Clinical Pathway Effectiveness: Febrile Young Infant Clinical Pathway in a Pediatric Emergency Department

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OBJECTIVE: Young infants are often treated in emergency departments (EDs) for febrile illnesses. Any delay in care or ineffective management could lead to increased patient morbidity and mortality. A standardized ED clinical pathway may improve care for these patients. The objective of this study is to evaluate the impact of a febrile young infant clinical pathway implemented in a large, urban children's hospital ED on the timeliness and consistency of care.

METHODS: This study used a before-and-after retrospective observational study design comparing 2 separate periods: prepathway from September 2007 through August 2008 and postpathway from September 2009 through August 2010. Subjects were infants aged 56 days or younger presenting with a rectal temperature of 38.0[degrees]C or higher. Patients were excluded if they were transferred from another hospital or if they developed a fever after initial presentation.

RESULTS: Five hundred twenty infants were enrolled. The mean time to urine collection and time to the first antibiotic administration were reduced after pathway implementation (23-minute reduction to urine collection vs 36-minute reduction to the first antibiotic administration). There was improvement in the proportion of infants who received the pathway-specific antibiotics based on age (odds ratio, 7.2; 95% confidence interval, 4.4, 11.9) and the proportion of infants who were administered acyclovir based on pathway guidelines (odds ratio, 8.8; 95% confidence interval, 2.9-30.0).

CONCLUSIONS: An ED-based febrile young infant clinical pathway improved the timeliness of initiation of work-up as measured by urine collection and of therapy by an earlier administration of the first antibiotic, as well as decreased variability of care.

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