

How the Coronavirus Disease-2019 May Improve Care: Rethinking Cervical Cancer Prevention

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Abstract

These past months of the coronavirus disease-2019 (COVID-2019) pandemic have given us ample opportunity to reflect on the US health-care system. Despite overwhelming tragedy, it is an opportunity for us to learn and to change. As we postpone routine visits because of the pandemic, we worry about risks for patients who delay cancer screening. We use cervical cancer screening and prevention as an example of how we can use some “lessons learned” from the pandemic to prevent “collateral losses,” such as an increase in cancers. COVID-2019–related health-system changes, like the more rapid evaluation of diagnostic tests and vaccines, the transition to compensated virtual care for most counseling and education visits, and broadened access to home services, offer potential benefits to the delivery of cervical cancer screening and prevention. While we detail the case for cervical cancer prevention, many of the issues discussed are generalizable to other preventative measures. It would be a tragedy if the morbidity and mortality of COVID-2019 are multiplied because of additional suffering caused by delayed or deferred cancer screening and diagnostic evaluation—but maybe with creativity and reflection, we can use this pandemic to improve care.

These past months have provided ample opportunity to reflect on the US health-care system. Can we use this moment of tragedy to reimagine and improve care? For example, with the prioritization of care for acutely ill patients with coronavirus disease-2019 (COVID-2019), we have quickly learned to rethink care strategies. We have transitioned to virtual care for most counseling and education visits and have realized that the cognitive work done and time spent in those visits should be compensated whether the care is provided in person or virtually. We have broadened access to home services, and we are looking at more rapid evaluation of diagnostic testing and vaccines with Food and Drug Administration (FDA) oversight. The benefits to patients (safe convenient visits, less time and cost, ability to schedule visits with experts from afar, particularly in areas with limited local access), providers (compensated time for education and counseling), hospitals (more flexibility to reorganize resources to prioritize acute care but also grow virtually), and public health (promote broader vaccine uptake, attention to population health and the racial and ethnic and socioeconomic disparities that plague our nation).

As we postpone routine visits because of the pandemic, we worry about risks for patients who delay preventive care (1). With COVID-2019 likely to be circulating in our communities for some time, will we see an increase in cervical cancers as people forgo screening? Cervical cancer prevention is a good model to rethink because the major advances of the past few decades could be lost. Since the 1950s, cervical cancer has decreased in the United States by 70% because of the use and acceptance of annual cervical cytology (papanicolaou [Pap] test). Since then, we have learned that the human papilloma virus (HPV) causes cervical cancer, and a prophylactic vaccine was developed. Most recent guidelines recommend vaccination of all children aged 9–12 years, and studies have shown ongoing excellent protection. Yet, high rates of vaccination have been difficult to implement broadly in the United States.

We also know that the most useful way to predict a woman's risk of cancer is by the HPV testing of her cervix; specimens can be obtained either by a clinician or by patients themselves (self-testing). National guidelines, in fact, recommend that all people with a cervix undergo HPV testing either alone or in association

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with a Pap test (2). New management guidelines recommend use of a risk calculator that includes both a patient's age and current and prior HPV and cytology results to determine cancer risk as well as personalized management approaches (3).

COVID-2019 has created a critical opportunity to take advantage of lessons learned to help us overcome some of the systemic barriers to HPV vaccination, education and counseling, use of primary HPV screening, and the implementation of risk-based screening. In addition to prior barriers, COVID-2019 has caused additional obstacles because patients may be afraid of visiting a clinic, and access may be decreased as systems struggle to balance care of sick inpatients with re-opening critical but less urgent outpatient care. The substantial financial losses experienced almost universally by health-care systems during the COVID-2019 surge will create competing priorities as health systems try to maximize the volume of lucrative services while strategically trying to maintain their reputation as high-quality care partners in their community. Because most US insurance plans are employer based, more patients will face financial barriers to care. As we restart cancer screening and prevention with limited resources and the risk of a resurgence of the pandemic, it is imperative that a national group is tasked with prioritizing which services to restart and when rather than leaving this to local groups with incomplete information and a variety of incentives.

Following are some questions we should consider.

Do patients need to visit a health provider to get a cervical cancer screening test? Could we consider vaginal self-sampling for HPV, which has been used in many low-resource settings and allows patients to be tested at their own convenience (4)?

Results could be returned by mail to a centralized laboratory with results available to the patient's care team and the patient notified virtually of results so that face-to-face provider visits could be prioritized for patients whose prior or current testing is abnormal. Self-sampling has been found to have reasonable correlation with provider-obtained results and is acceptable to patients with other barriers of care, such as minority women, gender minorities, and those with limited access to health care (5). So far, this approach has not been FDA approved, but perhaps the pressure on the FDA to speed approval processes during COVID-2019 could be used here.

Can we implement new risk-based algorithms for management of abnormal results into clinical care systems (3)?

Centralized reporting of results would enable embedded risk calculation. We could then counsel patients using newly approved virtual visit platforms with recent COVID-2019-related approval of billing for these services. This would allow specialized educators to take on the majority of the education and improve understanding of other preventive health practices such as HPV vaccination.

Can we provide evaluation and treatment in a more efficient way?

Now that there are improved ways to bill for telemedicine, providers in the community could record colposcopy images on recently developed phone-related colposcopy devices and transfer images virtually for expert read and opinion.

Can we automate reminders and improve education virtually and provide culturally and linguistically appropriate education?

The COVID-2019 pandemic has shown us the dire consequences of inadequate education and service delivery for minority communities. Using technology more effectively, we could improve access for underserved and remote patients

through more linguistically and culturally tailored approaches to their care.

The new risk-based management guidelines identify patients for whom their risk of severe precancer or cancer is so high that "expedited treatment" is recommended at their first visit (3). Having virtual counseling before the procedure would better prepare patients for their visits and make sure their needs and values are understood prior to recommending an invasive treatment. Although perhaps justified by risk estimates, this will be a major change in care and patient expectation and will require education that could be standardized and provided virtually. Conversely, there are women who could safely stop screening, for example, women older than age 65 years with adequate and negative prior screening. Virtual education around the decision to stop screening could promote access for women who need screening or surveillance.

Can we combine HPV vaccination of all eligible people with other useful new vaccines?

People who have never considered a vaccine may now be interested in getting a COVID-2019 vaccine when one becomes available. Perhaps this is a time to capitalize on education about the importance of all vaccinations or offer vaccination clinics to address all vaccination needs at once.

Summary

While we have detailed the case for cervical cancer prevention practices, many of the issues discussed are generalizable to other preventative measures. For example, fecal immunochemical testing for colon cancer screening is not the primary screening modality in many health systems. Could it be deployed more broadly so that colonoscopy capacity can be maintained for diagnostic and therapeutic procedures?

It would be tragic if the morbidity and mortality of COVID-2019 are multiplied because of additional suffering caused by delayed or deferred cancer screening and diagnostic evaluation, but maybe with creativity and reflection, we can use this pandemic to improve care.

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