

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.

Journal:

[Applied Clinical Informatics](#)

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