

Current and (Potential) Future Effects of the Affordable Care Act on HIV Prevention

Abigail H. Viall¹ · Eugene McCray¹ · Jonathan Mermin² · Pascale Wortley¹

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Abstract Recent advances in science, program, and policy could better position the nation to achieve its vision of the USA as a place where new HIV infections are rare. Among these developments, passage of the Patient Protection and Affordable Care Act (ACA) in 2010 may prove particularly important, as the health system transformations it has launched offer a supportive foundation for realizing the potential of other advances, both within and beyond the clinical arena. This article summarizes opportunities to expand access to high-impact HIV prevention interventions under the ACA, examines whether available evidence indicates that these opportunities are being realized, and considers potential challenges to further gains for HIV prevention in an era of health reform. This article also highlights the new roles that HIV prevention programs and providers may assume in a health system no longer defined by fragmentation among public health, medical care, and community service providers.

Keywords Affordable Care Act · HIV · Prevention · HIV prevention · Health care · Health insurance · Public health · Review

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✉ Abigail H. Viall
bvz3@cdc.gov

¹ Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC), 1600 Clifton Road NE, Atlanta 30329, GA, USA

² National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC), Atlanta, GA, USA

Introduction

HIV prevention in the USA is experiencing a renaissance. Scientific advances have expanded the breadth of interventions and strategies available and have improved the precision and effectiveness with which they are deployed. Concurrently, the Patient Protection and Affordable Care Act (ACA) is driving changes in the financial and operational architecture of the US health system to improve the availability and accessibility of needed services, as well as the value realized by individuals *and* populations through their delivery. The confluence of these events has encouraged HIV prevention stakeholders to not only articulate visions (e.g., an “AIDS-Free” generation) that might have seemed untenable a decade ago but also chart a course toward their realization. Reaching the envisioned endpoints within the ambitious timelines set by the National HIV/AIDS Strategy (NHAS) will depend on the ability of HIV programs and providers to successfully capitalize on new structural and policy opportunities created by the ACA to advance HIV prevention through and beyond healthcare [1••].

As many of the ACA’s provisions did not go into full effect until 2014, its ultimate ramifications for HIV prevention remain to be determined. In this article, we articulate some core provisions of the ACA and the potential opportunities they present for advancing HIV prevention goals both within and beyond the boundaries of the health care system (see Table 1). We also review the evidence currently available to suggest whether, in fact, anticipated gains are materializing, and we explore potential contributors and impediments to their emergence. Finally, we outline a vision for a transformed prevention landscape—one characterized by closer

Table 1 Notable provisions in the Affordable Care Act: what they do and why they may matter for HIV prevention

