What kind of services can a laboratory offer to the physician?

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An effective, fit for purpose hospital coagulation laboratory service requires close collaboration between laboratory scientists and the doctors who make use of that service. The lab needs to provide the right version of the right assays in time to support clinical management, with suitable interpretation that must be approved by expert haemostasis expert clinicians. The Sheffield Haemophilia centre has a medical doctor as Director. The haemophilia and thrombosis centre includes the coagulation laboratory so the lab service is also directed by the Clinical director.
The lead scientist is responsible for the day to day running of this service but decisions on the level and nature of the service are taken after discussion with the clinical director. There are weekly multi disciplinary team meetings of all the haemophilia centre staff to discuss individual cases but in addition there are monthly planning meetings involving the leads scientist and all the haemostasis consultants, with minutes and agreed actions. This is the place where policy is agreed. It is also important that the lab service meets the needs f the other units in the hospital, outside of the haemostasis/haematology consultant group.

Two examples taken from the minutes of the last planning meeting are shown below to illustrate how the lab might respond to users needs , indicating how the lab service can be continuously improved to meet the needs of physicians using the service, including external users .

Change in laboratory method with implications for patient management

Since the change of laboratory method from ELISA to the rapid Accustar method for ADAMTS 13 activity the assay can be available 24/7. This increased availability has led to the number of requests increasing and smaller hospitals have begun requesting ADAMTS 13 activity in cases which are not thought to be TTP in order to rule this out. We have now had more than a dozen cases with Accustar <10 IU/dl (10% ) in cases who were not likely to be TTP based on clinical picture. Because they seemed unlikely to be TTP we did ELISA activity which was in the range 20-60 IU/dl. These cases looked like DIC rather than TTP and all had DDimer >50000 ng/ml, in contrast to immune TTP where our cases had DDimer <10000 in all but one case. Since we are now seeing cases in the 3-10 IU/dl range of ADAMTS activity which did not turn out to be TTP that were not seen with the previous lab method it was decided to review the wording on reports.
The previous wording said
“An ADAMTS 13 activity of <10 IU/dl is highly suspicious of TTP within an appropriate clinical setting. If any uncertainty, please discuss with a Consultant Haematologist. Please note assay now performed by automated chemiluminescence immunoassay.”
It was agreed that for outside sites it would be helpful to draw attention to the results of 3-10 IU/dl in cases that were not TTP. It was greed to amend the wording so that it says

“An ADAMTS 13 activity of <10 IU/dl is highly suspicious of TTP within an appropriate setting, but ADAMTS 13 activity of 3 - 10 IU/dl by chemiluminescence

can occur in conditions other than TTP. If any uncertainty, please discuss with a Consultant Haematologist"

Low fibrinogens in obstetrics unit cases.

The lab were contacted about a fib of 1.4 g/l in an obstetric case . The ward expressed surprise that it wasn't telephoned. It was authorised and released electronically with an acceptable turnaround time so there were no lab issues to discuss. A Teams call to discuss abnormal results took place with Consultant haemostasis colleagues, Lab staff and Obstetric colleagues including a consultant anaesthetist .

An internal audit indicated that there were only 10 adult cases on the obstetric unit with Fib <2 g/l in last 12 months. Since a fibrinogen of 2g/l is a decision limit for possible management with fibrinogen concentrate it was agreed to telephone any fib results <2 g/l in adult cases in the relevant locations using the number manned by the Labour ward coordinator rather than individual wards to be sure there was appropriate oversight.