

# California Health Benefits Review Program

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## Analysis of California Assembly Bill 1534 HIV Specialists

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A Report to the 2017-2018 California State Legislature

April 12, 2017

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# Key Findings:

## Analysis of California Assembly Bill 1534 HIV Specialists

Summary to the 2017-2018 California State Legislature, April 12, 2017



### AT A GLANCE

The version of California Assembly Bill (AB) 1534 analyzed by CHBRP would allow health plans to include HIV specialists, as defined, as eligible primary care providers (PCPs), if the provider requests PCP status and meets the health insurer's eligibility criteria for all specialists seeking PCP status.

1. CHBRP estimates that, in 2018, 23.4 million Californians enrolled in state-regulated health insurance will have insurance subject to AB 1534.
2. **Benefit coverage.** According to the responses to the CHBRP carrier survey, most health plans and policies, including Medi-Cal Managed Care Plans and plans accessed through CalPERS, allow HIV specialists to act as PCPs if the HIV specialist meets the health plan's PCP requirements.
3. **Utilization.** CHBRP is unable to estimate enrollee utilization of designating an HIV specialist as a PCP due to limitations in health claims data.
4. **Expenditures.** Impact on expenditures is unknown.
5. **Medical effectiveness.** There is limited evidence from two studies with moderate research designs that providers with more experience/expertise in HIV provide equivalent or better primary care screening services to persons living with HIV/AIDS (PLWH) compared to providers with less HIV experience/expertise or generalists.
6. **Public health.** There appear to be more than 900 HIV specialists (some of whom are credentialed by the American Academy of HIV Medicine [AAHIVM] and many more who likely meet the AB 1534 specialist definition) who treat some of the 126,000 PLWH in California. However, the use of primary care services provided by HIV specialists and the resulting health outcomes for PLWH is unknown.

### CONTEXT

Due to advances in drug treatment, HIV/AIDS has progressed from an acute illness with a high mortality rate to a manageable chronic illness where patients achieve close to normal life expectancy. CHBRP conducted an analysis on similar legislation, AB 2372, introduced during the 2015-2016 Legislative Session. The analysis of AB 1534 builds on the previous report.

### BILL SUMMARY

AB 1534 would allow DMHC-regulated health plans to include HIV specialists as eligible primary care providers (PCPs), if the provider requests PCP status and meets the health insurer's eligibility criteria for all specialists seeking PCP status. The bill defines an HIV specialist as a physician, physician assistant, or nurse practitioner who meets the criteria set forth by the American Academy of HIV Medicine (AAHIVM) or the HIV Medicine Association (HIVMA), or those who are contracted to provide outpatient care under the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990.<sup>1</sup>

### IMPACTS

#### Benefit Coverage, Utilization, and Cost

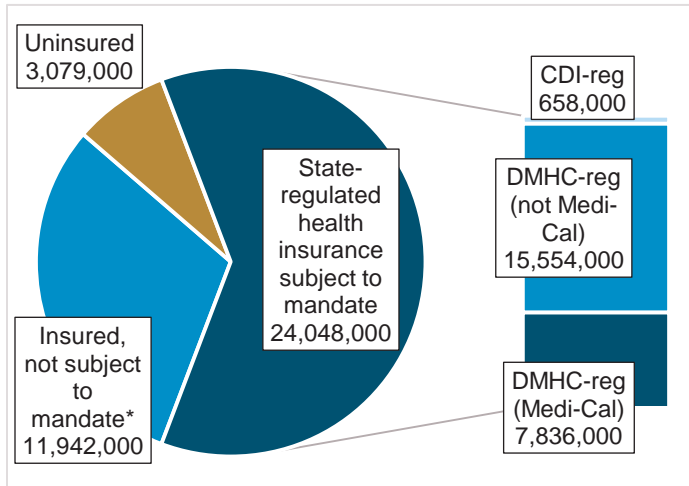
##### Benefit Coverage

AB 1534 does not alter the benefit coverage of 23.4 million enrollees subject to AB 1534, but increases enrollees' choice of PCPs, as the mandate would increase the number of qualifying HIV specialists that could be designated as PCPs. CHBRP assumes AB 1534 would not impact current PCPs who are HIV specialists, but would impact HIV specialists such as board-certified infectious disease specialists, nurse practitioners, and physician assistants, who meet the criteria for an HIV specialist to seek PCP status. According to the responses

<sup>1</sup> Refer to CHBRP's full report for full citations and references.

to the CHBRP carrier survey, most health plans currently allow HIV specialists to act as PCPs if the HIV specialist meets the health plan's PCP requirements.

**Figure 1.** 2018 Health Insurance in CA and AB 1534



\*Such as enrollees in Medicare or self-insured products  
 Source: California Health Benefits Review Program, 2017

## Utilization

CHBRP is not able to quantify the utilization impact of the proposed bill, due to limitations in health insurance claims data. "HIV specialists" are not specifically identified in common claims data.

## Expenditures

CHBRP is unable to estimate changes in unit cost for PCP services provided by an HIV specialist as a PCP. However, the unit cost for PCP services is unlikely to change postmandate since an HIV specialist will bill according to diagnostic and procedure codes for the corresponding PCP services. According to the carrier survey, when an HIV specialist serves as a PCP they are reimbursed the same as any other PCPs under the fee-for-service arrangement; there is also no difference in contracted provider rates for those health plans under the capitation arrangement.

## Medi-Cal

Most beneficiaries with HIV/AIDS enrolled in Medi-Cal Managed Care Plans regulated by DMHC are currently able to choose an HIV specialist, as defined, as their PCP. Beneficiaries who are not currently able to choose an HIV

specialist as their PCP would be able to do so, should AB 1534 be enacted.

## CalPERS

The impact to CalPERS enrollees would be similar to the impact on enrollees in privately funded commercial plans. CHBRP is unable to quantify this impact.

## Number of Uninsured in California

CHBRP is unable to project an impact.

## Medical Effectiveness

CHBRP had previously conducted thorough literature searches on this topic in 2016 for AB 2372. While some studies may refer to HIV specialists, as defined in the bill language, it is hard to disentangle the term HIV specialist, HIV provider, HIV primary care physician, and infectious disease physician. Two recent studies provide limited evidence that providers with more experience/expertise in HIV provide equivalent or better primary care screening services to persons living with HIV/AIDS (PLWH) compared to providers with less HIV experience/expertise or generalists.

## Public Health

There appears to be more than 900 HIV specialists (some of whom are credentialed by AAHIVM and many more who likely meet the AB 1534 specialist definition) who treat some of the 126,000 PLWH in California. However, the use of primary care services provided by HIV specialists and the resulting health outcomes for PLWH is unknown.

## Essential Health Benefits and the Affordable Care Act

AB 1534 allows certain providers to be designated as primary care providers, expanding the providers eligible to provide primary care services, but does not mandate coverage of additional benefits. Therefore, the provisions of AB 1534 do not appear to exceed EHBs, and would not trigger the ACA requirement that the state defray the cost of additional benefit coverage for enrollees in qualified health plans in Covered California.

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HIV Specialists

April 12, 2017

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## ABOUT CHBRP

The California Health Benefits Review Program (CHBRP) was established in 2002. As per its authorizing statute, CHBRP provides the California Legislature with independent analysis of the medical, financial, and public health impacts of proposed health insurance benefit bills. The state funds CHBRP through an annual assessment on health plans and insurers in California.

An analytic staff in the University of California's Office of the President supports a task force of faculty and research staff from several campuses of the University of California to complete each CHBRP analysis. A strict conflict-of-interest policy ensures that the analyses are undertaken without bias. A certified, independent actuary helps to estimate the financial impact, and content experts with comprehensive subject-matter expertise are consulted to provide essential background and input on the analytic approach for each report.

More detailed information on CHBRP's analysis methodology, authorizing statute, as well as all CHBRP reports and other publications are available at [www.chbrp.org](http://www.chbrp.org).

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## POLICY CONTEXT

The California Assembly Committee on Health has requested that the California Health Benefits Review Program (CHBRP)<sup>2</sup> conduct an evidence-based assessment of the medical, financial, and public health impacts of AB 1534, HIV Specialists.

If enacted, AB 1534 would affect the health insurance of approximately 23.4 million enrollees (62% of all Californians). This represents 97% percent of the 24 million Californians who will have health insurance regulated by the state that may be subject to any state health benefit mandate law — health insurance regulated by the California Department of Managed Health Care (DMHC) or the California Department of Insurance (CDI). If enacted, the law would affect the health insurance of enrollees in DMHC-regulated plans, including Medi-Cal Managed Care Plans, exempting specialized health care service plans.

### Bill-Specific Analysis of AB 1534, HIV Specialists

#### Bill Language

AB 1534 would allow health plans to include HIV specialists as eligible primary care providers (PCPs), if the provider requests primary care provider status and meets the health insurer's eligibility criteria for all specialists seeking primary care provider status.

- As defined in Section 14254 of the Welfare & Institutions Code, "Primary care provider" means a physician or nonphysician medical practitioner who has the responsibility for providing initial and primary care to patients, for maintaining continuity of patient care, and for initiating referrals for specialist care. This means providing care for the majority of health care problems, including but not limited to preventive services, acute and chronic conditions, and psychosocial issues.
- "HIV Specialist" means a physician, physician assistant, or a nurse practitioner who meets the criteria for an HIV specialist as published by the American Academy of HIV Medicine or the HIV Medicine Association, or who is contracted to provide outpatient medical care under the federal Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381).

