

## **Incidence of adverse drug events and potential adverse drug events: implications for prevention.**

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Bates DW, Cullen DJ, Laird N, et al. Incidence of adverse drug events and potential adverse drug events. Implications for prevention. ADE Prevention Study Group. JAMA. 1995;274(1):29-34.

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The authors report on their seminal 1993 study of [adverse drug events](#) (ADEs) at the Massachusetts General Hospital and Brigham and Women's Hospital in Boston. Using 11 intensive and general care units at the two hospitals, the authors prospectively identified actual and potential ADEs by contemporaneous chart review, provider interview, and voluntary incident reporting. The authors report an adjusted rate of ADEs of 6.5 per 100 admissions, 1.8 per 100 considered preventable. Among preventable ADEs, none were fatal, but 43% were judged serious and 20% life threatening. The authors break down ADEs by drug class and by the stage at which the error occurred (ordering, transcription, dispensing, or administration). This study has become the basis for the rationale for implementing computerized physician order entry systems (CPOE), barcoded medication administration systems, and other systems designed to reduce preventable medication errors at each stage.