HRSA CARE ACTION

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Population Trends

Financial Disincentives

Pathway Strategies

Delivery System Strategies

WORKFORCE CAPACITY in HIV

More than a third of U.S. physicians in practice are age 55 or older and likely to retire in the next 10 to 15 years. . . . the aging of the physician workforce will be a key factor limiting future growth of the health care system.[1]

The Nation faces severe workforce capacity challenges to effectively treat people living with HIV/AIDS (PLWHA). The demand for HIV and primary health care services, in particular, continues to increase as treating PLWHA becomes more complicated and new cases arise. Exacerbating workforce demands are the many experienced health professionals retiring from practice while young providers choose medical fields outside of HIV and primary health.

This phenomenon is unfolding in the context of general health care workforce shortages and in a climate of fiscal constraints within Medicaid and other funders, which has diminished provider reimbursement. The widening gap between supply and demand is already critical in certain geographic areas and among the underserved and aging populations—and is likely to worsen. Health care capacity is defined as the ability of the health care workforce to provide quality care sufficient to meet the demands for that care.[2] At the most basic level, the HIV workforce shortage is the result of a confluence of three key factors:

- An uptick in demand for an ever-expanding scope of HIV services
- A declining supply of clinicians with experience in HIV
- Stable or falling reimbursements and public funding.

DID YOU KNOW?

In a 2008 survey of Ryan White HIV/AIDS Program-funded clinics:

- 20 percent reported more than a 25 percent increase in caseloads in the previous 3 years.[3]
- 51 percent of clinics reported up to a 25 percent increase in caseloads.[4]
- 69 percent of clinics reported difficulty recruiting HIV clinicians and cited reimbursement and lack of providers as leading causes.[5]

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DIRECTOR'S LETTER

The aging population is increasing and is also more ethnically diverse than ever before. These changes, in turn, increase demand for a skilled, culturally competent health workforce. Meeting this demand means confronting a major provider shortage in the hundreds of thousands in just a few years' time. The shrinking number of disease specialists and primary care providers is especially critical for people living with HIV/AIDS. Our consumers depend on providers with disease expertise and sensitivity to issues like stigma, which are qualities that boost early treatment adoption and better health outcomes. Rising HIV incidence, rates of coinfections, and now age-related ailments translate to care needs far outpacing the number of available clinicians.

HRSA is working hard to build pathways for providers to enter HIV/AIDS care. This includes HIV management curricula and training opportunities, the HRSA-funded Health Workforce Information Center, and the Health Resources and Services Administration HIV/AIDS Workforce Meeting. The Center offers research on workforce issues, while the summit generated strategies for future action to recruit and retain primary care health professionals.

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Photographs
Cover and pages 3 and 5: providers at The Brooklyn Hospital Center Program for AIDS Treatment and Health Center, Brooklyn, NY; pages 6 and 9, providers at the Southeast Mississippi Rural Health Initiative, Hattiesburg, MS; and page 7, physician and patient, Bremerton satellite clinic of the Madison Clinic at the Harborview Medical Center, Seattle, WA.

Additional copies are available from the HRSA Information Center, 888.ASK.HRSA, and may be downloaded at www.hab.hrsa.gov.

This publication lists non-Federal resources to provide additional information to consumers. The views and content in those resources have not been formally approved by the U.S. Department of Health and Human Services (HHS). Listing of the resources is not an endorsement by HHS or its components.

HRSA is committed to ensuring that its grantees and providers have the capacity to deliver quality care to the growing number of PLWHA. As part of an agency-wide HRSA effort, the HIV/AIDS Bureau (HAB) has launched an initiative to address the HIV clinical workforce. To this end, HAB convened a stakeholder meeting of clinicians, workforce and other health researchers, State public health officials, and health care funders to examine the phenomenon and develop a plan for action. Attendees discussed key factors contributing to the decline in HIV clinicians, learned about promising workforce development strategies being implemented across the country, and brainstormed potential action steps. HRSA has organized the Health Resources and Services Administration Workforce Meeting to address workforce capacity issues across all health care fields.

