Delta T, a useful indicator for pharmacy dispensing data to monitor medication adherence

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Author(s) Baumgartner, Pascal C; Vrijens, Bernard; Allemann, Samuel; Hersberger, Kurt E; Arnet, Isabelle
Author(s) at UniBasel Arnet, Isabelle ; Baumgartner, Pascal ; Allemann, Samuel ; Hersberger, Kurt ;
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Calculating patients' medication availability from dispensing or refill data is a common method to estimate adherence. The most often used measures, such as the medication possession ratio (MPR), average medication supplies over an arbitrary period. Averaging masks the variability of refill behavior over time.; To derive a new absolute adherence estimate from dispensing data.; Dispensing histories of patients with 19 refills of direct oral anticoagulants (DOAC) between 1 January 2008 and 31 December 2017 were extracted from 39 community pharmacies in Switzerland. The difference between the calculated and effective refill day (ΔT) was determined for each refill event. We graphed ΔT and its dichotomized version (dΔT) against the MPR, calculated mean ΔT and mean dΔT per refill, and applied cluster analysis.; We characterized 2204 refill events from 116 DOAC patients. MPR was high (0.975 ś 0.129) and showed a positive correlation with mean ΔT. Refills occurred on average 17.8 ś 27.9 days "too early", with a mean of 75.8 ś 20.2 refills being "on time". Four refill behavior patterns were identified including constant gaps within or at the end of the observation period, which were critical.; We introduce a new absolute adherence estimate ΔT that characterizes every refill event and shows that the refill behavior of DOAC patients is dynamic.

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