*Mr. and Mrs. H.J., both in their early 40s, have been your patients for four years. You suspect that Mrs. J. may be seriously ill, and refer her to a consultant for further testing. Mr. J. telephones and says, "If the results are not good, I don't want you to tell her. I'll decide what's best for her." The results confirm your worse fears, and she is found to have metastatic cancer. Her life expectancy is measured in months. She is scheduled to return today to discuss the results of her tests. Do you tell her the truth or follow her husband's wishes?*

1. Which of the following are true of seriously ill patients?
   A. They do not want to be told the truth.
   B. If not told, they never become aware of the truth.
   C. They often have family members who request that the truth be withheld.
   D. They are harmed by telling the truth.

2. At your visit with Mrs. J. you should
   A. Include important family members
   B. Ask for Mrs. J.'s opinion as to what is happening
   C. Avoid using the word "cancer"
   D. Discuss only those therapeutic approaches that are scientifically accepted

3. Mr. J. feels that their 6-year-old son should not be told about his mother's illness or her grim prognosis because he will not understand. What advice should you give?
   A. "I agree, your son cannot understand the meaning of death."
   B. "Tell him, but be prepared to see some behavioral changes."
   C. "It is important for your son to participate in the family's sadness."
   D. "You may tell him about her illness, but when she dies just say she's gone away for awhile and will return."

4. A few weeks later, Mrs. J. asks you about drawing up a living will. What is true of a living will?
   A. It takes the place of a regular will.
   B. It has been recognized by all 50 states.
   C. It must be signed by two witnesses.
   D. It can be witnessed by you, the physician.

5. What areas would you consider to best assess Mrs. J.'s need for psychological support?
   A. Her previous reaction to stress
   B. Her level of denial
   C. Her expressions of anxiety
   D. Her level of fear

## Answers and Discussion

1. C is true; A, B and D are false. Most patients with serious illnesses want to be told the truth,[1] and most dying patients, even if not told, are aware of their diagnosis.[2] The fear that the truth will "harm" the patient is sometimes expressed by family members who wish to protect their loved one from depression or even suicide[3] or is an expression of the physician's own uneasiness about discussing death and dying issues.[4]

2. A and B are true; C and D are false. By including family members in this important visit, all will hear the same information about the diagnosis and plans for treatment. Asking Mrs. J. for her belief about what is happening may provide clues to her level of awareness and acceptance of the diagnosis. It will also allow her husband to hear her feelings about her illness.

It is important to use the word "cancer" early so as not to mislead the patient. Other words, such as "tumor" or "malignancy" can be used in future discussions. Address the issue of unproven cancer treatments, emphasizing your continued support of the patient, even if she chooses to try an alternative treatment.[5]

3. B and C are correct; A and D are incorrect. Children can understand the meaning of death earlier than people realize. It is unfair to allow the child to believe that his mother will return when she will not—this would only postpone his understanding of her death and undermine his trust of other family members.

When the child sees family members sad, he needs to understand why. He needs their support to express his own feelings of grief, which might manifest themselves in a dread of illness and in separation anxiety.[6]

4. The correct answer is C. A living will is a document giving the physician directions concerning medical treatment while the person is dying. It does not replace a legal will, which is effected after death and concerns material possessions. The living will in various forms has been recognized by 22 states as representing the preferences of the patient,[7] and while not legally binding, offers help for the clinician and the family when the patient can no longer state his or her wishes. The document needs to be signed by two witnesses, neither of whom can be related to the declarer by blood or marriage, be entitled to a part of the declarer's estate, have a claim against the declarer's estate, be the declarer's attending physician or employees of the physician, or the employee of a health facility (hospital or nursing home) in which the declarer is a patient.[3]

5. A is the correct answer. By asking the patient and family about previous reactions to stress, you will have your best indicator as to how he or she will cope with the present illness.[8]

All patients will have some level of denial, but it is often unconscious and, therefore, not measurable. In the same manner, anxiety and fear about death may not be expressed openly. The patient may sense a physician's uneasiness about death and not reveal his feelings. It is up to the physician to elicit these emotions from the patient so that they can be discussed.[9]

### References


1. Samp RJ, Curreri AR: A questionnaire survey on public cancer education obtained from cancer patients and their families. Cancer 1957; 10:382
2. Feifel H: The Meaning of Death. New York, McGraw-Hill, 1955
3. Geyman JP: Dying and death of a family member. J Fam Pract 1983; 17:125-134
4. Jonsen AR, Siegler M, Winslade WJ: Clinical Ethics. New York: MacMillan, 1982, p 73
5. Harper L: Talking to cancer patients. Hosp Physician 1982; 18(8):67-69
6. Wessel MA: A death in the family. JAMA 1975; 234:865-866
7. Peirce NR: Right-to-die controversy soon hot as right-to-life. The Oregonian, February 3, 1985, p B7
8. Kaye JM: The dying cancer patient: How to make it easier—for them and you. Your Patient and Cancer 1983; 3(1):95-111
9. Raft D: How to help the patient who is dying. Am Fam Physician 1973; 7(4):112

