

We have introduced a time-efficient and easily implementable intervention that relies on a computerized trigger tool, which identifies patients who are candidates for an iv to oral antibiotic switch” Berrevoets et al (2017).

Abstract:

Background: Timely switch from intravenous (iv) antibiotics to oral therapy is a key component of antimicrobial stewardship programs in order to improve patient safety, promote early discharge and reduce costs. We have introduced a time-efficient and easily implementable intervention that relies on a computerized trigger tool, which identifies patients who are candidates for an iv to oral antibiotic switch.

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Methods: The intervention was introduced on all internal medicine wards in a teaching hospital. Patients were automatically identified by an electronic trigger tool when parenteral antibiotics were used for >48 h and clinical or pharmacological data did not preclude switch therapy. A weekly educational session was introduced to alert the physicians on the intervention wards. The intervention wards were compared with control wards, which included all other hospital wards. An interrupted time-series analysis was performed to compare the pre-intervention period with the post-intervention period using ‘% of i.v. prescriptions >72 h’ and ‘median duration of iv therapy per prescription’ as outcomes. We performed a detailed prospective evaluation on a subset of 244 prescriptions to evaluate the efficacy and appropriateness of the intervention.

Results: The number of intravenous prescriptions longer than 72 h was reduced by 19% in the intervention group (n = 1519) (p < 0.01) and the median duration of iv antibiotics was reduced with 0.8 days (p = <0.05). Compared to the control group (n = 4366) the intervention was responsible for an additional decrease of 13% (p < 0.05) in prolonged prescriptions.

The detailed prospective evaluation of a subgroup of patients showed that adherence to the electronic reminder was 72%.

Conclusions: An electronic trigger tool combined with a weekly educational session was effective in reducing the duration of intravenous antimicrobial therapy.

Reference:

Berrevoets, M.A.H., Pot, J.L.W., Houterman, A.E., Dofferhoff, A.S.M., Nabuurs-Franssen, M.H., Fleuren, H.W.H.A., Kullberg, B-J., Schouten, J.A. and Sprong, T. (2017) An electronic trigger tool to optimise intravenous to oral antibiotic switch: a controlled, interrupted time series study. *Antimicrobial Resistance & Infection Control*. August 15th. .

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