The National Alliance for HIV Education and Workforce Development (NAHEWD) Recommendations for the AIDS Education and Training Centers (AETCs)

May 2014

NAHEWD makes these recommendations with the overall goal of building on the successful AETC infrastructure while expanding AETC reach and scope to facilitate rapid and consistent translation of the latest clinical and behavioral science into practice.

The National Alliance for HIV Education and Workforce Development (NAHEWD)

The National Alliance for HIV Education and Workforce Development (NAHEWD) is a membership organization that supports the mission of the AIDS Education and Training Centers (AETCs).

The mission of NAHEWD is to increase access to, reduce disparities in, and improve the quality of HIV care and service delivery through workforce development, education, technical assistance, and advocacy.

The AIDS Education and Training Centers (AETCs)

The AIDS Education and Training Centers (AETCs) are part of the Ryan White Program (RWP) and funded through the Health Resources and Services Administration (HRSA).

The mission of the AETCs is to build and maintain a well educated and culturally sensitive health professions workforce that can provide prevention education and counseling, diagnosis, care and treatment, and medical management for people at risk for and living with HIV.

The AETCs are the only national network of leading HIV experts providing locally-based, tailored education programs and technical assistance to healthcare teams and systems; the network helps systems integrate comprehensive care for those living with or affected by HIV. The AETC network transforms HIV care by building the capacity to provide accessible, high-quality treatment and services throughout the United States and its territories.

Executive Summary

This document describes the National Alliance for HIV Education and Workforce Development's (NAHEWD) vision for the future of the AIDS Education and Training Centers (AETCs), based on the AETC infrastructure of networked national, regional, and local centers. The AETCs, funded by the Health Resources and Services Administration (HRSA) as part of the Ryan White Program (RWP), have provided education, training, consultation, capacity building, and technical assistance to HIV care communities in the United States and its territories since 1987. The AETCs not only disseminate the latest clinical knowledge, they also facilitate its implementation in practice.

The need for the AETCs is even more evident today. It is more difficult than ever for providers to stay abreast of discoveries and rapid changes in (a) biomedical interventions to prevent, diagnose, and treat HIV; (b) behavioral approaches to key areas of concern for prevention and retention in care; and (c) the plan to shift HIV care into primary care settings. People living with HIV (PLWH) are living longer and developing new problems related to aging, while the established HIV workforce is also aging out of practice. The National HIV/AIDS Strategy (NHAS), published in 2010, and full implementation of the Patient Protection and Affordable Care Act (ACA) in 2014 will increase access to HIV testing, care, and services for many Americans. The healthcare system will need to address ongoing HIV-related disparities and expand HIV treatment in primary care settings to address these changes. The healthcare system will need to enhance service capacity as well as the skills and expertise of the provider workforce to meet the comprehensive and emerging care needs of PLWH. The AETCs are well positioned to address all of these concerns through targeted education and capacity building programs, and to deliver these programs in a timely manner.

Given more than 25 years of AETC experience, NAHEWD recommends that the AETCs:

- Employ geographically decentralized LPS networks to facilitate rapid dissemination and implementation of evidence-based clinical and behavioral science into practice with respect to the context of specific and unique communities.
- Integrate expertise of the AETC National Centers to develop interregional collaborations, clinical consultation, outcomes documentation, and Web-based repositories of AETC resources.

Given rapidly emerging models of care, ACA implementation, and increases in early HIV diagnosis, NAHEWD recommends that the AETCs:

- Provide longitudinal capacity building assistance tailored to individual HIV care settings and community health centers.
- Facilitate practice change with a focus on interprofessional team development.
- Expand target audiences to include key interprofessional team members needed to improve retention in care and adherence to treatment regimens.
- Increase the ability of HIV providers and care systems to use ACA implementation as a mechanism to ensure access to excellent HIV care and services.

Given the workforce need for more providers who can provide HIV primary care, HIV specialty care, and important support services, NAHEWD recommends that the AETCs:

- Work with state programs and private insurers to reach established primary care providers and specialists in non-HIV care who are new to HIV care but who will be called on to meet the emerging needs of PLWH.

- Build on multimodal training successes, employing evidence-based education methods with proven efficacy, to ensure a skilled and culturally sensitive HIV workforce.
- Expand education programs for faculty in health professions programs to help them integrate HIV into components of the various curricula.
- Provide coordinated education, support, and services to medical and dental residents and nurse practitioner and physician assistant students to develop HIV competency during pre-service training.
- Assure that AETC faculty use evidence-based training methods to present cutting-edge information.

Given the critical need to address disparities in HIV care outcomes in communities most impacted by the HIV epidemic, NAHEWD recommends that the AETCs:

- Provide capacity building expertise to replicate effective SPNS innovative models of care for highly impacted populations.
- Expand programs targeting minority and minority-serving providers working in highly impacted communities.
- Address issues of stigma and culturally sensitive HIV care in American Indian/Alaska Native and U.S.-Mexico border communities with expanded programming.

Given the great promise of the NHAS, with fewer new HIV infections and full access to care free from stigma and discrimination, NAHEWD recommends that the AETCs:

- Lead the integration of HIV prevention and testing into primary care, with a focus on the latest in biomedical and behavioral prevention interventions as well as advances in HIV testing technologies.
- Prepare clinicians with the knowledge and skills needed to provide PrEP.
- Apply lessons learned in the HIV epidemic to improve HCV diagnosis and treatment.

Given greater understanding of the epidemic as depicted in the HIV Continuum of Care, NHAS goals, ACA implementation, HRSA priorities, and other federal initiatives, NAHEWD recommends that HRSA:

- Use the existing AETC infrastructure to disseminate the latest findings in biomedical and behavioral prevention methods, HCV diagnosis and treatment, and new and emerging federal healthcare initiatives.
- Facilitate fiscal efficiencies by disseminating resources through the existing AETC structure to avoid duplication of costly infrastructures and to expedite implementation of new programs.
- Foster collaboration within HRSA and across federal agencies to enhance awareness of AETC capacities and to facilitate collaborations.
- Reinstate full funding for special program initiatives that address disparities and reach communities of highest need.
- Provide adequate funding, based on need for AETC training and capacity building assistance, to target programs at each stage of the HIV Care Continuum.

The AETCs have built an effective, efficient, and necessary public health response to assure that the U.S. healthcare system is responsive to the needs of providers and patients in the HIV epidemic. Long before the NHAS was published, the AETCs were dedicated to “unfettered access to high quality, life-extending care, free from stigma and discrimination” (NHAS, p. iii). The AETCs of the future must build on and expand their work to help make the final, effective push to ***stop HIV and achieve an AIDS-Free Generation.***

NAHEWD Recommendations for the AETCs

An estimated 50,000 new cases of HIV infection occur in the United States every year, indicating that the epidemic and its effects will continue for the foreseeable future.[1] The news for HIV-infected people is promising, however. People living with HIV (PLWH) who are engaged in care and who have access to treatment and services can live well into their senior years with few health limitations.[2] Improvements in antiretroviral therapy (ART), support services, and an extensive network of HIV-care specialists have all contributed to the positive change. The driving factor for these developments has been the Ryan White Program (RWP), which provides funding for HIV prevention, care, research, and support services in the United States and its territories. The Health Resources and Services Administration (HRSA)-funded AIDS Education and Training Centers (AETCs) are a part of this important system. The AETCs are funded to provide education, training, capacity building, and technical assistance to care providers and systems that must constantly evolve to address the ever-changing science of HIV and the needs of health care communities.[3]

This paper describes the vision of the National Alliance for HIV Education and Workforce Development (NAHEWD) for the AETCs of the future, and how the AETCs can continue to make a significant impact on the epidemic and facilitate "getting to zero" - zero new HIV infections, zero discrimination, and zero HIV-related deaths. We describe the roles the AETCs should play to (a) intervene at each point along the HIV Continuum of Care to improve clinical outcomes, expand prevention efforts, and address disparities; (b) promote development of the interprofessional HIV healthcare workforce needed to provide the highest quality, most accessible HIV specialty and primary care to PLWH; (c) expand PLWH use of the Patient Protection and Affordable Care Act (ACA) to ensure continued access to HIV diagnosis, care, treatment, and support services; and (d) share resources and collaborations to more effectively support HRSA priorities and the goals of the National HIV/AIDS Strategy (NHAS).

The AETCs

The AETCs were initially funded in 1987, only 6 years after the first AIDS cases were identified in the United States, before effective treatment, and when mortality rates were skyrocketing. The AETCs responded to the early concerns of front-line providers with programs tailored to the needs of patients and care communities. Programs focused on primary prevention, symptom management, palliative care, opportunistic infections, stigma, discrimination, grief, and loss. The AETCs used education, consultation, and community mobilization to support the rapid development of an HIV workforce where none had existed. When highly effective HIV treatment regimens started to become available in 1995, the AETCs were there to support provider communities as they learned to deliver state-of-the-art HIV care and to help patients receive the most benefit from new medications. The AETC model is based on adult learning theory that not only serves to disseminate the latest clinical findings but also facilitates their implementation and integration into practice.

In 2010, with the release of the National HIV/AIDS Strategy (NHAS), the AETCs began aligning their work to address NHAS-specific goals. In 2014, the need for the AETCs is even more evident. Advances in

[1] CDC. (2013). *HIV in the United States: At a glance*. Retrieved from http://www.cdc.gov/hiv/statistics/basics/ataglance.html
[2] Rodger, A. et al. (2013). Mortality in well controlled HIV in the continuous antiretroviral therapy arms of the SMART and ESPRIT trials compared with the general population. *AIDS, 27*(6), 973-979. doi:10.1097/QAD.0b013e32835cae9c
[3] HRSA HIV/AIDS Program. (nd). Part F – Education and Training Centers. Retrieved from http://hab.hrsa.gov/abouthab/partfeducation.html

biomedical interventions, the need to address behavioral elements in the HIV Continuum of Care,[4] an aging population of PLWH with multiple co-morbidities,[5] the need to shift HIV care into primary care settings, and the lack of readiness of these settings,[6] have emerged as critical concerns for the epidemic. In addition, the aging HIV care workforce and the decreasing number of new HIV care providers will soon lead to a large gap in the number of HIV care specialists.[7] All of these issues are being addressed in a timely manner by effective, locally targeted AETC programs.

