INDUSTRY SPONSORED SYMPOSIUM ABSTRACTS

INDUSTRY SPONSORED SYMPOSIUM 1
BECKMAN COULTER

The role of autoverification in postanalitic process improvement

Özlem Gülbahar, Turkey

Today, there is an enhancing workload in clinical biochemistry laboratories because of the increase in test volume and variety. However, expectations of clinicians are increasing from the laboratory, including faster results. One of the solutions to cope with this situation is to use auto-verification (CDSS: Clinical Decision Support System). By CDSS, both the probability of human error and the turnaround time (TAT) will be shortened. More importantly, more time can be devoted to reviewing complex test results that require expert interpretation. Thus, it may be possible to develop rational laboratory use applications such as reflective testing and consultation. However, all these benefits depend on the creation of a suitable and adequate verification algorithm. Basically, an algorithm should include evaluation parameters for preanalytical phase (serum index, etc.), analytical phase (flags etc.) and postanalytical phase (critical value, delta check, etc.). In addition, validation studies must be completed, and reliability should be tested before use. The relevant CLSI guidelines (AUTO 10A and AUTO15) can be used for CDSS use. The use of CDDS, which is becoming more widespread in Europe and the USA, has started to be applied not mandatory in our country and its use is controlled by the health authority.

INDUSTRY SPONSORED SYMPOSIUM 2
SNIBE

The clinical performance of Maglumi AMH, 17-OH progesterone and B2 microglobulin

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After seeing the evaluation of post-analytical phase as laboratory specialists by taking the opinions about outcomes of patients regarding the available results of 17 OH progesterone, AMH, β2 microglobulin and free testosterone(it will be called Maglumi panel in the next), the survey is made which is for clinicians about the clinical usefulness of our results especially for diagnosis and monitoring of concerning diseases .
With the help of LIS data, the most frequent test requesting clinicians and the clinicians who requested the Maglumi panel tests have been chosen. In this case, The questionnaire was prepared and directed to each clinician by an e-survey in an electronic environment including the purpose where the results were graphically evaluated.
In terms of its contribution to clinical monitoring, positive feedback is received from most clinicians. Among all feedback, no less than 92% positive feedback is given expect that free testosterone with 84% positive feedback on monitoring, however, 92% positive feedback is given on its diagnostics use.
In conclusion, total testing process may be never ending circle. Communicating with clinician is another extra step we need for patient safety.

INDUSTRY SPONSORED SYMPOSIUM 3
ROCHE

Automation solutions in laboratories

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XXX. National Congress of the Turkish Biochemical Society TBS 2019 and XXVII. Balkan Clinical LaboratoryFederation Meeting BCLF 2019 have been hold together on October 27-31, 2019, in Antalya, Turkey. During the congress, Mrs. Karakukcu made a satellite symposium about the benefits of the workflow automation systems and she shared her experience during the installation and re-structure processes of the Biochemistry Laboratory located in the Central Laboratory, in the Kayseri City Hospital, one of the biggest hospitals of Turkey, with a 1607 bed capacity.
The start and installation of the biochemistry lab was on May 2018 without an automation system. During that time, there was 3,400 samples and 33,350 clinical chemistry and immunoassay tests daily and rate of Immunoassay testing was 19.3% of total. Under these conditions, the average Turn Araound Time (TAT) was 370 minutes. The whole system and company was changed on October 2018. System workflow was rearranged.
After the change in system on October 2018 (just only the change of analyzers and workflow, the automation system was not installed yet), daily run test number was 36,070. TAT decreased to an average of 114 minutes on January 2019. In this period, Immunoassay testing rate was 22.4%.
After the automation system was installed in January 2019, the number of laboratory tests reached 40,028 in September 2019. The average TAT was 135 minutes, although the immunoassay test rate reached 25%.
The addition of an automation system increases the control of the laboratory. It also has the effect of improving the workflow and eliminating errors in such high-volume laboratories. The contributions of automation to the laboratory can be summarized under 3 main pillars: Quality, Flexibility, Short and Predictible TAT.
Sample quality is checked in the first stage with a high resolution camera. In case the samples are lipemic, icteric or hemolytic, scenarios are defined and the journey of the sample in the laboratory is determined.
Sample loading to the system can be done with a bulk loader module or via a separate input module. The centrifuge module can change the rotational speeds according to the test contained in the samples. For example, it can be defined as 9 minutes rotation time for hepatitis tests and 7 minutes for other tests.
Since the carriers which carrying the samples in the automation system are also the carriers of the analyzers themselves, the samples are not transferred to another carrier while entering the analyzers. Thus, there is no time loss during the transfer of the samples.
In the automation system, a post analytical device with a capacity of 27,000 samples is used to archive and store samples at 4-8°C. Samples that complete the storage period defined as 3 days are sent to waste automatically by the system.
Due to the structure of the City Hospitals, the systems are expected to be quite suitable for expansion. The Cobas ® Connection Modules (CCM) system meets this expectation quite well. It is possible to replace the analyzers with faster models and to add new pre-analytical equipments to the system. In addition, the system can be extended to connect not only biochemistry analyzers but also hemogram and coagulation analyzers.

INDUSTRY SPONSORED SYMPOSIUM 4
MINDRAY

Clinical utility of Reticulocyte Hemoglobin and Hypochromic erythrocytes reported by Mindray BC6800 Plus hematology analyzer in the study of erythropoiesis

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The hemogram is one of the more required tests by the clinicians, the analysis nowadays is totally automated, and the correct interpretation of the results requires joining the knowledge about the characteristics of the equipment and the clinical meaning of the results. The suppliers contribute innovations, providing new parameters that can help the clinicians to make a diagnosis in a fast, cheap, and useful manner.
Flow cytometry provides information about individual cell characteristics. This is in contrast to previous measurements of MCV, MCH, and MCHC which only calculate mean values for the total red cell population. Modern counters can provide information about the reticulocyte counts but also about the characteristics of these cells (size or Hb content), related to the quality of the erythropoiesis, giving information of the current erythropoietic activity of the bone marrow.
Mindray (Shenzhen, China) has recently launched a new analyzer 6800 Plus, which incorporate the RBC extended parameters, RBC subsets and the reticulocyte Hb content.
These parameters expand information at a cellular level:
(1) Provide information of the Hb on individual red cells, erythrocytes and reticulocytes as well
(2) Can aid in monitoring changes in Hb synthes