Literature Review:

California Assembly Bill 2861

Medi-Cal: Telehealth and Substance Use Disorder Services

Summary to the 2018–2019 California State Legislature, April 18, 2018

CALIFORNIA HEALTH BENEFITS REVIEW PROGRAM

AT A GLANCE

On February 23, 2018, the Assembly Committee on Health requested that CHBRP complete a literature review examining the use of telehealth for substance use disorder (SUD) treatment, related to the introduced version of California Assembly Bill (AB) 2861. This bill would require the Department of Health Care Services to allow a "licensed practitioner of the healing arts" or a certified substance use disorder counselor to receive Medi-Cal reimbursement for substance use disorder services provided through telehealth, as defined in Section 2290.5 of the Business and Professions Code, in accordance with the Medicaid state plan. CHBRP has prepared a limited policy analysis section and conducted a literature review. Our findings are contained in this brief report.

1. **Research approach and methods:** Studies of telehealth for SUD treatment were identified through searches of several databases. Of the 310 articles found, 65 were reviewed for potential inclusion in this report on AB 2861, and a total of 10 studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on relevant telehealth modalities, were of poor quality, or did not report findings from clinical research studies.
2. **Overview of research questions: The key questions for this literature review are:**
    1. What is the effectiveness of treatments for substance use disorders delivered via telehealth?
        a. Does the effectiveness differ by the specific telehealth modality?
        b. Does the effectiveness differ by provider type?
        c. Does the effectiveness differ by the type of substance being abused?
3. **Key findings for live video for telehealth SUD treatment:** There is limited evidence from two randomized controlled trials (RCTs) on opioid addiction treatment, two RCTs for smoking cessation, two RCTs for alcohol use, three non-randomized studies with comparison groups, and one feasibility study that videoconferencing is effective in the treatment of substance use disorders reviewed in this report (opioid use disorder, tobacco use disorder, and alcohol use disorder). However, there is insufficient evidence on the effectiveness of videoconferencing for cannabis use disorder, stimulant use disorder, and hallucinogen use disorder.
4. **Key findings for asynchronous store-and-forward for telehealth SUD treatment:** Asynchronous store-and-forward is the secure transmission of medical information (e.g. photo, x-ray image) to a health care provider for later review. There is insufficient evidence on the effectiveness of store-and-forward in the treatment of substance use disorders.
5. **Key findings for remote patient monitoring for telehealth SUD treatment**: There is insufficient evidence on the effectiveness of remote patient monitoring in the treatment of substance use disorders.
6. **Key findings for provider type in telehealth SUD treatment:** There is insufficient evidence on effectiveness by provider type (e.g. psychiatrists, psychologists, therapists, counselors, substance abuse counselors, peer providers) in telehealth treatments for substance use disorders.

Conclusion: The medical effectiveness review for this report summarized the available literature on Medi-Cal covered telehealth treatments for substance use disorders. Though there is a larger body of literature on telehealth treatments for other areas, such as mental health treatment, there is limited high-quality literature available specifically examining treatment for substance use disorders. It should be noted that a grading of insufficient evidence is given when there is an absence of robust, high-quality studies available in the literature, it does not mean there is no effect; it means that the effect is unknown. Additional medical and clinical research is needed to definitively examine the potential for telehealth to improve substance use disorder treatment in the Medi-Cal population.

CONTEXT

Telehealth has been broadly defined as "the use of telecommunications and information technologies to share information, and provide clinical care, education, public health, and administrative services at a distance" (DHHS, 2018). Rather than being considered a distinct service, telehealth or telemedicine is a platform through which services may be provided. Telehealth includes various "modalities," which include live video, asynchronous store and forward and remote patient monitoring, described below:

- Live video: synchronous or occurs in "real time," uses two-way, interactive video to connect users patients and providers to other providers; can be used for consultation and diagnosis;
- Asynchronous store and forward: asynchronous or does not occur in "real time," captures medical information (e.g., photo, x-ray image) and securely transmits information to a health care provider for later review;
- Remote patient monitoring: collects health data from a patient and securely transmits information to health care providers for assessment (CCHP, 2018b).