Location reference	What changes	HIV prevention relevance
Section 1001	Requires plans/issuers that offer dependent coverage to make the coverage available until the dependent is 26	Increased availability and accessibility of health insurance to persons living with or at high risk for acquiring HIV
Section 1201	Bars health plans and health insurance issuers from imposing any preexisting condition exclusion with respect to such plan or coverage	
Sections 1401-1402	Provides financial assistance in the form of premium tax credits (available on a sliding scale for persons whose household income falls between 100 and 400 % Federal Poverty Level, or FPL) and cost sharing subsidies (for persons who purchase a silver level plan and have household incomes between 100 and 250 % FPL)	
Section 1557	Prohibits discrimination in certain health programs and activities on the basis of race, color, national origin, sex, age, or disability	
Section 2001	Expands Medicaid eligibility to all Americans <65 whose household income falls at or below 138 % FPL	
Sections 1001 and 1302(c)	<ul style="list-style-type: none"> •Adds annual limits on beneficiary out-of-pocket costs (including any cost-sharing or coinsurance obligations, but excluding premiums) for individual and family coverage •Removes annual and lifetime limits on plans' coverage for essential health benefits 	Increased access to and use of high impact HIV prevention and care services
Sections 1001, 4105-4106	Requires (1001, 4104) or incentivizes (4106) coverage of certain preventive services without cost sharing under Medicare, Medicaid, and private health plans	
Section 1302(a)	Requires nongrandfathered health plans in the individual and small group markets, as well as alternative benefit plans offered to Medicaid expansion populations, to cover items and services in ten benefit categories including the following: <ul style="list-style-type: none"> •Ambulatory patient services •Mental health and substance use disorder services •Prescription drugs •Preventive and wellness services and chronic disease management 	
Sections 3301 and 3314	Gradually eliminates (by 2020) the so-called “donut hole” under Medicare Part D and specifically allows AIDS Drug Assistance Program (ADAP) expenditures for covered Part D drugs to count towards Medicare Part D enrollees' True-Out-Of-Pocket (TrOOP) limits	
Section 2703	Creates a new option for state Medicaid programs to establish “health homes” that can coordinate care for Medicaid enrollees who <ul style="list-style-type: none"> •Have 2 or more specified chronic conditions (HIV is among these) •Have one chronic condition and are at risk for a second •Have one serious and persistent mental health condition 	Enhanced healthcare system capacity to deliver high quality, coordinated care to persons living with or at high risk for acquiring HIV
Sections 2701, 3002, 3011-3015	<ul style="list-style-type: none"> •Institutes new (e.g., Medicaid adult core measure set) and strengthens existing (e.g., Physician Quality Reporting System) healthcare quality measurement efforts •Calls for creation of a national strategy to improve healthcare quality and health outcomes 	
Section 3021	Establishes an Innovation Center within the Centers for Medicare and Medicaid Services and provides funding for the Innovation Center to develop and test innovative health care payment and service delivery models, including patient centered medical homes and accountable care organizations	
Section 5601	Provides \$11B in new, dedicated funding for community health centers operations and expansions	

coordination and integration among public health, community, and medical care providers—and the unique

roles that public health can play within this emergent health system.

Prevention *Through* Healthcare Requires Access to Healthcare

Access to comprehensive healthcare services in the USA has generally been mediated through affordable health insurance [2]. For many people living with or at high risk for acquiring HIV, such coverage has been unavailable. Data from the Centers for Disease Control and Prevention's (CDC) Medical Monitoring Project show that between 2009 and 2012, almost 18 % people living with HIV (PLWH) who were actively engaged in HIV medical care lacked any form of health insurance [3]. Estimates from Health Resources and Services Administration (HRSA) suggest that almost 27.6 % of those who received services through the Ryan White program in 2012 were uninsured [4]. Because both systems are limited to PLWH who sought healthcare or support services, these estimates are likely to underestimate the percentage of all PLWH who lack health insurance. Moreover, at least 40 % of HIV-infected adults in medical care received health insurance through Medicaid and/or Medicare, programs for which they generally qualified only once their disease was sufficiently advanced that they became eligible for disability benefits under Social Security [3]. Determining insurance coverage among persons at high risk for acquiring HIV is even more difficult, as the estimates will vary according to a host of conceptual (e.g., the definition of "risk" used) and methodological (e.g., the sampling methods employed) factors. Individuals who belong to demographic groups associated with increased risk of HIV acquisition—for example, young adult men, African-Americans, and persons who belong to low-income households—are more likely to be uninsured [5]. The highest risk subpopulations within these broad groups are likely at even greater risk for being uninsured. For example, data collected through CDC's National HIV Behavioral Surveillance (NHBS) system suggest that, among those surveyed, almost 40 % of persons who injected drugs were uninsured in 2012. Among men who have sex with men (MSM) (surveyed in 2011) and high-risk heterosexuals (surveyed in 2013), the proportions uninsured were 30 and 36 %, respectively [6–8].

The ACA introduces a number of policy changes intended to address systemic gaps that leave millions of Americans without insurance, or with insurance that offers inadequate access to critical services and incomplete protection from high medical expenses. Specifically, the law bars coverage denials or premium rate setting on the basis of preexisting conditions (e.g., HIV infection), extends dependent coverage to the age of 26, ends annual and lifetime caps on coverage for the essential health benefits (EHB), creates the Health Insurance Marketplace (or "exchange") through which individuals can compare health plans and purchase health insurance, provides advance premium tax credits to individuals with incomes between 100 and 400 % of the Federal Poverty Limit (FPL) and cost sharing

reductions for those in the 100 to 250 % of FPL range, and expands Medicaid eligibility (at states' discretion) to all individuals whose household incomes fall at or below 138 % FPL [9, 10•].

