## Establishing A Single Growth Curve For Newborn Weight Classification At Birth In The Nursery

Newborn babies are classified as appropriate, small or large for gestational age based on their birth weight and the growth chart used for classification. Small and large for gestational age newborns are at higher risk for complications and especially hypoglycemia. Accurate classification is important and allows for appropriate monitoring of blood glucose and timely intervention in case of hypoglycemia to prevent serious complications. The availability of numerous growth charts for classification based on weight often leads to different clinicians using different charts to plot babies. Subsequently, newborns can be misclassified depending on the primary physician leading to low consistency in care of newborn babies. Our aim:

To identify the most appropriate growth chart for use in our population and institution and implement its use across all clinicians involved in the care of newborns in the nursery. Our activity:

We collected data from medical records, specifically birth weight, gestational age and weight classification, of newborns admitted to the nursery over a period of three months and then used different growth charts, namely the Fenton, Olsen, WHO and Intergrowth charts to classify newborns based on their weight as appropriate, small or large for gestational age. Using Chi-square test, we analyzed data and identified statistically significant (p<0.05) differences in weight classification using the different charts in approximately 500 babies in the nursery. Based on the results of our analysis and discussion with nursery attendings, it was decided to use the Olsen growth chart in the unit. The first intervention was to create a "Nursery Handbook" for the new interns and then based on the results proceed with further interventions until at least 90% of newborns are appropriated classified. Data pre-intervention showed the use of the Olsen growth chart of 44%, and the post-intervention and improvement up to 98%. No further intervention was required.