BILL SUMMARY

Assembly Bill (AB) 2861 would require the Department of Health Care Services to allow a "licensed practitioner of the healing arts" or a certified substance use disorder counselor to receive Medi-Cal reimbursement for substance use disorder services provided through telehealth, as defined in Section 2290.5 of the Business and Professions Code, in accordance with the Medicaid state plan. Definitions of a licensed practitioner of the healing arts (LPHA) vary by state. In California, the following providers meet the requirements of a LPHA:

1. Psychiatrist, Medical Doctor, Psychiatric Resident (MD, DO)
2. Licensed Clinical Psychologist (PhD, PsyD)
3. Licensed Clinical Social Worker (LCSW)
4. Licensed Marriage and Family Therapist (LMFT)
5. Licensed Professional Clinical Counselor I (LPCC I)
6. Licensed Professional Clinical Counselor II (LPCC II)
7. Registered Nurse, Nurse Practitioner, Nurse Practitioner Intern (RN, NP, NPI)
8. Physician Assistant (PA)

POLICY CONTEXT

Definitions of telehealth or telemedicine vary by entity and by state.

California State Law

Currently, California law defines telehealth in Section 2290.5 of the Business and Professions Code as "the mode of delivering health care services and public health via information and communication technologies to facilitate the diagnosis, consultation, treatment, education, care management, and self-management of a patient's health care while the patient is at the originating site and the health care provider is at a distant site. The originating site is defined in the Business and Professions Code as "a site where a patient is located at the time health care services are provided via a telecommunications system or where the asynchronous store and forward service originates." [1] The Business and Professions Code also states that, "Telehealth facilitates patient self-management and caregiver support for patients and includes synchronous interactions and asynchronous store-and-forward transfers." [2]

State regulations define telehealth as "the ability of physicians and patients to connect via technology other than through virtual interactive physician/patient capabilities, especially enabling rural and out-of-area patients to be seen by specialists remotely." [3] Existing law defines two modalities of telehealth: synchronous interactions and asynchronous store-and-forward transfers. Although the definition of telehealth under current law ("information communication technologies") does not exclude telephone, e-mail, or messaging, these modalities are also not explicitly included. Similarly, California's existing definition of telehealth does not exclude evolving methods of telehealth, such as remote patient monitoring or mobile health, nor does it explicitly include those methods. Remote patient monitoring utilizes devices to store or transmit physiological data for provider review to enhance chronic disease management (e.g., blood pressure and blood glucose readings for patients with diabetes) (NIH, 2016). Mobile health (or "mHealth") "is the use of mobile and wireless devices to improve health outcomes, healthcare services and health research" (NIH, 2016).

Many states, including California, have laws in place to govern prescribing of controlled medications via telehealth (CCHP, 2018a). Section 2242.1(a) of California's Business and Professions Code prohibits providers "from prescribing or dispensing dangerous drugs or dangerous devices on the Internet without an appropriate prior examination and medical indication."[4]

Medicaid (Federal)

Medicaid defines the sites at which telehealth takes place as originating sites and distant sites. The agency defines an originating site as: "location of the Medicaid patient at the time the service being furnished via a telecommunications system occurs." Medicaid defines a distant site as: "site at which the physician or other licensed practitioner delivering the service is located at the time the service is provided via telecommunications system."[5] For example, a patient's primary care physician at an originating site may communicate with a specialist at a distant site via telehealth platforms.

[1] BPC 2290.5(a)(4).
[2] BPC 2290.5.
[3] CA Code of Reg. Title 10 Sec. 6410.
[4] CA Business & Professions Code Sec. 2242.1(a).
[5] Available at: www.medicaid.gov/medicaid/benefits/telemed/index.html.