# Self-Assessment in Family Practice

Series Editor: Robert B. Taylor, MD
Compiled by William L. Toffler, MD, Clinical Assistant Professor, Department of Family Medicine, Oregon Health Sciences University School of Medicine, Portland, Oregon

*This section of the Journal is designed to present clinical problems that focus on patient management, problem solving, and other elements integral to family medicine. The intent of this section is aimed more at teaching and learning than at self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references that appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as letters to the Editor.*

**Questions 1-5 each contain four suggested answers. Choose one or more of the four responses.**

*You are seeing a new patient, a 30-year-old, gravida 2, para 1 woman, who is now 12 weeks pregnant. She brings her medical records with her, revealing that she had a cesarean section done for cephalopelvic disproportion. This was necessitated by failure to progress at 6-cm dilatation, despite hard contractions, in the face of a "borderline" pelvis on pelvimetry. She was delivered using a low transverse incision. She now wishes to discuss with you a future vaginal delivery.*

1. Which of the following are contraindications to a trial of labor for vaginal delivery following a cesarean section?
   A. Breech presentation with current pregnancy
   B. Multiple gestation
   C. Patient refusal
   D. Low transverse incision

2. With respect to pelvic size and x-ray pelvimetry, which of the following are true?
   A. Pelvimetry is a fairly reliable predictor of route of delivery.
   B. Pelvimetry is rarely helpful in predicting route of delivery.
   C. Pelvic size by pelvimetry is significantly different in women delivered by cesarean section for cephalopelvic disproportion when compared with those who successfully deliver vaginally.
   D. Pelvimetry can be harmful.

3. In order to foster patient education, you and the patient discuss the risks of the various delivery options. Which of the following are true?
   A. A trial of labor is extremely risky to both mother and baby.
   B. The chance of the previous scar completely rupturing is approximately 5 percent.
   C. The chance of rupture of the previous cesarean section scar is less than the likelihood of a prolapsed cord.
   D. The risk of a rupture with a low transverse incision is only slightly greater than with a classical incision.

4. In the United States, which of the following are true?
   A. The rate of repeat cesarean section is 75 percent.
   B. The rate of repeat cesarean section is 99 percent.
   C. The maternal mortality for cesarean delivery is two to four times higher than the mortality for vaginal delivery.
   D. The rate of cesarean section done because of previous cesarean section has increased.

5. If a trial of vaginal delivery is chosen by this patient, which of the following are true?
   A. The likelihood of vaginal delivery being accomplished is greater than 50 percent.
   B. It is absolutely contraindicated to consider oxytocin (Pitocin) augmentation in this patient.
   C. Oxytocin augmentation is unlikely to improve the likelihood for a successful vaginal delivery.
   D. The chance of uterine rupture is significantly greater if oxytocin is used.

*Continued on page 474*

*Continued from page 471*

## Answers and Discussion

1. A, B, C. Currently, breech presentation, multiple gestation, and patient refusal are considered to be contraindications to a trial of vaginal delivery following cesarean section.[1]

A low transverse incision at the time of the previous cesarean section is considered a requirement to permit a safe trial of labor and vaginal delivery in a subsequent pregnancy.[2]

2. B, D. Pelvimetry rarely alters clinical management and is not reliable as a predictor of delivery outcome.[3] In a recent study it was reported that in 98 percent of patients, use of pelvimetry caused no change in clinical management plan.[4] Pelvimetry poses a radiation hazard with potential oncogenic risk to the newborn.[3] In addition, the trip to the radiology department makes observation and monitoring of the patient more difficult and increases the risk for a delivery in a suboptimal setting.[3] In a recent series no significant differences were found in pelvic diameter by pelvimetry between women experiencing vaginal delivery vs cesarean section.[3]

3. C. Acute fetal distress from an umbilical cord prolapse is much more frequent than fetal distress from a ruptured previous scar.[1] The current literature demonstrates the safety of a trial of labor in a woman who has had prior delivery by low transverse cesarean section.[1,2,5,6]

The chance of a rupture of the previous cesarean section scar is less than 1 percent—in a recent series of over 200 patients there were no ruptures.[1]

4. B, C, D. In the United States today, 99 percent of births after cesarean section are by repeat cesarean section.[1,6] This is true despite the report of the National Consensus Development Conference in recommending a trial of labor for vaginal delivery.[6] In the current literature, there have been no maternal deaths and only one fetal death due to a uterine incision rupture in a monitored labor.[1] The maternal mortality rate for a cesarean section is two to four times higher than for vaginal delivery.[2,6,7] Previous cesarean birth as a cause for cesarean section has increased despite these facts.[6]

5. A. A recent series studied patients delivered after primary cesarean section for cephalopelvic disproportion and found that 67.3 percent were delivered vaginally.[1] In addition, in the same study, 94 patients out of 230 received oxytocin to augment their labors. There was no significant morbidity or mortality.[1] The successful rate of vaginal delivery was significantly increased in this study and in one other that allowed the liberal use of oxytocin.[1,2] All labors were monitored internally to assure appropriate intrauterine pressure of approximately 50 mmHg. There is no reason to believe that a given pressure achieved by augmentation is any more dangerous to a uterine scar than the same pressure achieved without agumentation.[1]

