



## After 5pm your doc may not screen you for cancer



A new study endeavoured to research whether breast and colorectal cancer screening are related to the time of day a patient visits their primary care clinician. As part of this quality improvement study shows, both clinical ordering and patient completion of cancer screening tests decreased later in the day. The study published in JAMA found that **patients with primary clinical care appointments that are later in the day were less likely to receive orders of guideline recommended cancer screening.**

**Cancer** is a leading cause of mortality in the United States. Appropriate cancer screening can be effective in decreasing both morbidity and mortality by detecting and treating cancers at an earlier stage. However, underuse of cancer screening tests is common. [The Centers for Disease Control and Prevention](#) estimates that among patients who meet guideline recommendations, approximately 37% of adults have not been screened for colorectal cancer, and 28% of women have not been screened for breast cancer.

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As the day winds down, physicians are likely to fall behind on their daily tasks and schedules and certainly experience fatigue. The association of time of day with relation to cancer screening rates is unknown, states the study.

[The US Preventive Services Task Force](#) guidelines recommend that primary care physicians (PCPs) offer breast and colorectal cancer screening to eligible patients during clinic visits. Often, unfortunately, as the clinic day progresses, physicians may fall behind schedule leading to them having shorter and more rushed interactions with patients scheduled later in the day. As the clinic day progresses, doctors may also face decision fatigue, which is defined as the depletion of self-control and active initiative that results from the cumulative burden of decision making. This often results in lower quality of care for those patients with clinic appointment times later in the day.

The study states as an example, that in prior analyses results found that influenza vaccination rates began around 44% in the morning but then steadily decreased to 32% by the end of the day. These patterns have also been found to exist for other behaviours. Evidence indicates that later in the day, there are higher rates of inappropriate antibiotic prescriptions by primary care physicians, higher rates of opioid prescribing for back pain by physicians, and lower rates of appropriate hand-washing among clinicians during the end of hospital shifts.

The research comprised a retrospective, quality improvement study of 33 primary care practices in Pennsylvania and New Jersey spanning from September 1, 2014 to August 31, 2016. The participants included

adults eligible for breast or colorectal cancer screening. The data was analysed from April 24, 2018 to November 8, 2018.

Among a network of 33 primary care practices, ordering of breast and colorectal cancer screening rates decreased later in the clinic day, most notably toward the end of the morning and afternoon shifts. A 1-year follow-up found that completion of these cancer screening tests had similar patterns. The authors note that to their knowledge, this is the first study of its kind to demonstrate that primary care clinic appointment time is associated with both ordering and completion of screening for breast and colorectal cancer.

Clinician ordering of cancer screening tests significantly decreased as the clinic day progressed. Patient completion of cancer screening tests within 1 year of the visit was also lower as the primary care appointment time was later in the day. Future interventions targeting improvements in cancer screening should consider how time of day may influence these behaviours.

The report states that variations in clinician ordering of cancer screening tests by clinic appointment time have not been well examined. Moreover, the downstream effect of whether the patient completes cancer screening based on clinic appointment time is unknown. In this study, their objective was to evaluate the association of primary care clinic appointment time with clinician ordering and patient completion of breast and colorectal cancer screening.

Future work could be conducted to further understand the existing behaviours identified in this study such as evaluating the relative contributions of clinician vs patient factors on variations in ordering of cancer screening tests, as well as other factors associated with patient completion of screening tests.

Future work could also be focused on ways to improve these behaviours patterns. For example, the study cites that prior work has shown how a nudge in the electronic health record can improve influenza vaccination rates across all times of day,<sup>11</sup> but further work is still needed to understand how to lower the decline in care over the course of the day.

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Source: [JAMA](#)

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