The full text of AB 1534 can be found in Appendix A

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<sup>2</sup> CHBRP's authorizing statute is available at <http://chbrp.org/faqs.php>.



## Analytic Approach and Key Assumptions

In this analysis, CHBRP differentiates between PCP HIV specialists and non-PCP HIV specialists. CHBRP clarifies that the “HIV specialty” designation may be obtained through a credentialing society or through a Ryan White Program contract; it is not a formal board-certified specialty or subspecialty (e.g., internal medicine, infectious disease) that is recognized by the California Medical Board (or taught by medical schools<sup>3</sup>).

Based on bill language parameters, this analysis:

- assumes AB 1534 would not impact current PCPs who are also HIV specialists because they meet the bill’s definition of a PCP premandate.
- assumes AB 1534 would primarily impact board-certified infectious disease specialists who treat patients with HIV, and are not currently PCPs, but meet the bill’s definition of HIV specialist.
- assumes AB 1534 would impact only a small number of physician assistants (PAs) and nurse practitioners (NPs) who are HIV specialists, but are currently not serving as primary care providers.
- assumes that only HIV-positive enrollees would select HIV specialists as their PCPs, although this is not specified in the bill language.
- focuses on delivery of primary care services to people living with HIV (PLWH) rather than on delivery of HIV care because enrollees currently have access to HIV care as specialty care.
- evaluates the clinical literature for evidence that non-PCP HIV specialists provided equivalent or better quality of primary care than PCP HIV specialists.
- assumes that reimbursement rates are based on the services provided, meaning PCPs and specialists would receive the same reimbursement for providing primary care services.

CHBRP conducted an analysis on similar legislation, AB 2372<sup>4</sup>, introduced during the 2015-2016 Legislative Session. The analysis of AB 1534 builds on the previous report.

## General Caveat for All CHBRP Analyses

It is important to note that CHBRP’s analysis of proposed benefit mandate bills address the incremental effects — how the proposed legislation would impact benefit coverage, utilization, costs, and public health compared to current coverage. CHBRP’s estimates of these incremental effects are presented in this report.

## AB 1534 Definitions of HIV specialist

Below are the explanations of the organizations that define HIV specialist criteria according to AB 1534. CHBRP will use the term “HIV Specialist™” to indicate those credentialed by AAHIVM and “HIV specialist” to designate any provider meeting of the three bill definitions: the published criteria established by the American Academy of HIV Medicine (AAHIVM) or the HIV Medicine Association (HIVMA); or a

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<sup>3</sup> CHBRP is aware of two advanced nursing programs that offer an HIV specialist track, although there is not an HIV specialist board certification for NPs.

<sup>4</sup> CHBRP’s analysis of AB 2372 is available at: [http://chbrp.org/completed\\_analyses/index.php](http://chbrp.org/completed_analyses/index.php)

provider who is contracted to provide outpatient medical care under the federal Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381).

### *HIV specialist certifications*

#### AAHIVM

The HIV Specialist™ (AAHIVS)<sup>5</sup> is a trademarked credential offered by the AAHIVM to those who apply and meet the following conditions:

1. Be a licensed physician, physician assistant, or nurse practitioner working in direct clinical care.
2. Complete a minimum of 30 credits of HIV-related Category 1 CME/CEU/CE within the 24 months preceding the date of application. Substitutions acceptable: Certain training programs, HIV-specific fellowships, lecturing, and many other types of educational activity are acceptable as a substitute for actual accredited CME/CEU/CE. Concise education activity summary records help facilitate the application process and may be submitted separately by mail or fax for convenience; details are provided within the online Credentialing application.
3. Provide direct, ongoing care to at least 20 HIV patients in the past two years. Note: Providers with fewer than 20 regular HIV patients may still apply by selecting “1-19” as their patient count on the application. Once approved, the “lower-volume” applicant is then paired with a local, experienced Academy-credentialed Member as part of the Academy’s Clinical Consult Program.

AAHIVS application process: The applicants provide supporting documents demonstrating their education. The AAHIVM validates all submissions with a review of the application and profile, and follows up with inquiries where needed. The applicant must sign an agreement verifying their authenticity, and agreeing to abide by the AAHIVM Code of Professional Ethics, as set forth on the AAHIVM credentialing website.

AAHIVS exam: Applicants must complete an exam administered by AAHIVM, which takes a “knowledge management” approach to testing, mirroring problem solving activities that would occur in the actual treatment of patients. AAHIVM testing instruments are designed with this approach in mind; that skilled providers of all kinds often need to access technical resources when solving complex clinical situations.

AAHIVM also offers an HIV Expert™ (AAHIVE) credential for physicians, physician assistants, nurse practitioners, and pharmacists working in nonclinical environments, in addition to an HIV Pharmacist™ (AAHIVP) credential for pharmacists working in HIV-specific care environments.

#### HIVMA

The organization provides a definition of specialty medical providers who manage the care of HIV-infected patients in an outpatient or clinic setting. As this is not a certification as provided by AAHIVM, there is no exam component or official directory of providers meeting this definition.

To be a Qualified HIV Physician<sup>6</sup>, a provider must meet requirements in three categories:

1. Patient management: Management of at least 25 HIV-infected patients in the preceding 36 months.
2. Continuing medical education: At least 40 hours of HIV-related continuing medical education in the preceding 36 months, earning a minimum of 10 hours per year.

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<sup>5</sup> American Academy of HIV Medicine Practicing HIV Specialist Eligibility Requirements. Downloaded from: <https://aahivm.org/hiv-specialist/>.

<sup>6</sup> HIV Medicine Association Qualified HIV Physician Criteria (March 2013). Available at: [http://www.hivma.org/hiv\\_guidelines/#definition%20of%20an%20experienced%20hiv%20physician](http://www.hivma.org/hiv_guidelines/#definition%20of%20an%20experienced%20hiv%20physician).

3. Board certification or significant clinical experience: Board certification or equivalent in one or more medical specialties or subspecialties recognized by the American Board of Medical Specialties or the American Osteopathic Association is preferred. Significant clinical and professional experience in HIV medicine, defined as a minimum of at least five years, should be considered in the absence of board certification.

Patient management experience and HIV-related continuing education also should be used to identify qualified nurse practitioners, physician assistants, and nurse midwives who provide HIV primary care.

### *Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990*

The Ryan White CARE Act<sup>7</sup> funds a federal program developed to assist persons living with HIV/AIDS who have no health insurance or lack financial resources to access care. The program provides grant funding to cities, states, and local community-based organizations to provide HIV care and treatment services, supporting primary medical care and support services.

## **Interaction with Existing Requirements**

Health benefit mandates may interact and align with the following state and federal mandates or provisions.

### **State Requirements**

#### *California law and regulations*

#### *California definition of PCPs and specialists*

In California, primary care physicians and nonphysician medical practitioners are defined in Sections 14254 of the Welfare and Institutions Code and Title 10, Section 2240 of the California Code of Regulations:

"Primary care physician" is a physician who has the responsibility for providing initial and primary care to patients, for maintaining the continuity of patient care, and for initiating referral for specialist care. A primary care physician shall be either a physician who has limited his or her practice of medicine to general practice or who is a board-certified or board-eligible internist, pediatrician, obstetrician-gynecologist, or family practitioner. A nonphysician medical practitioner, as defined in subdivision (c) of Section 14088, who is supervised by a primary care physician, has the responsibility for providing initial and primary care to patients, for maintaining the continuity of patient care, and for initiating referral for specialist care.

Specialists are defined in Section 14255 of the Welfare and Institutions Code:

"Specialist" means a physician who is board certified or board eligible in the specialty of medical care provided.

#### **Knox-Keene Act**

Health and Safety Code, Title 28, Section 1367.2 (e) requires health plans to provide accessibility to all medically necessary specialists.

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<sup>7</sup> US Department of Health and Human Services. Available at: <http://hab.hrsa.gov/about/legislation.html>.

Health and Safety Code Section 1351 designates specialists as allergy, anesthesiology, dermatology, cardiology, and other internal medicine specialists, neonatology, neurology, oncology, ophthalmology, orthopedics, pathology, psychiatry, radiology, surgeries, otolaryngology, urology, and other designated as appropriate.

Health and Safety Code Section 1374.16 requires health plans to make standing referrals to specialists when medically necessary. Plans are not required to refer out of network, unless there is no contracting specialist in that discipline within the plan's network — in which case the plan would have to cover an out-of-network specialist referral.

Health and Safety Code Section 1374.16 specifically recognizes HIV/AIDS as a specialty as defined by the federal government or a national voluntary health organization. AAHIVM and HIVMA are two national organizations with HIV specialty definitions.

Although it does not explicitly define specialist, Title 10, Section 2240 of the California Code of Regulations requires that there are adequate full-time equivalents of primary care and specialist providers in the network accepting new patients covered by the policy to accommodate anticipated enrollment growth.

### *Similar requirements in other states*

As stated in the 2016 analysis of AB 2372, CHBRP is aware of two other states that have regulations regarding the definition of an HIV specialist similar to those proposed in AB 1534, although the definition of HIV specialist proposed in AB 1534 may be broader. No additional states have proposed or enacted legislation in the interim.

