Benefits of personal digital assistance in decreasing prescribing errors: preliminary experience from a tertiary care hospital

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摘要
Abstract

To prevent errors made during the prescription of drugs, we try to understand if the personal digital assistance (PDA) can have such benefits. Between January 1 2001 and March 31 2002, we surveyed the prescription orders from the intensive care units (ICUs) of a 961-bed teaching hospital and also prospectively analyzed any potentially serious prescribing errors. The PDA was introduced into prescription system in January 1 2002. Before the use of PDA, the total prescribing errors are 1,505 among the overall 144,481 orders (1.04%). Those errors can be categorized into five main factors, including work environment (670 events, 44% of total errors), team problem (190, 13%), individual factors (410, 27%), task problems (147, 10%) and patient factors (88, 6%). After the PDA era, the incidences of total prescribing errors decreased significantly compared to those before PDA use (0.58% vs. 1.04% before PDA, $P<0.001$). Further analysis revealed that the decline in errors due to problems of work environment (31%), team (4%) and tasks (5%) were the main contributing factors. As to the real incidences, there were significant decline in the factors concerning physical environment (0.3 ‰ vs. 0.7 ‰, $P<0.05$), staffing (0.3 ‰ vs. 2.1 ‰, $P<0.001$), communication (0.0 ‰ vs. 0.4 ‰, $P<0.05$), responsibility (0.1 ‰ vs. 0.6 ‰, $P<0.05$), protocols (0.0 ‰ vs. 0.4 ‰, $P<0.05$) and no routine pathways (0.3 ‰ vs. 0.7 ‰, $P<0.05$). In conclusion, the PDA can diminish at least half of the common factors affecting prescription errors and also decrease half of the incidences. (Ann. Disaster Med 2002;1:20-28)