### References

1. Flamm B, Dunnett C, Tischerman E, Quilligan E: Vaginal delivery following cesarean section: Use of oxytocin augmentation and epidural anesthesia with internal tocodynamic and internal fetal monitoring. Am J Obstet Gynecol 1984; 148(6):759
2. Meier PR, Porreco RP: Trial of labor following cesarean section: A two-year experience. Am J Obstet Gynecol 1982; 144:671
3. Anderson N: X-ray pelvimetry: Helpful or harmful? J Fam Pract 1983; 17:405
4. Laube DW, Varner MW, Cruikshank DP: A prospective evaluation of x-ray pelvimetry. JAMA 1981; 246(19):2187
5. Minkoff HL, Schwartz RH: The rising cesarean section rate: Can it safely be reversed? Obstet Gynecol 1980; 56:135
6. Gleicher N: Cesarean section rates in the United States—The short term failure of the National Consensus Development Conference in 1980. JAMA 1984; 252(23):3273
7. Peletti DB, Cefalio RC, Shapiro S, et al: In-hospital maternal mortality in the United States: Time trends and relation to method of delivery. Obstet Gynecol 1982; 59:6

# Self-Assessment in Family Practice

Series Editor: Robert B. Taylor, MD
Compiled by David R. Martin, MD, Resident, Department of Family Medicine, Oregon Health Sciences University School of Medicine, Portland, Oregon.

*This section of the Journal is designed to present clinical problems that focus on patient management, problem solving, and other elements integral to family medicine. The intent of the section is aimed more at teaching and learning than at self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references that appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as letters to the Editor.*

**Questions 1-5 each contain four suggested answers. Choose one or more of the four responses.**

*A 12-month-old male infant presents to your office for his fifth well-child visit. The visits at 2 weeks of age, and 2, 4, and 6 months of age were routine. The mother has no specific concerns. The child continues appropriate progression along the growth curves, and the physical examination is normal for his age.*

1. Which of the following conditions would prompt you to obtain a screening hematocrit as part of the well-child examination?
   A. The infant has been exclusively breast-fed since birth.
   B. The family is of low socioeconomic status.
   C. The infant was born at 35 weeks' gestation and had intrauterine growth retardation.
   D. The neonatal hematocrit (in a term delivery) was 43 percent by volume of packed red blood cells.

2. Which of the following statements regarding the tests used to establish the presence of iron-deficiency anemia are correct?
   A. The most commonly used screening test is the capillary hematocrit.
   B. Venous hematocrit is significantly more accurate than capillary and is more reliably indicative of an iron-deficiency state.
   C. A Coulter complete blood count is more useful in screening than is a simple spun hematocrit.
   D. The "gold standard" in diagnosing iron-deficiency anemia is the free erythrocyte protoporphyrin.

3. Appropriate statements regarding the numerical values of screening hematocrits include:
   A. A hematocrit of 35 percent indicates that the individual should be considered a candidate for iron supplementation.
   B. The appropriate value is not 35 percent but 33 percent.
   C. Black infants have a lower average hematocrit than do white infants.
   D. The value of the hematocrit at which both blacks and whites should be treated is the same.

4. Which of the following are appropriate methods of treating or of preventing iron deficiency?
   A. Breast-fed infants should begin to receive iron supplementation by 4 to 6 months of age.
   B. All infants on long-term formula feedings should receive an iron-fortified formula or should receive iron supplementation.
   C. Cereals formulated specifically for infants are fortified with iron in a form optimized for absorption.
   D. An appropriate method of treating presumed iron deficiency is 3 mg/kg of body weight each day of elemental iron as ferrous sulfate given one-half hour before a feeding.

5. Which of the following are true of the effects of iron deficiency and of iron supplementation?
   A. There is considerable evidence that iron deficiency in the first years of life is associated with subnormal mental development.
   B. There is evidence that this effect is independent of malnutrition and socioeconomic status.
   C. Other clinical findings of iron deficiency include thin, brittle, or spooned nails, as well as decreased absorption of fat, vitamin A, and xylose.
   D. There has been some evidence that excessive iron intake predisposes the infant to infection.

## Answers and Discussion

1. All responses are true. The prevalence of iron-deficiency anemia reaches its peak between the ages of 6 months and 2 years.[1] The overall prevalence varies widely depending on diagnostic criteria and the population screened. Estimates of from 1 to 5 percent and 5 to 20 percent are common, with the latter being more typical.[1,2,3] Some studies have shown a greater than 60 percent prevalence in low-income groups.[3] Although there is not a consensus as to whether screening should be performed routinely in all 1-year olds, there is general agreement that those at high risk should be screened.

Premature and low–birth-weight infants are at high risk because of a low "iron endowment" at birth and because of increased growth rates. Iron endowment can be decreased by early cord clamping, perinatal blood loss, or anything else that decreases the neonatal hematocrit or total red cell mass.

