

INSTITUTIONAL ELECTRONIC DATA BASE OF AUTOPSY REPORTS. CAN WE DO IT IN SRI LANKA?

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Medical records in a hospital are considered an institutional property containing private or individual information. Special record rooms are maintained in hospitals for storage of such records as well as for necessary retrievals. The guidelines on how to keep the medical records including the accessibility and confidentiality of the documents as well as disposal of the documents are practiced according to rules and regulations of a country and they differ from country to country and state to state.^{1,2,3}

Unlike records of routine medical cases where examinations are conducted for treatment purposes, records of medico-legal examinations conducted are managed differently since a medico-legal report is a structured formal vehicle for communication between the medical officers and the legal system. Although it is prepared for a specific person by a specific expert, it becomes a document to be used by a diverse non-medical audience where the expert is accountable for the opinion that was expressed in the report⁴. Hence, the expert who gave the opinion receive summons to appear in a court of law to give evidence at the trial stage. However, due to a prolonged lagging time of court procedures (in Sri Lanka) of expert oral evidence, the individual pathologist who conducted the examination or the authorized person appointed or the institution which the expert was employed has to keep the records in a retrievable manner to use it at a latter date. With the development of computers, forensic report writings has revolutionized all over the world and many experts use computer formats to draft reports though it is the hard copy duly signed by the expert is sent to the courts ultimately. Therefore, many institutions have developed electronic data bases of autopsy reports for easy storage, easy retrieval as well as for statistics and epidemiological research.^{5,6,7}

In Sri Lanka, medico-legal work in a hospital is carried out by designated medical officers i.e. Consultant Judicial Medical Officer (specialized qualifications), Registrars in Forensic Medicine (specialized training), Medical Officer-Medico-Legal (MBBS qualifications with training) or District Medical Officer (MBBS qualification) or academic staff of Departments of Forensic Medicine of National Universities. According to

the Ministry of Health and University administration procedures if the doctor leaves the country or not in a position to attend to the Courts he or she has to officially handover the documents to a suitable person to appear on behalf of him. Therefore, a forensic doctor carrying medico-legal documentations from one institution to other leading to few cupboards of documentation to take home at the time of retirement is the practice in Sri Lanka. Although this practice has many advantages to the system it is not without any faults.

Maintaining institutional autopsy data bases either in written format or electronic format are practiced all over the world. The main purpose of them is to facilitate report retrieval for official purpose and for institutional statistics. In Sri Lanka too institutional statistics are obtainable, but maintaining them as a data base is not happening methodically. Autopsy report in Sri Lanka is a formatted health form called H42 in three languages where details are written according to the body cavities. When a postmortem report is sent to the courts H 42 is filled by the doctor in writing or in a typed form if facilities are available. With the availability of computers, forensic doctors in Sri Lanka have developed an electronic version of H 42 where filling of autopsy data is done electronically and printouts are taken as the original and send to the courts after placing the signature and the frank. A photocopy of the original is kept in case file for individual reference and electronic storage is not considered. However, new versions of electronic autopsy report formats based on systemic examination in a free style manner are appearing among newly qualified specialists which are user friendly.⁸

The development of an institutional data bases will not be a difficult task for most of the forensic unites in Sri Lanka because what we are lacking is an organized system and dedication. A methodical storage of electronic reports of all the individual experts stored in a data base with added spread sheets and an easily retrievable data system will be enough to start the system. The most important conceptual change that has to be done is developing the concept of institutional accountability and the belief that computers can

help us in producing a quality report which maximize the efficiency. A user friendly autopsy report format which will not take that much space in the computer coupled with facilities of storage of digital autopsy photographs can be used as reviewable material as well as enhancement of the report will solve the issue. What we need is the regular updating of the system with the data and occasional audit of the system.

A laptop or a desktop with an external memory devise, a printer, a digital camera and development of expertise of how to operate the system are the need equipments and skills for an electronic data base. These equipments are within an annual budget of a medico-legal institution in Sri Lanka. However, the development of the system where confidentiality is maintained to the highest standards with limited access to the system with security features and passwords have to be done since the medico-legal investigations may go on for years in some cases.

A quality autopsy report cannot be done if there is no quality autopsy. Institutional autopsy guidelines depending on the available facilities with standard operative procedures have to be developed first if we are to have a good autopsy report data base. All the doctors in the institution who conduct postmortems should ensure that minimum standards are met at the autopsy as well as the report. The autopsy report format should be a user friendly electronic document where a novice with little computer literacy can fill without wasting much valuable time. The data retrieval process should also be and equally easy system.

Maintaining electronic autopsy reports in a data base has many advantages than disadvantages to the system. The main advantage is the availability of retrievable data at any time for perusal compared to the hand written illegible case notes and tracing case files. The time to trace a case record is within seconds to minutes. It also help the pathologists to have a track of the progress of the autopsy reports especially when samples have been sent for further investigations and the report is yet to be completed. The other advantage of the electronic autopsy report system is uniformity of the autopsy standards. One of the major achievements in having electronic autopsy system is the improvement of the personal computer skills of the experts and the members of the team due to regular usage. It also reduced the dependability on computer operators/ secretaries and the delays attached to the issues of depending on another person for the product. Having a data base maintained by the department/unit also

increased institutional accountability of medico-legal report especially in a situation where the pathologist who did the autopsy will not be able to attend to the courts. If the report is completed the head of the institution will be in a position to send the report or attend to the case, if the court wishes.

The most important advantage of having an electronic autopsy report data base is the feasibility of having an organized regular peer review process. The availability of the retrievable data in a user friendly manner is the key factor for a successful review process. For this electronic report system backed up with digital photographs is very useful. The other important advantage is the possibility of conducting forensic epidemiology research based on the data base. Since the autopsy report may become a public document after sending the report to the requesting authority, using them for research will not become a problem if the anonymity of the data could be preserved, adhering to research ethics.

Compared to the number of advantages of an electronic autopsy data base the disadvantages are less. The main disadvantage is need of a capital investment; i.e a separate computer/ or an external device to store the reports in a designated place. However, we have to be aware of technical failures that can occur at any point. The other disadvantage one may think is the need of being with computer all the time. To overcome this problem regular maintenance of the computer and backup system where a hard copy is mandatory in the case file has to be implemented. Although confidentiality issues though can be considered as negative aspects it can be easily solved with modern techniques such as system accessibility being limited to the relevant personnel. The external device where data storage is done should be kept under lock and key where unauthorized persons will not have access to use them.

In conclusion we would like to state that though dreams of improving existing systems are born as a brain child of an individual, making the dream come true is a team effort. Constant dialog with the team, attending to problems then and there, reviews and audits of the system are more important to sustain the dream and take the dream to a fully fledged realization.

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