

# What’s New in the Patient Safety World

October 2021

## Tool to Prevent Discontinued Medications from Being Dispensed

One of the biggest gaps in medication safety is failed discontinuation of medications. A clinician decides to discontinue the medication and either enters an order for that discontinuation or simply tells the patient to stop taking the medication. But the community pharmacy or mail order pharmacy is never notified of that discontinuation and continues to dispense that medication. Our multiple prior columns on this problem are listed below.

Enter a tool called CancelRx. We mentioned CancelRx in our March 2017 What's New in the Patient Safety World column [“Yes! Another Voice for Medication e-Discontinuation!”](#). Researchers at the University of Wisconsin recently demonstrated the value of CancelRx in reducing outpatient medication discrepancies by ensuring communication of medication discontinuation to pharmacies ([Watterson 2021](#)).

CancelRx integrates with clinic EHR and pharmacy dispensing software and automates the manual process that was previously delegated to clinic and pharmacy staff. It automatically sends an electronic notification of a medication discontinuation from a clinic’s EHR to a pharmacy’s dispensing software. After a clinic prescriber has discontinued a medication and indicated that the pharmacy should be notified, the order is processed by a third-party vendor, in this case SureScripts (the same platform used to communicate electronic prescriptions). For the cancellation message to be electronically transmitted via CancelRx, the functionality must be “turned on” at SureScripts for both the clinic sending the message and the pharmacy receiving the message.

The research team used an interrupted time series analysis (ITSA) to evaluate the effect of CancelRx to decrease medication discrepancies in the EHR and pharmacy management software. The impact was quite striking. Approximately 34% of prescriptions were successfully cancelled in the pre-CancelRx period. There was an immediate and significant increase in the proportion of successful medication discontinuations after CancelRx implementation, with an average of 92.78%

prescriptions successfully discontinued in the post period. The impact was sustained in the year after the initial launch.

Of interest was a disparity between primary care and specialty care clinics. The ITSA found that there were significant differences between the proportion of successful medication discontinuations pre-CancelRx implementation (difference 17.7%,  $P < 0.001$ ). Specialty clinics had a greater proportion of medications that were successfully cancelled in the preintervention period compared to primary care clinics. During the year prior to CancelRx implementation, the percentage of medications successfully cancelled from primary care clinics was approximately 26%, whereas the percentage from specialty clinics was approximately 44%. However, immediately after CancelRx implementation, the proportion of successful cancellations across the 2 clinic types converged and became the same on average (approximately 98% in both the primary care and specialty clinics, difference 1.6%).

Also, prior to CancelRx implementation there was considerable variation in the time to medication discontinuation. In comparison, after CancelRx implementation, medication discontinuations were all completed on the same day!

CancelRx requires that both the clinic and the pharmacy have the functionality turned on through the third-party vendor.

Watterson et al. note that CMS added CancelRx to the 2017 Stage 3 Meaningful Use EHR Certification Criteria, required to qualify for the Medicaid Promoting Interoperability Program. Certification criteria requires that a user be able to not only create, change, or refill but also cancel prescriptions within the EHR technology according to NCPDP SCRIPT Standard (which includes CancelRx). But, for a variety of reasons, organizations have been slow to adopt this functionality. The authors note, however, that more and more entire health systems, private clinics, and pharmacies are now upgrading their systems to receive and utilize CancelRx functionality.

The results of the Watterson study should serve as an impetus for all health systems and clinics to begin using CancelRx.

**Some of our other columns on failed discontinuation of medications:**

|                   |  |
|-------------------|--|
| May 27, 2014      | <a href="#"><u>“A Gap in ePrescribing: Stopping Medications”</u></a>           |
| March 2017        | <a href="#"><u>“Yes! Another Voice for Medication e-Discontinuation!”</u></a>  |
| February 2018     | <a href="#"><u>“10 Years on the Wrong Medication”</u></a>                      |
| August 28, 2018   | <a href="#"><u>“Thought You Discontinued That Medication? Think Again”</u></a> |
| December 18, 2018 | <a href="#"><u>“Great Recommendations for e-Prescribing”</u></a>               |
| August 2019       | <a href="#"><u>“Including Indications for Medications: We Are Failing”</u></a> |
| August 6, 2019    | <a href="#"><u>“Repeat Adverse Drug Events”</u></a>                            |

## References:

Watters TL, Stone JA, Brown R, et al. CancelRx: a health IT tool to reduce medication discrepancies in the outpatient setting, Journal of the American Medical Informatics Association 2021; 28(7): 1526-1533

<https://academic.oup.com/jamia/article-abstract/28/7/1526/6211610?redirectedFrom=fulltext>



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