Manual Paper-based Systems

Developing a manual system

Financial constraints may require that a laboratory use a manual, paper-based system for all its information management. Careful planning, attention to detail, and awareness of problems can allow for the development of a good paper-based system that will provide satisfactory service.

Registers, logs and worksheets

Manual registers, logs and worksheets are widely used, and most laboratorians are very familiar with use of manual systems for managing samples through the laboratory. Even laboratories with some computerization will often have partially or totally handwritten worksheets.

Laboratory registers or sample logs take many forms, and almost all laboratories will have one that has been in use. When reviewing information management needs, consider whether an existing register is satisfactory, or whether it should be redesigned.

Registers and logs with good design are:

- practical to use and easy to complete;
- make it easy to find the data;
- make summarizing data and writing reports easier.

The logbook or register can be supplemented by the use of daily logbooks. For example, a separate logbook might be used to keep track of the numbers of patients and samples, or a logbook could be developed that is organized by the type of test. For some specialties such as microbiology or parasitology, a laboratory might decide to keep a specific logbook showing the total number of tests and the percentage of positive results.

Registers and logbooks are unique sources of information for preparing statistics and reports, although they can be more cumbersome to use and less complete than a computerized information system.
Data entry

When using a paper system, it is important to emphasize to staff that all data entry must be complete. A computerized system usually requires that all “essential fields” contain data, but in handwritten records there is no check on this point.

Legibility

Illegible writing may be a problem, but it must be addressed; emphasize to employees the importance of legibility.

Carefully consider the ease of use, and legibility of the final report of results—it is the primary product of the laboratory, so make sure it is done properly and professionally.

Handwritten reports

When handwritten reports are issued, the laboratory needs a copy for its files or archives. Not having an exact copy of the report can lead to later problems, if errors in transcription occur.

It is imperative that the records be kept in a safe place where they can be easily retrieved.

Storing paper-based materials

When storing paper-based materials, keep in mind that the goals are to be able to find a result, trace a sample throughout its pathway in the entire process, and evaluate a problem or an occurrence to find its source.

Some useful rules to think about are:

- keep everything, but develop a system for when and how to discard (for example, after the appropriate established retention time, shred records to maintain patient confidentiality);
- ensure easy access to information by those who need it;
- use a logical system for filing;
- use numbers to help keep things in chronological order.

Paper is fragile, and vulnerable to water, fire, humidity, and vermin (rodents and insects). Use a storage area that will protect against these elements as much as possible.