- The AETCs respond to the rapidly changing epidemic by providing technical assistance and capacity building to assure that advances in diagnostics, treatment, prevention, behavioral health, retention in care, ART, and adherence to treatment regimens are integrated into clinical care settings.
- The AETCs understand the context of the epidemic within the social determinants of health; they work to help care providers alleviate the negative impact of stigma, racism, poverty, sexism, heterosexism, and discrimination.
- The AETCs expand their influence and use resources efficiently by joining into collaborations with partners who focus on similar issues, such as local and state departments of health; graduate medical, dental, nursing, pharmacology, and physician assistant training programs; the Centers for Disease Control and Prevention (CDC)-funded STD/HIV Prevention Training Centers (PTCs) and Regional Tuberculosis Training and Medical Consultation Centers (RTMCCs); and the Substance Abuse and Mental Health Services Administration (SAMHSA)-funded Addiction Technology Transfer Centers (ATTCs).
- As education experts, the AETCs employ diverse and proven education, capacity building, and mentoring methods within the local context for the greatest impact on provider knowledge, skills, and confidence to provide care. These methods are more likely to lead to integration into clinical practice.
- The AETCs support HRSA priorities for HIV,[8] the goals of the National HIV/AIDS Strategy (NHAS),[9,10] guidance from the HIV Continuum of Care, and expanded healthcare coverage offered by the Patient Protection and Affordable Care Act (ACA).[11]

The AETC infrastructure has evolved into a network of 11 regional centers with 125 local performance sites (LPSs) covering all 50 states and U.S. territories, with support from 3 national centers:

- the Clinician Consultation Center (CCC)
- the AETC National Resource Center (NRC)
- and the AETC National Evaluation Center (NEC)

This infrastructure – from regional centers covering several states and territories and their local centers

[4]Gardner, E.M. et al. (2011), The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clinical Infectious Diseases, 52,* 793–800. doi:10.1093/cid/ciq243

[5] Balderson, B,H. et al. (2013). Chronic illness burden and quality of life in an aging HIV population. *AIDS Care, 25*(4), 451-458. doi:10.1080/09540121.2012.712669

[6] Saha, S. et al. (2013). Primary care provider cultural competence and racial disparities in HIV care and outcomes. *Journal of General Internal Medicine, 28,* 622-629. doi:10.1007/s11606-012-2298-8

[7] Institute of Medicine (IOM). (2011). *HIV screening and access to care: Health care system capacity for increased HIV testing and provision of care.* Retrieved from http://www.nap.edu/catalog.php?record_id=13074

[8]HRSA. (nd). *Public health: Five priorities.* Retrieved from http://www.hrsa.gov/publichealth/

[9]Office of National AIDS Policy. (2010, July). *National HIV/AIDS strategy for the United States*. Retrieved from

[10]Boccher-Lattimore, D. (2012, November). *Supporting National HIV/AIDS Strategies: The domestic experience and the AETCs.* Ryan White All Grantees Meeting, Washington DC, Panel Presentation.

[11]The Affordable Care Act and HIV/AIDS. (2013).

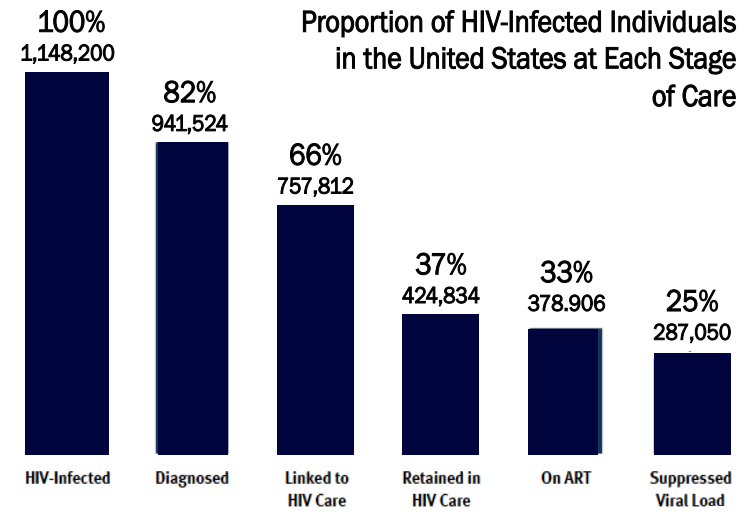
focused on specific communities, to national centers that focus on evaluation, coordination, and consultation – work together to:

- disseminate the latest information about clinical science, practice guidelines, and systems integration to improve access to quality HIV care; and
- support providers and care facilities as they implement these advances and integrate them into accessible, comprehensive care for PLWH.

The HIV Continuum of Care

Gardner's[12] work on the spectrum of HIV care visually illustrated the problems of access to effective HIV care. More recent data[13] show that, of the estimated 1.1 million Americans living with HIV, only 25% achieve a suppressed viral load, which is a primary goal of HIV treatment. Decreases occur at each stage in the continuum: diagnosed, linked to care, retained in care, prescribed ART, and virally suppressed (Figure 1).[8] The HIV Continuum of Care has been further analyzed to identify critical population outcomes. For example, the greatest drop in the cascade consistently occurs from linkage to care to retention in care for every age, racial/ethnic, risk factor, and gender group; young people and African Americans are the least likely to be engaged in ongoing care or to receive effective treatment.[14] Cascades based on real time data have been developed by states, cities, and clinics to better understand local epidemics and to help develop targeted intervention strategies for those at most risk. The HIV Continuum of Care makes it abundantly clear that getting to a suppressed viral load requires providers who are skilled in ordering effective treatment regimens, helping patients adopt new behaviors, and using an interprofessional team approach to care.[15] Comprehensive and effective control of the HIV epidemic requires (a) routine HIV testing in all healthcare settings; (b) effective systems to ensure that newly-diagnosed PLWH are linked to culturally appropriate, accessible clinical services; (c) systems embedded into care settings to track PLWH, identify those who have fallen out of care, and provide outreach services to help them return to care; and (d) services to help PLWH adhere to HIV treatment regimens by addressing barriers to treatment, including lack of housing, insufficient food, substance abuse, and mental health problems.

Figure 1. HIV Continuum of Care



Source: Gardner, E.M. et al. (2011). *Clin Infect Dis, 52*, 793–800.
Source: Adapted from CDC "HIV in the United States–The Stages of Care" July 2012.

[12] Gardner, E.M. et al. (2011).
[13] CDC. (2012). *HIV in the United States: The stages of care.*

[14] CDC. (2012), *HIV in the United States: Stages of care.*

[15] IOM. (2011).

The Need for Rapid and Coordinated Responses: The Importance of Local Performance Sites (LPSs)

The rapid translation of the science into evidence-based practice standards is key to the provision of quality care in the epidemic. National organizations, including HRSA and the CDC, make frequent changes to guidelines based on changes in evidence-based knowledge. Traditional continuing education methods, while helping to enhance awareness of guidelines and basic knowledge, have been shown to have little impact on clinical care.[16] Providers who receive ongoing education, experiential learning, and clinical support are more likely to provide care based on the most up-to-date treatment guidelines. Quality care is facilitated by convenient access to education, training, capacity development, and expert clinical consultation that (a) address the context of community practices and epidemics and (b) provide access to easily accessible referral networks.

The AETC Response

The AETCs have developed a base structure of geographically-dispersed LPSs featuring relationships with local clinics, health departments, and other settings where HIV care is delivered. Drawing on implementation science, the LPSs provide a comprehensive approach to facilitate service integration through processes that engage local leaders and offer longitudinal training and support to increase integration of new learning into practice. LPSs are responsible for (a) knowing the communities in which they work, including how HIV and other related diseases affect healthcare in those geographic areas; (b) using local data to better target HIV testing, prevention, and care services; (c) responding rapidly to disseminate cutting-edge and evidence-based information to providers in diverse settings, including remote rural areas and hard-to-reach, highly-impacted urban neighborhoods; and (d) initiating capacity building programs to help care providers and facilities integrate cutting-edge information into clinical and support services for PLWH.[17] Every community has a unique mix of problems and resources; the LPSs understand these variables and are well positioned to mobilize efforts to address needs. This regional and local infrastructure has allowed the AETCs to develop the trust, expertise, and community relationships needed to provide expert capacity building and technical assistance to local care settings. A panel of the International Association of Providers in AIDS Care (IAPAC) reviewed 325 studies and identified evidence-based recommendations to effectively support engagement in HIV care and ART adherence, including the need for

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- systematic monitoring of entry into care after diagnosis
- systematic monitoring of retention in care
- routine adherence assessments
- patient education and support using specific adherence tools

[16] Davis, D.A., & Taylor-Vaisey, A. (1997). Translating guidelines into practice: A systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines. *Canadian Medical Association Journal, 157,* 408-416.

[17] Lifson, A.R. et al. (2004). Minnesota's Midwest AIDS Training and Education Center: Helping health care providers remain current on a rapidly changing epidemic. *Minnesota Medicine, 87*(12), 44-47.

- one-on-one patient education about ART
- screening, management, and treatment for depression and other mental health issues in combination with adherence counseling.[18]

AETCs provide support for providers to learn these skills. Care providers and healthcare systems need more than skill development, however, they also need training and capacity building support to integrate best practices into care. ***In the last fiscal year (FY12-13), the AETC network provided 14,600 training events for more than 111,500 participants. Most programming occurred in local communities and/or through distance learning programs sponsored by LPSs or regional offices in support of LPS activities. Programs addressed issues related to improving outcomes in the continuum of care, such as adherence (in 43% of events), mental health (in 23% of events), substance abuse (in 23% of events), and community linkages (in 23% of events). In addition, 21% of AETC trainees practiced primarily in rural settings, a group that is often missed by other training programs.*** The AETC network is truly a bargain: local experts, with effective education, consultation, and mentoring skills, rapidly respond to changing landscapes, and provide capacity building support in ways that best accommodate local needs.