- New York law requires that managed care organizations provide treatment for those on HIV Special Needs Plans (SNPs) by HIV specialists. An HIV specialist is defined by the New York State Department of Health AIDS Institute; the result of an expert panel.<sup>8</sup>
- Maryland, in its administrative code, requires that health insurers cover treatment by HIV/AIDS specialists. An HIV specialist must either have an American Board of Medical Specialties certification in infectious diseases, or have performed a minimum amount of HIV care and completed an HIV education requirement, which can be filled by passing the AAHIVM credentialing exam.

## **Federal Requirements**

### *Affordable Care Act*

A number of Affordable Care Act (ACA) provisions have the potential to or do interact with state benefit mandates. Below is an analysis of how AB 1534 may interact with requirements of the ACA as presently exists in federal law, including the requirement for certain health insurance to cover essential health benefits (EHBs).<sup>9</sup>

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<sup>8</sup> NY Department of Health (2009). Defining the HIV Specialist. Available at: <http://www.hivguidelines.org/wp-content/uploads/2009/06/hiv-specialist-report.pdf>

<sup>9</sup> The ACA requires nongrandfathered small-group and individual market health insurance — including but not limited to QHPs sold in Covered California — to cover 10 specified categories of EHBs. Resources on EHBs and other ACA impacts are available on the CHBRP website: [http://www.chbrp.org/other\\_publications/index.php](http://www.chbrp.org/other_publications/index.php).

Any changes at the federal level may impact the analysis or implementation of this bill, were it to pass into law. However, CHBRP analyzes bills in the current environment given current law.

CHBRP is unaware of any federal laws or regulations that would interact with the provisions of AB 1534.

### Essential Health Benefits

State health insurance marketplaces, such as Covered California, are responsible for certifying and selling qualified health plans (QHPs) in the small-group and individual markets. QHPs are required to meet a minimum standard of benefits as defined by the ACA as EHBs. In California, EHBs are related to the benefit coverage available in the Kaiser Foundation Health Plan Small Group Health Maintenance Organization (HMO) 30 plan, the state's benchmark plan for federal EHBs.<sup>10,11</sup>

States may require QHPs to offer benefits that exceed EHBs.<sup>12</sup> However, a state that chooses to do so must make payments to defray the cost of those additionally mandated benefits, either by paying the purchaser directly or by paying the QHP.<sup>13,14</sup> State rules related to provider types, cost-sharing, or reimbursement methods would *not meet* the definition of state benefit mandates that could exceed EHBs.<sup>15</sup>

AB 1534 allows certain providers to be designated as primary care providers, expanding the providers eligible to provide essential health benefits, but does not mandate coverage of additional benefits. Therefore, the provisions of AB 1534 do not appear to exceed EHBs, and would not trigger the ACA requirement that the state defray the cost of additional benefit coverage for enrollees in QHPs in Covered California.

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<sup>10</sup> The U.S. Department of Health and Human Services (HHS) has allowed each state to define its own EHBs by selecting one of a set of specified benchmark plan options. CCIIO, Essential Health Benefits Bulletin. Available at: [cciio.cms.gov/resources/files/Files2/12162011/essential\\_health\\_benefits\\_bulletin.pdf](http://cciio.cms.gov/resources/files/Files2/12162011/essential_health_benefits_bulletin.pdf).

<sup>11</sup> H&SC Section 1367.005; IC Section 10112.27.

<sup>12</sup> ACA Section 1311(d)(3).

<sup>13</sup> State benefit mandates enacted on or before December 31, 2011, may be included in a state's EHBs, according to the U.S. Department of Health and Human Services (HHS). Patient Protection and Affordable Care Act: Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation. Final Rule. Federal Register, Vol. 78, No. 37. February 25, 2013. Available at: [www.gpo.gov/fdsys/pkg/FR-2013-02-25/pdf/2013-04084.pdf](http://www.gpo.gov/fdsys/pkg/FR-2013-02-25/pdf/2013-04084.pdf).

<sup>14</sup> However, as laid out in the Final Rule on EHBs HHS released in February 2013, state benefit mandates enacted on or before December 31, 2011, would be included in the state's EHBs and there would be no requirement that the state defray the costs of those state mandated benefits. For state benefit mandates enacted after December 31, 2011, that are identified as exceeding EHBs, the state would be required to defray the cost.

<sup>15</sup> Essential Health Benefits. Final Rule. A state's health insurance marketplace would be responsible for determining when a state benefit mandate exceeds EHBs, and QHP issuers would be responsible for calculating the cost that must be defrayed.

## **BACKGROUND ON HIV/AIDS AND HIV SPECIALISTS**

Human immunodeficiency virus (HIV) attacks the body's immune system, specifically the CD4 cells (T cells) that fight infections, thus greatly increasing the risk of opportunistic diseases. HIV infection leads to acquired immunodeficiency syndrome (AIDS) if left untreated. Due to advances in drug treatment, HIV/AIDS has progressed from an acute illness with a high mortality rate to a manageable chronic illness where patients achieve close to normal life expectancy.

### **Treatment of HIV/AIDS**

Effective treatment of HIV reduces viral load, increases the body's CD4 count, improves immune status, greatly reduces the risk of opportunistic diseases, improves quality of life, reduces rates of transmission, and provides near-normal life expectancy (Gallant et al., 2011). HIV/AIDS is treated with highly active anti-retroviral therapy (HAART) usually through a combination of at least three prescription medications, representing at least two different drug categories. Regimen complexity has decreased over the years, but still may present challenges to some patients. These medication regimens reduce the viral load in the blood stream, enabling the body to fend off secondary infections and diseases and reduce the risk of transmitting the virus to others. Treatment effectiveness may wane over time (due to mutations to the virus), requiring changes to the drug regimen. Other reasons for changing a treatment regimen include pregnancy or patient intolerance to side effects such as nausea, pain, fatigue, anemia, etc. Long-term effects may include insulin resistance leading to diabetes, loss of bone density, or hyperlipidemia (increases in cholesterol). Both the treatment of HIV and management of potential medication side effects require ongoing care from a health care provider (e.g., HAART therapy often has interactions with other medications that have to be considered in treatment of other chronic conditions).

As HIV has progressed to a chronic condition, people living with HIV/AIDS (PLWH) are living longer and developing other conditions common to the general population (e.g., heart disease, cancer). These non-HIV-related conditions require age- and gender-relevant preventive care and chronic care (Aberg et al., 2014; Greene et al., 2013).

### **Standards of HIV Primary Care**

The HIV Medicine Association (HIVMA) of the Infectious Disease Society of America updated their recommended standards of care for PLWH in 2013 (Aberg et al., 2014). The routine healthcare maintenance recommendations for HIV-infected adults includes annual blood pressure checks, digital rectal exam, depression screening, influenza vaccination, and patient education for a variety of topics such as sexual behavior, alcohol and drug use, dietary teaching, and smoking cessation. Routine services also include fasting glucose and/or HbA1c testing, fasting lipid profile, STD testing, colorectal cancer screenings, and services specific to women such as trichomoniasis, mammography, Cervical Pap smear, and bone densitometry. These services are recommended in addition to standard HIV related care, such as measuring CD4 cell counts, HIV viral load suppression, and prescription of HAART. The Health Resources and Services Administration updated its list of HIV/AIDS Care Performance Measures to include additional primary care measures in 2013 (HRSA, 2016).

### **Providers of HIV/AIDS Treatment in California**

HIV providers may be physicians, physician assistants, or nurse practitioners and may be credentialed as an HIV Specialist™ by the American Academy of HIV Medicine (AAHIVM). PLWH may see an HIV

specialist who is in private practice, or practices at an HIV clinic, general healthcare clinic, or a community health center.

Table 1 presents the distribution of AAHIVM-credentialed HIV Specialists™ and a lower-bound estimate of noncredentialed HIV specialists in California.

**Table 1.** Number of Credentialed and Noncredentialed HIV Specialists in California, 2016

Provider Type	Number of Providers
<b>Total HIV Specialists™ (credentialed)</b>	<b>340</b>
MD and DO <sup>a</sup>	283
<b>By medical board certification</b>	
Internal Medicine	96
Family Practice	89
Infectious Disease	75
Geriatrics	2
OB/GYN	2
Emergency Medicine	2
No Listing	17
Nurse Practitioner	39
Physician Assistant	18
<b>HIV Pharmacists™ (credentialed)</b>	<b>108</b>
<b>Noncredentialed providers listed as HIV specialists<sup>b</sup></b>	<b>+453</b>
<b>Total HIV specialists in California</b>	<b>+900</b>

Source: California Health Benefits Review Program, 2016. Communication with AAHIVM.

Note: (a) MD=258; DO=25

(b) This count does not include HIV specialists practicing at the clinics funded by the Ryan White CARE Act. Although these clinics are not subject to AB 1534, the “specialist” definition in the bill does include providers contracted to provide care under the Ryan White CARE Act. These providers may also practice in other settings outside of the clinic and could be counted as part of the HIV specialist supply in California.

Key: MD=Doctor of Medicine; DO=Doctor of Osteopathic Medicine.

