P-232 - MANUFACTURE AND EVALUATION OF A DEVICE TO VERIFY MINIMUM QUANTITY OF SAMPLE REQUIRED FOR ANALYSIS IN NEWBORN SCREENING

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INTRODUCTION: In Costa Rica, there has been a steady increase of unsatisfactory samples, for newborn screening since 2013. Insufficient quantity of sample to carry out the corresponding analyzes is the main cause. AIM OF THE STUDY: The aim of this study is to evaluate if the prototype device assures the minimum amount of blood sample required, at the time of collection, to perform all the downstream analysis related to newborn screening. At the same time the device is also useful to evaluate correct sampling by health workers in medical facilities. MATERIALS AND METHODS: The prototype device consists of a plastic transparent sheet (120x40 mm), with an 8 mm diameter opening in the center. The area of the opening is compared to the area of the sample obtained by capillary puncture. If the area of the sample is greater than the opening in the device, the sample is satisfactory. On the contrary, if the area of the sample is less than the opening on the device, the sample is considered unsatisfactory. A total of 280 devices were distributed in 36 collection centers throughout the country. RESULTS: After a follow-up regarding the production of unsatisfactory samples, we found that in 30 centers, the percentage of unsatisfactory samples had decreased, only 5 centers had increased and in 1 center the same percentage did not change. CONCLUSION AND DISCUSSION: The extended distribution of this device throughout sample collecting medical facilities will have a favorable impact in decreasing the percentage of samples classified as insufficient. This tool will complement the use of other resources such as statistical monitoring and training.