

# A Clinical Reminder Order Check (CROC) Intervention to Improve Guideline-Concordant Imaging Practices for Men with Prostate Cancer: A Pilot Study

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## **BACKGROUND**

# Nearly half of men with low-volume, lowstage, prostate cancer undergo inappropriate imaging.

- Professional societies recommend against imaging for low-risk prostate cancer staging.
- Providers are generally aware of and knowledgeable about guidelines but may not always image patients accordingly.
- In a qualitative study of urologists, a clinical order check was suggested as way to help this problem.

There could be things embedded in CPRS to help guide the practitioner in making these decisions. That's unique to the VHA though because not every urology practice has access to electronic medical records that functions like CPRS.

Makarov et al. 2016

# T of the Abdomen ONLY with Contrast Creatinine w/Egfr INSERT HEPLOCK Order an Imaging Procedure Reason for Study (REQUIRED - 64 characters maximum) INFLUENZA TRIAGE PROTOCO | LEFT of 2) IMAGING ORDER CHECK MEDS:OUTPATIENT MEDS:IV SOLUTIONS & ADDITI Imaging not recommended to stage men with PSA<10, Gleason<7, and clinical MEDS:NON VA/OTC/HERBAL MEDS:IM INJ/IMMUNIZATIONS Imaging recommended for high risk cancer. Excessive imaging may harm patients MEDS:GIPREPS AND MEDS NURSING:INPATIENT NURSING:OUTPATIENT PROSTHETICS ORDERS.. Cancel Order Drug Interaction Monograph RESPIRATORY/02/VENTILATOR ORDERS... RESTRAINT ORDERS. SPECIALTY ORDERS (NY)

**METHODS** 

We implemented the CROC at VA New York Harbor Healthcare System (VANYHHS) from April 2, 2015 to November 15, 2017 in the local Electronic Medical Record (EMR) system.

The notification appeared in a pop-up window when an imaging test was ordered for a patient with prostate cancer and PSA < 20 ng/ml.

The CROC allowed providers a free-form justification for overriding the pop-up.

# • 65% (203/313) of Veterans prior to CROC and 81% (97/120) of Veterans post-intervention with low-risk prostate cancer were appropriately not imaged. (p=.001)

**Quantitative Results** 

 Men with low-risk prostate cancer treated in the postintervention period were 1.3 times as likely to avoid imaging compared to those treated prior.

# **Qualitative Results**

Free-Form Response Distribution

| Justification                           | Percent |
|---|---------|
| "Okay" category                         | 51.3%   |
| Vague or unclear Justification          | 15.6%   |
| Imaging for "other", explicit           | 11.5%   |
| Statement of high-risk                  | 6.1%    |
| Statement indicating appropriate order  | 3.9%    |
| Post-Treatment/Advanced                 | 3.7%    |
| Pain                                    | 3.3%    |
| Imaging for "other", non-explicit       | 2.8%    |
| Assigning liability to another provider | 1.1%    |
| Radiation planning                      | 0.4%    |
| Monitoring/AS                           | 0.2%    |

n = 1432 responses

# DISCUSSION

RESULTS

The EMR-based CROC intervention is associated with moderate improvement in guideline-concordant imaging practices for Veterans with low-risk prostate cancer.

Results of this pilot study have informed the development of intervention implementation across VA Medical Center systems in a national-level clinical trial.