### Ryan White Program Providers

PLWH (especially those who are underinsured or uninsured, and thus do not have health insurance subject to AB 1534) may seek care at the clinics funded through the Ryan White CARE Act. These clinics were foundational to the control of the AIDS epidemic in the early 1990s, through their provision of HIV treatment and management. Providers contracted through the Ryan White Program would be eligible to serve as PCPs under AB 1534. Providers contracted through the Ryan White Program would only be eligible to serve as a PCP for PLWH if they practiced outside of a Ryan White funded clinic or within a practice setting that accepted insurance coverage for primary care services. In 2014, there were

approximately 145 providers contracted to provide services through Ryan White Part A, and 133 providers that received funding from multiple Program Parts (HRSA, 2017). It is unclear whether these providers are physicians, physician assistants, nurse practitioners, specialists, primary care providers, or another type of provider. Almost 40% of providers practice in community-based organizations, while almost 20% of providers practice in community and mental health centers, and another 18% practice in health departments. Less than 15% of providers practice in hospitals. According to a national survey of Ryan White Program Part C and D grantees in 2014, more than 80% of respondents other than health departments indicated their agencies or providers participated in managed care networks for Medicaid and private insurance (HRSA, nd).

### **Nurse Practitioners (NPs)**

As shown in Table 1, 39 nurse practitioners (NPs) were credentialed as an HIV Specialist™ in California in 2016. A majority (83%) of NPs in the United States are certified primary care providers, and presumably meet California's definition of a PCP (AANP, 2016). NPs who provide primary care may focus on specific clinical areas such as adult care, gerontology, pediatric care, or women's health. NPs also specialize in psychiatric/mental health, acute and emergency care, and neonatal care. An NP certified in one of these specialties may choose to obtain an HIV specialist designation, and would therefore be able to request a PCP designation from a health insurer under AB 1534. The bill language does not specify whether the supervising physician also needs to meet the criteria defined in AB 1534.

Other national organizations provide certifications for nurses and NPs who provide HIV/AIDS care. The HIV/AIDS Nursing Certification Board<sup>16</sup> offers a certification with similar requirements to those of AAHIVM and HIVMA. CHBRP is aware of two Schools of Nursing that provide an HIV sub-specialty or an "HIV Primary Care Certificate" to NPs who complete the specialty focus within primary care NP programs. Duke University School of Nursing was awarded funding by HRSA in 2013 to establish an NP HIV/AIDS primary care education program (HRSA, 2013) and the School of Nursing at Johns Hopkins University provides an "HIV Primary Care Certificate." These certificates or sub-specialty education programs do not meet the definition of an HIV specialist under AB 1534 unless other criteria are met.

### **Physician Assistants (PAs)**

As shown in Table 1, there were approximately 18 physician assistants (PAs) credentialed as HIV Specialists™ in California in 2016. Approximately one-third (35%) of PAs are practicing family medicine in California (NCCPA, 2017). PAs also specialize in surgery-subspecialties, emergency medicine, and other specialty areas. A PA certified in one of these specialties may choose to obtain an HIV specialist designation, and will therefore be able to request a PCP designation from a health insurer under AB 1534. The bill language does not specify whether the supervising physician also needs to meet the criteria defined in AB 1534.

### **HIV Pharmacists™ (credentialed)**

Pharmacists support medication adherence, identify drug interactions, and provide medication management among multiple providers. Pharmacists may also obtain an HIV Pharmacist™ credential through AAHIVM. Pharmacists work in tandem with HIV care providers (who may be specialists or PCPs) to ensure the safe and effective use of medications in PLWH but are not classified as an independent billing provider. HIV Pharmacists do not meet the definition of "HIV specialist" under AB 1534.



## Care Coordination for HIV Care

In addition to seeing an HIV specialist, PLWH may see other health care practitioners, including dentists, nurses, case managers, social workers, psychiatrists/psychologists, pharmacists, and medical specialists (AIDS.gov, 2014). Coordinating care among multiple providers is challenging, but necessary to improving health outcomes for PLWH; it improves medication adherence and reduces viral loads, especially for complex patients (Gallant et al., 2011). PLWH are more likely to be retained in care (defined as two HIV medical visits within one year, at least 2–6 months apart) when enrolled in a comprehensive care coordination program or when receiving care from more experienced HIV clinicians (Kimmel et al., 2016). Care retention is associated with higher rates of viral suppression, and is important to ensure continuity of care. Care coordinators would not be eligible to serve as PCPs under AB 1534.

## HIV/AIDS Incidence and Prevalence

### National

Nationally, the Centers for Disease Control and Prevention report that rates of diagnosis of HIV in 2014 were highest for blacks/African Americans (44.3/100,000) and lowest for whites and Asians (5.3/100,000 and 5.5/100,000, respectively). Hispanics/Latinos had a rate of 16.4/100,000 persons. Rates for persons of multiple races, Native Hawaiian/Pacific Islander, and American Indian/Alaska Native ranged between 14.1/100,000 and 8.8/100,000 (CDC, 2016). In addition to the disparate HIV incidence rates by race/ethnicity, data show that there are racial/ethnic disparities in access to physicians with HIV expertise (DHCS, 2015; Heslin et al., 2004).

### California

The California Office of AIDS maintains an HIV/AIDS surveillance system that records the prevalence and incidence of HIV diagnoses and the prevalence of AIDS cases (CDPH, 2016). The most recent data available are from 2014. Differences in HIV/AIDS cases in California occur among several demographic categories including gender, race, age, and risk exposure (Table 2).

**Table 2.** Number of (Living) HIV/AIDS Cases in California, December 2014

Demographic Characteristics	Total Living HIV/AIDS Cases (n)
<b>TOTAL</b>	<b>126,241</b>
<b>Sex</b>	
Men	109,792
Women	14,982
Transgender	1,467
<b>Race/ethnicity</b>	
White	53,076
Black	22,953
Hispanic	42,523
American Indian/Alaska Native	443

Demographic Characteristics	Total Living HIV/AIDS Cases (n)
Asian	4,762
Native Hawaiian/Pacific Islander	298
Multi-race/Unknown/Other	2,175
<b>Age (years)</b>	
0–12	161
13–19	410
20–29	9,857
30–39	20,553
40–49	35,431
≥50	59,829
<b>Risk exposure</b>	
MSM	83,441
IDU	8,317
MSM/IDU	9,250
Heterosexual contact (non-high-risk)	7,191
HRH	11,351
Other/unknown	5,984
Perinatal exposure	707

*Source:* California Health Benefits Review Program, 2017. Adapted from California Office of AIDS, Persons living with diagnosed HIV infection, by year and selected demographic characteristics as of December 31, 2014, Table 2.  
 Key: MSM=Men who have sex with men; IDU=Injection drug use; HRH=High risk heterosexual contact; Other/unknown=includes exposure to blood transfusion or blood products, receiving a transplant, occupational exposure, and other unspecified risks.

## MEDICAL EFFECTIVENESS

As discussed in *Policy Context*, AB 1534 would allow DMHC-regulated plans to include HIV specialists, as defined, as primary care providers (PCPs) upon their request and if they meet the plan or insurers' criteria for a specialist serving as a primary care provider. The medical effectiveness review summarizes findings from the literature on the effectiveness of primary care services for HIV patients provided by an HIV specialist, compared to a primary care provider who is not an HIV specialist. CHBRP previously examined the literature through 2016 in the analysis of AB 2372. This review summarizes the literature 2016 to present.

As described in the analysis of AB 2372, multiple studies have found that receiving outpatient care for HIV from a provider with more training/expertise in HIV is associated with better outcomes for measures of HIV severity, such as plasma viral load control (Landon et al., 2005). PLWH who are treated by providers with more HIV training/expertise were more likely to be on HAART (Landon, 2005) and on newer treatment regimens sooner (Landon et al., 2003). However, these studies do not address whether receiving care from an HIV specialist, as defined in the bill, is associated with better detection of non-HIV comorbidities. CHBRP assumes that AB 1534 would only affect PLWH's choice of provider for non-HIV comorbidities because under current law PLWH already have access to HIV specialists for HIV/AIDS care.

### Research Approach and Methods

CHBRP assumes AB 1534 would primarily impact board-certified infectious disease specialists, who are not currently PCPs, but meet the bill's definition of HIV specialist. CHBRP searched for studies of PLWH treated by HIV specialists who are not PCPs compared to HIV specialists who are PCPs, but identified no such studies in the literature at this time. Instead, the medical effectiveness review for this bill focuses on examining providers' experience/expertise with HIV patients and the provision of primary care screening services.

Studies of HIV specialists were identified through the Scopus citation index. CHBRP searched for the articles by Kimmel et al. (2016), Kitahata et al. (2003), and Engelhard et al. (2016) and found related articles based on common citations. The results were further refined by using the search terms listed in Appendix B.

The search was limited to abstracts of studies published in English from 2016 to present because CHBRP had previously conducted thorough literature searches on these topics in 2016 for AB 2372. Of the 81 articles found in the literature review, 18 were reviewed for potential inclusion in this report on AB 1534, and a total of two studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on provider types or care models, primary care services or disease screening outcomes, or were systematic reviews of literature reviewed previously by CHBRP. A more thorough description of the methods used to conduct the medical effectiveness review and the process used to grade the evidence for each outcome measure is presented in Appendix B

### Methodological Considerations

Studies pertinent to AB 1534 examine primary care services provided by non-PCP HIV specialist as compared to those provided by a PCP. As in the literature review for AB 2372, there were no studies that specifically address the effectiveness of primary care services for HIV patients provided by any HIV specialists, as defined in the bill language, compared to a PCP.

While some studies may refer to HIV specialists, it is hard to disentangle the term HIV specialist, HIV provider, HIV primary care physician, and infectious disease physician. HIV disease does not fall under the range of any one medical specialty. Physicians trained in internal medicine, family medicine, and other medical subspecialties join infectious disease specialists as HIV experts. Additionally, as defined in the bill language, physician assistants and nurse practitioners are able to obtain HIV specialist recognition. The studies do not necessarily reflect experience related to the kinds and experience of providers that might practice in CA currently or as a result of AB 1534.