HRSA has contracted with Mathematica Policy Research, Inc. (MPR), a health policy research organization, to conduct a qualitative assessment of the supply of clinicians and other key personnel in Ryan White HIV/AIDS Program care settings and the impact of supply on the delivery of services to PLWHA. With the help of HRSA, MPR is developing case studies of local systems of care and has provided a literature review. In addition, the HIV Medicine Association (HIVMA), in conjunction with the American Academy of HIV Medicine, has released a joint policy statement on the workforce situation and related recommendations. (See "Averting a Crisis in HIV Care," www.aahivm.org/images/stories/pdfs/report_aahivm_hivma_workforce_statement.pdf.)

KEY FACTORS DRIVING DEMAND

General Population Trends

Four overarching trends will both increase demand for health care services and affect the adequacy of the future health care workforce to meet that demand:

- ***Overall population growth.*** The U.S. population is expected to increase overall by 29 percent between 2000 and 2030.[6]

- ***Aging population.*** The shift in the age distribution is expected to significantly impact on demand as consumption of health care services is highest among the elderly.[7] Moreover, health care professionals are also aging, suggesting that many will retire just as demand for their services skyrockets.
- ***Increasing racial and ethnic diversity.*** The demand for health care services and for multilingual and culturally competent care clinicians is likely to grow as minorities comprise a greater proportion of the overall population. Unfortunately, minorities are sorely underrepresented in the physician and nurse workforce.
- ***Geographic misdistribution.*** Many rural areas and pockets of urban areas with high minority concentrations continue to struggle with severe workforce shortages and face significant challenges in recruiting and retaining health care professionals.

HIV-Specific Trends

Struggling with rising caseloads at a time of decreased Medicaid funding and unchanged Ryan White funding levels, many HIV programs have been forced to reduce services, cut back clinic hours, and even close shop altogether. Several HIV-specific factors are likely driving this growing demand for HIV-related health care services.

Increasing HIV prevalence. With stabilized incidence rates, new HIV cases occurring among younger people, and with highly active antiretroviral therapy (HAART) initiated sooner after infection and continuing longer throughout life, the overall demand for HIV-related health care services will continue to climb.

Increasing HIV diagnoses. New efforts to test and diagnose HIV will likely bring more patients into care early and improve life expectancy—thereby increasing demand for HIV-related services. An estimated 25 percent of the people currently living with HIV in the United States do not know that they are infected.[8] In 2003, the Centers for Disease Control and Prevention (CDC) announced a new program called "Advancing HIV Prevention: New Strategies for a Changing Epidemic" to incorporate HIV testing as a routine part of medical care.[9] Universal opt-out testing is the best way to get patients into care early but is projected to increase patient volume by 20-50 percent, according to Mike Saag, chair-elect at HIVMA and director of the Center for AIDS Research at the University of Alabama at Birmingham. "On its face this is a good thing because people treated earlier in the disease do better," he says. "But a positive test has to be followed up with treatment. And where are these providers going to come from? Who will take care of this new influx of patients?"

Increasing complexity and scope of care. The introduction of HAART fundamentally altered the HIV epidemic, prolonging life and transforming HIV from a terminal illness to a chronic condition. HIV-related treatments and drug regimens have become more complex, increasing demand for a wide range of prevention and care services to address a host of complications and comorbid conditions associated with HIV treatment—and with aging. A survey of Ryan White Part C programs found that on average 37 percent of Part C patients had a serious mental illness; 35 percent had a substance abuse disorder; and 23 percent had hepatitis B or C.[10] These new challenges reinforce the importance of coordinated HIV care involving a multiplicity of providers. The complexity and scope of HIV care also means HIV health care professionals are expected to spend more time and resources to stay informed about the latest HIV care research, guidelines, and clinical performance measures.

