Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

- Women who have signs or symptoms consistent with acute HIV infection. When acute retroviral syndrome is a possibility, a plasma RNA test should be used in conjunction with an HIV antibody test to diagnose acute HIV infection.

RAPID TESTING DURING LABOR

Any woman with undocumented HIV status at labor should be screened with a rapid HIV test unless she declines (opt-out screening).

REASONS FOR DECLINING A RAPID TEST SHOULD BE EXPLORED

Immediate initiation of appropriate antiretroviral prophylaxis should be recommended to women on the basis of a reactive rapid test result, without waiting for the result of a confirmatory test.

POSTPARTUM/NEWBORN TESTING

When a woman's HIV status is still unknown at delivery, she should be screened immediately postpartum with a rapid HIV test unless she declines (opt-out screening).

When the mother's HIV status is unknown postpartum, rapid testing of the newborn as soon as possible after birth is recommended so antiretroviral prophylaxis can be offered to HIV-exposed infants. Women should be informed that identifying HIV antibodies in the newborn indicates that the mother is infected.

For infants whose HIV exposure status is unknown and who are in foster care, the person legally authorized to provide consent should be informed that rapid HIV testing is recommended for infants whose biologic mothers have not been tested.

The benefits of neonatal antiretroviral prophylaxis are best realized when it is initiated less than 12 hours after birth.

CONFIRMATORY TESTING

Whenever possible, uncertainties about laboratory test results indicating HIV infection status should be resolved before final decisions are made about reproductive options, antiretroviral therapy, cesarean delivery, or other interventions.

If the confirmatory test result is not available before delivery, immediate initiation of appropriate antiretroviral prophylaxis should be recommended to any pregnant patient whose HIV screening test result is reactive to reduce the risk for perinatal transmission.

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COMMENTARY

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The primary mission of public health is to prevent adverse health outcomes and reduce the risk of disease, whereas the main focus of emergency medicine is to evaluate and treat critically ill and injured patients.[1] It is difficult, however, to ignore the fact that EDs serve as a major health care safety net.[2] Emergency medicine is thus obliged to take on a wide range of important initiatives that affect the public's health, including screening and detection of hypertension, alcohol abuse, new-onset diabetes, child abuse, intimate partner violence, and HIV.

From a health systems perspective, EDs may be a logical site for instituting focused public health screening measures. EDs disproportionately serve populations at risk for a variety of screenable chronic diseases for which effective treatments exist, such as HIV. The conceptual basis for EDs as a site for disease screening was brought into focus in a 2-part report prepared by the Public Health Task Force of the Society for Academic Emergency Medicine.[3] This report provided a detailed rationale for ED-based screening through a systematic review of the evidence for or against instituting screening measures in the ED setting that were advocated by the United States Preventive Task Force. HIV screening was noted in the report as a measure for which compelling evidence existed to support screening in the ED.[4,5] Since that review was published in 2000, rarely a month goes by in which our colleagues are not exploring new approaches to addressing these and other potential public health screening intervention measures. For example, the American College of Emergency Physicians has recently endorsed a screening intervention measure for alcohol abuse.[6] Although championed by some, many remain skeptical about the wisdom of implementing ED screening programs because of concerns of detracting from the primary mission of emergency care and the constraints of resources and time. The recent report from the Institute of Medicine addresses this tension by recognizing the critical role EDs are expected to fulfill even without the resources and infrastructure to conduct public health promotion initiatives.[7]

Public health and clinical issues related to infectious disease screening deserve particular emphasis. Traditional infectious disease control relies on a variety of principles, the first being early identification of infected persons, followed by interruption of transmission, case management, and monitoring control efforts.[8] The CDC relies on all arms of the public health infrastructure to help identify and contain potential infectious disease epidemics. EDs have effectively risen to this task in the past in response to acute infectious disease outbreaks, serving as a critical venue for anthrax and severe acute respiratory syndrome screening. EDs are also responding to the need for increased surveillance for emerging infectious diseases and manmade outbreaks. From the clinical standpoint, there is also a compelling argument for increasing accessibility to a simple rapid assay for a highly treatable infectious disease.[9]

In the new HIV testing guidelines for the health care setting, the CDC has strengthened their previous recommendations that EDs provide routine universal HIV screening. We must distinguish between HIV testing for diagnostic purposes and HIV screening (which involves conducting HIV testing for all patients in a defined population), as well as other terms:

"targeted" (testing based on HIV risk factors or site of care) and "universal" (all patients 13 to 64 years old). The CDC previously recommended targeted testing for those persons with higher HIV risk behaviors or those seeking care in high-prevalence settings, but have changed their recommendations over time, and now recommend routine universal screening for all patients aged 13 to 64 years old, particularly in EDs. The rationale for this evolution is the insufficient progress in reducing the estimated 40,000 new HIV cases diagnosed annually in the United States—a number that has remained relatively unchanged since the early 1990s. Availability of effective treatment and evidence that early recognition decreases likelihood of further HIV transmission also provide compelling arguments for increased attention to early diagnosis. There is strong evidence from a variety of sources that many missed opportunities for HIV diagnosis occur in the ED setting.[10,11] Although including the ED as part of a national strategy to address the ongoing HIV epidemic may be logical from a public health perspective, a variety of issues must be considered if EDs are to play a significant part in the new strategic program. These issues include the process of obtaining informed consent, the need for ED prevention counseling, the processes of pre- and posttest counseling, cost, and operational implementation.