2. A, B, and C are true. D is false. In one survey, 84 percent of 142 practicing family physicians screened their 1-year-old patients with capillary blood hematocrit determinations.[4] The capillary hematocrit has the advantage that it is easy to obtain; however, there is a clear-cut difference in accuracy as compared with venous samples. In one study, 10 percent of 70 paired Coulter hemoglobin measurements showed at least 1 g/dL difference and a mean hemoglobin difference of 0.5 g/dL.[3] In contrast, no paired venous EDTA tube Coulter hemoglobin measurements showed greater than 0.4 g/dL difference, and the mean hemoglobin difference between paired venous samples was 0.6 g/dL.

Coulter hematocrit determinations were 0.4 to 0.5 percent lower than spun hematocrits in a series where the mean hematocrit was about 35.5 percent.[3,4] This difference may be expected to widen with increased severity of hypochromic anemia secondary to plasma trapping between the centrifuged microcytic red cells. However, for screening purposes, the two methods have been found equally useful when hematocrit alone is examined. One major advantage of Coulter analysis is that the mean corpuscular volume (MCV) is determined as well. As the MCV can be low, indicating possible iron deficiency in the presence of a normal hematocrit, Coulter analysis increases the sensitivity of the test in predicting responders to treatment.[3,4]

It is this response to treatment, rather than any single laboratory test, that is the "gold standard" in diagnosing iron deficiency. Blood studies should be repeated 3 to 4 months after initiation of therapy. A response of 0.6 g/dL is significant, but the generally accepted increase indicative of a "physiologically relevant" response is 1.0 g/dL.[3]

3. A is false. B, C, and D are true. The goal of screening for iron deficiency at 1 year of age is to identify as many individuals as possible who will have a hemoglobin response to iron treatment while minimizing the number of unresponsive infants who might be treated unnecessarily. It has been shown that this means treating not only those classically considered anemic (Hct < 31 percent or Hgb < 11.0 g/dL) but also the "low normal" population (with Hct to 33 percent or Hgb to 11.5 g/dL).[3,4] If the screening criteria are further broadened to include all those with Hbg < 11.5 g/dL or MCV < 72 fL, then the number of total responsers identified is almost doubled, and yet the response rate is stable at about 50 percent.[3,4]

Blacks normally have somewhat lower hemoglobins (0.3 to 0.8 g/dL) than Caucasians. However, identical screening criteria have been determined by response to therapeutic trials.[5]

4. All responses are true. The most recent recommendations of the American Academy of Pediatrics' (AAP) Committee on Nutrition regarding mineral supplement needs in normal children state that there is no evidence that breast-fed infants require iron supplements in the first 4 to 6 months.[6] After that time, the diet should be supplemented with iron-fortified cereal, standard infant formulas with iron, or iron drops. For about the last decade infant cereals have been fortified with iron of small particle size for improved absorption. Any infant started on commercial for-

Continued on page 82

*Continued from page 80*

mula feedings in the first six months of life should receive iron-fortified formula or else should receive iron supplementation at a dosage of 1 mg/kg/d of elemental iron—starting no later than 4 months of age for term infants and earlier at higher doses for low–birth-weight infants.

Administering the iron between meals increases the amount absorbed and avoids reducing the antibacterial properties of breast milk, which occurs with increasing lactoferrin saturation.[1,7]

5. All responses are true. There is considerable evidence that iron deficiency in the first years of life is associated with a number of neurochemical changes as well as with poor performance on a variety of developmental and IQ scales.[1,3] In a controlled study conducted by Lozoff et al,[8] there is some evidence that this effect is independent of malnutrition and socioeconomic status.

There is a variety of evidence that excessive iron administration may impair specific host defenses and may predispose to the development of infection.[1,2] However, the AAP's Committee on Nutrition,[7] as well as other authorities,[3] believe that there is no evidence that iron supplementation or therapy as currently recommended increases the risk of infection. It is felt that the benefits of iron administration in the recommended manner outweigh the risks as we currently understand them.

## References

1. Nathan DG, Oski FA (eds): Hematology of Infancy and Childhood. Philadelphia, WB Saunders, 1981
2. Eggertsen SC, Schmeeweiss R, Bergman JJ: An updated protocol for pediatric health screening. J Fam Pract 1980; 10:25
3. Reeves JD, Vichinsky E, Addiego Jr. J, Lubin BH: Iron deficiency in health and disease. Adv Pediatr 1983; 30:281
4. Driggers DA, Reeves JD: Screening one-year-old infants for iron deficiency. J Fam Pract 1982; 15:789
5. Reeves JD, Driggers DA, Lo EYT, et al: Screening for anemia in infants: Evidence in favor of using identical hemoglobin criteria for blacks and Caucasians. Am J Clin Nutr 1981; 34:2154
6. American Academy of Pediatrics, Committee on Nutrition. Vitamin and mineral supplement needs in normal children in the United States. Pediatrics 1980; 66:1015
7. American Academy of Pediatrics, Committee on Nutrition. Relationships between iron status and incidence of infection in infancy. In American Academy of Pediatrics, Committee on Nutrition: Pediatric Nutrition Handbook. Evanston, Ill, American Academy of Pediatrics, 1979, p 444
8. Lozoff B, Brittenham GM, Viteri FE, et al: Developmental deficits in iron-deficient infants. Effects of age and severity of iron lack. J Pediatr 1982; 101:948