Recent analyses of data from the National Health Interview Survey (NHIS) and the Gallup-Healthways Well-Being Index suggest substantial gains in coverage across major demographic categories, particularly racial and ethnic minorities and young adults, during the ACA's first year of full implementation [11, 12•]. In keeping with the law's emphasis on making insurance more affordable, individuals whose household incomes fall below 250 % FPL seem to account for a sizeable share of these gains [10]. According to the Center for Medicaid and CHIP Services, between October 2013 and May 2015, over 12.8 million additional individuals had enrolled in Medicaid and CHIP [13]. And, enrollment data reported by the independent state exchanges and the federally facilitated marketplace, Healthcare.gov, suggest that of the 9.9 million individuals who selected an insurance plan from an exchange and paid their first month's premium as of June 2015, 84 % were eligible for federal subsidies in the form of premium tax credits and financial assistance with out-of-pocket costs, such as deductibles, copayments, and co-insurance [14].

Given the combination of traditionally low rates of insurance coverage and high rates of poverty and near-poverty among people at risk for or living with HIV, it seems reasonable to expect that these groups will realize some of the coverage gains reflected in the aforementioned national trends. To date, there appears to be at least some data that support this supposition. Published projections suggest that between 70,000 and 200,000, PLWH could newly gain coverage under the ACA if all states expanded Medicaid [15, 16]. Anecdotal data suggest that many PLWH have taken advantage of this opportunity in the first 2 years since the full provisions of the ACA went into effect. An analysis that compared prescription drug data for more than 1 million individuals newly enrolled in plans offered through the Health Insurance Marketplace with that of a matched cohort of one million individuals who received coverage through their employers found that Marketplace enrollees had significantly higher odds (OR=3.7) of using specialty drugs generally used to treat HIV; the authors interpret this finding as potentially indicative that PLWH are experiencing meaningful coverage gains under the ACA [17]. And, recently published from CDC show that, among MSM who participated in the most recent NHBS data collection cycles, the percentage who reported being uninsured dropped from 31 % in 2011 to 21 % in 2014 [18]. Monitoring the extent to which these early signals represent meaningful gains in insurance coverage among people living with or at high risk for acquiring HIV will be a critical part of efforts to ensure the ACA's benefits are fully and equally realized across all populations.

Prevention Through Healthcare Requires Access to the “Right” Healthcare Services

In addition to expanding health insurance coverage, the ACA also introduces a number of insurance benefit design, payment, and delivery system reforms that are intended to push the US health system closer to realizing the “Triple Aims” of better individual care experiences, healthier populations, and lower per capita costs of care [19]. People living with or at risk for acquiring HIV often have myriad healthcare needs and priorities; as a result, HIV-related outcomes are shaped by more than access to those services and supports that typically fall under the rubric of HIV prevention and care. An HIV-prevention optimizing system, then, will be one that provides adequate access not only to the kinds of HIV prevention services and modalities reviewed below but also to services that address the medical, social, and structural determinants that lead to poor outcomes among populations at greatest risk.

Screening and Risk-Based Testing for HIV and Other Diseases with Shared Transmission Pathways

Through HIV testing, individuals who are diagnosed with HIV can be swiftly connected a suite of services that increase the quality and length of their lives and decrease their risk of transmitting HIV to others. Meanwhile, those whose HIV test results are negative but who indicate substantial behavioral risk (e.g., active injection drug use or unprotected anal intercourse) can explore the full range of currently available preventive options—including risk reduction education, condom use, preexposure prophylaxis, and medication-assisted drug treatment—with their providers.