The traditional HIV pretest process can be so arduous that it effectively precludes HIV screening in busy EDs. To increase ease of testing and streamline the testing process, the CDC recommends that a separate written informed consent for HIV testing not be required. Instead, the general consent for medical care (which is usually signed by patients at registration) would include notification that an HIV test may be performed, along with notification of the patient's option to decline testing (defined as opt-out testing). Substantial benefits of opt-out screening have been realized in prenatal settings and STD clinics. Implementation of these new CDC recommendations for HIV testing in EDs, however, remains relatively unexplored. The CDC is to be applauded for having recently sponsored 2 emergency medicine researchers to begin to examine some of these issues.

Although the CDC's recommendations might serve to set a standard for HIV testing, states are not bound by these guidelines. Many states still retain explicit requirements for written informed consent. To enact the new CDC guidelines, many states will need to change their laws to permit HIV testing in the absence of written informed consent. Unfortunately, changing state laws is a slow process, but the new guidelines will be an important impetus for change. ED-based advocates of HIV screening can assume important leadership roles here by working with infectious disease and public health colleagues, as well as city and state health departments, to lobby for legislative revision.

Opposing views about the legal and ethical aspects of the new recommendations exist, particularly because these views may stand as challenges to legislative change. According to one viewpoint from the Center for HIV Law and Policy, general consent for medical care is not the same as informed consent and might not be a legal substitute for it, because informed consent implies a conversation with the physician and the patient, whereas general consent does not.[12] Another interesting legal issue raised in a recent *Journal of the American Medical Association* commentary suggests that the new guidelines could lead to health care professionals being found negligent for a failure to test if HIV diagnosis is delayed or transmission to partners occurred as a result of this failure.[13] Further legal research and tort liability reform will likely be required to resolve these concerns, and it will be important for advocates of the new recommendations to take part in this process.

The new CDC recommendations indicate that prevention counseling should not be required for routine HIV testing in health care settings. Although the recommendations acknowledge the importance of prevention counseling, they emphasize that this process need not be conducted when testing occurs. The rationale for eliminating prevention counseling as a requirement for testing centers on the perception that it acts as a barrier to conducting HIV screening at many potential testing sites (such as busy time-constrained EDs). By removing the requirement for prevention counseling with testing, the testing process can be streamlined. Patients who need prevention counseling could be referred to venues that specialize in this process.

The new recommendations do retain, although in a different form, the need for providing patients with pretest information (as opposed to prevention counseling) about HIV and HIV testing, including an opportunity for patients to ask questions on these topics. Pretest information can now be provided in oral or written format (eg, brochures). Streamlining the testing process was intended to encourage EDs to establish HIV screening programs and evolved in part from the perception that extensive pretest requirements may interfere with the goals of maximizing accessibility to testing. As with informed consent, however, individual states may have specific requirements for prevention counseling and provision of pretest information, which in certain instances will need to be addressed to enable implementation of the CDC's streamlined approaches.

In demonstration projects, the costs of conducting ED HIV screening have been comparable to testing costs in traditional testing venues, such as STD clinics.[5] Although the cost of a rapid HIV test is relatively inexpensive (about $14/kit), other costs include those associated with training, maintaining quality assurance, and ensuring follow-up for patients who test positive for HIV. The costs associated with implementing routine universal HIV screening in EDs throughout the United States are substantial, and it remains to be determined how funding will be raised. Multiple models are being proposed to cover these costs, including collaborative relationships with state health departments, direct funding from city initiatives (eg, Washington DC's HIV Testing Campaign), grants, and direct reimbursement from insurers. For example, in New York State, Medicaid now reimburses for HIV testing conducted under

ED-based screening programs. For the foreseeable future, EDs interested in setting up a screening program must negotiate these issues on their own. Centralized sources are being modeled in a few states, such as New York and New Jersey, with resultant expansion of the number of EDs offering testing in those states. A CDC-sponsored project to the American Hospital Association's Health Research Education Trust will also fill a critical need by providing operational guidance on how to enact ED-based HIV screening programs. Significant financial questions remain, however, such as whether other health insurers will reimburse for HIV screening and whether individual EDs will have the resources to start and sustain their own programs. ED programs depending on insurance coverage alone for HIV screening would have to absorb the costs of screening uninsured patients, who likely represent a disproportionate number of cases. These unreimbursed costs will likely serve as disincentive for implementing screening until more comprehensive payment strategies are devised.

The latest CDC recommendations provide general guidance for most health care settings. Because they are broad in scope and audience, they do not address the numerous operational issues relevant to incorporating routine universal HIV screening at US EDs. When one considers whether implementing recommendations for universal HIV screening are feasible for EDs, it is essential to realize that the primary goal of ED services (ie, attention to immediate life threats) must always take precedence. However, we must also recognize the important role of emergency medicine as part of the health care infrastructure and the significant part we may play in helping to realize the public health gain associated with earlier recognition and linkage to care for those who are HIV infected. Toward that end, a number of EDs around the country have already begun to explore implementation of HIV screening programs, with the realization that a "one size fits all" approach is probably not feasible. Programs under development include those with dedicated staff (with resource sharing from other publicly funded venues), those in which screening is integrated into routine care (conceptually in line with the CDC recommendations, but technically challenging), or hybrid models in which support staff work in an integrated fashion with health care workers. An incremental approach in which testing is preferentially offered to patients who clinicians consider are at increased risk may help establish operational processes in EDs and has proven to be highly efficient in identifying new cases.[14] Regardless of the approach, mechanisms for ensuring linkage of care for those who test HIV positive are essential and require partnerships with existing institutional or local resources.

The CDC's new recommendations for addressing the US HIV epidemic represent a new challenge for emergency medicine. The case for ED participation is compelling. In emergency medicine, we have already demonstrated a willingness to take on other important public health problems that affect our patients (eg, alcohol screening). The expansion of HIV screening in US EDs will depend in large part on how the practical issues raised are resolved and whether resources and infrastructure can be brought to bear that allow us to integrate this initiative into our practice while remaining true to the core mission of our specialty.

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