Medicaid does not consider telemedicine to be a distinct service. Instead, Medicaid describes telemedicine as an electronic communication that uses two-way, real-time, and interactive communication between a patient and a provider at a distant site. Medicaid specifies that the communication should include both audio and video equipment at a minimum; the Medicaid program's definition of telehealth is largely based on Medicare's definition in 42 CFR 410.78.[6] States may also enact state-specific regulations related to telehealth usage generally or in their Medicaid programs (CCHP, 2017b).

Medi-Cal

California's Medicaid program, Medi-Cal, aligns its telehealth coverage and reimbursement with the state's California Telehealth Advancement Act of 2011 and federal regulations. Within Medi-Cal, telehealth is not considered to be a distinct service, but rather a way for providers to deliver health care. Medi-Cal does not limit the locations in which telehealth services can be delivered for the patient or by the health care provider (DHCS, 2017).

State Medicaid programs vary in their approaches to telehealth reimbursement. Medi-Cal reimburses for current Medi-Cal benefits "appropriately provided via telehealth" for the following types of services:[7]

- Selected Evaluation and Management (E&M) services for patient visit and consultation.
- Selected psychiatric diagnostic interview examination and selected psychiatric therapeutic services.
- Teledermatology by store-and-forward.
- Teleophthalmology by store-and-forward.
- Teledentistry.
- Transmission costs (up to 90 minutes per patient, per day, per provider).
- Originating site facility fee.
- Interpretation and report of x-rays and electrocardiograms performed via telehealth.

Key Assumptions

CHBRP considers live video, asynchronous store-and-forward, and remote patient monitoring to be the telehealth modalities most relevant to AB 2861. It is unclear whether or not remote patient monitoring would be reimbursable through Medi-Cal. Twenty-one states reimburse for remote patient monitoring in some capacity in their Medicaid program, but California is not one of these states (CCHP, 2017a).

CMS specifies that asynchronous telecommunication does not include telephone calls, images transmitted via fax, and text messages. Also, Medi-Cal does not reimburse for e-mail, phone, or fax as telehealth services (CCHP, 2017c).[8] Therefore, CHBRP did not consider literature related to e-mail, phone, or fax in regards to telehealth substance use disorder services in Medi-Cal. Additionally, CHBRP did not consider text, chat, or apps to be relevant to AB 2861 because it appears unlikely that these methods of communication would be reimbursable through Medi-Cal.

[6] 42 CFR Ch. IV (10–1–11 Edition). Available at: www.gpo.gov/fdsys/pkg/CFR-2011-title42-vol2/pdf/CFR-2011-title42-vol2-sec410-78.pdf.
[7] Available at: www.dhcs.ca.gov/provgovpart/Pages/Telehealth.aspx.
[8] Available at: www.dhcs.ca.gov/provgovpart/Pages/Telehealth.aspx.

LITERATURE REVIEW: MEDICAL EFFECTIVENESS

AB 2861 would allow a licensed practitioner of the healing arts or a certified substance use disorder counselor to receive Medi-Cal reimbursement for substance use disorder services provided through telehealth. As discussed previously, the telehealth modalities most relevant to AB 2861 include live video communications, asynchronous store-and-forward and remote patient monitoring. The medical effectiveness review summarizes findings from evidence[9] from 2009 to present on the effectiveness of live videoconferencing, asynchronous store-and-forward, and remote patient monitoring in the treatment of substance use disorders.

Substance Use Disorders and Behavioral Health Treatments

Substance use disorders (SUD) occur when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment (American Psychiatric Association, 2013). According to the Substance Abuse and Mental Health Administration's (SAMHSA) National Survey on Drug Use and Health, 20.2 million adults (8.4%) had a substance use disorder (Hedden, 2015). SAMHSA classifies the most common substance use disorder in the United States into the following categories: alcohol use disorder, tobacco use disorder, cannabis use disorder, stimulant use disorder, hallucinogen use disorder, and opioid use disorder (SAMHSA, 2015).

