Blood transfusion documentation using a photocopying machine¹

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Manual transcription of the patient's identification and of the blood flask is normally necessary in the production of laboratory grouping or cross-match reports, in the labelling of the corresponding blood flasks, and in the

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¹The Minnesota Mining & Manufacturing Co. Ltd.

keeping of laboratory records. These steps constitute points of possible errors in transcription at times of fatigue and are wasteful of skilled technicians' time and effort. By employing a copying machine and an appropriately designed request form we have been able to obviate all manual transcription in the production of reports, labels, and records. A number of additional safety features in the system described include a similar ABO colour code for reports and bottles, a key to location of the blood flasks within the blood bank, and the fact that the clinician receives back a photostat copy of the patient's name and other details exactly as written by himself.

This system has been in satisfactory operation at two.

	SURNAME CHRISTIAN NAMES WARD NO.	HOSP. NO. AGE DATE	LAB. NO.
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 LOCATION

X-MATCH					
BOTTLE NO.	GROUP	R.T.	COOMBS	COMPATIBILITY	SIGNATURE

Date _____

Patient's Blood Group _____

Sig.

**BLOOD GROUPING AND/OR
BLOOD TRANSFUSION**

<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Blood group if known _____ Known antibodies _____ Previous transfusions _____ Previous pregnancies _____ Remarks _____ </div> <div style="width: 45%; text-align: center;"> YES/NO YES/NO </div> </div>	<div style="text-align: center;"> If grouping only required Please Tick <div style="border: 1px solid black; width: 60px; height: 30px; margin: 0 auto;"></div> </div> <div style="text-align: center;"> Number of pints required _____ Time and Date _____ </div> <div style="text-align: center;"> IF URGENT PLEASE INDICATE * <div style="display: flex; justify-content: center; gap: 20px; margin-top: 5px;"> <div>2 Hrs.</div> <div>1 Hr.</div> <div>20-30 Min.</div> </div> </div> <div style="text-align: center;"> Signature _____ * (Delete as appropriate) </div> <div style="text-align: right;"> Date _____ </div>
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 Tube Group

 R₁R_a

 Mixed Coombs

FIG. 1. *Request form.*

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FIG. 2. Diagram of transmission of information.

hospitals, one of which is a major obstetric unit, for over two years.

The request form² (Fig. 1) is of suitable texture (ledger white wove) to be filed vertically as the permanent laboratory record of all work pertaining to the cross-matching and other possible serological tests for a particular patient on one day. The patient's identification details are entered on section I (and the blood specimen similarly labelled), either by an Addressograph type of automatic documentation or alternatively by writing with a reproduction-ink pen (Bic, Scripto, or Pentel). Clinical details and number of pints required, etc., are entered on section III, for which any kind of pen or pencil can be used.

When received in the laboratory the technician only has to enter the number (and group) of the blood flasks selected for cross-matching and subsequently to indicate their compatibility with his signature in section II. A reproduction-ink pen is used. Thereafter it takes a matter of seconds to produce copies of sections I and II on to adhesive-stripped reports of the appropriate ABO colour code (Table I) for the ward case notes and for attaching by a rubber band to each of the compatible blood flasks. Additional laboratory procedures, such as antibody tests, can later be written on section IV and only reported if relevant. The operation of the system is shown diagrammatically in Figure 2. Both before instituting this system and on several occasions since we have inves-

tigated the suitability or otherwise of other commercially available copying machines but these have failed to meet the specific requirements of copying on to adhesive-stripped reports; producing copies of sections I and II only; permitting the selection of paper the appropriate ABO colour code at the time of producing the copies; simplicity and rapidity of operation by technical staff unfamiliar with copying techniques.

The advantages of this system of reporting blood groups and cross-matches can be summarized as follows:

- 1 Report attached to each blood bottle as issued and matching similar report in case notes.
- 2 Patient identification on report exact copy of name as written by doctor concerned.
- 3 Colour code to ensure that the bottles, labels, and reports in case notes are all of the same ABO group.
- 4 No manual copying of information for labels, reports or day-book, possible points of human error.
- 5 Applicable to requests and specimens labelled by automatic documentation.
- 6 In addition the reports for insertion in the patient's case-notes are entirely consistent with the 'roof-tile mounting' and lower margin test identification recommended by the Tunbridge Report on 'The standardization of medical records' and its application to laboratory work (Lennox, 1966). The size (8×5 in.) is so close to that suggested in the above report ($7\frac{1}{2} \times 5$) as to be easily adapted.

We gratefully acknowledge the suggestions we have received from Dr. J. N. Marshall Chalmers regarding the value of a location code on the report in conjunction with the use of rotating shelves in the blood bank.

REFERENCE

Lennox, B. (1966). *J. clin. Path.*, 19, 203.

TABLE I

Blood Group	ABO Colour Code
A	Yellow
B	Pink
O	Green
AB	White

²Messrs. John Thomson Ltd., 436 Dumbarton Road, Glasgow, W.1.