## Outcomes Assessed

Because AB 1534 refers to primary care, including but not limited to preventive services, acute and chronic conditions, and psychosocial issues, CHBRP's medical effectiveness review for AB 1534 focused on non-HIV comorbidities, such as diabetes and hypertension. CHBRP searched for studies of HIV specialists who are PCPs compared to HIV specialists who are not PCPs, and was again unable to identify a study. One study was found that focuses on the impact of provider's experience/expertise with HIV patients on the care they provide for primary care services. An additional study was found that examined noncommunicable disease and cancer screenings by HIV care model type.

## Study Findings

The review for AB 2372 found there is a very low preponderance of evidence from four studies with weak research designs that care for non-HIV comorbidities provided by physicians with more experience/expertise in HIV is associated with poorer processes of care than care provided by physicians with less experience/expertise in HIV. However, these findings were from surveys of physicians only, and focused on the physician's comfort level with providing primary care services. Because these studies do not include care provided by physician assistants and nurse practitioners, and do not include data obtained from claims, they have not been factored into the overall medical effectiveness conclusion of this report.

Two recent studies with moderate research design provide limited evidence that providers with more experience/expertise in HIV provide equivalent or better primary care screening services to PLWH compared to providers with less HIV experience/expertise or generalists.

## Literature on HIV Specialists

### *Findings for non-HIV comorbidities*

With improved survival for PLWH, patterns of comorbidity have changed among HIV-positive patients. Cardiovascular disease, hypertension, and diabetes have become prevalent, and causes of death have shifted from opportunistic infections to end-stage liver and kidney disease and non-HIV-related malignancies (Bergersen et al., 2003; Brown et al., 2005; Hooshyar et al., 2007; Lewden et al., 2008; Palella et al., 2006; Triant et al., 2007).

Details about the studies reviewed for AB 2372 can be found in the 2016 CHBRP analysis.

One recent study used 2010 Medicare and Medicaid claims data for HIV-positive Californians to examine eight quality-of-care outcomes, including whether enrollees received four preventive services recommended annually for PLWH: influenza vaccine, TB testing, lipid profile, and glucose blood test (Landovitz et al., 2016). The researchers compared receipt of the four preventive services based on provider experience, among other characteristics. Providers with more than five HIV positive patients

within one year were deemed HIV specialists. Medicare enrollees who saw a non HIV-specialist were less likely to receive the influenza vaccine and a TB test than providers with more than 50 HIV positive patients per year (35.6% vs. 46.8% and 8.6% vs. 22.1%;  $p < .01$ ). There was no significant difference based on the provider's experience with HIV for whether Medicare enrollees received a lipid panel or a glucose blood test. Medicaid enrollees who saw a non HIV-specialist were less likely to receive a TB test, a glucose blood test, or a pap smear than providers with more than 50 HIV positive patients per year (12.9% vs. 38.5% [ $p < .01$ ], 90.4% vs. 95.7% [ $p < .05$ ], and 19.2% vs. 47.9% [ $p < .01$ ]). There was no significant difference between receipt of the influenza vaccine or a lipid panel for Medicaid enrollees based on care provided by a non-HIV specialist provider compared to a provider with more than 50 HIV positive patients.

There is limited evidence from one recent study of moderate research design that PLWH are more likely to receive preventive health screenings from providers with more experience/expertise in HIV as providers with less experience/expertise in HIV.

Another recent study compared rates of noncommunicable disease preventive screenings for PLWH by type of HIV care model in Boston, Massachusetts (Rhodes et al., 2017). The preventive screenings examined include hypertension, obesity, hyperlipidemia, and diabetes screenings, and breast, cervical, and colorectal cancer screenings. HIV care models were categorized as infectious disease (ID) providers only, generalist providers only, and ID plus generalist providers. After adjusting for the number of visits in 2012, there were no significant differences at the 0.05 level of noncommunicable disease or cancer screenings based on HIV care model.

There is limited evidence from one study of moderate research design that infectious disease (ID) specialists provide comparable noncommunicable disease and cancer screening services to PLWH compared to generalist providers and ID plus generalist providers.

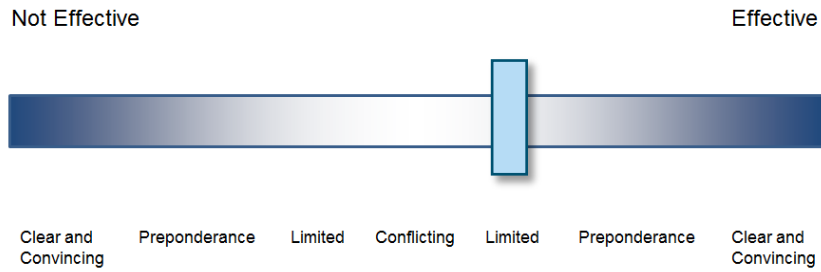
## Summary of Findings

The chart in this section summarizes CHBRP's findings regarding the strength of the evidence for the effects of HIV specialists serving as PCPs addressed by AB 1534. The title of the chart indicates the service for which evidence is summarized. The statement under the heading "Conclusion" presents CHBRP's conclusion regarding the strength of evidence about the effect of the service on a specific relevant outcome and the number of studies on which CHBRP's conclusion is based. For the services for which CHBRP concludes that there is clear and convincing, preponderance, limited, or conflicting evidence, the placement of the vertical bar indicates the strength of the evidence.

**Figure 1.** Non-HIV Comorbidities and Primary Care Screenings Outcomes Summary

**Conclusion**

There is limited evidence that providers with more experience/expertise with HIV care provide equivalent or better primary care services to PLWH based on two recent studies with moderate research designs.



## BENEFIT COVERAGE, UTILIZATION, AND COST IMPACTS

AB 1534 would allow DMHC-regulated health plans to include HIV specialists as an eligible PCP when the provider requests PCP status and meets the health plan or health insurer's eligibility criteria for all specialists seeking PCP status. AB 1534 does not alter the benefit coverage of 23.4 million enrollees subject to AB 1534, but increases enrollees' choice of PCPs, as the mandate would increase the number of qualifying HIV specialists that could be designated as PCPs.

This section reports the potential incremental impacts of AB 1534 on benefit coverage, utilization, and overall cost.

### Key Assumptions

- CHBRP assumes AB 1534 would not impact current PCPs who are HIV specialists. AB 1534 would impact HIV specialists such as board-certified infectious disease specialists, nurse practitioners, and physician assistants, who meet the criteria for an HIV specialist to seek PCP status.
- Among the HIV specialists that can be designated as PCPs as a result of AB 1534, CHBRP assumes that only HIV-positive enrollees would select these providers as their PCPs although this is not specified in the bill language.

### Baseline and Postmandate Benefit Coverage

Currently, enrollees with health insurance that would be subject to AB 1534 have access to HIV specialists as defined by their plan. According to the responses to the CHBRP carrier survey, most health plans, including Medi-Cal Managed Care Plans and plans accessed through CalPERS, allow HIV specialists to act as PCPs if the HIV specialist meets the health plan's PCP requirements. As noted in the *Policy Context* section, California law (Section 14254 of the Welfare and Institutions Code) defines "primary care provider" as a physician or nonphysician medical practitioner who has the responsibility for providing initial and primary care to patients, for maintaining continuity of patient care, and for initiating referrals for specialist care. The law designates PCPs as either a physician who has limited his or her practice of medicine to general practice or who is a board-certified or board-eligible internist, pediatrician, obstetrician-gynecologist, or family practitioner; or a nonphysician medical practitioner who is supervised by a primary care physician. Based on Table 1, a high proportion of credentialed HIV specialists in California (e.g., internist, family practitioner, obstetrician-gynecologist, nurse practitioner, and physician assistant) currently qualify for the PCP designation. CHBRP assumes that AB 1534 would largely impact infectious disease specialists, who may not currently be PCPs, but who meet the HIV specialist requirement. A small number of NPs and PAs may also be impacted by AB 1534.

Postmandate, CHBRP assumes that enrollees with HIV could designate infectious disease specialists — including physicians, NPs and PAs who meet the HIV specialist definition put forth in AB 1534 — as their PCP. CHBRP qualitatively estimates that the impact would be minimal: according to Table 1, among credentialed HIV Specialists™ in California in 2016, there are 75 board-certified infectious disease specialists, comprising 22% of credentialed HIV Specialists™. There are an additional 453 noncredentialed HIV specialists for whom it is unclear if they are currently identified as PCPs and/or as a specialist.

## Utilization

CHBRP is not able to quantify the utilization impact of the proposed bill, due to limitations in health insurance claims data. Such an analysis would require a robust database that identifies primary care and specialty services by provider type and whether the provider is an HIV specialist as defined by AB 1534. “HIV specialists” are not specifically designated in common claims data, and thus, CHBRP is unable to determine whether primary care provided to a PLWH is delivered by an HIV specialist PCP or a non-HIV specialist PCP. Similarly, CHBRP is unable to tell whether a specialist (such as an infectious disease physician) providing primary care is designated as that patient’s PCP. Therefore, CHBRP is unable to identify whether implementation of AB 1534 would impact a shift in utilization from one provider to another, or if there would be a change in the overall utilization of services.