# Self-Assessment in Family Practice

Series Editor: Robert B. Taylor, MD
Compiled by Karen Lloyd, MSW, Department of Family Medicine, The University of Oregon Health Sciences Center, School of Medicine, Portland, Oregon

*This section of the Journal is designed to present clinical problems that focus on patient management, problem solving, and other elements integral to family medicine. The intent of this section is aimed more at teaching and learning than at self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references that appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as letters to the Editor.*

**Questions 1-4 each contain four suggested answers. Choose one or more of the four responses.**

*S.T. is a 15-year-old girl brought to the emergency room by her parents. She attempted suicide with overdosing. The family have been patients of yours for about six months, having recently moved from another town. When S.T. is medically stable, you talk with her and her parents. The parents express surprise at their daughter's action and explain that she and her boyfriend recently broke up. The patient says she's been despondent because of the loss of her boyfriend and she's now embarrassed and wants to return home.*

1. What considerations are the most important for you at this time, and what plan of action should you take?

A. Discharge to home
B. Hospitalize the patient
C. Determine seriousness of suicide intent
D. Make decisions for the child and parents and take action

2. When you suggest follow-up counseling to involve the family, the parents insist the problem occurred because the patient's boyfriend "broke up" with her and only she needs help. You should:

A. Agree with the family
B. Insist the parents see a therapist with the patient
C. Keep the child in the hospital until parents agree to counseling
D. Start antidepressant medication

3. What are the signs to look for in assessing suicide potentiality?

A. Violent or rebellious behavior
B. Symptoms of depression
C. Illegal behavior
D. Running away

4. Which of the following can be related to adolescent suicide?

A. Family communication
B. Perinatal influences
C. Siblings
D. Social contact with peers

*Continued on page 174*

## Answers and Discussion

*Continued from page 172*

1. Answer C is the most important consideration; however, answers A, B, and D may be correct in other situations. How serious was the suicide attempt? What were the circumstances of discovery and the possibility of completion? Is this a cry for help or did the child truly intend to end her life? What degree of hopelessness or helplessness is present in the child and in the parents? Answers to these questions will help you determine the seriousness of the attempt.

The child should be returned home to the support of the family if at all possible. Hospitalization will be needed if further medical treatment is necessary that can be provided only in a hospital or if support systems at home do not allow for the child's return.[1] The child has lost control of her situation and life; these parents show a degree of control by bringing S.T. to you. However, an assessment of their ability to maintain enough control to protect S.T. will be necessary. In many situations the parents will be detached or noncommunicative and other support may be needed.

2. B is correct. In some instances D may be indicated. A and C are false. Drugs may be needed in some cases to treat depressive symptoms; however, follow-up counseling is a necessity, and should involve the parents as well as the child. This is where the real problem lies.[1] If parents continue to refuse to attend with the child, then have the child seen alone. Family therapy is best, but it is important that the child's extreme method of communication not be ignored. The parents may agree to be seen occasionally for guidance to better understand their child's problems or to develop improved communication skills.[2]

In families with poor interpersonal relationships, an adolescent will cling more desperately to outside relationships and be more devastated by their loss. Another underlying problem may be conflict with the parents. When parents are absent, noncommunicative, detached, or alienated from the child, the presence or absence of other supportive resources as patient substitutes should be elicited.[3]

3. All responses are true. Depending on the child's age and maturity you may want to look for all these signs. In most suicidal attempts one can find a history of emotional disturbance.[4] The older adolescent will generally display symptoms of depression, such as social withdrawal, loss of initiative and self-esteem, sadness, sleep disturbances, or a radical personality change. Younger children manifest symptoms of acting out behavior, hostility, agressiveness, or delinquency.[5,6] Illegal behavior or an act that causes the child to be arrested may be a way of forcing others to act for him.[1]

4. A, B, and D are true. C is false. Studies have demonstrated a connection between adolescent suicide and patterns of family communication and interaction.[1,3,8] Alienation or social isolation may be related to the lack of a secure relationship with the parents, so that it affects the child's ability to establish long-term relationships with others.

When looking at communication systems within the family, ask yourself the following: how does the child or family handle loss and

have many losses occurred recently? An individual or family that denies the importance of a loss is unable to complete the grief process and functioning may be decreased. A family that openly discusses losses and understands needs for bereavement is more apt to pull together.

Siblings have not been mentioned as a cause in the literature, but they may have similar problems to the patient within the family system.

Salk and others[9] studied "the possible relationship between falling perinatal mortality and rising rates of adolescent suicide" and found that three factors have a correlation: respiratory distress for more than one hour at birth, lack of antenatal care before 20 weeks of pregnancy, and chronic disease of the mother during pregnancy. They summarize that "whatever environmental conditions might precipitate suicide, those individuals whose early life experience included adverse perinatal conditions are more vulnerable during adolescence."