MODELS OF CARE: CAPACITY BUILDING

The United States is on the verge of tremendous changes in healthcare, brought on by opportunities in the ACA and pressures to control care costs. New models of primary care, including the patient-centered medical home (PCMH), will give new, and long overdue, foci to prevention and health maintenance, in order to reduce costs and improve outcomes. Many components of PCMH are established cornerstones of the highly effective HIV care models developed by RWP providers over the last 20 years because these practices support retention in care and help to control viral loads.[19] RWP models of care have demonstrated that 70% of clients who are retained in care achieve viral suppression.[20] The AETCs have played a large role in supporting this outcome, through Ryan White provider training and capacity building interventions to improve systems of care.[21] While ACA will increase access to services, it will also create enormous pressure on HIV care systems as more people are diagnosed, enter care, and live longer with the infection. To meet this need, HRSA expects to expand HIV primary care into community settings. While this is a logical and pragmatic approach, these settings will require support, technical assistance, and capacity building to design accessible services that are culturally sensitive, stigma-free, and staffed by a workforce with HIV expertise. Recent studies have shown that the primary care workforce is not fully prepared to meet this challenge.[22,23]

The AETC Network Supports HIV Capacity Building by:

- Facilitating change in care systems.
- Bringing national expertise to local healthcare systems.
- Translating research into practice.
- Mobilizing primary care providers.
- Responding rapidly to emerging needs.
- Providing coordinated responses.
- Identifying and reaching out to underserved communities.

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[18] Thompson, M.A. et al. (2012). Guidelines for improving entry into and retention in care and antiretroviral adherence for persons with HIV: Evidence-based recommendations from an International Association of Physicians in AIDS Care Panel; *Annals of Internal Medicine,* 156(11), 817-833. doi:10.7326/0003-4819-156-11-201206050-00419

[19] Target Center. (2012). *A path to medical home status: Insights from Ryan White Grantees.* Retrieved from https://targethiv.org/library/pathW medicalW homeW statusW insightsW ryanW whiteW grantees 20

Continuum of HIV care among Ryan White HIV/AIDS Program clients, U.S. (2010). Retrieved from http://hrsa.gov/data/reports/continuumofcare/

[21] HIV Medical Homes Resource Center, see http://www.fxbcenter.org/mhrc.html

[22] Phillips, K.A. et al. (2010). A multicenter study of internal medicine residents' perceptions of training, competence, and performance in outpatient HIV care. *AIDS Patient Care and STDs, 24,* 159-282.

[23] HealthHIV. *3rd Annual State of HIV Primary Care National Survey*. http://issuu.com/healthhiv/docs/3rd_pc_survey_final

The AETC Response

Longitudinal capacity building activities have increased the capacity of healthcare systems to meet the challenges of the epidemic, make progress on the goals of the NHAS, and help realize the potential of the ACA. The AETCs have extensive experience assessing care systems and providing consultation, training, and technical assistance to create innovative practice models tailored to the specific needs of a region, city, or clinic. The goal of these interventions is to enhance delivery of HIV treatment and comprehensive care services through workforce efficiencies that improve PLWH health outcomes. Approaches have included planning for adjustments in staff mixes and responsibilities,[24] including the use of:

- advanced practice nurses and physician assistants who practice to the full extent of their educations,[25]
- patient navigation systems that help PLWH engage in care,[26]
- staff restructuring to support PCMH implementation,[27]
- community health workers who function as integrated members of the healthcare team,[28] and
- interprofessional principles of team-based care and practice.[29]

AETC faculty and staff have the skills to educate key interprofessional team members, including clinician-prescribers, nurses, pharmacists, dental professionals, case managers, mental health and substance use specialists, health educators, and paraprofessionals such as medical assistants, peer navigators, and outreach workers. Each plays an important role in accessible team-based care that meets the comprehensive needs of PLWH.

NAHEWD recommends that the AETCs:

- ***Provide longitudinal capacity building assistance tailored to individual HIV care settings and community health centers.***
- ***Facilitate practice change with a focus on interprofessional team development.***
- ***Expand target audiences to include key interprofessional team members needed to improve retention in care and adherence to treatment regimens.***
- ***Increase the ability of HIV providers and care systems to use ACA implementation as a mechanism to ensure access to excellent HIV care and services.***

AETCs have been in the forefront of identifying best practices and methods to help organizations re-align personnel into the changing healthcare landscape, including ways to increase successful integration of HIV care into primary care and community health settings serving vulnerable populations. Using their experiences with successful models of care in Ryan White programs, the AETCs are poised to meet the growing demands of the changing healthcare system in light of ACA implementation, encouraging primary care settings to adopt best practices and to replicate the remarkable successes that have changed HIV from an acute, terminal disease to the status of a chronic disease.

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[24] Samb, B. et al. (2007). Rapid expansion of the health workforce in response to the HIV epidemic. *New England Journal of Medicine, 357*(24), 2510-2514.

[25] IOM. (2011).

[26] Farrisi, D., & Deitz, N. (2013). *Patient navigation is a clientc centered approach that helps to engage people in HIV care.*

[27] Reuben, D.B. et al. (2013). Effect of nurse practitioner comanagement on the care of geriatric conditions. *Journal of the American Geriatrics Society, 61*(6), 857–867. doi:10.1111/jgs.12268

[28] Mukherjee, J.S., & Eustache, F.E. (2007). Community health workers as a cornerstone for integrating HIV and primary healthcare. *AIDS Care, 19*(Suppl. 1), S73-S82.

[29] Resnick, B. (2013). When will we ever learn the benefits of teams? *Journal of American Geriatrics Society, 61,* 1019-1021.

WORKFORCE DEVELOPMENT: QUALITY CARE TO IMPROVE HEALTH OUTCOMES

Unfortunately, there is a growing shortage of interprofessional healthcare team members needed to provide care for patients with chronic diseases, including HIV.[30] RWP Part C-funded clinics report increased patient loads and a lack of qualified providers as key barriers to access for HIV care.[31] The cohort of experienced HIV-care clinicians, who brought passion and commitment to HIV care at the beginning of the epidemic, entered the field 20 or more years ago and are nearing retirement. As they leave, a service gap will emerge that will need to be filled with well-educated clinicians with new skills targeted to caring for PLWH in the changing healthcare landscape. Shortages already exist for the primary care providers who are needed to diagnose HIV, develop comprehensive care plans, and care for PLWH as the infection continues to evolve into a chronic, manageable disease.[32] With ACA implementation, these shortages will be exacerbated, as more people are diagnosed and seek healthcare, and as more PLWH obtain private insurance through health exchange marketplaces.

The best predictors of high quality HIV care are experience in HIV patient management and ongoing professional development.[33] Workforce education is needed for three groups:

- Already-practicing professionals, including:
  - primary care providers who are new to HIV care,
  - specialists in non-HIV areas (e.g., cardiology, gastroenterology, gerontology) who are new to HIV care and who will be increasingly called on to assist with other chronic diseases and aging processes that develop in chronically-infected PLWH, and
  - HIV-care providers who need updates on cutting-edge treatment and medical and behavioral management information.
- Clinician-prescribers and providers in training who need to learn about HIV care and services.
- Expert HIV-care providers who can become education and consultation resources for less experienced providers.

The AETC Response

The AETCs are well positioned to address the workforce development needs of all of these providers, enhancing knowledge, developing skills, and facilitating practice change. After more than 25 years of training experience, the AETCs have developed expertise in:

- Assessing education needs and individualizing programs for providers in a variety of care communities.[34,35]
- Developing curricula for a broad spectrum of HIV-related topics.

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[30] Bodenheimer, T. et al. (2009). Confronting the growing burden of chronic disease: Can the U.S. health care workforce do the job? *Health Affairs, 28,* 64-74. doi:10.1377/hlthaff.28.1.64

[31] Hauschild, B.C. et al. (2008). *HIV clinic capacity and workforce challenges: Results of Ryan White Part Cc funded programs.*

[32] HealthReform.gov. (nd). *Fact sheet: Creating jobs and increasing the number of primary care providers.*

[33] HIV Medicine Association. (2013). *Identifying providers qualified to manage the longitudinal treatment of patients with HIV infection and resources to support quality HIV care.*

[34] Fogler, J.A. et al. (2007). Consultation needs in perinatal HIV care: Experience of the National Perinatal HIV Consultation Service. *American Journal of Obstetrics and Gynecology, 197*(3), S137-S141.

[35] Liljestrand, P. (2004). HIV care: Continuing medical education and consultation needs of nurses, physicians, and pharmacists. *Journal of the Association of Nurses in AIDS Care, 15*(2), 38-50. doi:10.1177/1055329003252053

- Effective training based on adult learning theory for cutting-edge clinical topics (e.g., HIV and aging, HCV treatment, salvage therapy, pre-exposure prophylaxis, chronic care).[36]
- Skill-based training[37] and capacity development[38] that shape provider abilities and confidence to support retention in care and ART adherence, including topics such as risk assessment, caring for substance-using patients, assessment and treatment of depression, and managing primary care and age-related needs of PLWH.[39,40,41]
- Clinical consultation[42,43] for providers seeking assistance with the care and treatment of specific patients, including case conferences, chart reviews, and telehealth programs.
- Preceptorships and mini-residencies in HIV clinical care settings designed to meet the learning needs of individual providers, ranging from HIV primary care to specialized skills such as high-resolution anoscopy.
- Ongoing mentoring programs for newly licensed providers, those new to HIV care, and those seeking to become HIV clinical experts.
- Evaluation has documented positive outcomes related to the impact of AETC education and consultation on provider knowledge, attitudes, practice behavior changes, patient health outcomes, and system-level changes in care. The majority of trainees report practice changes such as improved risk assessment skills, increased HIV testing, increased confidence to treat, better management of medication side effects, more carefully planned referrals, revised policies and procedures, changes in the way care is delivered, and better collaborations between agencies.

The AETC Network Supports HIV Workforce Development by:

- Educating and maintaining clinically competent interprofessional care teams.
- Focusing on each point in the HIV Care Continuum to minimize morbidity and mortality.
- Facilitating practice change.
- Identifying and reaching out to underserved communities.