However, CHBRP posits that it is possible more enrollees living with HIV might choose an HIV specialist as their PCP. A recent survey of 98 patients with HIV indicated that 59% of patients used their HIV physician as their PCP, but 85% patients would prefer their HIV physician provide both HIV and primary care (Cheng et al., 2014). If more enrollees choose their HIV specialist as their PCP, CHBRP anticipates two scenarios for potential utilization changes. First, HIV specialists may be able to provide coordinated HIV and primary care, which may result in fewer visits, thus decreasing the overall utilization. Second, HIV specialists may be less comfortable than general internists with prescribing treatments for other chronic conditions, such as diabetes, heart disease, and mental health issues (Cheng et al., 2014; Fultz et al., 2005; Kimmel et al., 2016). For instance, they may refer their HIV patients with diabetes to endocrinologists for care. If that happens, the overall utilization may increase.

## Expenditures

CHBRP’s expenditure analysis is informed by changes in unit costs, enrollees’ cost sharing, and utilization postmandate. Due to the limitations in the claims data mentioned above, CHBRP is unable to estimate changes in unit costs for PCP services provided by an HIV specialist as a PCP. However, the unit cost for PCP services is unlikely to change postmandate since an HIV specialist will bill according to diagnostic and procedure codes for the corresponding PCP services. According to the carrier survey, when an HIV specialist serves as a PCP they are reimbursed the same as any other PCPs under the fee-for-service arrangement; there is also no difference in contracted provider rates for those health plans under the capitation arrangement. CHBRP therefore assumes that unit costs for PCP service provided by an HIV specialist as a PCP would not change postmandate. However, if HIV specialists are currently considered to be specialist providers, they could be reimbursed the same or more than PCPs for HIV-related services.

Postmandate, CHBRP anticipates two scenarios for enrollees’ cost sharing. First, enrollees’ cost sharing may decrease postmandate if enrollees shift to HIV specialists designated as PCPs, and previous HIV-related services delivered as a specialty visit with cost sharing can be billed as a PCP or preventive visit, with no or lower cost sharing. Additionally, if efficiencies are gained from coordinating HIV services with primary care resulting in fewer visits, then cost sharing and overall expenditure would also be expected to decrease. Alternatively, cost sharing may increase, particularly for patients with other chronic conditions. Increased patient cost sharing might occur if another specialist needs to be included in the treatment team, as HIV specialists *may* be less expert than a traditional PCP at treating some comorbidities that may be revealed through a primary care visit (such as diabetes, heart disease, mental health issues, and others) and more likely to refer patients to other specialists (Cheng et al., 2014; Fultz et al., 2005; Kimmel et al., 2016). It may also be the case that the amount of preventive care received by PLWH may increase due to the ease of getting both HIV and primary care from an HIV specialist serving as a PCP. In this scenario, expenditures may be expected to increase.



## PUBLIC HEALTH IMPACTS

There appear to be more than 75 non-PCP<sup>17</sup> HIV specialists (including AAHIVM credentialed and many more providers who likely meet the AB 1534 specialist definition) who treat some of the PLWH with insurance subject to the mandate. However, use of primary care services provided by HIV specialists and the resulting health outcomes for non-HIV comorbidities for enrollees living with HIV is unknown. This finding reflects the extremely limited evidence that PLWH would receive comparable primary care from an HIV specialist as from a primary care provider (Rhodes et al., 2017). As was stated in the *Benefit Coverage, Utilization, and Cost Impacts* section, a majority of PLWH would prefer their HIV specialist provider also provide primary care services (Cheng, et al., 2014). However, it is unknown how many HIV specialists who are currently not PCPs would request this designation and how many PLWH would request their HIV specialist provider also serve as their PCP.

As stated in the *Background on HIV/AIDS and HIV Specialists* section, much of the existing literature provides conclusive evidence that PLWH experience better HIV-related health outcomes when receiving care from an HIV provider with more experience. One recent study included in the *Medical Effectiveness* section found that PLWH received more primary care and cancer screenings from providers with more experience (Landovitz et al., 2016). It is possible that HIV specialists with more experience would provide equivalent primary care services to PLWH compared to PCPs who are not HIV specialists or HIV specialists with less experience. It is also possible that if more HIV specialists serve as PCPs for PLWH, improved care coordination would lead to better primary care health outcomes in the long-term. However, because primary care services have not typically been included in academic studies, more evidence is needed to support this.

### Impact on Disparities<sup>18</sup>

The Rhodes et al. study (2017) found that generalist providers saw a higher share of Hispanic patients with HIV (40%) compared to infectious disease specialists (13.8%) and infectious disease specialists plus generalists (16.7%). Infectious disease specialists plus generalists had higher proportions of black patients with HIV (36%) compared to infectious disease specialists (25.6%) and generalists (24.4%). Rates of primary care and disease screenings were not reported by race, although as stated in the *Medical Effectiveness* section, rates of screenings for PLWH were not statistically different between provider groups.

Landovitz et al. (2016) reported screening rates of PLWH by race/ethnicity and found that Medicare enrollees who were black were significantly more likely than white enrollees to receive a TB test (20.5% vs. 17.4%; 95% CI) and significantly less likely to receive a lipid panel (65.8% vs. 74.7%; 95% CI). Similarly, Medicare enrollees who were Hispanic were significantly more likely to receive a TB test (20.4% vs. 17.4%; 95% CI) and significantly less likely to receive a flu shot (41.8% vs. 48.6%; 95% CI), lipid panel (70.2% vs. 74.4%; 95% CI), or glucose test (41.8% vs. 48.6%; 95% CI) than white patients. Among Medicaid enrollees, black patients were less likely to receive a lipid panel compared to white patients (58.1% vs. 68.1%; 95% CI) and Hispanic patients were more likely to receive a flu shot compared to white patients (41% vs. 31.6%; 95% CI).

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<sup>17</sup> Non-PCP HIV specialists refers to those physicians who are board certified in a particular medical subspecialty, such as infectious disease.

<sup>18</sup> Several competing definitions of “health disparities” exist. CHBRP relies on the following definition: Health disparity is defined as the difference in health outcomes between groups within a population. While the terms may seem interchangeable, “health disparity” is different from “health inequity.” “Health disparity” denotes differences, whether unjust or not. “Health inequity,” on the other hand, denotes differences in health [status or] outcomes that are systematic, avoidable, and unjust.” Wyatt et al., 2016.

While differences between racial and ethnic groups exist, it is unclear how AB 1534, should it be enacted, would contribute to a reduction in health and access disparities among PLWH.

## **APPENDIX A TEXT OF BILL ANALYZED**

On February 22, 2017, the California Assembly Committee on Health requested that CHBRP analyze AB 1534. Below is the bill language, as it was introduced on February 17, 2017. Immediately following is the bill language with suggested amendments. The Bill Author has indicated to CHBRP that the bill will be amended in these ways and CHBRP, with agreement from the requesting Health Committee, has analyzed the text as it will be amended.

CALIFORNIA LEGISLATURE— 2017–2018 REGULAR SESSION

**ASSEMBLY BILL**

**No. 1534**

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**Introduced by Assembly Member Nazarian**

**February 17, 2017**

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An act to add Section 1367.693 to the Health and Safety Code, and to add Section 10123.833 to the Insurance Code, relating to health care coverage.

### **LEGISLATIVE COUNSEL'S DIGEST**

AB 1534, as introduced, Nazarian. Health care coverage: HIV specialists.

Existing law, the Knox-Keene Health Care Service Plan Act of 1975, provides for the licensure and regulation of health care service plans by the Department of Managed Health Care. A willful violation of the act is a crime. Existing law also provides for the regulation of health insurers by the Department of Insurance. Existing law requires the Department of Managed Health Care and the Insurance Commissioner to adopt regulations to ensure that enrollees and insureds have access to needed health care services in a timely manner. Existing law requires the Department of Managed Health Care to develop indicators of timeliness of access to care, including waiting times for appointments with physicians, including primary care and specialty physicians. Existing law requires health care service plans to report annually to the Department of Managed Health Care on compliance with the standards developed pursuant to these provisions. Existing law requires the Insurance Commissioner to adopt regulations that ensure, among other things, the adequacy of the number of professional providers in relationship to the projected demands for services covered under the group policy.

This bill would require access to HIV specialists to be subject to the regulations, standards, and reporting requirements developed pursuant to the above specified provisions. The bill would require a health care service plan contract or health insurance policy that is issued, amended, or renewed on or after January 1, 2018, to include an HIV specialist, as defined, as an eligible primary care provider, as defined, if the provider requests primary care provider status and meets the plan's or health insurer's eligibility criteria for all specialists seeking primary care provider status. Because a willful violation of these requirements by a health care service plan would be a crime, the bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

#### DIGEST KEY

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

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#### BILL TEXT

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

#### **SECTION 1.**

Section 1367.693 is added to the Health and Safety Code, immediately following Section 1367.69, to read:

#### **1367.693.**

(a) Every health care service plan contract that is issued, amended, or renewed on or after January 1, 2018, that provides hospital, medical, or surgical coverage, excluding specialized health care service plan contracts, shall include an HIV specialist as an eligible primary care provider, if the provider requests primary care provider status and meets the health care service plan's eligibility criteria for all specialists seeking primary care provider status.

(b) For purposes of this section, "primary care provider" means a physician or a nonphysician medical practitioner, as each term is defined in Section 14254 of the Welfare and Institutions Code, who has the responsibility for providing initial and primary care to patients, for maintaining the continuity of patient care, and for initiating referral for specialist care. This means providing care for the majority of health care problems, including, but not limited to, preventive services, acute and chronic conditions, and psychosocial issues.

