Because Sickledex, like the sickling test, only detects sickle haemoglobin it is imperative that electrophoresis is performed on all positive results. At the same time the rare false positive results due to a dysproteinaemia will be detected. This test is valuable, particularly in the laboratory, where occasional sickling tests are performed and positive control cells are difficult to obtain. Laboratories performing large numbers of sickling tests may find the Sickledex test too costly but in our opinion Sickledex is quicker to perform than the orthodox sickling test and is more reliable in inexperienced hands.

We are grateful to Ortho Diagnostics for supplying Sickledex.

We are indebted to Dr N. E. G. Richardson for referring the case mentioned in the text.

References

- Cradock-Watson, J. E., Fenton, J. C. B., and Lehmann, H. (1959). TRIS buffer for the demonstration of haemoglobin A₂ by paper electrophoresis. *J. clin. Path.*, **12**, 372-373.
- Diggs, L. W., Schorr, J. B., Arcari, W. Q., and Reiss, A. (1968). In *Proceedings of the 23rd Joint Annual Meeting of the American Society of Clinical Pathology and College of American Pathologists*.
- Konotey-Ahulu, F. I. D. (1969). Letter to the Editor. Anaesthetic deaths and the sickle-cell trait. *Lancet*, **1**, 267-268.
- Loh, W. P. (1968). A new solubility test for rapid detection of haemoglobin S. *J. Indiana State med. Ass.*, **61**, 1651-1652.
- Serjeant, G. R., Richards, R., Barbor, P. R. H., and Milner, P. F. (1968). Relatively benign sickle-cell anaemia in 60 patients aged over 30 in the West Indies. *Brit. med. J.*, **3**, 86-91.
- Schneider, R. G., Alperin, J. B., and Lehmann, H. (1967). Sickling tests: pitfalls in performance and interpretation. *J. Amer. med. Ass.*, **202**, 419-421.

A report form for the serial display of laboratory results in small hospitals

C. P. MAYERS *From the International Grenfell Association, St Anthony, Newfoundland*

Serial display of the laboratory results in the patient's case notes makes it possible for the clinical staff to assimilate the data at a glance. The many advantages of cumulative report forms were described in this journal in the report of the Working Party of the Association of Clinical Pathologists (ACP Report, 1968). Cumulative report forms can be produced in larger hospitals by computer-based systems (eg, College of American Pathologists, 1965) or by photographic reproduction (eg, Whitby and Owen, 1965), but these systems are too expensive for use in small hospitals.

This paper describes a cheap laboratory report form designed for use in small hospitals to produce a cumulative report in the patient's case notes. The design is similar to the report forms used in larger laboratories (ACP Report, 1968) but this report form takes advantage of the smaller range of investigations performed in small hospitals to display the laboratory information in the correct time sequence on a single page of the case notes.

The Report Form

The report form measures $8\frac{1}{2} \times 3$ inches (210×79 mm) and fits the $11 \times 8\frac{1}{2}$ inch (280×216 mm) page used for patients' case notes in this hospital. This width utilizes the full width of the page for the display of laboratory data. It would require alteration for use in some hospitals where different page sizes are used, such as the 10×8 inch size (254×203 mm) or the $11\frac{1}{2} \times 8\frac{1}{2}$ inch size (299×210 mm) recommended in two recent reports (Ministry of Health, 1965; Scottish Health Services Council, 1967). The form is a 'no-carbon-required' combined request and report form. It consists of two sheets of paper with identical printing, glued together by a thin strip along the top margin. The top sheet can be torn off along the line of perforations $\frac{1}{4}$ inch (6 mm) below the top edge. Just below the line of perforations, the top copy has a strip of transfer tape across the back, which peels off to expose an adhesive surface which is used to stick the form onto the mount page in the case notes. Subsequent forms are added in shingle fashion from below upwards on the mount page.

The paper is coloured to identify the various kinds of laboratory report forms. As recommended in the Scottish Health Services Council report (1967), bacteriology is blue, chemical

Notice

The Pathology of Trauma

The volume entitled 'The Pathology of Trauma' which contains papers delivered at the symposium organized by the Royal College of Pathologists in the spring of this year will be shortly available. The price is £2.00, and there is a concessionary price of 35s. (£1.75) for all members of the Royal College, members of the Association of Clinical Pathologists, and regular subscribers to the *Journal of Clinical Pathology*. (Both of these prices include postage for orders received before 30 January 1971). Please send orders to the Publishing Manager, *Journal of Clinical Pathology*, BMA House, Tavistock Square, London WC1H 9JR.