According to the National Institute on Drug Abuse (NIDA), behavioral therapies help engage people in drug abuse treatment, increase abstinence, and help modify their behaviors and coping mechanisms related to drug abuse. A number of evidence-based therapies have been shown to be effective in treating substance use disorders, including Cognitive Behavioral Therapy (CBT), Motivational Enhancement Therapy (MET), Medication-Assisted Treatments (MAT), and Contingency Management Interventions (NIDA, 2018). These treatments often involve mental health and specific substance use treatment providers, ranging from psychiatrists, psychologists, therapists, counselors, and substance abuse counselors to peer providers (SAMHSA, 2016).

Telehealth Treatments for Substance Use Disorders

Telehealth is being used increasingly to overcome barriers to care, especially geographical barriers. Rural communities face greater challenges in accessing mental health and substance use treatment services as a result of difficulty recruiting and obtaining qualified professionals (Benavides-Vaello et al., 2013; Young, 2012). Telehealth services offer the potential benefit of increasing access to care in these communities.

There is a large body of evidence on the effects of telehealth, specifically videoconferencing, on health outcomes for the treatment of mental health conditions. In 2016, CHBRP identified four RCTs and a systematic review that reported that outcomes for psychiatry and counseling delivered by live videoconferencing did not differ from in-person care (Fortney et al., 2015; García-Lizana and Muñoz-Mayorga, 2010; Morland et al., 2010, 2014; Myers et al., 2015).

[9] Much of the discussion below is focused on reviews of available literature. However, as noted in the medical effectiveness approach document (see p.8 in the document posted here), in the absence of "fully-applicable to the analysis" peer-reviewed literature on well-designed randomized controlled trials (RCTs), CHBRP's hierarchy of evidence allows for the inclusion of other evidence.

This report focuses on reviewing the effectiveness of currently covered telehealth modalities under Medi-Cal (videoconferencing, store-and-forward) and remote patient monitoring in the treatment of substance use disorders.

Research Approach and Methods

Studies of telehealth treatments for substance use disorders were identified through searches of PubMed, the Cochrane Library, Web of Science, Embase, Scopus, and PsycINFO. Websites maintained by the following organizations that produce and/or index meta-analyses and systematic reviews were also searched: the Agency for Healthcare Research and Quality (AHRQ), the International Network of Agencies for Health Technology Assessment (INAHTA), the National Health Service (NHS) Centre for Reviews and Dissemination, the National Institute for Health and Clinical Excellence (NICE), the National Institute on Drug Abuse (NIDA), and the Substance Abuse and Mental Health Services Administration (SAMHSA).The search was limited to abstracts of studies published in English.

Of the 310 articles found in the literature review, 65 were reviewed for potential inclusion in this report on AB 2861, and a total of 10 studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on relevant telehealth modalities, were of poor quality, or did not report findings from clinical research studies. 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: Literature Review Methods.

The conclusions below are based on the best available evidence from peer-reviewed and grey literature. Unpublished studies are not reviewed because the results of such studies, if they exist, cannot be obtained within the 60-day timeframe for CHBRP reports.

Key Questions

1. What is the effectiveness of treatments for substance use disorders delivered via telehealth?
    a. Does the effectiveness differ by the specific telehealth modality?
    b. Does the effectiveness differ by provider type?
    c. Does the effectiveness differ by the type of substance being abused?

Methodological Considerations

The nature of the mandate for AB 2861 limits the literature available on telehealth services to only include studies specifically on substance use, and of those, only studies that involved modalities covered by Medi-Cal or remote patient monitoring, which Medi-Cal could potentially choose to cover in the future. As a result, very few studies were identified that are applicable to the bill. Of the studies that were found to apply, many had small sample sizes or were nonrandomized comparison studies, which may limit the confidence of their conclusions.

Outcomes Assessed

The outcomes assessed by studies included in this review included participation in treatment, frequency of substance use, medication adherence, satisfaction with treatment and resource utilization.

