oxygenator. Separated red cells: Maintenance of effective oxygen-carrying capacity without circulatory overload; chronic anemia. Plasma (liquid): Plasma volume expander. Plasma (fresh): Platelets as plasma or concentrate. Plasma (ion exchange): Immune and typing sera and labile factors. Plasma (frozen): Labile clotting factors; storage. (*Gibson, J.: Battle of Blood, U. S. Armed Forces Med. J. 11: 1276 (Nov.) 1960.*)

PLASMA The chief problem with pooled human plasma has been the high incidence of homologous serum jaundice associated with its use as a plasma expander. Although the etiological agent of homologous serum jaundice remains unknown and unidentified, at least two partly acceptable empirical methods have emerged for ridding pooled human plasma of its ability to transmit this disease. These are (1) the heating of plasma and plasma products for ten hours at 60 C., and (2) the "shelf-storage" method in which plasma is stored for six months at 31 to 32 C. Plasmanate is a new plasma product, the only one to receive a license from the Biologics Division of the National Institutes of Health, manufactured by partial fractionation of fresh plasma by the cold ethanol method. The fibrinogen and some of the globulins are thus removed from the original plasma leaving a final product which contains about 88 per cent albumin and 12 per cent globulin. There is good evidence that this product is a safe and effective plasma expander. (*Hamit, H. F.: Status of Human Plasma as Plasma Volume Expander, J. A. M. A. 174: 1617 (Nov. 19) 1960.*)

RED CELL PRESERVATION The addition of lactose or dextrose to blood in acid citrate dextrose enables it to be stored between −3 and −40 C. provided rapid freezing and thawing are employed. Only about 5 per cent of red cells in blood so treated are hemolyzed. Blood so preserved has a post-transfusion survival after 24 hours of 77 per cent of the original cells after storage for 2 years at −93 C. (*Strumia, M. M., Colwell, L. S., and Strumia, P. V.: Preservation of Blood for Transfusion, J. Lab. Clin. Med. 56: 576 (Oct.) 1960.*)

PLASMA EXPANDER "Plasmagel" is a 3 per cent gelatine solution, isotonic, liquid at room temperature, free from sodium and chloride, but containing glucose; it has a molecular weight between 35,000 and 40,000. Administration of 500 ml. increases the plasma volume by 400 ml. The solution is well tolerated. Even repeated infusions have not caused allergic or toxic reactions. It does not interfere with blood cross matching and typing and does not cause bleeding tendency. (*Hascher, H., and Hascher, M.: Contribution to Treatment of Shock with Particular Emphasis on Liquid Gelatine as Plasma Expander, Der Anaesthesist 9: 236 (July) 1960.*)

PERITONEAL ABSORPTION Erythrocytes tagged with radioactive chromium were introduced into the peritoneal cavities of 15 patients. Rates of absorption of blood from the peritoneal cavities were similar, regardless of whether patients were kept in supine or Fowler's position. When air was introduced into the peritoneal cavity, and the patient was kept in Fowler's position, the rate of absorption of erythrocytes was reduced approximately one-third. The presence of pneumoperitoneum slows the absorption of blood because of a blocking layer of air beneath the diaphragm, and because the lymphatics are blocked by air bubbles. (*Schildt, B., and Eiseman, B.: Peritoneal Absorption of Cr^{51} Tagged Erythrocytes. Its Influence by Pneumoperitoneum and Fowler's Position, Acta chir. scandinav. 119: 397 (Sept.) 1960.*)

HEMORRHAGE Patients taking anticoagulant drugs who require surgical procedures present special problems of management. Should emergency surgery be necessary in a patient receiving heparin, the slow intravenous infusion of a one per cent solution of protamine sulfate in a dosage equivalent, milligram for milligram, to that of the heparin will immediately counteract the effects of heparin. Emergency surgery may be performed in a patient on bishydroxycoumarin (Dicumarol) therapy after the intravenous administration of vitamin K_1 (phytonadione) in a dosage of 50 to 55 mg. Other vitamin K