

## LETTER TO THE EDITOR.

### TURNAROUND TIME: BALANCING EXPECTATIONS.

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The turnaround time (TAT) is a key way by which clinicians measure the level of efficacy of the chemical pathology laboratory<sup>1</sup> and the quality of its service delivery.<sup>2</sup> Dissatisfaction in the delivery time is sometimes expressed by laboratory users.<sup>3,4</sup> Laboratory physicians and clinicians are not unified on what the ideal turnaround time should be or on which exact definition should be used as there are sub definitions.<sup>3,5</sup> The total TAT is the time from when the request is made to when the result is received by the requesting physician.<sup>6</sup> The laboratory is primarily concerned with the aspect it can control. Though it is still responsible for the information dissemination and re-training required to minimize errors in the extra laboratory phase. (Pre-pre analytical phase) it has a role to play in the pre-pre analytical phase, mainly information dissemination and re training. Loosely put the TAT is the timeliness of a result.<sup>2</sup> Physicians and patients prefer to receive results as soon as possible, irrespective of the implication on managerial decisions. Sometimes it can be lifesaving.<sup>7</sup> Increased TAT for some request breeds increased discontent and can be a source of frustration for both parties.<sup>1</sup> The TAT varies depending on the type of request, location of the patient and the time of the work day. It also varies based on the analyte, institution and method.<sup>6</sup> Most requests sent at the beginning of the work day are ready by the close of work. Actual analysis usually do not take more than one hour for requests processed manually and less than 30 minutes for those done by automated techniques. More time is required for preparation, quality control and reporting. A total turnaround time of less than 60 minutes is acceptable for emergency requests.<sup>6,8,9</sup> With the auto analyzer the results of

tests under the renal and liver function panel as well as lipids can be received within the same day. The later two when done manually could take a couple of days while hormonal requests take one to two weeks. These are done in batches to minimize cost and maximize resources. Cardiac markers are done regularly by the laboratory but unfortunately, currently we do not have same day results. Delays can also be caused by technical issues, verification of doubtful results, quality assurance and control, insufficient specimen amongst others.<sup>1</sup>

In developed countries, unpredictable situations such as machine breakdown, interruption in power and water supply are excluded from the calculation of TAT.<sup>8</sup> These play a more significant role in our environment and in practice definitely cause delays. Reducing TAT requires minimizing the extra laboratory factors that often play a major role.<sup>8</sup> This might mean reducing the time spent waiting for phlebotomy, transport to the laboratory which usually involves human couriers,<sup>8,6</sup> and time spent in making payments.

The best time to send a request is in the morning especially for those tests done routinely and needed on a daily basis to make a decision such as serum bilirubin by the neonatologist and electrolytes by those in the intensive care unit and pre operation requests. This might mean that someone is designated to send the requests immediately the patient is seen instead of waiting till the end of the entire ward round.

Most requests are accepted during call time but only emergencies will be processed. Such emergencies include electrolytes, urea, bilirubin for neonates, random plasma glucose, cerebrospinal fluid glucose and protein. The results will be ready for pick up

during the call time, within the hour or half an hour if need be. Alerting the clinicians of critical results would be easier if there is a contact number. False alarms are a distraction to the work environment.<sup>10</sup> This means that if a result is needed by the next morning, it is unnecessary to write 'very urgent' except you need it within the hour and the indication should be clearly stated. Improperly filled request forms do not help the prioritizing process. Analysing the 'on call' requests as they come, instead of batching them together in the long run increases the TAT of the requests that come later.

## CONCLUSION AND RECOMMENDATION

The aim in improving the TAT is to do most of the cold cases during the work day when more staff are available so that the call times can be devoted to critical care areas and genuine emergencies. In the immediate future we look forward to better funding and stability of services and therefore improved TAT. Long term plans may include reducing the human courier aspect by semi automating the transport system, upgrading the Laboratory Information System (LIS) and having a central hospital information system. Clinicians and Laboratory physicians should work together as a team. We have the same overall goal of improving patient care.

Whenever difficulty is encountered and when special tests need to be requested or if a patient is about to go through a critical care/close monitoring phase, the pathologist should be contacted for adequate planning and trouble shooting.

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