Ask the teenager about family conflicts, such as divorce, abusive behavior, chronic illness of a family member, or a family history of suicide. Ask about social and economic changes, relocation, financial difficulties, peer pressure, and parent-child estrangement.[5] Jacobs and Teicher suggest using a life history chart to clarify the longitudinal dynamics.[7]

1. First Phase: Numerous behavior problems and dissensions within the family from childhood to onset of adolescence.

2. Escalation Phase: Onset of adolescence with its yearning for autonomy and personal authority leads to even stricter discipline and personal restrictions on child by parents.

3. Final Phase: Alienated from the family, the child desperately latches onto boy- or girlfriend with an intensity that not only alienates others from the child but also makes the eventual dissolution of that single relationship almost inevitable.

4. Suicide Phase: All social attachments gone, the adolescent feels the only legitimate solution is suicide.

This approach shows the child to be using a problem-solving method, exhausting all options before attempting suicide.

### References


1. Lieberman D: Suicide among adolescents. In Wolff K (ed). Patterns of Self-Destruction. Springfield, Ill, Charles C. Thomas, 1983, pp 19-23
2. Davis P: Suicidal Adolescents. Springfield, Ill, Charles C. Thomas, 1983, pp 16-32
3. Landou-Stanton J, Stanton M: Suicidal adolescents and their families. In Prander M, Kolnion S (eds). Adolescents and Family Therapy: A Handbook of Theory and Practice. New York, Gardner Press, 1985
4. Stoddard F, Pahlavan K, Cahners S: Suicide attempted by self-immolation during adolescence; I. Literature review, case reports, and personality precursors. In Feinstein SC et al (eds). Adolescent Psychiatry, vol 12. Chicago, University of Chicago Press, 1985, 12, pp 251-265
5. Woodcock H: When your patient asks: Will you talk with my teenager? I'm afraid he's considering suicide. Patient Care 1985; 19:149-150
6. Victoroff V: The Suicidal Patient: Recognition, Intervention, Management. Oradell, NJ, Medical Economics Books, 1983
7. Evans D: Explaining suicide among the young: An analytical review of the literature. J Psychol Nursing and Mental Health Service, 1982; 20(8):9-16
8. Farberou N: The Many Faces of Suicide. New York, McGraw-Hill, 1980
9. Salk L, Sturner W, Lipsitt L, et al: Relationship of maternal and perinatal conditions to eventual adolescent suicide. Lancet 1985; I:624-627

# Self-Assessment in Family Practice

Series Editor: Robert B. Taylor, MD
Compiled by Larry E. Davis, MD, Department of Family Practice, The Oregon Health Sciences University School of Medicine, Portland, Oregon.

*This section of the Journal is designed to present clinical problems that focus on patient management, problem solving, and other elements integral to family medicine. The intent of this section is aimed more at teaching and learning than at self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references that appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as letters to the Editor.*

**Questions 1-5 each contain four suggested answers. Choose one or more of the four responses.**

*As part of your local hospital's continuing medical education program, a seminar dealing with hand injuries is presented. You attend and participate in presentations dealing with injuries occurring at home, at work, and during sports activities. Representative questions during the post-test examination include the following:*

1. Fingertip amputations or avulsions are among the most common hand injuries encountered by physicians who provide primary care. Which of the following are true with respect to operative (grafting) and nonoperative management of these injuries?

A. With operative management, time loss from work is usually less.

B. Operative management results in fingertips that have poorer sensation, increased cold sensitivity, depressed appearance, and often unsightly pigmentary changes.

C. With nonoperative management, most injuries will heal within four to six weeks with better two-point discrimination and appearance than in grafted fingertips.

D. Excellent cosmetic and functional results have been reported with nonoperative management in children, even when the distal phalanx was involved.

2. A 22-year-old patient suffers a 4-cm palm laceration while repairing a window. Which of the following are true?

A. A general anesthetic or axillary block is usually necessary in order to provide adequate anesthesia for hemostasis and adequate exposure to evaluate the wound.

B. Combined ulnar and median nerve blocks at the wrist will provide adequate anesthesia.

C. A blood-pressure cuff maintained at 250 mmHg on the upper arm may not provide adequate hemostasis unless the hand and arm are first compressed by application of an eschmark bandage.

D. Flexor tendon repair performed later than eight hours after injury usually is associated with poor outcome.

3. According to the *AMA Guides to the Evaluation of Permanent Impairment*, the following are true:

A. Permanent disability is a purely medical condition, which the physician considers stable or nonprogressive at the time evaluation is made, as is any anatomic or functional loss or abnormality after maximal medical rehabilitation has been achieved.

B. Amputation of the index finger at the metacarpal-phalangeal (MCP) joint is considered to cause more impairment than a similar injury of the long finger or thumb.

C. To determine restriction of joint motion, two measurements are necessary.

D. The goniometer is primarily a research tool used to measure degree of joint swelling in rheumatoid arthritis of the hands.

4. Which of the following psychomotor tests of hand function are defined correctly?

A. Hand Dynamometer test: measures the eye-hand coordination and wrist-finger speed.

B. Tapping test: measures ability to make skillful, controlled manipulation of tiny objects.

C. O'Connor Finger Dexterity test: measures hand strength.

D. Minnesota Rate of Manipulation test: measures manual dexterity of arm-hand unit and consists of five subtests.

5. With respect to work-related injuries, which of the following are true?

A. Hand injuries account for approximately one third of the more than one million persons who make a claim for workers' compensation yearly.

