

Abstract:

BACKGROUND AND OBJECTIVES: Early onset sepsis (EOS) is an important cause of neonatal morbidity and mortality. Timely administration of antibiotics is crucial in management. We initiated a quality improvement project to improve timely administration of antibiotics.

METHODS: Primary drivers of change identified by the team were improving delivery of antibiotics from pharmacy and improving time to admit in the electronic medical record (EMR) in order to improve overall timeliness of antibiotics administration. Timings of antibiotics administration was tracked by using a control chart. Timings of antibiotics and outcomes of pre-intervention (December 2016) were compared with post intervention of PDSA cycles (January 2017-November 2018).

RESULTS: There was statistically significant improvement in time to admission in electronic medical records over the time periods of pre-intervention, PDSA I and PDSA II (p-value < 0.05) (Table 1). Also, time to delivery of antibiotics from pharmacy was significantly reduced between PDSA cycles from 21 minutes to 9 minutes with improvement in overall workflow. An average time to infusion of antibiotics decreased from 70 minutes to 48 minutes. There was also overall improvement in number of neonates receiving antibiotics under 1 hour of decision making from 37% to 77%.

CONCLUSIONS: In our study we were able to successfully implement our “antibiotics under one hour” goal. The ability to achieve this objective can be met across multi-institutions rendering care to newborns if the approach is multidisciplinary. Deleting obstructions in the process that involve admission, registration and entry into the EMR effectively reduced time.

Reference:

Ma, C., Levin, G., Panda, S.K., Sambalingam, D. and Singh, A.P. (2020) Improving timing of antibiotics in neonates with early onset sepsis - quality improvement project. *Journal of Neonatal-Perinatal Medicine*. March 11th. doi: 10.3233/NPM-190293. (Epub ahead of print).