HAEMATOLOGY										INTERNATIONAL GRENFELL ASSOCIATION									
REQUESTED BY DR. _____ DATE _____					FOR LAB. USE					PATIENT'S NAME _____ SEX _____									
REPORT TO BE SENT TO _____										ADDRESS _____									
DATE SPECIMEN COLLECTED _____ TIME _____										HOSPITAL NO. _____ DATE OF BIRTH _____									
CLINICAL DETAILS (AND TREATMENT)										IN PATIENT STAFF ☐ OR OUT PATIENT REFERRED ☐									
										BLOOD FILM ☐									
PLEASE TICK TESTS NEEDED					DIFFERENTIAL					BLOOD FILM									
☐ GM/100ML Hb					☐ X10 ⁹ /L RBC					☐ PCV									
☐ % CU, H					☐ % MCHC					☐ ESR									
☐ RETIC					☐ PLATELETS					☐ WCC									
☐ L.M.M.					☐ NEUTROS					☐ LYMPHOS									
☐ MONOS					☐ EOSINS					☐ BASOS									
☐ BLEED TIME (MINS)					☐ CLOT TIME (MINS)					☐ L.E. CELLS									
☐ FIRMING																			
DATE																			

Fig. 1 An example of the report forms described in this paper (two-thirds of the actual size).

INTERNATIONAL GRENFELL ASSOCIATION
ST. ANTHONY HOSPITAL
LABORATORY REPORTS

First Name: Crane, Last Name: Myrtle, Attending Physician: Dr. Purvis, Room No.: 202-5, Hosp. No.: 9210

Name: Myrtle Crane, Address: Pads 202-5, St. Anthony's Hospital, Date: 13.2.69, Ref: 46.52

TESTS REQUIRED: ☒ BLOOD (Morphology), ☒ URINALYSIS, ☒ MISCELLANEOUS

RESULTS: BLOOD (Morphology) 46.52, URINALYSIS 40. Lab., MISCELLANEOUS 40. Lab.

DATE: 13.2.69

Fig. 2 A page of the commonly used 'no-carbon-required' laboratory report forms. Each form must be lifted to see the one underneath (half actual size).

pathology is green, and haematology is red. Further colours are used to identify other reports, urine analysis is yellow, miscellaneous white with black print, blood grouping white paper with red print, and serology orange. The subject matter of each form is also indicated by name at the top and at the bottom of each form.

The forms are printed with boxes for the request data at the top left, and for the patient identification data (which may be inserted by hand, by adhesive label, or by mechanical printing) at the top right. The forms for chemical pathology, haematology, and urine analysis are divided at the foot of the page into vertical columns, each of which has a small box to be ticked to indicate the tests required, and beneath the small box the unit of measurement is indicated and the test is named, eg, g/100 ml Hb. The space at the foot of each of the columns is available for the laboratory results to be inserted, and a space is also provided at the foot of the report for the date. The forms for bacteriology, serology, and miscellaneous reports do not have columns. They have a space at the foot for the date but are otherwise blank in the lower portion. This blank space is used to insert the results, which are summarized along the bottom, eg, 7 Jan 69 perineal swab—pinworm ova present. A specimen form is illustrated in Figure 1.

A typical page of the previously used laboratory report forms is shown in Fig. 2, for comparison with Fig. 3, which shows a page made up of the forms described here.

In the black and white illustration the colour coding is absent, and so for simplicity only two kinds of report are shown in Fig. 3 (haematology and urine analysis). Similar forms are, however, used for most kinds of laboratory information, including chemical analysis, bacteriology, blood grouping and serology, and miscellaneous reports.

In any patient chart system a few kinds of report are better displayed separately. These

INTERNATIONAL GRENFELL ASSOCIATION
ST. ANTHONY HOSPITAL
LABORATORY REPORTS

Last Name: CRANE First Name: MYRTLE Attending Physician: DR. PURVIS Room No.: 202-5 Ward No.: Q.210

HAEMATOLOGY **INTERNATIONAL GRENFELL ASSOCIATION**

REQUESTED BY DR. PURVIS DATE 14/1/69 FOR LAB. USE

REPORT TO BE SENT TO MEDS

DATE SPECIMEN COLLECTED 14/1/69 TIME 10.00

CLINICAL DETAILS (AND TREATMENT):
HAEMOLYTIC INCOMPATIBILITY
INFECTIOUS HEPATITIS

PATIENT'S NAME: MYRTLE CRANE SEX F

ADDRESS: ST. A.