B. A recent study showed that family physicians frequently fail to document either work status or exposures and their possible relationship to health status.

C. Malingering, psychiatric factors, and the physician's own feelings toward the patient may affect a disability evaluation.

D. Occupational health services are often six-sided relationships.

## Answers and Discussion

1. A is false; B, C, and D are true. A nonoperative technique has been described that eliminates many of the disadvantages of operative management and has superior results.[1] The wound is cleansed and debrided, then the defect is covered by an occlusive aluminum foil dressing (available as packaging for scalpel blades or Xeroform gauze). Dressing changes are performed on the third, fifth, and seventh days, then weekly. If initial bleeding is a problem, Gelfoam may be applied, then the foil dressing begun in 24 hours. The dressing is occlusive, does not stick to the wound and is comfortable. This eliminates the expense and time loss involved in grafting procedures.

2. B and C are true; A and D are false. Combined ulnar and median nerve blocks will provide adequate anesthesia, so that axillary block or general anesthesia are usually not necessary in this type of injury unless the patient refuses a wrist block. Venous oozing may flood the site of injury, obscuring exploration unless the extremity is compressed prior to application of the tourniquet. Flexor tendon repair may be performed at a later date if necessary due to absence of a qualified surgeon at initial evaluation or concerns about infection.

3. C is true; A, B, and D are false. The definition of permanent impairment (not disability) is given in A. Permanent disability is not a purely medical condition. A patient is permanently disabled when his actual or presumed ability to engage in useful activity is reduced or absent because of "impairment," which, in turn, may or may not be combined with other factors. The percentage of impairment for finger amputations at the MCP joint are: thumb, 22 percent, index, 14 percent, long, 11 percent, ring, 5 percent, little, 3 percent.[2] The goniometer is an inexpensive, simple-to-operate device, which is necessary to measure the limits of flexion and extension of interphalangeal joints of the fingers. If the patient is capable of assuming the prescribed neutral position for each motion, then the degree of motion can be determined.

4. A, B, and C are defined incorrectly. Only D is defined correctly. The Hand Dynamometer test measures hand strength. The Tapping test measures eye-hand coordination and wrist-finger speed. It consists of a page with 300 circles, each 1.3 cm diameter. The subject is given 60 seconds with each hand to place three marks in each circle with a pencil and proceed as rapidly as possible across the rows without skipping any circles. The O'Conner Finger Dexterity test measures the ability to make skillful, controlled manipulation of tiny objects involving primarily the fingers.[3]

5. All responses are true. Stein and Franks[4] reported in *The Journal of Family Practice* on a questionnaire study of 362 patients at a family medicine center and 38 percent described current health problems related to work. One hundred of these patients' charts were evaluated, and 41 or these had no documentation of job title, place of work, type of company, length of employment, or job duty. Occupational health services are often six-sided relationships involving a physician, patient, employer, government agency, workers' compensation carrier, and union.

**References**

1. Fox JW IV, Golden GT, Rodeheaver G, Edgerton MT, Edlich RF: Nonoperative management of fingertip pulp amputation by occlusive dressings. Am J Surg 1977; 133:225-226
2. American Medical Association Committee on Rating of Mental and Physical Impairment: Guides to the Evaluation of Permanent Impairment. Chicago, American Medical Association, 1971
3. Gloss DS, Wardle MG: Reliability and validity of American Medical Association's guide to ratings of permanent impairment. JAMA 1982; 248:2292-2296
4. Stein EC, Franks P: Patient and physician perspectives of work-related illness in family practice. J Fam Pract 1985; 20:561-565

# Self-Assessment in Family Practice

Series Editor: Robert B. Taylor, MD
Compiled by Michael Prislin, MD, Adjunct Associate Professor,
Department of Family Medicine,
University of California,
Irvine, California.

*This section of the Journal is designed to present clinical problems that discussion and supplemental references that appear on the following pages. family medicine. The intent of this section is aimed more at teaching and learning than at self-assessment as an evaluation or scoring device. Reinforcement of major teaching points is therefore included through the further discussion and supplemental references which appear on the following pages. Critical comments relating to these self-assessment materials are invited and should be submitted as Letters to the Editor.*

**Questions 1-4 each contain four suggested answers. Choose one or more of the four responses.**

*A 39-year-old gravida 1, para 0, woman presents to your office for prenatal care. Routine prenatal history and physical, prenatal laboratory studies, genetic counseling, and referral for genetic amniocentesis are performed.*

