



## **Proceedings of the Sri Lanka College of Paediatricians**

19<sup>th</sup> Annual Scientific Congress - 12<sup>th</sup> August to 14<sup>th</sup> August  
2016

Galle Face Hotel, Colombo

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## AN INTERNAL AUDIT ON SELECTED PRE ANALYTICAL ERRORS IN SAMPLES RECEIVED TO THE DEPARTMENT OF CHEMICAL PATHOLOGY, LADY RIDGWAY HOSPITAL

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### INTRODUCTION

Pre analytical problems are the major source of laboratory errors, accounting for 60- 70% of total errors encountered within the total testing process. Haemolysed, lipaemic and icteric samples are one aspect of the pre analytical errors. These will cause interference to analytical procedures and produce erroneous results.

### OBJECTIVES

To assess the current situation of the laboratory by doing an internal audit, and to take the necessary steps to improve the situation.

### METHOD

A retrospective descriptive study was carried out reviewing the records of 3703 patient samples from 1st April 2016 to 29th April 2016. Percentage of haemolysed, lipaemic and icteric samples were calculated. Subsequently an education programme on minimising these errors was done by a medical officer for nurses in the Lady Ridgway Hospital for 2 days. A re-audit was performed from 30th April 2016 to 25th May 2016.

### RESULTS

Among 3703 samples of the initial audit, 212 (5.7%) were haemolysed, 257 (6.9%) were lipaemic, 225 (6.0%) were icteric. According to the International Federation of Clinical Chemistry working group on laboratory errors and patient safety (IFCC WG-LEPS) more than 2% of haemolysed samples in biochemistry laboratory are not acceptable.

Among 4250 samples of the re-audit, 186 (4.3%) were haemolysed, 318 (7.4%) were lipaemic and 236 (5.5%) were icteric.

### CONCLUSION

Even though the percentage of icteric samples has not being changed after the intervention, there is a reduction in the percentage of haemolysed samples. However it has not improved up to the expected level. In spite of the intervention percentage of lipaemic samples has increased. This emphasizes the need of a continuous professional education to minimize pre analytical errors.