(c) Access to HIV specialists shall be subject to the regulations developed pursuant to Section 1367.03 and shall be included in the reports and other information required under Section 1367.035, consistent with the specialty designation.

(d) For purposes of this section, “HIV specialist” means a physician, physician assistant, or a nurse practitioner who meets the criteria for an HIV specialist as published by the American Academy of HIV Medicine or the HIV Medicine Association, or who is contracted to provide outpatient medical care under the federal Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381).

## **SEC. 2.**

Section 10123.833 is added to the Insurance Code, immediately following Section 10123.83, to read:

### **10123.833.**

(a) Every health insurance policy that is issued, amended, or renewed on or after January 1, 2018, that provides hospital, medical, or surgical coverage, excluding specialized health insurance policies, shall include an HIV specialist as an eligible primary care provider, if the provider requests primary care provider status and meets the health insurer’s eligibility criteria for all specialists seeking primary care provider status.

(b) For purposes of this section, “primary care provider” means a physician or a nonphysician medical practitioner, as each term is defined in Section 14254 of the Welfare and Institutions Code, who has the responsibility for providing initial and primary care to patients, for maintaining the continuity of patient care, and for initiating referral for specialist care. This means providing care for the majority of health care problems, including, but not limited to, preventive services, acute and chronic conditions, and psychosocial issues.

(c) Access to HIV specialists shall be subject to the regulations developed pursuant to Section 10133.5, consistent with the specialty designation.

(d) For purposes of this section, “HIV specialist” means a physician, physician assistant, or a nurse practitioner who meets the criteria for an HIV specialist as published by the American Academy of HIV Medicine or the HIV Medicine Association, or who is contracted to provide outpatient medical care under the federal Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381).

## **SEC. 3.**

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the

Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

### **Assembly Bill 1534, with Amendments**

SECTION 1. Section 1367.693 is added to the Health and Safety Code, immediately following Section 1367.69, to read:

1367.693. (a) Every health care service plan contract that is issued, amended, or renewed on or after January 1, 2018, that provides hospital, medical, or surgical coverage, excluding specialized health care service plan contracts, shall **include allow** an HIV specialist **as to be** an eligible primary care provider, if the provider requests primary care provider status and meets the health care service plan's eligibility criteria for all specialists seeking primary care provider status.

(b) For purposes of this section, "primary care provider" means a physician or a nonphysician medical practitioner, as each term is defined in Section 14254 of the Welfare and Institutions Code, who has the responsibility for providing initial and primary care to patients, for maintaining the continuity of patient care, and for initiating referral for specialist care. This means providing care for the majority of health care problems, including, but not limited to, preventive services, acute and chronic conditions, and psychosocial issues.

~~(c) Access to HIV specialists shall be subject to the regulations developed pursuant to Section 1367.03 and shall be included in the reports and other information required under Section 1367.035, consistent with the specialty designation.~~

~~(d) For purposes of this section, "HIV specialist" means a physician, physician assistant, or a nurse practitioner who meets the criteria for an HIV specialist as published by the American Academy of HIV Medicine or the HIV Medicine Association, or who is contracted to provide outpatient medical care under the federal Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381).~~

SEC. 2. ~~Section 10123.833 is added to the Insurance Code, immediately following Section 10123.83, to read:~~

~~10123.833. (a) Every health insurance policy that is issued, amended, or renewed on or after January 1, 2018, that provides hospital, medical, or surgical coverage, excluding specialized health insurance policies, shall include an HIV specialist as an eligible primary care provider, if the provider requests primary care provider status and meets the health insurer's eligibility criteria for all specialists seeking primary care provider status.~~

~~(b) For purposes of this section, "primary care provider" means a physician or a nonphysician medical practitioner, as each term is defined in Section 14254 of the Welfare~~

~~and Institutions Code, who has the responsibility for providing initial and primary care to patients, for maintaining the continuity of patient care, and for initiating referral for specialist care. This means providing care for the majority of health care problems, including, but not limited to, preventive services, acute and chronic conditions, and psychosocial issues.~~

~~–(e) Access to HIV specialists shall be subject to the regulations developed pursuant to Section 10133.5, consistent with the specialty designation.~~

~~–(d) For purposes of this section, “HIV specialist” means a physician, physician assistant, or a nurse practitioner who meets the criteria for an HIV specialist as published by the American Academy of HIV Medicine or the HIV Medicine Association, or who is contracted to provide outpatient medical care under the federal Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381).~~

~~SEC. 3.~~ No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

## APPENDIX B LITERATURE REVIEW METHODS

Appendix B describes methods used in the medical effectiveness literature review conducted for this report. A discussion of CHBRP's system for grading evidence, as well as lists of MeSH Terms, publication types, and keywords, follows.

Studies of HIV specialists were identified through a the Scopus citation index. CHBRP searched for the articles by Kimmel et al. (2016), Kitahata et al. (2003), and Engelhard et al. (2016) and found related articles based on common citations. The results were further refined by using the search terms listed below.

The search was limited to abstracts of studies published in English from 2016 to present because CHBRP had previously conducted thorough literature searches on these topics in 2016 for AB 2372. The literature did not include any randomized controlled trials and the majority of papers examined claims data or were systematic reviews. Reviewers screened the title and abstract of each citation retrieved by the literature search to determine eligibility for inclusion. The reviewers acquired the full text of articles that were deemed eligible for inclusion in the review and reapplied the initial eligibility criteria.

Of the 81 articles found in the literature review, 18 were reviewed for potential inclusion in this report on AB 1534, and a total of two studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on provider types or care models, primary care services, or disease screening outcomes, or were systematic reviews of literature reviewed previously by CHBRP.

### Evidence Grading System

In making a "call" for each outcome measure, the medical effectiveness lead and the content expert consider the number of studies as well the strength of the evidence. Further information about the criteria CHBRP uses to evaluate evidence of medical effectiveness can be found in CHBRP's *Medical Effectiveness Analysis Research Approach*.<sup>19</sup> To grade the evidence for each outcome measured, the team uses a grading system that has the following categories:

- Research design;
- Statistical significance;
- Direction of effect;
- Size of effect; and
- Generalizability of findings.

The grading system also contains an overall conclusion that encompasses findings in these five domains. The conclusion is a statement that captures the strength and consistency of the evidence of an intervention's effect on an outcome. The following terms are used to characterize the body of evidence regarding an outcome:

- Clear and convincing evidence;
- Preponderance of evidence;
- Limited evidence
- Conflicting evidence; and
- Insufficient evidence.

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<sup>19</sup> Available at: [www.chbrp.org/analysis\\_methodology/docs/medeffect\\_methods\\_detail.pdf](http://www.chbrp.org/analysis_methodology/docs/medeffect_methods_detail.pdf).



A grade of *clear and convincing evidence* indicates that there are multiple studies of a treatment and that the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective.

A grade of *preponderance of evidence* indicates that the majority of the studies reviewed are consistent in their findings that treatment is either effective or not effective.

A grade of *limited evidence* indicates that the studies had limited generalizability to the population of interest and/or the studies had a fatal flaw in research design or implementation.

A grade of *conflicting evidence* indicates that although some studies included in the medical effectiveness review find that a treatment is effective, a similar number of studies of equal quality suggest the treatment is not effective.

A grade of *insufficient evidence* indicates that there is not enough evidence available to know whether or not a treatment is effective, either because there are too few studies of the treatment or because the available studies are not of high quality. It does not indicate that a treatment is not effective.

## Search Terms

The search terms used to locate studies relevant to AB 1534 were as follows:

Keywords used to refine the search:

- Access
- Cost
- Cost effectiveness
- Economic loss
- ER utilization
- Ethnicity
- Gender
- Glucose blood test
- HIV coordination of care
- HIV primary care physician
- HIV specialist
- Hospital admissions rates
- Influenza vaccine
- Lipid profile
- Long term impacts
- Medical care
- Medical home
- Medication adherence
- Medication adherence support
- Morbidity
- Mortality
- Nurse practitioner
- Pap smears
- Patient satisfaction
- Physician
- Physician assistant
- Premature death
- Preventive health care
- Preventive health screenings
- Price
- Primary care
- Productivity and cost of illness
- Psychological well-being
- Public health
- Quality of life
- Race
- Racial disparities
- Reimbursement rate
- Sex differences
- Social determinants of health
- Tuberculosis (TB) testing
- Utilization

## **APPENDIX C COST IMPACT ANALYSIS: DATA SOURCES, CAVEATS, AND ASSUMPTIONS**

### **Determining Public Demand for the Proposed Mandate**

This subsection discusses public demand for the benefits AB 1534 would mandate. Considering the criteria specified by CHBRP's authorizing statute, CHBRP reviews public demand for benefits relevant to a proposed mandate in two ways. CHBRP:

- Considers the bargaining history of organized labor; and
- Compares the benefits provided by self-insured health plans or policies (which are not regulated by the DMHC or CDI and therefore not subject to state-level mandates) with the benefits that are provided by plans or policies that would be subject to the mandate.

On the basis of conversations with the largest collective bargaining agents in California, CHBRP concluded that unions currently do not negotiate for the inclusion of HIV specialists and the ability for a non-PCP HIV specialist to serve as a PLWH's PCP. In general, unions negotiate for broader contract provisions such as coverage for dependents, premiums, deductibles, and broad coinsurance levels.