AN AGING WORKFORCE

Clinicians expected to reach retirement age by 2020:

- 46 percent of dentists,
- 24 percent of pharmacists, and
- 33 percent of physicians[11,12]

"HIV generalists are overworked [and] underpaid. . . . Even if all of your patients have Medicare coverage and you collect 100 percent of the charges, you get $325 per patient per year regardless of disease level. Why would a medical student with $200,000 in debt choose a field that treats them like this?"

Evolving demographics in HIV. As providers and communities continue to address disparities in access to health care in underserved communities, including racial and ethnic minorities, the demand for health care services within these demographic groups is likely to increase.[13] Since the early 1990s, HIV/AIDS has disproportionately affected people of color, particularly African-Americans.[14] In 2006, 70 percent of new AIDS cases occurred among racial and ethnic minorities. Racial minorities tend to present later in the disease and require more acute care. According to one study of veterans, for example, minorities were sicker at the time of diagnosis, and had a poorer prognosis, greater burden of comorbidities and greater immunosuppression.[15]

Shifting geographic distribution. The geographic focus of HIV is spreading to more rural, southern communities, where provider shortages are already acute. Metropolitan areas still account for the majority of all AIDS cases; however, there has been a regional shift in the incidence and prevalence of HIV in our country. For example, a growing proportion of all new AIDS cases occurs in the South, a region with a disproportionate share of poverty, unemployment, and populations without insurance and with lower overall health status.[16] As a result, the demand for HIV-related health care services will grow in an area of the country where demand has historically been low.

Intensifying financial constraints. Recent cutbacks in Medicaid eligibility and covered benefits in many States have already led to an increase in the number of uninsured and underinsured people with HIV.[17] As the safety net provider for the uninsured and third largest funder of HIV care, a growing number of people rely on the Ryan White HIV/AIDS Program for care, putting unsustainable strain on grantees.

DECLINING SUPPLY OF HIV CLINICIANS

The supply of health care providers in HIV is not keeping up with demand, especially in nursing, dental care, and primary care. In HIVMA's workforce and capacity survey of Ryan White Part C-funded clinics, 69 percent reported difficulty recruiting HIV clinicians and cited reimbursement and lack of providers as leading causes.[18] The uneven distribution of physicians across geographic areas, populations, and specialties is widely accepted.[19,20]

Those providing care to PLWHA need additional expertise in HIV medicine as well as sensitivity to the particular issues of stigma and concerns of special populations. Physician expertise in HIV care, defined as experience treating HIV-infected patients, is associated with earlier adoption and appropriate use of new antiretroviral therapy, and thus improved patient outcomes.[21–23] Because HIV/AIDS is a chronic, multisystem disease, workforce capacity concerns extend beyond physician shortages to shortages among a wide range of midlevel clinicians and other staff, from dentists and pharmacists to psychologists and social workers—as well among nonexpert generalists who help coordinate care across these multiple domains.[24]

The management of HIV disease necessitates both specialty and primary care expertise. HIV has evolved into a chronic disease that requires multidisciplinary management, generalists with HIV experience may be best suited to provide and coordinate consistent and comprehensive care.[25] Unfortunately, the Nation faces a shortage of both infectious disease specialists and primary care providers. HRSA estimates there is a current shortage of 7,000 primary care physicians in underserved areas.[26] While infectious disease specialists may have the most extensive HIV training, the reality is that HIV care is often provided by generalists, including internal medicine and family practice physicians. It is estimated that primary care physicians comprise a large proportion (56 to 58 percent in two studies) of physicians who care for HIV patients.[27,28] With increasing demand and declining remuneration, the number of physicians entering primary care fields is declining and will continue to decline.[29]

KEY DRIVERS OF HIV WORKFORCE SHORTAGES

Many HIV providers are struggling to attract—and retain—clinicians with experience in HIV. Why? The answer is complex and multifaceted and involves a multitude of dynamic factors, some of which reflect health care workforce shortages in general and some of which are specific to HIV. Major drivers of the shortage occur on the back end, with HIV physicians burning out, retiring, or closing their practices due to underfunding. The current economic situation, in particular, has caused downturns in Medicaid and Medicare reimbursement. On the front end, there are multiple "pipeline" or "pathway" factors that help explain why students are not choosing to enter HIV and why existing medical professionals are not accepting HIV patients or being adequately trained in HIV care.