1. Which of the following patients is at increased risk in regard to age and parity?

A. 16-year-old G1, P0
B. 22-year-old G1, P0
C. 26-year-old G2, P1
D. 39-year-old G1, P0

2. Which of the following conditions occur more frequently in the "elderly" primiparous woman?

A. Pregnancy-induced hypertension
B. Premature rupture of membranes
C. Breech presentation
D. Gestational diabetes

3. Which of the following is useful in screening for gestational diabetes?

A. Hemoglobin $A_{1c}$
B. Fasting serum glucose
C. One-hour glucose screen
D. Three-hour glucose tolerance test

4. Which of the following studies assess the functional status of the placenta?

A. Oxytocin contraction test
B. Real-time ultrasound study
C. Breast self-stimulation test (BSST)
D. Non-stress test

## Answers and Discussion

1. A, B, C, and D are correct. Over the past ten years, utilization of risk assessment systems has been introduced into prenatal care.[1,2,3] These systems are based on a multifactorial analysis of a wide range of prenatal conditions and their association with obstetric outcome. In such systems, both age and parity have been identified as having a low, but definite, predictive value in terms of obstetric risk. Specifically, age less than 17 years or greater than 35 years and nulliparity or grand multiparity have been identified as risk factors. It should be noted that risk factors are cumulative in terms of predicting risk so that a 36-year-old G1, P0, woman is at greater risk than a 36-year-old G2, P1, woman.[2]

2. A, B, and D are correct. It has been a precept that "the elderly, primiparous patient" is at increased risk, but there is relatively little literature on this subject, and the available reports are somewhat contradictory. However, several conditions appear to occur more frequently in the elderly, primiparous patient: pregnancy-induced hypertension, gestational diabetes, and pre-term delivery often associated with premature rupture of membranes.[4,5,6] Perinatal mortality, but importantly not neonatal mortality, also appear to be increased in several studies. In these studies, this increase is associated with a higher incidence of placental abruption, particularly in patients who have pregnancy-induced hypertension.

3. C is correct. Gestational diabetes occurs in approximately 5 percent of pregnancies and is particularly associated with a positive family history of a first-degree relative with type II diabetes mellitus, a previous obstetric history of a large for gestational age (LGA) infant (greater than 4,500 g), or maternal age greater than 25 years at the time of pregnancy. Hemoglobin $A_{1c}$, which in theory would seem to be an ideal study for assessing long-term glucose intolerance, even in the setting of the dramatic physiologic changes in carbohydrate metabolism that occur during pregnancy, is not yet a useful test simply because normative values during pregnancy do not yet exist. A single fasting glucose tolerance test is not predictive of a pregnant patient's response to a carbohydrate load and, therefore, is an inadequate study. A three-hour glucose tolerance test remains the gold standard for diagnosing diabetes of any form, yet is too time consuming and expensive to be utilized as a simple screen. The one-hour glucose screen has gained increasing acceptance in the obstetric literature as the screening study of choice for gestational diabetes. In this procedure, 50 g of carbohydrate is administered to a fasting patient and the serum glucose is assessed one hour following the carbohydrate load. If the value is greater than 130-135 mg/dL, the patient may be glucose intolerant and a full three-hour glucose tolerance test is indicated. The optimal time to screen is at the point of maximal insulin demand during pregnancy or at approximately 26-30 weeks. Any patient who demonstrates an early pattern of rapid and excessive weight gain should also be screened.[7]

4. A, C, and D are correct. The earliest standard for assessing placental function was the oxytocin contraction test, a study designed to mimic the physiologic stress of labor.[8] During the past 10 years, this test has been largely replaced by the non-stress test, which does not entail the administration of Pitocin. While the non-stress appears to be a good predictor of fetal well-being, it does not necessarily predict placental function.[9] Recently, interest has centered on the breast self-stimulation test, or BSST.[10] The BSST is performed by asking the patient to perform nipple stimulation while being monitored in the fashion of a non-stress test. The nipple stimulation causes endogenous release of oxytocin, which in turn produces uterine contractions. Fetal heart rate response during contractions can then be interpreted in a manner analogous to the oxytocin challenge test. Ultrasound, while useful for defining location and occasionally separation of the placenta, is not helpful in assessing placental function.

### References


1. Hobel CJ, Hyvarinen MA, Okada DM: Prenatal and intrapartum high risk screening. Am J Obstet Gynecol 1973; 117:1-7
2. Sokol RJ, Rosen MG, Stojken J, et al: Clinical applications of high risk scoring on an obstetric service. Am J Obstet Gynecol 1977; 128:652-658
3. Edwards LE, Barsada MI, Tatsean RW, Haskanson EY: A simplified antepartum risk scoring system. Obstet Gynecol 1979; 54:347-351
4. Kane SM: Advancing age and the primigravida: Obstet Gynecol 1979; 52:334-338
5. Horger EO, Smythe AR: Pregnancy in women over forty. Obstet Gynecol 1977; 49:257-262
6. Kessler L, Lancet M, Borenstein R, Steinmetz A: The problem of the older primipara. Obstet Gynecol 1980; 56:165-171
7. Swinker M: Routine screening for gestational diabetes mellitus in a family practice center. J Fam Pract 1983; 17:611-614
8. Pratt D, Diamond F, Yen H, et al: Fetal stress and nonstress test: An analysis and comparison of their ability to identify fetal outcome. Obstet Gynecol 1979; 54:419-424
9. Ingardia CJ, Cetiulo CL, Knoppel RA, et al: Prognostic components of the nonreactive non-stress test. Obstet Gynecol 1980; 56:305-310
10. MacMillan JB, Hale RW: Contraction stress testing with mammary self-stimulation. J Reprod Med 1984; 29:219-224