HOSPITAL NO. 202-5 DATE OF BIRTH 9/5/31

IN PATIENT STAFF ☒ OUT PATIENT ☐ OR REFERRED ☐

BLOOD FILM ☐

PLEASE TICK TESTS NEEDED

DATE	Hb	Hct	HbC	PCV	MCV	MCHC	ESR	PLATELETS	WBC	DIFFERENTIAL	BLD	CLT	PLT	U.R.	PH	SG	Alb	Sugar	Amoeb	Bile	Urobilinogen	WBC	RBC	Epith	Casts	Bacteria	Cytopl
18 JAN 69	11.9	36					28%																				
17 JAN 69	11.8	36					26																				
16 JAN 69	10.8	33					36																				
15 JAN 69	11.2	31					42																				
14 JAN 69	4.7	2.9					35																				
13 JAN 69	8.4	25					22																				

URINALYSIS DATE 11/1/69

DATE	Hb	Hct	HbC	PCV	MCV	MCHC	ESR	PLATELETS	WBC	DIFFERENTIAL	BLD	CLT	PLT	U.R.	PH	SG	Alb	Sugar	Amoeb	Bile	Urobilinogen	WBC	RBC	Epith	Casts	Bacteria	Cytopl
11/1/69	6.6	20					24%																				
10/1/69	6.6	18					25%																				
9 JAN 69	5.6	20					20%																				
8/1/69	5.7	16					10%																				

URINALYSIS DATE 7/1/69

DATE	Hb	Hct	HbC	PCV	MCV	MCHC	ESR	PLATELETS	WBC	DIFFERENTIAL	BLD	CLT	PLT	U.R.	PH	SG	Alb	Sugar	Amoeb	Bile	Urobilinogen	WBC	RBC	Epith	Casts	Bacteria	Cytopl
7 JAN 69	6.6	17					6%																				
7 JAN 69																											
6 JAN 69																											

(See explanation of test results on separate sheet)

Fig. 3 A cumulative record of laboratory results, prepared from 15 of the report forms described in this paper (half actual size).

are the reports of investigations that are usually only required once. The investigations concerned are those of tissue pathology, bone marrow morphology, gastric acid secretion tests, glucose tolerance tests, spinal fluid examination, and cytology. These reports require more space to display the information they contain, and little advantage would be gained from displaying them in sequence with the other reports.

Advantages

The results obtained by the different branches of the laboratory are displayed together on a single page of the patient's record chart, and are distinguished from each other by colour coding and by title.

The time sequence of the various findings can be readily appreciated.

Abnormal, anomalous, or erroneous results can easily be seen.

Fifteen report forms can be accommodated on a single page of the record chart.

The results on one form are not obscured by forms inserted later, and it is unnecessary to lift any forms to obtain the information required.

The forms can still be turned up if required to check the patient identification data.

The figures are read vertically instead of the right to left rows of some systems.

The form is wide to utilize the full width of the chart page for the display of information.

The form requires no more labour for handling or transcription than the widely used NCR forms, and no apparatus is required. The storage space required is slightly increased as the form is wider than normal.

The results produced by the laboratory, sometimes at considerable expense, are readily seen by the clinical staff. This facilitates their work and particularly such tasks as noting unusual results, reviewing progress, or writing summaries and discharge reports.

I am grateful to Mr Buchan, chief radiographer of the International Grenfell Association, for the photographs.

References

- ACP Report (1968). Data Processing in Clinical Pathology: Report of a Working Party of the Association of Clinical Pathologists. *J. clin. Path.*, 21, 231-301.
- College of American Pathologists (1965). *Symposium on Computer-Assisted Pathology*. Chicago.
- Ministry of Health (1965). *Report of Central Health Services Subcommittee on the Standardisation of Hospital Medical Records*. H.M.S.O., London.
- Scottish Health Services Council (1967). *Hospital Medical Records in Scotland, Development and Standardisation*. H.M.S.O., Edinburgh.
- Whitby, L. G., and Owen, J. A. (1965). Serial laboratory reports and records for chemical analyses. *J. clin. Path.*, 18, 668-677.