Financial Disincentives

The high cost of medical education coupled with relatively low pay discourages students from entering the primary care workforce, especially among individuals from disadvantaged backgrounds. Reimbursement rates for HIV treatment are extremely low—lower than the actual cost of providing care in some areas of the country. Moreover, compensation has not kept pace with the increased caseloads. "HIV generalists are overworked, underpaid, and now being asked to take on an even bigger caseload. Even if all of your patients have Medicare coverage and you collect 100 percent of the charges, you get $325 per patient per year regardless of disease level. Why would a medical student with $200,000 in debt choose a field that treats them like this?" asks Saag. "Our current reward system for health care does not reward primary care. We don't pay primary care physicians to do what they do," said Saag.

Insufficient Exposure to HIV During Medical Education

HIV is not taught in many health profession schools because schools are not required to do so by accrediting agencies. And with more patients being seen in outpatient settings, fewer students are exposed to PLWHA during residency, which is skewed toward inpatient care. In 2004, HIVMA conducted a survey of 729 first-year medical residents in internal medicine programs in 10 States with the highest HIV prevalence. Approximately one-half of respondents (51 percent) felt their residency had not prepared them to practice HIV medicine.[30]

"Reverse Brain Drain"

Many people believe that HIV is no longer a domestic crisis or cause worthy of pursuit. Young clinicians passionate about HIV disease often focus their work on Africa and elsewhere with sizeable HIV epidemics.

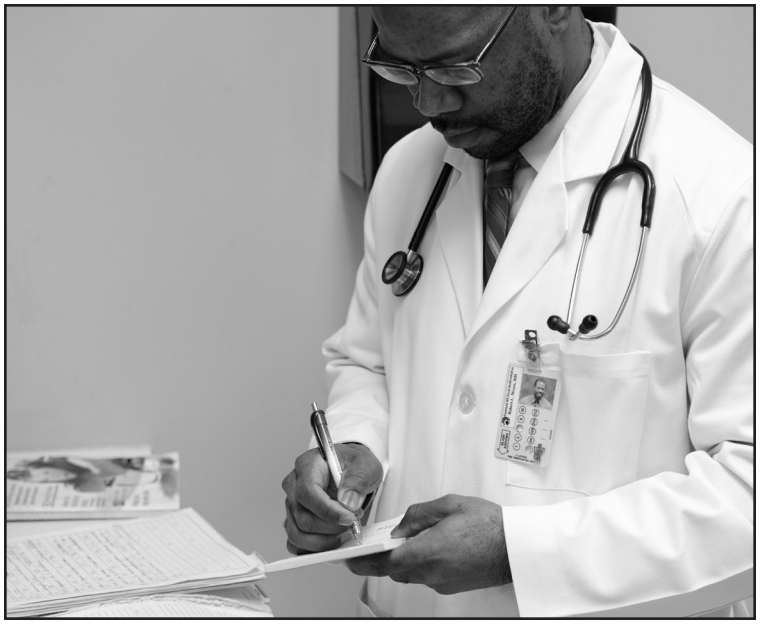
Reluctance to Work With HIV Patients

Stigma and prejudice remain a concern in the HIV/AIDS epidemic, especially among providers in rural and remote areas. Many emerging and existing clinicians are reluctant to treat individuals with HIV/AIDS because they are uncomfortable discussing drug use and sexual behavior with patients. Clinicians may also be intimidated by the complexity of HIV care and the need to stay up-to-date with treatment protocols.