The USA has made important progress toward reducing the proportion of PLWH who remain unaware of their infections [20]. However, to reach the estimated one in eight persons living with HIV who remain unaware of their infections, efforts to implement routine HIV testing must be sustained and expanded [19]. Unfortunately, despite recommendations from CDC and the United States Preventive Services Task Force (USPSTF) that individuals between the ages of 15 and 65 should be tested for HIV at least once in their lifetimes and that those with risk factors should be tested more frequently (at least annually), HIV testing rates remain suboptimal [22, 23]. According to the most recently released estimates from NHIS, less than 40 % of adults reported having ever been tested for HIV [24]. Meanwhile, data from National Survey of Family Growth (NSFG) suggest that, among individuals between the ages of 15 and 44 who report behaviors that increase their risk for acquiring HIV, approximately two-thirds were not tested for HIV in the last year [25, 26].

The ACA introduces a requirement for nongrandfathered health plans to cover without cost sharing (1) preventive services that have in effect an “A” or “B” rating from the

USPSTF, (2) immunizations recommended by the Advisory Committee on Immunization Practices, and (3) guidelines for preventive care and screenings for women, infants, and children recognized by HRSA [27••]. Through subsequent rule-making, the Department of Health and Human Services (DHHS) has further clarified that these coverage requirements are included in its definition of the essential health benefits package and so are applicable to both qualified health plans (QHPs) sold through the Health Insurance Marketplace and Alternative Benefit Plans (ABPs) offered to Medicaid Expansion populations [28, 29]. As a consequence, more Americans—including many persons living with HIV or at increased risk of acquiring it—now have enhanced access to HIV testing, as well as screening and preventive services for other related conditions (e.g., gonorrhea, syphilis, and hepatitis C) that operate as sentinel conditions for behavioral risk and, in some cases, independently increase individual risk for HIV acquisition or transmission (see Table 2).

Linkage to, and Retention in, HIV-Related Care

In 2013, only 73 % of persons newly diagnosed with HIV were successfully linked to care within 30 days, and only 54 % of individuals living with diagnosed HIV were retained in care in 2012 [1••]. The consequences of these system failures for both individual and public health are significant: Individuals who do not start antiretroviral therapy quickly or who are not adequately retained in care may experience delayed virologic suppression, higher cumulative viral load burden, poorer immunologic function and overall health, and increased risk of death [30–34]. In a recent analysis of HIV transmissions at each step of the care continuum, individuals diagnosed with HIV but not receiving regular care accounted for 61 % of the HIV transmissions estimated to have occurred in the USA [35•].

The extent to which individuals who do not have HIV, but are at increased risk for acquiring it, are successfully linked to, and continuously able to access, clinical preventive services is unknown. However, it is plausible that the same health system fragmentation responsible for the abovementioned failures in the HIV care continuum also contributes to inconsistent utilization of recommended preventive services such as preexposure prophylaxis, risk reduction counseling, and medication-assisted treatment for substance use disorders, by persons at high risk for acquiring HIV.

Through its authorization of and provision of funding support for various new care delivery and payment models and reform efforts, including patient-centered medical homes, accountable care organizations, Medicaid Health Homes, and the State Innovation Model (SIM) initiative, the ACA is pushing the US health system from a model that primarily supports acute care delivery to one that emphasizes patient and

Table 2 Cost-sharing under the ACA for important HIV/STI primary prevention services