Such expertise will be critical as ACA implementation puts increased pressure on the country's primary care system to serve the millions of newly insured Americans. Some clinicians will be called on to provide HIV clinical services, and the AETCs are ready to address this need. Clinical training and capacity building will be necessary to ensure that clinics and providers serve PLWH in all parts of the country and across disenfranchised populations. Using successful training and consultation models, the AETCs address the need to manage a small, but complex, patient population through local networks and outreach to private sector providers who accept Medicaid, where Medicaid has been expanded. While Ryan White providers have been the primary target audience for AETC education, the AETCs have always cast the net wider to support workforce development for safety net providers and are fully prepared to continue and expand these efforts.[44]

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[36]Bradley-Springer, L. et al. (2006). Changes in clinician ability to assess risk and help patients determine the need for HIV testing: A comparison of three teaching methods. *Evaluation and the Health Professions, 29*(4), 367-393. doi:10.1177/0163278706293404

[37]Dieckhaus, K.D. et al. (2005). The use of standardized patient encounters for evaluation of a clinical education program on the development of HIV/AIDS-related clinical skills. *Journal of HIV/AIDS and Social Services, 4*(2), 9-26. doi:10.1300/J187v04n02_03

[38]Millery, M.P., & Messeri, P.A. (2005). What is capacity building? Lessons from a national demonstration program of HIV education for social service providers, *Journal of HIV/AIDS and Social Services, 4*(2), 79-96. doi:10.1300/J187v04n02_07

[39]Bashook, P.G. et al. (2010). Outcomes of AIDS Education and Training Center HIV/AIDS skill-building workshops on provider practices. *AIDS Education and Prevention, 22*(1), 49-60. doi:10.1521/aeap.2010.22.1.49

[40]Dieckhaus, K.D. et al. (2005). The use of standardized patient encounters for evaluation of a clinical education program on the development of HIV/AIDS-related clinical skills. *Journal of HIV/AIDS and Social Services, 4*(2), 9-26. doi:10.1300/J187v04n02_03

[41]Cook, J.A. et al. (2006). Changes in service delivery following HIV/AIDS education of medical and mental health service providers: Results of a one-year follow-up. *Psychiatric Rehabilitation Journal, 29*(4), 282-288.

[42]Frank, L.R., & Day, R. (2005). Evaluation of HIV clinical consultation provided by the AIDS Education and Training Centers: Improving clinician capacity to provide HIV treatment. *Journal of HIV/AIDS and Social Services, 4*(2), 97-112. doi:10.1300/J187v04n02_08

[43]Lim, M.L. et al. (2003). Outcomes of dual-protease inhibitor salvage therapy in human immunodeficiency virus infected patients referred to a telephone consultation service. *Pharmacotherapy, 23*(9), 1100-1104. doi:10.1592/phco.23.10.1100.32757

[44] Koo, D., & Miner, K. (2010). Outcome-based workforce development and education in public health. *Reviews of Public Health, 31,* 253-269.

Practicing Providers

The AETCs cast a wide net with conferences and large-group education programs. These programs disseminate general information to a diverse group of practicing care providers. Providers often emerge from those programs with pressing questions and/or a continuing interest in HIV. The AETCs follow-up with these providers with additional education, skills-building opportunities, and consultation, as well as on-going mentoring relationships with expert regional faculty.[45,46,47,48] AETC faculty and staff work with these providers to facilitate the implementation of HIV care in their care facilities based on individual goals, such as increasing testing in a clinic, providing HIV primary care to a panel of PLWH, or becoming an expert HIV care provider. In this way, AETC programs meet the ongoing needs of both novice and more experienced providers. Training data from FY12-13 document that the AETCs reached an array of HIV care providers, including novice providers (16% with < 4 years experience). In addition, AETCs have developed on-line tool kits,[49] synchronous on-line training modules, and Web-based programs to reach an ever-broadening audience of providers in primary care and community care settings.[50]

Clinician-Prescribers and Providers in Training

The AETCs recognize the need to reach clinicians early in the course of their careers because HIV care is an important career consideration. Whether health professions students decide to go into HIV-specialty care or into another area of healthcare, they all need basic information about the epidemic. At the very least, all graduates from health professions programs need to understand the importance of HIV-related risk assessment, prevention, testing, post-exposure prophylaxis, and referral systems for linkage to care.

NAHEWD recommends that the AETCs:

- ***Work with state programs and private insurers to reach established primary care providers and specialists in non-HIV care who are new to HIV care but who will be called on to meet the emerging needs of PLWH.***
- ***Build on multimodal training successes, employing evidence-based education methods with proven efficacy, to ensure a skilled and culturally sensitive HIV workforce.***
- ***Expand education programs for faculty in health professions programs to help them integrate HIV into components of the various curricula.***
- ***Provide coordinated education, support, and services to medical and dental residents and nurse practitioner and physician assistant students to develop HIV competency during pre-service training.***
- ***Assure that AETC faculty use evidence-based training methods to present cutting-edge information.***

The AETCs are well situated to expand work with faculty in health professions programs to assure that accurate information on HIV is skillfully integrated into curricula at undergraduate levels. Students often select preferred areas of practice early in their training programs, so any focus on HIV in the pre-clinical years will help to increase the number of providers with the desire to work in HIV care. Students also need clinical experiences with PLWH to help them develop healthy attitudes about HIV. These learning experiences establish the basic knowledge and skills needed to

[45]Cook, P.F. et al. (2008). *Longitudinal training improves care.* Poster presented at Ryan White Program All Titles Conference, Washington, DC.
[46]Cook, P.F. et al. (2009). Outcomes of multimodal training for healthcare professionals at an AIDS Education and Training Center. *Evaluation & the Health Professions, 32*(1), 3-22.
[47]Rosen, D. et al. (2005). Multi-discipline HIV longitudinal training: Utilizing AETC resources to build HIV care capacity in minority-serving health centers. *Journal of HIV/AIDS and Social Services, 4*(2), 57-77. doi:10.1300/J187v04n02_06
[48]Culyba, R.J. et al. (2010). Changing HIV clinical knowledge and skill in context: The impact of longitudinal training in the southeast United States. *Journal of the Association of Nurses in AIDS Care, 22,*(2), 128-139. doi.:10.1016/j.jana.2010.07.005
[49]See, for instance, http://aidsetc.org/searches/toolkits
[50]See, for instance, *HIV Web Study* at HIVwebstudy.org

provide care in the continuing epidemic and AETCs can help faculty in health professions school integrate those experiences in to the curricula.

The AETCs recognize the impact that clinician-prescribers can make on controlling the HIV epidemic. Medical and dental residents and nurse practitioner and physician assistant students need targeted experiences during their training programs to prepare to care for people living with or at risk for HIV infection. If those providers graduate with the knowledge, attitudes, and skills needed to contribute to comprehensive HIV care as they start their careers it will make a big difference in workforce readiness to address HIV. The AETCs do not currently focus on these groups, but are poised to provide education, clinical experience, and mentoring to this select group of advanced health professions students.

Expert Clinician Educators

It is not enough to engage expert clinicians and knowledge leaders as AETC educators. AETC faculty must also be effective teachers, coaches, consultants, and mentors, with an emphasis on advanced teaching skills. Faculty development activities are an integrated component of AETC quality improvement efforts. The emphasis on improving faculty-teaching skills sets the AETCs apart from other CME/CE providers. AETCs teach faculty to:

- integrate adult learning theory into training activities so that education experiences are learner centered and taught with techniques that open learners' minds, stimulate high-level learning, instill confidence, enhance knowledge retention, and inspire implementation in clinical settings.
- provide effective consultation and mentoring to individuals and care communities in order to accelerate implementation of high quality HIV care in to clinical settings.

The AETC Network Supports Excellence in Education by:

- Using evidence-based education methods with proven ability to impact clinical care.
- Employing innovative methods to identify learner needs.
- Teaching best education practices to faculty.
- Ensuring that clinical and topic experts are also expert trainers.

AETC faculty development also emphasizes skills needed to reach large audiences of providers who are not able to attend in-person trainings and/or who are too remote for faculty to otherwise reach in an ongoing manner. AETCs train faculty to use distance-learning processes more effectively, with engaging visuals, interactive polling, and case discussions to increase the effectiveness of these methods.

Disparities Continue: A Focus on Inequities in HIV Care

As shown in the HIV Continuum of Care, not all PLWH benefit from important advances brought about by effective treatment. National health disparities continue to negatively impact the HIV epidemic, with poverty and lack of access to care leading the way. For instance, HIV prevalence rates are 2-3 times higher for people who lack a high school education, are unemployed, live below the poverty level, or are homeless, than for people without such barriers.[51] In addition, men who have sex with men (MSM), and especially young MSM of color, have clearly borne the brunt of the epidemic in the United States, but HIV also affects other communities including injection drug users (IDU), transgender women, African American women, and, more generally, African Americans and Latinos.[52]

[51] CDC. (2011). *Characteristics associated with HIV infection among heterosexuals in urban areas with high AIDS prevalence: 24 Cities, United States, 2006-2007*. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6031a1.htm

[52] CDC. (2013). *HIV in the United States: At a glance*. Retrieved from http://www.cdc.gov/hiv/statistics/basics/ataglance.html

The ACA directly addresses the needs of underserved communities and seeks to reduce disparities in health outcomes by increasing access to critical healthcare services. The ACA will extend coverage to 9 million Latinos, 7 million African Americans,[53,54]and – in the 26 states that have expanded Medicaid coverage – more than 4.8 million people living in poverty.[55] Given this opportunity, HIV services for the newly insured must be culturally aware, address stigma, and provide services tailored to the needs of all at-risk communities. For example, data from the Adolescent Medicine Trials Network HIV/AIDS Interventions found high viral loads in 30% of 12-24 year-old PLWH, predicting a high risk for disease progression and HIV transmission to uninfected sex partners. Programs must be designed to focus on prevention and care services for this, and other, highly impacted populations.[56]

HRSA's Ryan White Program has responded to the needs of underserved populations disproportionately impacted by the HIV epidemic through the Special Programs of National Significance (SPNS) program, which funds the development of innovative models for HIV diagnosis, linkage, engagement in care, and treatment. A major focus of the SPNS program is the evaluation component, which assesses the design, implementation, utilization, and cost- and health-related outcomes of these models. Dissemination and replication of successful interventions is integrated as well. For example, SPNS programs have focused on the needs of the homeless, recently released inmates, young African American men, transgender women of color, Latino/a populations, and prevention with positives.[57]

The AETC Response

The AETCs have designed programs to meet the needs of local care communities and to address issues of the highest risk demographic groups, including MSM, transgender women, people of color, youth, IDU, prisoners, and heterosexual women. AETC programs integrate cultural awareness to help providers care for diverse patient groups. In FY12-13, 51% of AETC events addressed the needs of specific underserved populations, including MSM, adolescents, and transgender women. Programs provide information on current topics of need, including IDU-specific HIV concerns, transitions from prison to community and from pediatric to adult HIV care, comprehensive transgender healthcare, and women's barriers to care.