JOB SATISFACTION

In a national survey of almost 12,000 physicians:

- 5.5 percent reported the practice of medicine "very satisfying";
- 29 percent reported it "satisfying";
- 60 percent would not recommend medicine as a career to their children or other young people.[31]



African-American and Hispanic medical school graduates represent just one-tenth the number of White graduates.

Education System and Professional Training

Professional schools don't have enough slots to meet demand, particularly in primary care fields. In addition, there are a higher number of applicants for most health care profession training programs than there are positions available.

Geographic Factors

Recruiting health care professionals with experience in HIV is especially challenging in rural areas. Many rural hospitals and clinics face a chronic shortage of clinicians willing to relocate and remain in the region, due in part to concerns about professional isolation. Results from the workforce and capacity survey conducted by HIVMA and the Forum for Collaborative HIV Research found that clinics in the West and South, and to a lesser degree the Midwest, reported the most difficulty recruiting clinicians. To a much larger degree than in other regions, clinics in the south reported that physician pay scales and provider aversion to treating patients with HIV presented barriers to recruitment.[32]

Race and Ethnicity

An overall shortage of minority graduates exists in medicine, and HIVMA reports an acute shortage of minority physicians in the field of HIV.[33] Yet in 2007, African-Americans accounted for 49 percent of estimated HIV diagnoses. Hispanics represent 15 percent of the U.S. population but 22 percent of all new HIV cases.[34] However, African-American and Hispanic medical school graduates represent just one-tenth the number of White graduates, according to the Association of American Medical Colleges.[35]

ENHANCING WORKFORCE CAPACITY

Simply increasing the number of clinicians is unlikely to adequately address specific HIV workforce deficits, such as the under-representation of minorities, certain specialties, or specific types of clinicians.[36] A combination of different strategies, tailored to specific regions and patient populations, is likely needed to solve the workforce capacity problem. Strategies fall into two broad categories, with considerable overlap:

- Pathway strategies designed to increase the pipeline of new health care professionals in primary care and specialty professions central to HIV care
- Delivery system strategies intended to extend the capacity of the existing health care workforce.

Pathway Strategies

Due to recent declines in general internal medicine graduates, many experts argue for the need to strengthen the Nation's primary care base through strategies that steer students into primary care specialties or train existing physicians in HIV care.[37] Funders, policymakers, and Ryan White grantees have started to invest in a wide range of "pathway" strategies, particularly among nurses and HIV specialists serving racial/ethnic minorities and underserved communities. Implemented alone or in combination, these pathway strategies can be categorized as medical education strategies and professional development strategies.

Medical Education Strategies. These tactics aim to reform the medical education system and curriculum to increase students' HIV training both in the classroom and during residency. Some strategies aim to mitigate the considerable financial burden students face by helping to subsidize the high cost of medical education. Others create incentives that steer students into particular low-supply professions and/or specialties relevant to HIV.

HRSA's Bureau of Clinician Recruitment and Service has several recruitment programs. Title VII training grant programs, such as the National Health Service Corp (NHSC), the Health Career Opportunity Program (HCOP),

and Area Health Education Centers (AHEC) use training programs, grants, scholarships, and loan repayment programs to enhance the supply, distribution, diversity, and quality of the health care workforce in medically underserved areas.[38] President Barack Obama's FY 2010 budget request for HRSA expands the agency's nurse loan repayment and scholarship program and the NHSC.

According to Sylvia Trent-Adams of HRSA's Workforce Workgroup, "Money is the driving force behind a lot of the workforce shortage response." Through financial incentives, HRSA has been actively bolstering the Nation's primary care supply. "Increasingly, hospitals and other health care entities are starting to do the same thing," she explains. "In areas with crippling shortages, some providers are willing to pay off all loans as well as cover relocation and moving expenses for clinicians willing to work in their areas."