Services currently subject to ACA requirements for coverage without cost-sharing ^a				
Recommendation source	Intervention or service	Rating ^b	Population(s) addressed	Date recommendation issued
USPSTF	Alcohol misuse: screening and behavioral counseling interventions in primary care	B	Adults aged 18 and older	May 2013
USPSTF	Chlamydia and gonorrhea: screening	B	Sexually active women age 24 years and younger and in older women who are at increased risk for infection.	September 2014
USPSTF	Hepatitis B in pregnant women: screening	A	Pregnant women	June 2009
USPSTF	Hepatitis B virus infection: screening, 2014	B	Persons at high risk for infection	May 2014
USPSTF	Hepatitis C: screening	B	Adults at high risk for infection; one-time screening for HCV infection to adults born between 1945 and 1965.	June 2013
USPSTF	Human immunodeficiency virus (HIV) infection: screening	A	Adolescents and adults 15–65 years old, regardless of risk; pregnant women; adolescents and adults who are at increased risk, regardless of age	April 2013
USPSTF	Sexually transmitted infections: behavioral counseling ^d	B	Sexually active adolescents and for adults who are at increased risk for sexually transmitted infections (STIs).	September 2014
USPSTF	Syphilis infection in pregnancy: screening	A	Pregnant women	May 2009
USPSTF	Syphilis infection: screening	A	Persons at increased risk for syphilis	July 2004 ^e
ACIP	Hepatitis B: vaccination	Recommended	Unvaccinated adolescents (<19 years of age); adults at increased risk for HBV	December 2005; December 2006
Bright Futures, 3rd Edition	STI screening: gonorrhea and chlamydia	Recommended	Sexually active adolescents and young adults, ages 11–21	2008
Bright Futures, 3rd Edition	STI screening: syphilis and HIV	Recommended	Sexually active adolescents and young adults, ages 11–21, who screen positive for risk	2008
Bright Futures, 3rd Edition	Administration of alcohol, drug use screening tool	Recommended	Adolescents and young adults, ages 11–21, who are positive or risk screening questions	2008
Women's Preventive Services Guidelines	Counseling for sexually transmitted infections	Recommended	All sexually active women	August 2012
Women's Preventive Services Guidelines	Counseling and screening for HIV	Recommended	All sexually active women	August 2012
Women's Preventive Services Guidelines	Contraceptive Methods and Counseling ^e	Recommended	All women with reproductive capacity	August 2012
Services not currently subject to ACA requirements for coverage without cost-sharing ^c				
Recommendation Source ^b	Intervention or service	Rating ^b	Population(s) addressed	Date recommendation issued ^b
USPSTF	Alcohol misuse: screening and behavioral counseling interventions in primary care	I	Adolescents (under 18 years of age) ^f	May 2013
USPSTF	Chlamydia and gonorrhea: screening	I	Sexually active men	September 2014
USPSTF	Drug use, illicit: screening	I	Adolescents, adults, and pregnant women	January 2008
USPSTF	Genital herpes: screening	D	Adolescents, adults, and pregnant women	March 2005 ^e
USPSTF	Syphilis infection: screening	D	Asymptomatic persons, not at increased risk for syphilis	July 2004 ^e
USPSTF	Tuberculosis infection: screening	N/A		

Table 2 (continued)Services currently subject to ACA requirements for coverage without cost-sharing^a

			Asymptomatic adults at increased risk for developing active tuberculosis (TB) disease	Recommendation statement under development
Women's Preventive Services Guidelines	Contraceptive methods—male condoms	Explicitly not covered	All women with reproductive capacity	August 2012
N/A	Male and female condoms	N/A	All men who are sexually active	N/A
N/A	Preexposure prophylaxis (PrEP)	N/A	All persons at substantial risk for acquiring HIV, as outlined in the US Public Health Service Clinical Practice Guidelines	N/A ^b
N/A	Nonoccupational post-exposure prophylaxis (nPEP)	N/A	Persons with sexual, injection-drug use, and other substantial nonoccupational HIV exposure who seek care within 72 h after exposure	N/A ^b

^a In practice, benefit design features (including use of provider networks), insurer coding requirements, and provider coding and billing practices may all affect whether an individual will be subject to cost sharing requirements

^b If applicable. For items to which a particular column does not apply, the table indicates this with a not applicable sign, or N/A

^c These services include those that have not yet been evaluated, those that have been evaluated, but for which evidence has proven insufficient to warrant a positive recommendation, and those for which the relevant panel has issued a positive recommendation *against* their use. Individual insurers and health plans may nonetheless choose to cover some of these services, either with or without cost-sharing. However, this coverage is not required under Section 2713 of the Public Health Service Act, as added by the Affordable Care Act and incorporated into the Employee Retirement Income Security Act of 1974 (ERISA)

^d While some variance across insurers is likely with respect to how coverage benefits are defined for recommended services, that variance may be substantial in the case of counseling-based preventive services like this one. For guidance, insurers may—but are not required to—look to standards set by CMS as part of its National Coverage Determinations (NCD) process for Medicare. The NCD for high intensity behavioral counseling to prevent STIs (NCD manual section number 210.10) is available at <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=352&ncdver=1&bc=AgAAgAAAAAAAAA%3d%3d&>

