Manufacture of blood and blood components (3/20/91)

DATE : March 20, 1991

TO : All Registered Blood Establishments

SUBJECT: Deficiencies Relating to the Manufacture of Blood and Blood Components

FROM : Acting Director
Center for Biologics Evaluation & Research

INTRODUCTION:

The Food & Drug Administration (FDA) has reviewed and evaluated inspectional findings, error and accident reports, blood product recalls, and enforcement actions for the past year. This evaluation indicates continued deficiencies relating to the release of unsuitable blood and blood components.

Areas where significant deficiencies from current good manufacturing practices (21 CFR 606, et. seq.) have occurred include, but are not limited to, donor deferral, viral marker testing, computer systems, and procedures relating to product release and control operations. We believe that providing a brief listing of the more significant errors reported to the FDA and those found during inspections will be beneficial to blood establishments and provide information that may be useful in performing self audits.

DONOR DEFERRAL:

Significant deficiencies in donor deferral systems included, but were not limited to:

- Deferral records were incomplete, not current, or did not provide for accurate identification of the donor (See 21 CFR 606.160);

- Donors were no: recognized as having multiple reasons for deferral (See 21 CFR 606.160);

- Computer systems contributed to the loss of donor records or did not recognize all deferrals (See 21 CFR 606.160 and 606.60).

TESTING FOR VIRAL MARKERS AND REVIEW OF TESTING RECORDS:

Significant deficiencies in viral marker testing and review of testing records included, but were not limited to:

- Test samples were of poor quality, sample identification was inadequate, and back-up samples were not properly stored or identified (See 21 CFR 606.140);

- Test kit manufacturer's directions for use were not followed for proper storage and preparation of reagents and for proper dilution of samples and/or controls (See 21 CFR 606.65);

- Equipment was not properly maintained or calibrated, and investigations were inadequate to correct recurrent performance problems (See 21 CFR 606.60);

- Samples were tested multiple times without proper invalidation of tests, and investigations were not adequate to clarify technologist error or malfunction of the test kit or equipment. As a result, test interpretations were incorrect (See 21 CFR 606.65 and 606.140).

COMPUTER SYSTEMS:

Significant deficiencies found relating to the use and operation of computer systems in manufacturing included, but were not limited to:

- Written procedures were not available describing proper use of the system in daily operations; no provisions for manual back-up or for controlling changes to the hardware and software (See 21 CFR 606.100);

- Records did not include documentation concerning initial installation and validation procedures or for changes to the hardware and software that were components of the current system in use (See 21 CFR 606.160 and 606.60);

- Personnel were not properly trained in the use of the system(s) concerning capabilities and limitations of the system when used in critical steps in manufacturing such as donor suitability, testing, labeling, and product release (See 21 CFR 606.20).

STANDARD OPERATING PROCEDURES (SOP's) AND CONTROL OPERATIONS:

Significant deficiencies found relating to SOP's and general control operations included, but were not limited to:

- SOP's did not comply with FDA guidance concerning re-entry of donors who previously tested reactive for hepatitis B surface antigen (HBsAg) or antibody to human immunodeficiency virus (anti-HIV); SOP's were either not followed, not sufficiently detailed, or did not reflect current manufacturing operations (See 21 CFR 606.100 and 640.3);

- The wrong unit was quarantined and retested, or the wrong test was repeated (See 21 CFR 606.100 and 606.140).

- Components from untested autologous units were released for

further manufacturing use (See 21 CFR 606.100, 610.40, and 610.45).

SUMMARY:

The Food & Drug Administration requests that blood bank directors and appropriate personnel review current standard operating procedures and manufacturing operations with regard to the potential for errors in the areas described in this memorandum and for consistency with applicable regulations contained in Title 21, Code of Federal Regulations, Parts 600, 606, 610, and 640.

Gerald V. Quinnan, Jr., M.D.