The Arkansas AHEC's Family Medicine Residency Training Program, for example, offers an HIV management curriculum in community-based training settings to provide medical students with HIV care training through preceptorships, family medicine clerkships, and senior rotations. Some evidence exists that conducting training and placement in underserved areas increases the likelihood that clinicians will settle in those regions, thereby bolstering workforce supply.[39,40]

Another way clinics can give residents clinical experience in HIV care is to partner with hospital residency programs that offer out-patient training. Laura Cheever, deputy associate administrator at HAB, says, "By bringing residents onsite for outpatient training, HIV clinics can increase residents' exposure to HIV care and possibly increase the chance that they will stay on after training."

An added benefit of such a partnership is that it makes daily work more interesting for clinic staff by providing them with teaching and mentoring opportunities. This approach may enhance both recruitment and retention.

Professional Development Strategies. Professional development tactics aim to increase the level of HIV expertise among clinicians and boost the supply of qualified providers of HIV care. "Training must serve two purposes: First, HIV specialists need to be trained in primary care. Second, primary care physicians, physician assistants [PAs] and nurse practitioners [NPs] need to ramp up their expertise in HIV," contends Kathleen Clanon, director of the Pacific AIDS Education and Training Center and medical director of HIV services at Alameda County Medical Center in Oakland, California. "In the Ryan White community in general, a specialist is providing primary care. That's a flawed model, she argues. "Our patients have issues outside of HIV, conditions associated with aging, that HIV specialists are not trained to address. In the next 10 years, the key determinant of how long someone lives with HIV will be the quality of primary care," she states.

"The key determinant of how long someone lives with HIV will be the quality of primary care."

HIV training is available through HAB's network of AIDS Education and Training Centers (AETCs).[41] For example, the Midwest AIDS Training and Education Center (MATEC) developed an Individualized Clinician Training Program to teach practicing health care professionals to serve as HIV resources in their communities. The program's goal is to reduce disparities in health outcomes by increasing the number of providers in underserved and minority communities.[42]

Delivery System Strategies and Models

There are a number of shorter-term solutions designed to boost the capacity of the existing health care workforce by increasing productivity, efficiency, and competencies of providers—without necessarily expanding the overall size of the workforce. Many of these strategies have met with success in other areas of health care and have the potential to be helpful for HIV care as well.

Indeed, as NPs and PAs have already assumed the role of primary HIV care providers in many clinical settings—a trend that may become more commonplace—paraprofessionals such as community health workers (CHWs) could be added to the care team to alleviate some of the burden of nurses and PAs. CHWs could take on screening, patient navigating, and counseling on health behaviors, further freeing up NPs and PAs for routine clinical care.[51] Peer educators could also play a role. At Duke University's AIDS Research and Treatment Center, HIV-positive peer educators are trained to help HIV patients understand their disease, how to manage medication routines, and how to access community and other health care resources. Peer educators can also improve communication among patients, physicians, and other health care providers.[52] And they can provide companionship, social support, and help patients overcome barriers to improve adherence.

Experienced NPs and PAs were found to "provide basic guideline-related care similar to that of physician experts and better than that of physicians without HIV-related expertise."

Task Shifting. Task shifting is "the rational redistribution of tasks among health workforce teams that allows specific tasks to be transferred from highly qualified health workers to those with less training."[43] Task shifting promotes more efficient use of existing clinicians by utilizing NPs and PAs as "physician extenders" who can take on more patient care and free up physician time.[44,45] Task shifting has been widely and effectively used internationally and is gaining traction in domestic care settings, particularly in HIV clinics.[46] This strategy has been shown to reduce physician workload while maintaining quality of care and has been suggested as a method to boost clinical productivity.[47,48] "Task-shifting can also lower costs and reduce the rates of staff burnout. International experiences offer great [guidance] about how we can remake our system without necessarily having to increase the pipeline," Clanon states.[49]

One study found that the quality of HIV care provided by trained NPs and PAs is comparable to that of physician HIV experts. Experienced NPs and PAs were found to "provide basic guideline-related care similar to that of physician experts and better than that of physicians without HIV-related expertise."[50]

Clanon uses task shifting as one of several available strategies that improve workforce efficiency. "In the standard model of HIV care, the physician visit is crammed full of tasks that could easily be delegated to support staff," Clanon explains. In addition to a yearly physician visit, a typical clinic patient would meet with a nurse clinician, who administers primary care using a standard protocol. Additionally, there may be interim adherence visits with a pharmacist, who also conducts side-effect screening by phone and/or email. In complex cases, the patient would see the physician more regularly. Substance abuse and psychosocial case managers are tasked with ensuring patients engage in routine health maintenance.