^e Under the HRSA Women's Preventive Services Guidelines, coverage without cost sharing is available for all FDA-approved contraceptive methods including, but not limited to, barrier methods, hormonal methods, and implanted devices that are prescribed for an eligible woman by her health care provider. However, the guidelines specifically exclude coverage for contraceptive methods that relate to *male* reproductive capacity, including male condoms and vasectomies

^f At first glance, there seems to be a discrepancy between USPSTF and HRSA Bright Futures recommendations around screening adolescents for alcohol use/misuse. However, a detailed review of the two recommendation sets suggests that, in fact, the USPSTF and Bright Futures positions may not be in conflict. The USPSTF evaluated and found insufficient evidence to recommend formal alcohol misuse screening and (for those who screen positive) behavioral interventions delivered as part of routine care for adolescents between the ages of 12 and 17. Bright Futures only positively recommends formal screening IF an adolescent first answers affirmatively to some basic behavioral questions around alcohol use. In other words, the USPSTF statement is focused on generalized screening, while the Bright Futures' recommendation deals with targeted screening

^g As of October 26, 2015, recommendation statement was in the process of being reviewed and updated

^h While no recommendations relating to these services have been issued by one of the entities mentioned in the ACA (i.e., USPSTF, ACIP, or HRSA as part of its Bright Futures and Women's Preventive Services Guidelines), guidelines around using these preventive services are available from the US Public Health Service (for PrEP) and the US Department of Health and Human Services (for nPEP). See <http://www.cdc.gov/hiv/pdf/prepguidelines2014.pdf> (PrEP) and <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5402a1.htm> (nPEP) for details

population engagement, care continuity and coordination, and provider responsibility for health outcomes and population health. As a result of these changes, practices and services that support linkage to and retention in care will become standard practices and default operations, rather than wrap around supplements necessary to ensure people living with or at risk for acquiring HIV have a better chance of successfully navigating the healthcare system.

Biomedical Approaches to Prevention: Preexposure Prophylaxis and Treatment as Prevention

Since the ACA's passage in 2010, the science of biomedical HIV prevention has been revolutionized by a series of landmark studies that conclusively demonstrated that antiretrovirals offer important preventive, as well as therapeutic, benefits. For people living with HIV, immediate initiation of antiretroviral therapies that lead to durable virologic

suppression not only decreases their risk of morbidity and mortality from AIDS-defining and non-AIDS defining conditions; it also reduces their risk for transmitting HIV to uninfected partners by more than 95 % [34, 36, 37]. For people who are uninfected but at substantial risk for contracting HIV, several large studies have shown that daily oral preexposure prophylaxis (or, PrEP) with an FDA-approved, fixed-dose combination of tenofovir disoproxil fumarate 300 mg and emtricitabine 200 mg, when taken as prescribed, can reduce HIV acquisition risk by more than 90 % [38]. Recent open label PrEP demonstration studies and programs among MSM have also shown that maintaining the requisite high levels of adherence is possible, with high levels of effectiveness [39, 40].

Unfortunately, both antiretroviral treatment and PrEP are reaching far too few people who stand to benefit from them. CDC has estimated that only 30.2 % of the estimated 1.2 million people who are living with HIV in the USA have achieved durable virologic suppression [41]. Even limited to the proportion of PLWH who are aware of their infections, the figure is 41.7 % [41]. CDC also estimates that as many as 1.2 million persons in the USA meet US Public Health Service recommended indicators for PrEP use [42]. Although similar national figures do not exist to quantify the proportion of individuals most likely to benefit from PrEP who have access to this preventive option, published analyses of awareness and utilization rates—particularly among populations, like black MSM, who are disproportionately affected by HIV—suggest considerable room for improvement [43–45].