NAHEWD recommends that the AETCs:

- ***Provide capacity building expertise to replicate effective SPNS innovative models of care for highly impacted populations.***
- ***Expand programs targeting minority and minority-serving providers working in highly impacted communities.***
- ***Address issues of stigma and culturally sensitive HIV care in American Indian/Alaska Native and U.S.-Mexico border communities with expanded programming.***

The AETCs have a long history of training providers who serve minority populations (48% of trainees in FY12-13) and, with Minority AIDS Initiative (MAI) funds, have developed specialized programs to improve outcomes for the most affected and vulnerable. MAI funds supported 4,837 trainings for 29,817 participants in FY12-13. MAI-funded AETC clinical training was found to help providers improve adherence to clinical practice guidelines (49% adherence at baseline, with 11%

[53]Office of the Assistant Secretary for Planning and Evaluation. (2012)
[54]HHS.gov. (2014). *Enrollment in the Health Insurance Marketplace totals over 8 million people.* Retrieved from http://www.hhs.gov/news/press/2014pres/05/20140501a.html
[55]Kaiser Family Foundation. (2013). *The coverage gap: Uninsured poor adults in states that do not expand Medicaid.* Retrieved from http://kff.org/health-reform/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicaid/
[56]National Institutes of Health. (2014). *NIH research network finds many youth have high levels of HIV.* R

[57] HRSA. (ND). *SPNS – Special Projects of National Significance (Part F).* Retrieved from http://hab.hrsa.gov/abouthab/partfspns.html

increase post-intervention).[58] Furthermore, supplemental MAI funds have also been provided for targeted populations in the U.S.-Mexico Border and American Indian/Alaska Native (AI/AN) projects.

The U.S.-Mexico Border Project grew out of a grassroots collaboration of regional AETC offices and LPSs in California, Arizona, New Mexico, and Texas, which joined together to educate border-area providers and health centers about caring for people living with and at risk for HIV.[59] AETC border-focused training and capacity building programs have integrated HIV with other health concerns in the region, including sexually transmitted infections (STI), substance abuse, mental health, hepatitis C virus (HCV) infection, and domestic violence, often in collaboration with other federally-funded training centers (e.g., PTCs, RTMCCs, ATTCs). In FY12-13, the border AETCs provided 113 events for 1,225 providers. The AETC Border Project has worked with the U.S.-Mexico Border Health Commission (UMBHC) to promote and co-sponsor programs and materials, including national, regional, and local border events, such as a border-wide Webinar during the 2013 Border Health Week that addressed ACA implementation for more than 200 border HIV care providers. The AETC Border Project has also worked with U.S. Immigration and Customs Enforcement (ICE), providing HIV care programs to ICE healthcare providers with a focus on continuing care when detainees are deported to their home countries.

American Indian/Alaska Native (AI/AN) communities have received focused attention in AETC programs for the past 15 years.[60] AI/AN HIV rates are concerning, and HRSA recognized early on that these Americans were at high risk when rates of poverty, culturally-based stigma, historical traumas, substance use, violence, STIs, and limited access to healthcare were considered.[61] The AETCs provide programs for AI/AN and AI/AN-serving providers, targeting activities to increase routine HIV testing, risk assessment, consultation, and HIV primary care, as well as issues of historic trauma, stigma, and discrimination. In FY12-13 the AI/AN AETC program trained 2,885 providers in 288 events.

Given the strong AETC commitment to improve HIV healthcare services and outcomes for underserved, highly impacted communities and their expert work in hard-to-reach communities,[62] the AETCs must be more integrated with the SPNS program. The AETCs can be the mechanism to encourage effective replication in healthcare settings around the country. Dissemination is necessary, but not sufficient, for meaningful implementation of valuable lessons learned about innovative models of care that result from SPNS programs, especially those that address HIV-related healthcare disparities. The AETCs can partner with the SPNS projects to be that partner for implementation.

Getting to an AIDS-Free Generation

The National HIV/AIDS Strategy (NHAS) vision statement specifies that:

> The United States will become a place where new HIV infections are rare, and when they do occur, every person, regardless of age, gender, race/ethnicity, sexual orientation, gender

[58] Shade, S.B. et al.. (2012). Quality of comprehensive HIV care in underserved communities: does clinical training lead to improvement. *American Journal of Medical Quality*. *28*(2), 143-50. doi:10.1177/1062860612453756

[59] Donohoe, T. et al. (2012). HIV clinician training on the U.S.-Mexico Border: Experiences from a 10-year multi-center collaborative of the Health Resources and Services Administration AIDS Education and Training Centers (AETCs). Poster presented at the XIX International AIDS Conference, July 22-27, 2012, Washington DC.

[60] Oropeza, L., at al. (2001). *HIV/AIDS prevention, early intervention, and health promotion: A self-study module for health care providers serving Native Americans.* Denver, CO: Mountain-Plains Regional AIDS Education and Training Center.

[61] CDC. (2013). *HIV/AIDS among American Indians and Alaska Natives*. Retrieved from http://www.cdc.gov/hiv/risk/racialethnic/aian/

[62] Bradley-Springer, L. et al. (2003). Hard-to-reach providers: Targeted HIV education by the national AIDS Education and Training Centers. *Journal of the Association of Nurses in AIDS Care, 14*(6), 25-36. doi:10.1177/1055329003252878

identity or socio-economic circumstance, will have unfettered access to high quality, life-extending care, free from stigma and discrimination.[63]

NAHEWD supports this achievable vision. Full implementation of the ACA will increase access to HIV clinical care and other essential services. With a well-informed and skilled workforce, the ACA, steered by the NHAS, offers great promise to turn the tide of the HIV epidemic if it builds on the remarkable care delivery programs developed by HIV care communities during the epidemic, most often with the support of the RWP.[64]

Prevention and Testing

While behavioral harm reduction methods remain important, the CDC now recognizes adherence to antiretroviral therapy (ART) as the key component of high impact prevention. When an HIV-infected person achieves an undetectable viral load, transmission risk decreases by 96%;[65] Prevention at all levels is an essential contribution to the public health because it decreases the number of new cases, which decreases a community's viral load and risk for new infections. ART given after exposure to HIV-infected blood, semen, or vaginal secretions (post-exposure prophylaxis [PEP]) can decrease risk by two-thirds;[66] taking ART as ongoing prevention (pre-exposure prophylaxis [PrEP]) reduces risk by as much as 44%;[67] and perinatal transmissions can be decreased to less than 1% when HIV-infected women and their infants receive effective ART during pregnancy, labor, and delivery.[68]

All of these methods must be cohesively combined with routine HIV testing. New testing methods are faster, more accurate, and better able to identify acute infection, when the risk of transmission is high. In 2013, the U.S. Preventive Services Task Force gave routine HIV testing a Category A rating, qualifying testing for coverage by public and private health insurance programs and providing better opportunities to find the 18% of PLWH who do not yet know they are infected.[69] The methods, tools, and means are within reach, but they are not universally employed.

The AETC Response

The AETCs have a long tradition of teaching healthcare providers to integrate prevention into care. In the early days, behavior change was all that was available; the emphasis was on condom use, cleaning injection equipment, and abstaining from or modifying high-risk behaviors. As newer methods evolved – beginning with the prevention of mother-to-child transmission – the AETCs were quick to develop and integrate content and learning activities into existing curricula. For example, in FY12-13 46% of AETC events included prevention and behavior change topics (e.g., risk reduction, PEP). The same is true for testing; the AETCs have adapted as the science has evolved and have helped establish HIV testing as a primary care responsibility, which involves keeping up with testing technology and interpretation of test results.[70,71] Training programs have been designed using a variety of strategies to help primary care

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[63] Office of National AIDS Policy. (2010, July). *National HIV/AIDS strategy for the United States*, p. iii.

[64] Gallant, J.E. et al. (2011). Essential components of effective HIV care: A policy paper of the HIV Medicine Association of the Infectious Diseases Society of America and the Ryan White Medical Providers Coalition. *Clinical Infectious Diseases, 53*(11), 1043-1050. doi:10.1093/cid/cir689

[65] CDC. (2013). *Prevention benefits of HIV treatment.* Retrieved from http://www.cdc.gov/hiv/prevention/research/tap/

[66] AIDS.gov. (2013). *Postc exposure prophylaxis.*

[67] CDC. (2012). *PrEP: A new tool for HIV prevention.*

[68] CDC. (2014). *HIV among pregnant women, infants, and children.* U.S. Preventive Services Task Force. (2013). *Screening for HIV.* Retrieved

[69] from http://www.uspreventiveservicestaskforce.org/uspstf/uspshivi.htm

[70] Myers, J. et al. (2012). Supporting the integration of HIV testing into primary care settings. *American Journal of Public Health, 102*(6), e25-e32. doi:10.2105/AJPH.2012.300767

providers, emergency department providers, and oral health providers[72] integrate HIV testing into their practices. As scientific biomedical and behavioral advances in prevention and testing continue to emerge, the AETCs are poised to disseminate best practices with effective training and capacity building activities. As an example, PrEP is the newest, and somewhat controversial, prevention tool. The target audience for PrEP training is providers who care for high-risk uninfected individuals, and who may not be involved in any level of HIV services. Reaching this audience requires different outreach strategies, for which the AETCs have demonstrated capacity, as their work with HIV testing in hospital emergency departments can attest.