"Initially resistant to taking on these responsibilities, the case managers now enjoy working with patients in this manner," Clanon observes. Clanon also says that task shifting and care coordination would be far more commonplace if the reimbursement structure were different. "As it stands, clinics can only bill for one service [type] per day, which provides a perverse incentive to *not* provide care." Providers can, however, provide many different types of services upon patient visits.

In care coordination models, patients with complex and/or multiple conditions often see several clinicians concurrently for different aspects of their health care.

Clanon's Medical Assistant (MA) plays a critical role at the clinic by providing routine health care maintenance, such as actively tracking pap smears and making appointments for people who need them. The MA is trained in panel management, a population management strategy. She monitors a dashboard of the clinic's client base, which includes 200 medical records and outlines key metrics, including the date of the client's last visit, dental records, and other health indicators. The MA reviews the report monthly and tracks whether patients are up-to-date on routine treatments and evaluations. Using a protocol to prioritize which cases are most urgent, the MA then reaches out to patients and brings them back into care. "Most providers have an MA but most MAs are not trained to do panel management," Clanon says. "Kaiser Family Foundation is a pioneer in this approach but no one is doing this in HIV care. It is a promising strategy," she adds. The MA doesn't get reimbursed for these interventions but is paid through the clinic budget.

Through panel management and outreach, the MA brings more work to the clinic, not less. The clinic's panel size has not increased but each client is spending more time in care. In this way, task shifting has improved quality of care as well as clinician satisfaction. "We feel on top of things and aren't struggling to keep track of patients. We are able to focus on acute care, not routine care and case management." But without Ryan White funding, this model would be impossible under the current reimbursement system. Career development and reimbursement for practitioners who accept increased tasks require investigation. Although more research is needed to determine optimal training and reimbursement adjustments, sufficient data are available to support a prompt adoption of task shifting to save lives.[53]

Co-management. Effective care co-management programs can bridge the gap between less experienced generalists and HIV experts. Rather than having the HIV expert provide primary HIV care, this model allows generalist physicians to oversee HIV care while under regular consultation with an HIV expert in person, by phone, or by email.[54] These arrangements involve logistical issues related to formalizing billing methods for consultations and handling liability concerns. The creation of a robust care co-management program would be most appropriate in geographic areas with low patient concentrations or when local HIV expertise is in short supply.[55]

Care coordination models. In care coordination models, patients with complex and/or multiple conditions often see several clinicians concurrently for different aspects of their health care, thereby improving the efficiency of health care delivery. This models engages all members of the multidisciplinary clinical team. Having various experts working in concert rather than in separate silos promotes the sharing of expertise and resources, which

ONLINE RESOURCES

Health Workforce Information Center:
www.healthworkforceinfo.org/

HIV Medicine Association:
www.hivma.org/default.aspx

Health Care Workforce:
www.healthcareworkforce.org/healthcareworkforce_app/index.jsp

could improve both outcomes and efficiency.[56] Examples of models based on care coordination include the medical home approach and the integrated delivery system.