The provisions of the ACA that are most likely to have an immediate and durable impact on the accessibility of ART and PrEP are those that require all nongrandfathered individual and small group health plans and Medicaid ABPs to cover essential health benefits [28, 29]. In addition to the previously mentioned inclusion of preventive health services, one of the ten categories of services and benefits specified as part of the EHB package is prescription drugs. Unfortunately, and unintentionally, the original implementing regulation did not ensure coverage for some drugs, including many combination therapies used to treat HIV. An analysis of 84 “silver” level qualified health plans offered in 15 states found that, in 2014, single source brand name HIV drugs (i.e., those for which no generic equivalent was available) were covered 81 % of the time, but combination of HIV medicines, such as Truvada, Combivir, and Stribild, was only included in the formularies of reviewed plans 67 % of the time [46].

Regulators have since recognized the gaps unintentionally present in the initial regulation and have taken corrective action [47]. For plan years beginning on or after January 1, 2017, entities that issue plans covered by the ACA’s EHB requirements must establish a pharmacy and therapeutics (P&T) committee, which will be charged with establishing and managing the plan’s drug formulary. Among other things,

the P&T committee will be tasked with ensuring that the drug formulary “covers a range of drugs across a broad distribution of therapeutic categories.....[and] provides appropriate access to drugs that are included in broadly accepted treatment guidelines and that are indicative of general best practices at the time” [47• (p. 10872)].

These requirements can improve access to the full array of combination ART regimens recommended by the HHS Panel on Antiretroviral Guidelines for Adults and Adolescents, as well as to PrEP when prescribed in accordance with the US Public Health Service’s 2014 clinical practice guidelines, *Preexposure Prophylaxis for the Prevention of HIV Infection in the United States*.

Prevention Through Healthcare Must Be Coupled with Prevention Beyond Healthcare

Given that the health of both individuals and populations is largely determined by the conditions they confront, and actions they take, outside of their formal interactions with clinical care providers, greater emphasis on integration of public health, community health, and clinical care systems is critical if the USA is to replace the current US system of “sick care” with one that promotes and preserves *health* [48, 49]. The ACA includes several provisions directly aimed at encouraging collaboration and even integration across the traditional boundaries of clinical care, public health, and community services. Integration is increasingly being considered and prioritized as part of the design and operation of various health reform initiatives, as evidenced by changes made to proposal requirements during the second round of funds awarded under Center for Medicare and Medicaid Innovation’s SIM initiative [50, 51].

In addition to continuing to provide critical safety net services for individuals unable to benefit from some of the ACA’s reforms, such as individuals with incomes below 100 % FPL in states that have not expanded Medicaid, public health, and community partners are uniquely well positioned both to bring *community into* preventive and clinical care (e.g., by helping clinical care providers deliver care that is informed by and responsive to the needs of the communities they serve) and to extend preventive and clinical care *into communities* (e.g., by identifying and helping individuals with chronic conditions reengage in clinical care).

HIV prevention programs and providers have already begun to explore the new roles they may assume in, and the contributions they can make to, a fully integrated system encompassing public health, medical care, and community services and service providers. Health departments are helping to ensure that the healthcare systems in their communities remain nimble and responsive to evolving prevention science and opportunities for impact. New York City, for example, has launched a new outreach campaign that uses public health

detailing methods to educate staff in 600 primary care and infectious disease clinics about PrEP and PEP and bolster their capacity to effectively implement practices that increase access to these prevention tools among their patients [52]. Importantly, interactive engagement approaches like detailing represent more than just a mechanism for getting information to clinical providers; they also foster greater bidirectional communication by creating an opportunity for public health staff to collect feedback from clinicians that can inform future health department activities [53].

Health departments are also working with providers and community service organizations to aggregate and make more effective use of available data generated by the delivery system and other sources. For example, under CDC's Data to Care (D2C) initiative, health departments are leveraging HIV surveillance data and other information sources to identify HIV-diagnosed persons who are not in care and reengage them [54]. D2C creates a platform for real-time (or near real-time) data exchange among providers, payers, public health, and community partners that can provide timely proactive support for linkage to and retention in care, as well as improvements in the quality of care.

