P-234 - ANALYTICAL PERFORMANCE EVALUATION FOR NEONATAL TSH IN THE BUENOS AIRES CITY NEONATAL SCREENING PROGRAM USING AN EXTERNAL QUALITY CONTROL PROGRAM

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INTRODUCTION: The Neonatal Screening Program (NSP) of the Buenos Aires City Government has four laboratories in networking. Given the importance of the comparability of the results, the Sigma (σ) metrics is a useful tool for evaluating the analytical performance of the process. OBJECTIVE: To evaluate the analytical performance of neonatal TSH (nTSH) for the four laboratories by calculating the overall σ index of each panel of dried blood samples, in the 2016 - 2018 period. MATERIALS AND METHODS: The nTSH results of 32 External Quality Control Program (EQCP) samples (16 panels) provided by the Argentine Biochemical Foundation, were evaluated for the 4 NSP laboratories. The interlaboratory σ (σi) was calculated for each sample using: An Allowable Total Error (ATE%) of 54%, interlaboratory BIAS% and CV% (BIASi%, CVi%), according to σi = (ATE% - |BIASi%|)/CVi%. The percentage of adherence to the EQCP and the degree of compliance in terms of the maximum allowed BIAS% (BIAS%m) established by EQCP of ± 22.5% were calculated. The four laboratories use DELFIA (Perkin-Elmer) METHOD: The calculations were made using data of the peer group. The sigma analysis criteria consider σ>4 as optimum while σ<2 shows a need for improvement. RESULTS: The overall compliance of the NSP to the EQCP was 95.3%. The overall compliance to the BIAS%m was 79.2 %, whereas it was 68.7 % for samples between 7 and 15 µUI/ml (which includes our cut-off established in 8 µUI/ml blood). σi index was calculated in 32 samples (range= 0.4-9.9): 12.5 % of them had σ<2, 43.7 % had 2<σ< 4 and 43.7 % had σ >4. In those samples between 7 and 15 µUI/ml (n=7), 14.3 % had σ<2, 57.1 % had 2<σ<4 and 28.6 % had σ>4. CONCLUSION: The low number of samples offered by the provider close to our cut-off in the analyzed period is a certain limitation of this study. However, the results show that the analytical performance of the NSP is acceptable. Our data shows an opportunity for improvement and the need to keep monitoring the analytical performance of our Program.