Study Findings

This section summarizes CHBRP's findings regarding the strength of the evidence for the effects of telehealth treatments for substance use disorders as addressed by AB 2861. Separate charts are presented for each telehealth service for which the bill would mandate coverage and for each outcome for which evidence of the effectiveness of a treatment is available.

Effectiveness of Live Videoconferencing for SUD Treatment

Live videoconferencing treatment involves real-time interaction with a provider via video communications. Videoconferencing can improve access to substance use treatment by allowing patients to receive counseling services in their homes or at rural area clinics (King et al., 2014). CHBRP identified 10 studies that examined the effectiveness of videoconferencing for substance use disorders, specifically, opioid use disorder, tobacco use disorder, and alcohol use disorder.

Opioid addiction treatment

CHBRP identified two smaller-scale randomized controlled trials and two retrospective comparison studies that examined the effectiveness, feasibility, and patient satisfaction of live video conferencing for opioid addiction treatment. In a preliminary study by King et al. (2009), patients testing positive for opioid use (n = 37) were randomly assigned to an Internet-based videoconferencing group counseling platform or onsite group counseling for 6 weeks. Patients in both groups achieved at least 2 consecutive weeks of abstinence and high rates of session attendance and satisfaction. Similar results were found in a second study by King et al. (2014). Opioid treatment program participants (n = 85) were randomly assigned to receive 12 weeks of weekly individual counseling in-person or via a web-based videoconferencing platform. Of those that completed the study, participants in both conditions had similar attendance rates, low rates of positive drug test results, and reported high treatment satisfaction. Two retrospective comparison studies of medication-assisted treatment to remote clinics reviewed clinic records of opioid treatment patients to assess the differences in outcomes between face-to-face treatment and videoconferencing. Both studies reported no significant differences in additional substance use during treatment or time to achieve abstinence and no difference or increased retention rates with the telehealth group (Eibl et al., 2017; Zheng et al., 2017).

Smoking cessation

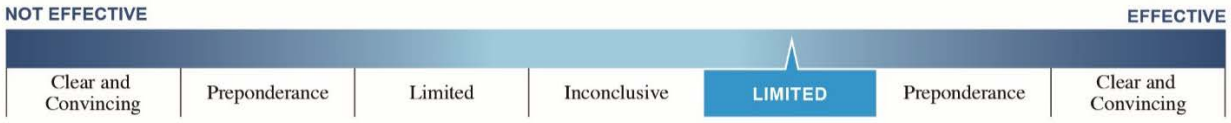
CHBRP identified two randomized controlled trials that examined the effectiveness of video counseling in smoking cessation, with phone counseling as the comparison group, and one non-randomized trial that compared smoking cessation treatment delivered via telehealth videoconferencing to in-person treatment. In a study by Richter et al. (2015), participants (n = 566) were randomly assigned to receive smoking cessation treatment via video counseling or phone counseling and found that verified abstinence did not differ between the two groups, participants in the video counseling group were significantly more likely to use and manage their cessation medications and reported significantly higher satisfaction than the phone counseling group. Another study that focused specifically on women of Korean ethnicity, randomly assigned participants (n = 49) to either a video or phone arm for an 8-week smoking cessation counseling intervention (Kim et al., 2016). Similarly, they found comparable self-reported rates of abstinence for both groups and reported that satisfaction and feasibility ratings were highest among participants under 50 years old. Lastly, a non-randomized trial examined the outcomes of smoking cessation treatment delivered via telehealth videoconferencing or in-person (telehealth n = 184; in-person n = 370) demonstrated approximately 25% abstinence rates in both groups with no other group differences reported (Carlson et al., 2012).

