Children's Hospital of Philadelphia PolicyLab

Clinical Decision Support and Palivizumab

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BACKGROUND AND OBJECTIVES: Palivizumab can reduce hospitalizations due to respiratory syncytial virus (RSV), but many eligible infants fail to receive the full 5-dose series. The efficacy of clinical decision support (CDS) in fostering palivizumab receipt has not been studied. We sought a comprehensive solution for identifying eligible patients and addressing barriers to palivizumab administration.

METHODS: We developed workflow and CDS tools targeting patient identification and palivizumab administration. We randomized 10 practices to receive palivizumab-focused CDS and 10 to receive comprehensive CDS for premature infants in a 3-year longitudinal cluster-randomized trial with 2 baseline and 1 intervention RSV seasons.

RESULTS: There were 356 children eligible to receive palivizumab, with 194 in the palivizumab-focused group and 162 in the comprehensive CDS group. The proportion of doses administered to children in the palivizumab-focused intervention group increased from 68.4% and 65.5% in the two baseline seasons to 84.7% in the intervention season. In the comprehensive intervention group, proportions of doses administered declined during the baseline seasons (from 71.9% to 62.4%) with partial recovery to 67.9% during the intervention season. The palivizumab-focused group improved by 19.2 percentage points in the intervention season compared to the prior baseline season ($p < 0.001$), while the comprehensive intervention group only improved 5.5 percentage points ($p = 0.288$). The difference in change between study groups was significant ($p = 0.05$).

CONCLUSIONS: Workflow and CDS tools integrated in an EHR may increase the administration of palivizumab. The support focused on palivizumab, rather than comprehensive intervention, was more effective at improving palivizumab administration.

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