Medical home. At the heart of the medical home model is a physician or physician practice committed to organizing and coordinating patient-centered care across settings and practitioners.[57] At the HIV medical home, people with HIV can visit the doctor, dentist, and pharmacist; access education resources; receive behavior modification and health promotion support; and obtain the practical support that patients need to help them show up for treatment. The medical home model increases reimbursement to the designated physician, thereby recognizing the added value that these physicians provide to patients.[58] Ryan White grantees like Clanon's Oakland clinic are offering unofficial medical homes. "The flexibility afforded by Ryan White funding to fill in coverage gaps has been critical to helping many HIV clinics serve as medical homes to their patients," Clanon argues.[59] "Because of Ryan White funding, we have double the number of RNs and social workers than regular medical clinics, where their services aren't billable." According to Clanon, primary care physicians like the medical home model because it draws attention and resources to their efforts.

Integrated delivery systems. An integrated delivery system is composed of multiple providers that offer a continuum of care. Denver Public Health (DPH) is part of Denver Health, a comprehensive integrated medical system including a hospital, community clinics, various service centers, and a health plan.

DPH maximizes staff efficiency through coordinated care, multidisciplinary teamwork, and task shifting. Care coordination is the basis of HIV primary care at DPH and ensures more patients get into care—and stay in care. Nurse practitioners and physician assistants serve as primary care providers and provide a more holistic approach to care that emphasizes the role of the environment on patient health. Clinics provide access to a range of other services from a co-located pharmacy to retention support. Weekly multi-disciplinary meetings assist providers in coordinating care for challenging cases, such as patients who are in the hospital or prison, or have co-occurring disorders.

According to William Burman, director, infectious disease clinic, the DPH model focuses on key transitions in a patient's disease, such as the moment of diagnosis, entry into or release from prison, or movement into and out of inpatient facilities. "You need to have a specific person to closely manage each transition," said Burman. For example, a nurse who is in charge managing the transition from inpatient to outpatient care so the patient feels confident at the time of discharge that there is a care plan in place. DPH has been developing a software system for enhancing patient retention that notifies the clinic when someone hasn't made an appointment. Each day the retention team gets a list of all the patients who have missed a visit and need follow-up.

According to Burman, the culture of multidisciplinary teamwork and task shifting has had a positive impact on clinician recruitment and retention. "I imbue staff with the big picture of how the system works and empower them to effectively manage client transitions," he explains. Staff are involved in monthly care conferences to learn about patient needs from a broad perspective. The clinic encourages career development and provides advancement opportunities within the system—and involves staff in the development of annual goals, which helps them feel more invested in their work and the organization. Staff empowerment efforts have paid off. The average primary care provider has been with the clinic for 13 years, for example, and the dentist for 14 years. The nurse manager has an 18-year tenure. "We have worked really hard to break down barriers and titles and give people the independence that encourages

innovation." The pharmacy position at the clinic is "sought after," says Burman because of the "intense interaction between pharmacist and care providers, which really helps with recruiting and retention. When we remodeled this year we intentionally put in a single lunchroom so all staff in the building would sit together. Informal interaction helps make the world go around." Moreover, because pharmacists see patients more regularly than other staff they are a good resource for flagging patients who need to be reminded to seek follow-up care. "We are trying to create a system whereby a screen pops on the pharmacist's computer screen with information of the patient's latest lab results so that the pharmacist can remind them to make an appointment."

A CRITICAL JUNCTURE

While Ryan White grantees can adopt some of these strategies for enhancing their workforce, real change is likely to require a major overhaul of the current health care system. "If we are going to address this issue," argues HIVMA former-Executive Director Christine Lubinski, "then it has to be integrated into broader discussions, including on national health care reform and into the formation of a comprehensive national AIDS strategy."[60] Health care reform is a critical—and complex—part of the Administration's domestic agenda. How this reform unfolds will have serious implications for HIV providers. "Health care reform will be a driving force behind the efforts to address the workforce crisis. The financial and administrative feasibility of the models outlined in this newsletter are contingent upon health care reform," says Trent-Adams. Attendees at HAB's Workforce Meeting emphasized the need for restructuring reimbursement to support care provided by interdisciplinary teams and to reflect services provided rather than provider type. Given the impact of the HIV workforce crisis on access to and quality of HIV care, it is imperative that the Ryan White community become involved in the national dialogue on health care reform.

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