Finally, through integrated planning activities, HIV prevention and care service providers are leading efforts to (re)engineer the system as a whole to reduce fragmentation and achieve better outcomes for individuals and communities disproportionately impacted by HIV. In keeping with an emerging vision of health departments as the "chief health strategists" in their communities, those entities bear formal responsibility for developing Integrated HIV Prevention and Care Plans and accompanying Statewide Coordinated Statements of Need [55, 56]. However, successful development and execution of these plans depend on whether the health departments effectively engage with organizations that represent a diverse array of sectors, including clinical care and social services, as well as education, transportation, housing, and local businesses. Integrated planning activities are thus creating a space within which to galvanize community action that goes beyond improving the operations of the health system and also addresses the social determinants of health.

Challenges

While the ACA introduces a wealth of new opportunities for HIV prevention in the USA, there are a number of important challenges. First, as of August 2015, 20 states had not yet expanded their Medicaid programs; together, these states accounted for approximately 46 % of new HIV diagnoses in 2013, 40 % of all persons living with an HIV diagnosis at the end of 2012, and 46 % of the estimated 156,000 persons who are infected with HIV but unaware of their serostatus [21, 57]. While the Ryan White program will continue to offer an important safety net for persons diagnosed and living with HIV,

there is no equivalent national safety net program in place for the much larger number of persons who are at risk for, but have not yet acquired, HIV. Given that the median Medicaid eligibility threshold for parents of dependent children in nonexpansion states is 44 % of FPL and only 1 out of these 20 states offer Medicaid coverage for low income childless adults, many residents in these states will continue to have inadequate access to the full array of HIV prevention services and support that could be available to them [58].

Second, studies have shown that insurance coverage is an important facilitator—but not a guarantor—of greater access to and utilization of care and preventive services [59, 60, 61••]. Benefit designs that place all drugs used to treat HIV (even generics) in formulary tiers associated with the highest levels of cost sharing are likely to undermine initiation of, and adherence to, both PrEP and ART [62••, 63]. And, while supportive benefit designs—for example, first dollar coverage for preventive services—improve utilization, they do not necessarily lead to optimal utilization rates [59, 64–67]. Translating coverage to access and access to receipt of HIV prevention services will require additional investments in change at every level of the system. Patients may need to be educated about the preventive services they need, and where and how to access those services through their health plans. Providers may need to offer extended hours or adapt workflows (e.g., introduce routine collection and recording of sexual risk behavior) to optimize availability and delivery of recommended services. And, payers may need to reconsider what they cover and how these decisions affect the extent to which they realize the Triple Aim among their beneficiaries; for example, coverage of PrEP and ART may have limited value if coverage for the drugs is not coupled with coverage of adherence support counseling for those who need it.

Finally, an integrated *health* system—one that supports HIV prevention goals both within and beyond the *healthcare* system—is easier to envision than it will be to create. Fragmentation is not limited to the US healthcare system: It is also common in much of the public health and social service sectors. Moreover, in many communities, within sector fragmentation is coupled with cross-sector divisions that tend to limit community-wide collaboration and integration. Bringing public health, healthcare, and community together will require deft leadership capable of navigating and effectively bridging barriers that include laws, policy, organizational culture, technology, and professional training.

Conclusion

Advances in HIV prevention have encouraged the nation to adopt a vision of itself as "a place where new HIV infections are rare and when they do occur, every person, regardless of age, gender, race/ethnicity, sexual orientation, gender identity,

or socio-economic circumstance, will have unfettered access to high quality, life-extending care, free from stigma and discrimination [1].” Achieving this vision requires that persons living with or at risk for HIV have access to healthcare, that access to healthcare translates into receipt of recommended preventive and treatment services, and that delivery of these services is coordinated across the *health* system. The ACA provides the political and structural platform necessary for these requisites to become realities; actual success, however, will depend upon active involvement from, and collaboration among, a wide range of stakeholders, including those who represent public health, healthcare, and community service providers.

Compliance with Ethics Guidelines

Conflict of Interest Abigail H. Viall, Eugene McCray, Jonathan Mermin, and Pascale Wortley declare that they have no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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