NAHEWD recommends that the AETCs:

- ***Lead the integration of HIV prevention and testing into primary care, with a focus on the latest in biomedical and behavioral prevention interventions as well as advances in HIV testing technologies.***
- ***Prepare clinicians with the knowledge and skills needed to provide PrEP.***
- ***Apply lessons learned in the HIV epidemic to improve HCV diagnosis and treatment.***

The Hepatitis C Virus (HCV) Epidemic

Approximately 2.7-3.9 million persons are living with chronic HCV infection in the United States, making it the most common blood-borne infection in the country.[73] Despite this, a 2010 Institute of Medicine report[74] found that U.S. healthcare professionals lacked knowledge and awareness about chronic viral hepatitis. In response to this finding, the U.S. Department of Health and Human Services released a comprehensive strategic plan for hepatitis prevention and control in 2011.[75] Faced with a large cohort of HCV-infected Americans who are not yet aware of their infections (estimated to be 50%), the strategic plan called for an increase in HCV screening for the 1945-1965 U.S. birth cohort.[76] But many clinicians are unaware of the HCV testing recommendation and, similar to HIV, universal testing implementation has been slow. Again as with HIV, skilled providers are needed to cover the full spectrum of hepatitis care: providers who not only screen, but who also have the knowledge, skills, and confidence to offer treatment, as appropriate, to maximize the benefits of new treatment options. Three problems contribute to the lack of information diffusion and adoption in the HCV epidemic

- no one program has been tasked with responsibility for addressing this training and capacity building need,
- as with HIV, rapid advances in treatment are difficult to keep up with unless there is ongoing support for information dissemination and education programs, and
- dissemination of guidelines alone is not sufficient for practice change.

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[71] Myers, J. et al. (2012). *Federal agencies collaborating to reach the community: Enhancing HIV testing in primary care settings through the Health Resources and Services Administration AIDS Education and Training Centers (AETC) Program*. Poster presented at the XIX International AIDS Conference, July 22-27, 2012, Washington DC.

[72] *Open up and talk about it: Dental hygienists and the dentist at a community dental clinic want people to open their mouths for another reason. They want them to ask to be tested for the human immunodeficiency virus (HIV) at the dental clinic.*

[73] CDC. *Recommendations for the Identification of Chronic Hepatitis C Virus Infection Among Persons Born During 1945–1965.* Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm

[74] Institute of Medicine. (2014). *Hepatitis and liver cancer: A national strategy for prevention and control of hepatitis B and C.* Retrieved from http://books.nap.edu/openbook.php?record_id=12793

[75] U.S. Department of Health and Human Services. (2011). *Combating the silent epidemic of viral hepatitis: U.S. Department of Health and Human Services Action Plan for Prevention, Care, and Treatment of Viral Hepatitis.* Retrieved from http://hepb.org/pdf/Viral-Hepatitis-Action-plan-2011.pdf

[76] CDC. (2012). *Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945–1965*. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm

The AETC Response

The AETCs have taught about HIV/HCV co-infection for many years. They have developed the knowledge and skills needed to address this critical need for comprehensive HIV care and are fully aware that it may not be possible to control one epidemic without addressing the other. There is a clear need for rapid dissemination of the evolving science of HCV treatment and testing. With their experience training the HIV workforce and supporting clinical care settings to provide routine HIV testing, the AETCs have the expertise to provide these services with a focus on HCV, using lessons learned over the last 25 years. The AETCs would use effective intervention models to increase the capacity of safety net primary care providers to expand the number of persons with HCV who know they are infected and who are offered monitoring, care, and treatment for HCV.

The Way Forward

As described in this paper, effective clinical training and capacity building activities improve, coordinate, and intervene at various stages of the HIV Continuum of Care and support the Affordable Care Act, National HIV/AIDS Strategy, HRSA Priorities, and other federal initiatives. The AETCs can play an even more effective role in controlling the HIV epidemic based on a track record of rapid, flexible, and geographically comprehensive responses using theories of diffusion, dissemination, and implementation science to move bench-science discoveries, updated treatment guidelines, federal recommendations, and other emerging issues into patient care settings. They have demonstrated effective, efficient, and necessary reactions to these changes to assure that the U.S. healthcare system is responsive to the needs of providers and patients in the HIV epidemic. Clearly, the AETCs possess the education skills, clinical expertise, infrastructure, and networks needed to accomplish what NAHEWD is proposing: **targeting AETC efforts to positively influence healthcare in the United States and its territories in order to bring an end to the HIV epidemic.** NAHEWD endorses the AETC model to improve timeliness of information dissemination and provider skills acquisition for broader healthcare concerns, including the development of a more efficient healthcare system.

NAHEWD recommends that HRSA:

- ***Use the existing AETC infrastructure to disseminate the latest findings in biomedical and behavioral prevention methods, HCV diagnosis and treatment, and new and emerging federal healthcare initiatives.***
- ***Facilitate fiscal efficiencies by disseminating resources through the existing AETC structure to avoid duplication of costly infrastructures and to expedite implementation of new programs.***
- ***Foster collaboration within HRSA and across federal agencies to enhance awareness of AETC capacities and to facilitate collaborations.***
- ***Reinstate full funding for special program initiatives that address disparities and reach communities of highest need.***
- ***Provide adequate funding, based on need for AETC training and capacity building assistance, to target programs at each stage of the HIV Care Continuum.***

NAHEWD understands that the roles, tasks, and priorities of the AETCs must be considered in the context of available funding. We appreciate the resources that have already been invested to develop this substantial capacity building infrastructure. The AETCs have used HRSA funds wisely to produce an impressive network and to align with other institutions to produce economies of scale. For instance,

because the AETCs are embedded in academic institutions, they receive extraordinary in-kind contributions. These contributions include access to the leading HIV scientists and clinicians in the country, dedication to education and community service, office space, fiscal and institutional staff, and support services for AETC faculty and staff. The AETCs have also developed relationships with other organizations that have similar goals (e.g., other federal training centers, state and local health departments, rural health associations, and health professions organizations). These relationships have led to collaborations for expanded education programs and shared expenses for training facilities, faculty, and continuing education credits. Despite this, additional resources will be required to support AETC expansion and the development of future innovative and effective initiatives.

Benefits of AETC Activities

• Reduced disparities in HIV care.
• Universal, routine HIV screening in all care delivery systems.
• Improved outcomes at each point in the HIV Continuum of Care.
• Improved prevention services for people living with and at risk for HIV infection.
• Reduced HIV-related health care costs by:
  o Preventing new cases of HIV infection through behavioral interventions and treatment as prevention, resulting in reduced community viral loads.
  o Decreasing missed diagnoses and duplications in care.
  o Increasing access to high quality early intervention.
  o Decreasing hospital admissions and emergency room visits.
  o Coordinating efforts to contain costs, conserve resources, avoid duplication, and build on existing infrastructures.
• Coordinated, rapidly implemented responses to emerging needs.
• Well-educated providers with knowledge, skills, and attitudes to provide comprehensive HIV care.
• Established consultation and referral systems.
• Care systems prepared to treat PLWH.
• Seamless systems of care, with comprehensive services and interprofessional teams.

The AETCs were dedicated to "unfettered access to high quality, life-extending care, free from stigma and discrimination" long before the NHAS was published. At each point in the epidemic, from grief and despair to hope to reality and even to complacency, the AETCs have been there to promote prevention, diagnosis, linkage to care, retention in care, treatment adherence, suppressed viral loads, and quality of life for PLWH. The AETCs provide education and services to help reach the goals of the NHAS and to develop the capacity to control the epidemic.

The AETCs of the future should apply their methods, infrastructure, and experience to support providers and healthcare settings to make the final, comprehensive push to stop HIV and to achieve an AIDS-Free Generation.

Appendix 1. RECOMMENDATIONS FOR THE NATIONAL AIDS EDUCATION AND TRAINING CENTERS (AETCS)

THE NATIONAL ALLIANCE FOR HIV EDUCATION AND WORKFORCE DEVELOPMENT (NAHEWD)

MAY 2014

NAWHED makes the following recommendations with the overall goal of building on the successful AETC infrastructure while expanding AETC reach and scope to facilitate rapid and consistent translation of the latest clinical and behavioral science into practice.

NAHEWD recommends that the AETCs:

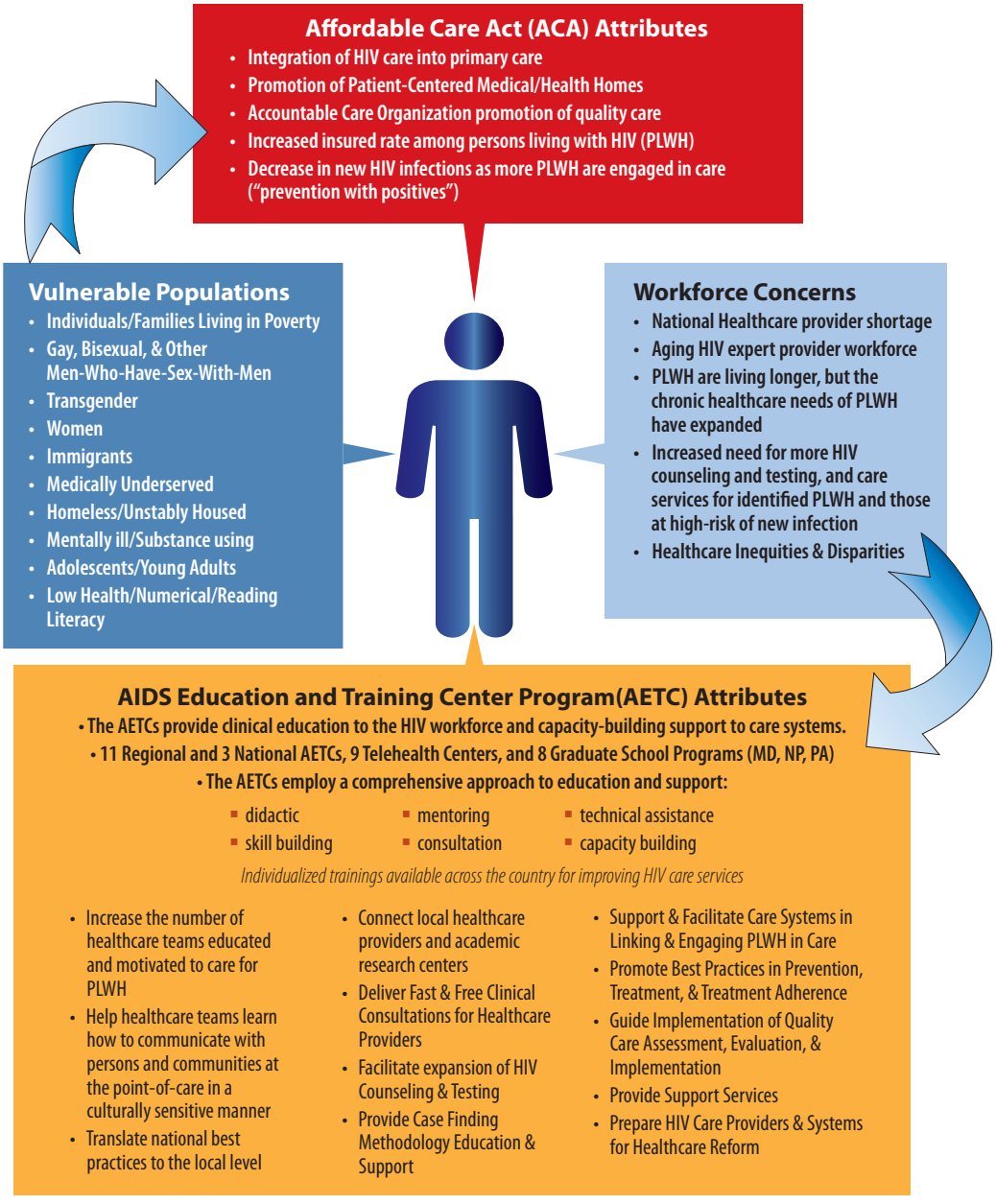
- Employ geographically decentralized LPS networks to facilitate rapid dissemination and implementation of evidence-based clinical and behavioral science into practice with respect to the context of specific and unique communities.
- Integrate expertise of the AETC National Centers to develop interregional collaborations, clinical consultation, outcomes documentation, and Web-based repositories of AETC resources.
- Provide longitudinal capacity building assistance tailored to individual HIV care settings and community health centers.
- Facilitate practice change with a focus on interprofessional team development.
- Expand target audiences to include key interprofessional team members needed to improve retention in care and adherence to treatment regimens.
- Increase the ability of HIV providers and care systems to use ACA implementation as a mechanism to ensure access to excellent HIV care and services.
- Work with state programs and private insurers to reach established primary care providers and specialists in non-HIV care who are new to HIV care but who will be called on to meet the emerging needs of PLWH.
- Build on multimodal training successes, employing evidence-based education methods with proven efficacy, to ensure a skilled and culturally sensitive HIV workforce.
- Expand education programs for faculty in health professions programs to help them integrate HIV into components of the various curricula.
- Provide coordinated education, support, and services to medical and dental residents and nurse practitioner and physician assistant students to develop HIV competency during pre-service training.
- Assure that AETC faculty use evidence-based training methods to present cutting-edge information.
- Provide capacity building expertise to replicate effective SPNS innovative models of care for highly impacted populations.
- Expand programs targeting minority and minority-serving providers working in highly impacted communities.
- Address issues of stigma and culturally sensitive HIV care in American Indian/Alaska Native and U.S.-Mexico border communities with expanded programming.
- Lead the integration of HIV prevention and testing into primary care, with a focus on the latest in biomedical and behavioral prevention interventions as well as advances in HIV testing technologies.

- Prepare clinicians with the knowledge and skills needed to provide PrEP.
- Apply lessons learned in the HIV epidemic to improve HCV diagnosis and treatment.

NAHEWD recommends that HRSA:

- Use the existing AETC infrastructure to disseminate the latest findings in biomedical and behavioral prevention methods, HCV diagnosis and treatment, and new and emerging federal healthcare initiatives.
- Facilitate fiscal efficiencies by disseminating resources through the existing AETC structure to avoid duplication of costly infrastructures and to expedite implementation of new programs.
- Foster collaboration within HRSA and across federal agencies to enhance awareness of AETC capacities and to facilitate collaborations.
- Reinstate full funding for special program initiatives that address disparities and reach communities of highest need.
- Provide adequate funding, based on need for AETC training and capacity building assistance, to target programs at each stage of the HIV Care Continuum.

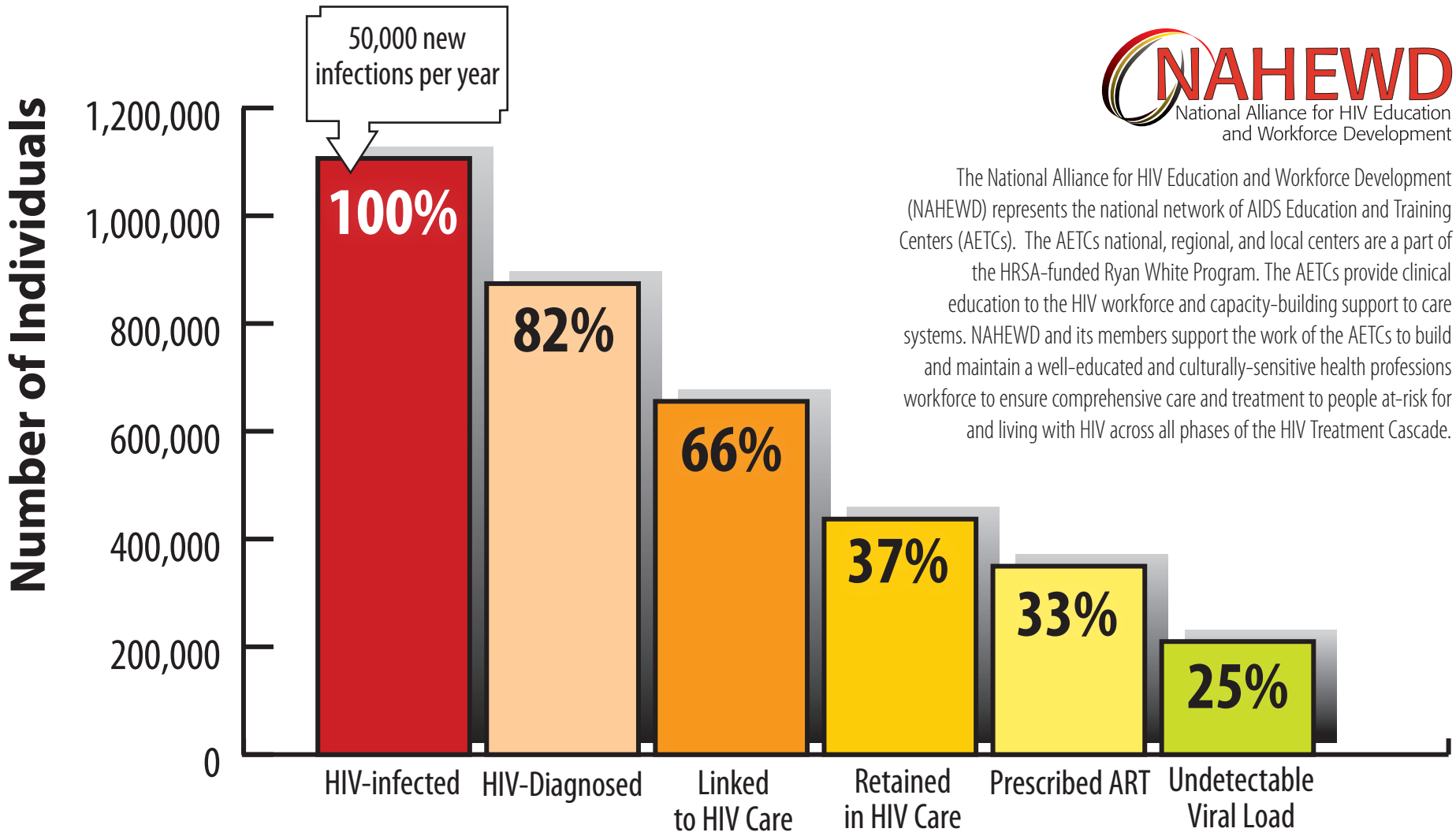
Affordable Care Act and the AIDS Education and Training Center Program (AETC) Support for Comprehensive HIV Care



NAHEWD
National Alliance for HIV Education and Workforce Development

The National Alliance for HIV Education and Workforce Development (NAHEWD) represents the national network of AIDS Education and Training Centers (AETCs). The AETCs national, regional, and local centers are a part of the HRSA-funded Ryan White Program. NAHEWD and its members support the work of the AETCs to build and maintain a well-educated and culturally-sensitive health professions workforce to ensure comprehensive care and treatment to people at-risk for and living with HIV across all phases of the HIV Treatment Cascade.

The U.S. HIV Treatment Cascade[1, 2, 3]



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1. Gardner EM, McLees MP, Steiner JF, del Rio C, & Burman WJ. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. Clin Infect Dis. (2011) 52(6): 793-800 doi:10.1093/cid/ciq243
2. Hall H, Frazier E, Rhodes P, et al. Continuum of HIV care: differences in care and treatment by sex and race/ethnicity in the United States. Program and abstracts of the XIX International AIDS Conference; July 22-27, 2012; Washington, DC. Abstract FRLBX05
3. CDC. Estimated HIV incidence among adults and adolescents in the United States, 2007-2010. HIV Supplemental Report 2012; XX (no.X). Available at www.cdc.gov/hiv/library/reports/surveillance/index.html.