Among publicly funded self-insured health insurance policies, the preferred provider organization (PPO) plans offered by CalPERS currently have the largest number of enrollees. The CalPERS PPOs currently provide benefit coverage similar to what is available through group health insurance plans and policies that would be subject to the mandate.

To further investigate public demand, CHBRP used the bill-specific coverage survey to ask carriers who act as third-party administrators for (non-CalPERS) self-insured group health insurance programs whether the relevant benefit coverage differed from what is offered in group market plans or policies that would be subject to the mandate. The responses indicated that there were no substantive differences.

## REFERENCES

- Aberg JA, Gallant JE, Ghanem KG, Emmanuel P, Zingman BS, Horberg MA, Infectious Diseases Society of America. Primary care guidelines for the management of persons infected with HIV: 2013 update by the HIV Medicine Association of the Infectious Diseases Society of America. *Clinical Infectious Diseases*. 2014;58(1):1-10.
- AIDS.gov. You & Your Provider. Page last revised March 25, 2014. Available at <https://www.aids.gov/hiv-aids-basics/just-diagnosed-with-hiv-aids/find-care-and-treatment/you-and-your-provider/>. Accessed March 28, 2017.
- American Association of Nurse Practitioners (AANP). NP Fact Sheet. Page last reviewed: October 25, 2016. Available at: <https://www.aanp.org/all-about-nps/np-fact-sheet>. Accessed March 22, 2017.
- Bergersen BM, Sandvik L, Dunlop O, Birkeland K, Bruun JN. Prevalence of hypertension in HIV-positive patients on highly active antiretroviral therapy (HAART) compared with HAART-naïve and HIV-negative controls: results from a Norwegian study of 721 patients. *European Journal of Clinical Microbiology and Infectious Disease*. 2003;22:731–736.
- Brown TT, Cole SR, Li X, et al. Antiretroviral therapy and the prevalence and incidence of diabetes mellitus in the Multicenter AIDS Cohort Study. *Archives of Internal Medicine*. 2005;165:1179–1184.
- California Department of Health Care Services (DHCS). Health Disparities in the Medi-Cal Population. Annual HIV Visit. Fall 2015. Available at: [http://www.dhcs.ca.gov/dataandstats/Documents/HealthDisparities\\_AnnualHIVVisit.pdf](http://www.dhcs.ca.gov/dataandstats/Documents/HealthDisparities_AnnualHIVVisit.pdf). Accessed March 27, 2016
- Centers for Disease Control and Prevention (CDC). HIV Surveillance Report, 2015; vol. 27. Published November 2016. Available at: <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Accessed March 15, 2017.
- Cheng QJ, Engelage EM, Grogan TR, Currier JS, Hoffman, RM. Who Provides Primary Care? An Assessment of HIV Patient and Provider Practices and Preferences. *Journal of AIDS & Clinical Research*. 2014;5(11).
- Engelhard EAN, Smit C, Nieuwkerk PT, et al. Structure and quality of outpatient care for people living with an HIV infection. *AIDS Care*. 2016;28(8):1062-1072.
- Fultz SL, et al. Differences between infectious diseases-certified physicians and general medicine-certified physicians in the level of comfort with providing primary care to patients. *Clinical Infectious Diseases*. 2005; 41(5):738-743.
- Gallant JE, Adimora AA, Carmichael JK, et al. 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*. 2011;53:1043-1050.
- Greene M, Justice AC, Lampris HW, Valcour V. Management of human immunodeficiency virus infection in advanced age. *JAMA: Journal of the American Medical Association*. 2013;309(13):1397-1405.

- Health Resources & Services Administration (HRSA). AETC education for nurse practitioners and physician assistants. 2013. Available at: <https://www.grants.gov/web/grants/view-opportunity.html?oppld=217573>. Accessed March 23, 2017.
- Health Resources & Services Administration (HRSA). Performance measure portfolio. Page last reviewed October 2016. Available at: <https://hab.hrsa.gov/clinical-quality-management/performance-measure-portfolio>. Accessed March 23, 2017.
- Health Resources & Services Administration (HRSA). Ryan White HIV/AIDS Program State Profiles. California—Ryan White HIV/AIDS Program Grant Recipient/Provider Characteristics. Page last reviewed February 28, 2017. Available at <https://hab.hrsa.gov/stateprofiles/Program-Grantees-and-Funding.aspx>. Accessed April 5, 2017.
- Health Resources & Services Administration (HRSA). Understanding and monitoring funding streams in Ryan White Program Clinics: Final Report Executive Summary. No date. Available at <https://hab.hrsa.gov/sites/default/files/hab/Global/fundingstreams-summary.pdf>. Accessed April 6, 2017.
- Heslin KC, Andersen RM, Ettner SL, Cunningham WE. Racial and ethnic disparities in access to physicians with HIV-related expertise. *Journal of General Internal Medicine*. 2005 Mar;20(3):283-9.
- Hooshyar D, Hanson DL, Wolfe M, Selik RM, Buskin SE, McNaghten AD. Trends in perimortal conditions and mortality rates among HIV-infected patients. *AIDS*. 2007;21:2093–2100.
- Kimmel AD, Martin EG, Galadima H, et al. Clinical outcomes of HIV care delivery models in the US: a systematic review. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*. 2016; 28(10): 1215-1222.
- Kitahata MM, Van Rompaey SE, Nieuwkerk PT, et al. Primary care delivery is associated with greater physician experience and improved survival among persons with AIDS . *Journal of General Internal Medicine*. 2003;18(2):95-103.
- Landon BE, Wilson IB, Cohn SE, et al. Physician specialization and antiretroviral therapy for HIV. Adoption and use in a national probability sample of persons infected with HIV. *Journal of General Internal Medicine*. 2003;18:233-241.
- Landon BE, Wilson IB, McInnes K, et al. Physician specialization and the quality of care for human immunodeficiency virus infection. *Archives of Internal Medicine*. 2005;165:1133-1139.
- Landovitz RJ, Desmond KA, Gildner JL, Leibowitz, AA. Quality of care for HIV/AIDS and for primary prevention by HIV specialists and nonspecialists. *AIDS Patient Care and STDs*. 2016; 30(9):395-408.
- Lewden C, May T, Rosenthal E, et al. Changes in causes of death among adults infected by HIV between 2000 and 2005: The Mortalité 2000 and 2005 surveys (ANRS EN19 and Mortavic). *Journal of Acquired Immune Deficiency Syndromes*. 2008;48:590–598.
- National Commission on Certification of Physician Assistants (NCCPA). 2015 Statistical Profile of Certified Physician Assistants by State. 2017. Available at <http://www.nccpa.net/Uploads/docs/2015StatisticalProfileofCertifiedPhysicianAssistantsbyState.pdf>. Accessed March 22, 2017.

- Palella FJ Jr, Baker RK, Moorman AC, et al. Mortality in the highly active antiretroviral therapy era: changing causes of death and disease in the HIV outpatient study. *Journal of Acquired Immune Deficiency Syndromes*. 2006;43:27–34.
- Rhodes CM, Chang Y, Regan S, Triant VA. Non-communicable disease preventive screening by HIV care model. *PLoS ONE*. 2017;12(1).
- Triant VA, Lee H, Hadigan C, Grinspoon SK. Increased acute myocardial infarction rates and cardiovascular risk factors among patients with human immunodeficiency virus disease. *Journal of Clinical Endocrinology and Metabolism*. 2007;92:2506–2512.
- Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. *Achieving Health Equity: A Guide for Health Care Organizations*. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2016. Available at [ihi.org](http://ihi.org).

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A group of faculty, researchers, and staff complete the analysis that informs California Health Benefits Review Program (CHBRP) reports. The CHBRP **Faculty Task Force** comprises rotating senior faculty from University of California (UC) campuses. In addition to these representatives, there are other ongoing contributors to CHBRP from UC that conduct much of the analysis. The **CHBRP staff** coordinates the efforts of the Faculty Task Force, works with Task Force members in preparing parts of the analysis, and manages all external communications, including those with the California Legislature. As required by CHBRP's authorizing legislation, UC contracts with a certified actuary, PricewaterhouseCoopers, to assist in assessing the financial impact of each legislative proposal mandating or repealing a health insurance benefit.

The **National Advisory Council** provides expert reviews of draft analyses and offers general guidance on the program to CHBRP staff and the Faculty Task Force. CHBRP is grateful for the valuable assistance of its National Advisory Council. CHBRP assumes full responsibility for the report and the accuracy of its contents.

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The California Health Benefits Review Program is administered by UC Health at the University of  
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A group of faculty and staff undertakes most of the analysis that informs reports by the California Health Benefits Review Program (CHBRP). The CHBRP Faculty Task Force comprises rotating representatives from multiple University of California (UC) campuses. In addition to these representatives, there are other ongoing contributors to CHBRP from UC. This larger group provides advice to the CHBRP staff on the overall administration of the program and conducts much of the analysis.

CHBRP staff coordinates the efforts of the Faculty Task Force, works with Task Force members in preparing parts of the analysis, and coordinates all external communications, including those with the California Legislature.

CHBRP is also grateful for the valuable assistance of its National Advisory Council, who provide expert reviews of draft analyses and offer general guidance on the program. CHBRP is administered by UC Health at the University of California, Office of the President, led by John D. Stobo, MD, Executive Vice President.

CHBRP assumes full responsibility for the report and the accuracy of its contents. All CHBRP bill analyses and other publications are available at [www.chbrp.org](http://www.chbrp.org).

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