

POSTER ABSTRACTS

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PS2 – 28

Decision Support For Amoxicillin Dosing In The Electronic Medical Record: If You Build It, Will They Use It?

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Background: A sizeable literature exists which suggests that the electronic medical record (EMR) can dramatically reduce prescribing errors, particularly when decision support tools are incorporated. In an effort to address resistant pneumococci, a weight-based dosage calculation program was introduced within HealthPartners EMR system (EpicCare) for amoxicillin ordering. Rationale for the dosage calculation was based on 2004 American Academy of Pediatrics and American Academy of Family Practice recommendations, which doubled the previously advised dose of 20-45 mg/kg/day to 80-90 mg/kg/day for otitis media and similar infections in children.

Aims: To examine the experience of the health system in reducing dosage errors after implementing the computer-assisted ordering for amoxicillin within a pediatric population.

Methods: The computer dosage calculation program for liquid 250mg/5ml amoxicillin (based on 77 mg/kg/day) was introduced in the EMR March 2006. All orders for this form and dose of amoxicillin among patients age 2 months to 12 years who weighed 30 kg or less, along with actual patient weight at time of order, were identified within automated medical record data for a two year period of time. Differences in amoxicillin orders, which were determined to be too low (<50 mg/kg/day), appropriate (50-100 mg/kg/day) or too high (>100 mg/kg/day) for patient weight, were examined one year prior to implementation (3/1/05-2/1/06) and one year post-implementation (4/1/06-3/31/07).

Results: For patients weighing 30 kg or less, 29% of orders were too low for patient weight prior to the implementation of the dosage calculation program, compared to 23% post-implementation (P<0.001).

Conclusions: While decision support for dosing in the EMR resulted in a statistically significant improvement in amoxicillin ordering, a substantial number of orders (almost one-fourth) were still too low for patient weight based on current recommendations. Providers appear to be adjusting the dose calculated by the EMR. Especially when recommendations change, implementation of computer-assisted ordering may not be successful without accompanying provider education.