HIV INFECTED – estimated number of people living with HIV Infection (PLWH) in the U.S.

NAHEWD ROLE: Support of evidence-based prevention education and training for service systems nationally.

The AETCs teach health care providers about evidence-based prevention methods, including prevention with positives (PWP), pre-exposure prophylaxis (PrEP), post-exposure prophylaxis (PEP), other sexually transmitted infections (STI), risk-reducing cognitive-behavioral Interventions, and prevention counseling methods.

HIV DIAGNOSED - estimated number of PLWH who have been tested and given an HIV diagnosis

NAHEWD ROLE: Implementation of best practices in the diagnosis of PLWH through routine HIV testing in all health care settings nationally.

The AETCs have a national HIV Testing Workgroup to support implementation of the CDC Testing Guidelines. Local and regional AETCs increase the skills and abilities of health care teams to provide HIV testing with a focus on rapid testing strategies, post-test counseling methods, and clinic logistics for efficient testing. The AETCs pioneered HIV testing in dental clinics.

LINKED TO CARE – estimated number of PLWH diagnosed with HIV who were linked to care services after HIV diagnosis

NAHEWD ROLE: Promote stronger communication between those providing HIV testing and HIV primary care providers within communities nationally.

The AETCs have a national Engagement in Care Workgroup to support these efforts. Local and regional AETCs provide education in communities across the country about best practices to link all people with a diagnosis of HIV infection into care. The AETCs are actively involved in educating healthcare teams about Affordable Care Act opportunities, including Disease Prevention Initiatives to help with workforce development, cost containment, and reimbursement issues related to providing comprehensive care services to PLWH.

RETAINED IN CARE – estimated number of PLWH who attend appointments for HIV care on a routine basis

NAHEWD ROLE: Promote the development and strengthening of culturally-sensitive, patient-centered care models of care for PLWH nationally and the utilization of evidence-based models of care that keep PLWH engaged in care.

The AETCs use the national Engagement in Care Workgroup, the national Minority AIDS Initiative (MAI) Workgroup, and cognitive-behavioral evidence-based interventions for diverse populations to provide the most cutting-edge and effective education for health care teams. AETCs teach about promoting retention in care, long-term engagement in care, and re-engaging those who have dropped out of care. Many PLWH have had negative experiences in obtaining health care services with healthcare systems, but receiving regular care is the best way for them to stay healthy, live longer, and prevent new infections.

PRESCRIBED ART – estimated number of PLWH who have been given a prescription for medications to treat HIV

NAHEWD ROLE: Support implementation of current ART prescribing guidelines by HIV care providers along with education regarding evidence-based interventions to initiation of ART by PLWH in a timely manner.

The AETCs are actively involved in providing providers with up-to-date, evidence-based guidelines and resources for clinical management of ART in diverse groups of PLWH, including men who have sex with men, drug users, heterosexual men and women, pregnant women, children, and adolescents in all racial/ethnic groups. The MAI Workgroup promotes safe, culturally appropriate care. The AETCs provide education about the Affordable Care Act and insurance/medication payment options for PLWH, many of whom live in poverty and are not currently insured.

UNDETECTABLE VIRAL LOAD/VIRAL SUPPRESSION – estimated number of PLWH for whom ART is working in an optimal manner

NAHEWD ROLE: Support of achieving 100% viral load suppression in all PLWH.

The AETCs teach health care teams about the importance of ongoing clinical care, appropriate and up-to-date ART, evidence-based interventions to increase long-term medication adherence, and the importance of life-long ART to reduce morbidity and mortality for PLWH and to prevent new HIV infections by significantly reducing the community viral load.

NAHEWD
National Alliance for HIV Education and Workforce Development

The Association of the AIDS Education and Training Centers

AETCs Respond to the National HIV/AIDS Strategy

The National HIV/AIDS Strategy (NHAS) identifies three major goals emphasizing the importance of achieving a more coordinated national response to the HIV epidemic. The HRSA-funded Ryan White Program, **AIDS Education and Training Centers (AETCs),** have been a primary source of HIV education for healthcare providers since 1987, and, as a result, are in a particularly advantageous position to help move the National HIV/AIDS Strategy forward. Without a well-informed and skilled workforce, the goals of the NHAS cannot be achieved.

GOAL 1: REDUCING NEW HIV INFECTIONS

AETC RESPONSE:

AETCs conducted 3,853 trainings and trained 38,682 health care providers focused on routine of HIV testing. (AETC Training Data 7/2010- 6/2011)

- Provide cutting edge training programs about HIV transmission, prevalence, and prevention, with a focus on motivational interviewing skills and risk-reduction processes
- Help providers acquire individual ***prevention counseling and community education skills***
- Create social marketing and education ***materials on HIV testing and HIV transmission*** that can be used by clinicians to start important conversations with patients
- Educate primary care providers to ***incorporate HIV prevention into clinical encounters*** and integrate ***prevention messages and communication into HIV clinical care settings***
- Develop and implement initiatives with the Health Resources and Services Administration (HRSA) and the Centers for Disease Control and Prevention (CDC) to ***increase HIV testing*** in primary care settings, emergency departments, STD clinics, community health centers, and hospitals

GOAL 2: INCREASING ACCESS TO CARE AND IMPROVING OUTCOMES

AETC RESPONSE:

AETCs have reached more than 132,000 healthcare providers through 17,300 training programs, in one year. (AETC Training Data 7/2010- 6/2011)

- ***Increase clinician HIV knowledge and clinical skills*** through quality training in the full spectrum of HIV care
- ***Link community-based providers with experts at academic medical centers***
- Deliver clinical updates and provide continuous clinical guidance through ***consultation and mentoring*** so that DHHS guidelines can be integrated into everyday practice and providers keep abreast of the ever advancing science of HIV treatment
- ***Increase the HIV workforce and enable access to care by teaching community providers*** how to keep pace with current HIV treatment, make referrals to HIV-care experts, establish consultation relationships, and support adherence to medications
- Provide clinicians ***nationally with free, prompt, state-of-the-art telephone consultation*** on prevention and management of HIV
- Collaborate and develop relationships to ***enable care in high-need areas*** and settings, including federally-funded community health centers, correctional facilities, homeless health programs, maternal and child health centers, mental health facilities, substance abuse treatment centers, and family planning programs
- Provide technical assistance to support the development of systems of care to ***assure that people living with HIV/AIDS (PLWHA) have access to appropriate health care***, including psychosocial support and intense mental health services substance use treatment

In 2012, the AETC National Clinicians' Consultation Center conducted 14,734 consultations with clinicians. (AETC Training Data 7/2011- 6/20012)

GOAL 3: REDUCING HIV-RELATED HEALTH DISPARITIES AND INEQUITIES

AETC RESPONSE:

- Support healthcare professionals who provide services to communities of color, women, gay/lesbian/bisexual/transgender people, prisoners, the homeless, drug users, and the uninsured with funding from the Minority AIDS Initiative (MAI)
- ***Engage and empower clinicians of color*** through mentoring and clinical training programs to provide HIV care and services
- Provide comprehensive HIV education to clinicians in ***high-risk communities*** to facilitate testing and earlier diagnosis
- Help providers develop methods to ***decrease stigma and discrimination*** in clinical practices and communities
- Disseminate information about prevalence and the need for ***prevention interventions to providers in high-risk communities***
- Develop ***community-level approaches*** in all capacity building programs

44% of all AETC trainees are racial/ethnic minorities and 70% are women.
(AETC Training Data 7/2010- 6/2011)

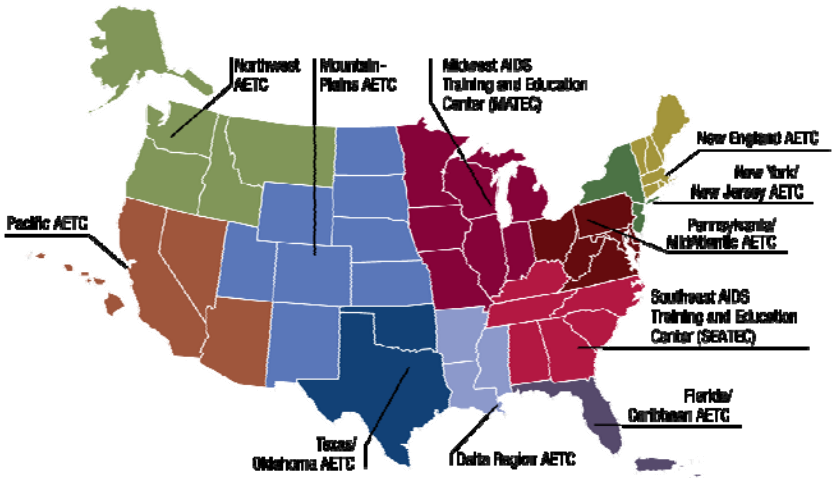
Over 90% of training participants working in HIV Clinics worked at Ryan White-funded organizations or clinics.
(AETC Training Data 7/2010- 6/2011)

A Coordinated Response

AETC RESPONSE:

The AETC network, by definition, provides a coordinated response to the training and education needs of the healthcare workforce in the HIV epidemic. It is ***an organized and structured mobilization of partnerships linking academic medical centers and leading clinical experts to address the needs of community clinicians serving diverse populations.*** For more than two decades, the AETCs have developed relationships with clinical care sites as well as with other training programs and agencies that focus on HIV infection. These relationships have produced ***timely and coordinated responses to changes in HIV care*** and implementation of new recommendations such as HIV testing. In addition, for the past 10 years the AETCs have partnered with other Federally-funded training centers to ***develop coordinated training interventions that reach a wider audience and avoid duplication of effort.***

8,614 participants have been trained in collaboration with other Federally-funded training initiatives.
(AETC Training Data 7/2010- 6/2011)



AETC 11 Regional Centers (see map)

AETC National/International Centers
AETC National Resource Center
Clinician Consultation Center
AETC National Evaluation Center
International Training and Education Center for Health

For more information about the AETC program, visit www.aidsetc.org
For more information about the NAHEWD organization, visit www.nahewd.org