REFERENCES

1. Secretaria de Saúde, Brasil. *Anais do Seminário sobre a Situacão de Saúde nas Áreas Metropolitanas Brasileiras, São Paulo, 11–15 agosto 1975*. São Paulo, 1986.
2. Empresa Metropolitana de planejamento da Grande São Paulo (EMPLASA). *Sumário de dados da Grande São Paulo, 1985*. São Paulo, 1986.
3. Fundação Instituto Brasileiro de Geografia e Estatística (FIBGE). *Anuário Estatístico do Brasil, 1985*. São Paulo, 1986.
4. Secretaria Metropolitana do Planejamento (SEMPLA). *Cortiços em São Paulo: Frente e Verso*. São Paulo, 1986.
5. Fundação Sistema Estadual de Análise de Dados (SEADE). Indicadores Demográficos pelo Estado de São Paulo. Folleto No. 80, 1986.
6. Boletims de Produção/CIS. Secretaria de Saúde de São Paulo, 1986.

♦♦♦

NIH Consensus Statement on Perioperative Red Cell Transfusions

Transfusion of red blood cells is a life-saving measure in the management of a variety of medical and surgical conditions. The AIDS epidemic has recently raised levels of apprehension among health professionals and the public regarding transmission of infectious disease via transfusion. Furthermore, there is new information about the significance of anemia in the perioperative period, that is, in the time from admission to the hospital through discharge after surgery. These developments have stimulated a reexamination of the benefits and risks of transfusion therapy.

To assess this procedure, the U.S. National Institutes of Health (NIH) held a Consensus Development Conference on Perioperative Red Cell Transfusion from 27 to 29 June 1988. Based on the scientific data presented, a consensus panel—composed of medical professionals, officials of blood-banking organizations, and the general public—drafted a consensus statement. The following is a summary of the panel's findings.

Source: World Health Organization. *Wkly Epidemiol Rec* 64(16):120–121, 1989.

Current experience suggests that patients with hemoglobin values greater than 10 g/dl rarely need perioperative transfusions. However, those with acute anemia and hemoglobin values less than 7 g/dl will frequently need blood.

No single criterion can replace good clinical judgment as the basis for a decision on the need for perioperative transfusion. Deciding whether to transfuse red cells depends on clinical assessment aided by data from laboratory tests, when indicated, to determine such factors as arterial oxygenation, mixed venous oxygen tension, cardiac output, the oxygen extraction ratio, and blood volume.

Many physicians and patients are concerned that anemia may increase perioperative morbidity, but there is no evidence that mild to moderate anemia has that effect. For example, healing is not compromised by anemia when normal blood volume is maintained.

Among the risks associated with red cell transfusion are transmission of disease agents: human hepatitis virus, human immunodeficiency virus (HIV), human T-cell lymphotropic virus (HTLV-I),

cytomegalovirus, and, on rare occasions, other microbial agents including Epstein-Barr virus, parvovirus, and protozoans such as babesia and plasmodia. Therefore, the number of transfusions should be kept to a minimum.

Although ways are being found to make red cell transfusions safer, transfusions should not be considered substitutes for good surgical and anesthetic techniques. Progress in anesthesia has allowed more time for surgeons to be fastidious about controlling bleeding, and new surgical techniques have improved their ability to do so.

A variety of alternatives to standard transfusions are now available. Among these are the use of the patient's own blood collected before the operation (autologous transfusion) and the salvage of blood lost during the operation, which appears to be safe in some applications. In addition, pharmacological approaches to reducing the need for transfusion are promising. For example, bleeding may be controlled more effectively with the use of desmopressin (a synthetic analog of vasopressin), and use of recombinant erythropoietin (r-HuEPO) to stimulate red cell production may increase the amount of blood available for autologous transfusion.

Research initiatives needed include the following: studies on the effect of anemia on the rate of recovery and length of hospital stay, development of predictors that better define the need for perioperative red cell transfusions, design of additional studies on the value of directed donations, development of ways to make transfusions safer, development of appropriate blood substitutes, determination of the risk of transfusion-transmitted infection with current donor screening procedures, and evaluation of new methods to identify infected donors.

Single copies of the complete NIH consensus statement may be obtained free from the Office of Medical Applications of Research, Building 1, Room 216, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20892, U.S.A.