Alcohol use disorders

One recent mixed-methods study reported on patient satisfaction with videoconferencing-based treatment for alcohol use disorders. Participants were randomized to face-to-face counseling (n = 39) or video counseling (n = 32). Results from a patient satisfaction survey and qualitative interviews indicated that both groups were equally satisfied with treatment (Tarp et al., 2017). The literature examining effectiveness on health outcomes of telehealth videoconferencing for alcohol use disorders is scarce, and CHBRP found no recent generalizable studies in the literature review. However, one study from 2005 conducted a small feasibility and acceptability study of using videoconferencing for an 8-session group relapse prevention therapy (n = 18). The authors reported high levels of satisfaction and that attendance and attrition rates were comparable with conventional treatment and (Frueh et al., 2005). Additionally, a pilot study with parolees and/or individuals on community supervision who were identified as at-risk alcohol users randomized participants (n = 127) to therapy via videoconferencing within the community supervision office or treatment as usual provided by their social services clinician. Findings indicated no differences between groups on outcomes indicating that in-person treatment and video conferencing perform similarly in this study. However, there were significant within group differences such that participants in the videoconferencing group showed significant reduction in their alcohol use (Staton-Tindall et al., 2014).

Summary of findings regarding videoconferencing for SUD treatment: There is limited evidence from two RCTs on opioid addiction treatment, two RCTs on smoking cessation, two RCTs on alcohol use, three comparison studies, and one feasibility study that videoconferencing is effective in the treatment of substance use disorders reviewed in this report (opioid use disorder, tobacco use disorder and alcohol use disorder). However, there is insufficient evidence on the effectiveness of videoconferencing for cannabis use disorder, stimulant use disorder, and hallucinogen use disorder.

Figure 1. Videoconferencing for Substance Use Disorders



Effectiveness of Asynchronous Store-and-Forward for SUD Treatment

CHBRP did not find any literature related to the use of store-and-forward for substance use treatment.

Summary of findings regarding asynchronous store-and-forward for SUD treatment: There is insufficient evidence on the effectiveness of store-and-forward in the treatment of substance use disorders.

Figure 2. Asynchronous Store-and-Forward for Substance Use Disorders

Effectiveness of Remote Patient Monitoring for SUD Treatment

CHBRP reviewed the literature in regard to remote patient monitoring for substance use disorders. Although there is literature on use of electronic health modalities that could be used for remote monitoring such as phone applications, automatically delivered coaching, interactive voice response, and text messaging, it was determined that these modalities did not fit the requirements for Medi-Cal reimbursable telehealth services. CHBRP found no literature on the types of remote monitoring for substance use that would be covered under the provisions of the bill.

Summary of findings regarding remote patient monitoring for SUD treatment: There is insufficient evidence on the effectiveness of remote patient monitoring in the treatment of substance use disorders.

Figure 3. Remote Patient Monitoring for Substance Use Disorders

Effectiveness by Provider Type in Telehealth Treatments for SUD

CHBRP did not find specifications of provider type or comparisons across different providers in the literature for telehealth for substance use disorders. However, treatment for substance use disorders usually contains both mental health and specific substance use treatment providers, ranging from psychiatrists, psychologists, therapists, counselors, substance abuse counselors to peer providers (SAMHSA, 2016).

Summary of findings regarding provider type in telehealth treatments for SUD: There is insufficient evidence on effectiveness by provider type in telehealth treatments for substance use disorders.

Figure 4. Provider Type in Telehealth Treatments for Substance Use Disorders

Conclusion

The medical effectiveness review for this report summarized the available literature on Medi-Cal covered telehealth treatments for substance use disorders. Though there is a larger body of literature on telehealth treatments for other areas, such as mental health treatment, there is limited high-quality literature available specifically examining treatment for substance use disorders. CHBRP concluded that there is limited evidence from two RCTs on opioid addiction treatment, two RCTs on smoking cessation, two RCTs on alcohol use, three comparison studies, and one feasibility study that videoconferencing is effective in the treatment of substance use disorders reviewed in this report (opioid use disorder, tobacco use disorder and alcohol use disorder). However, there is insufficient evidence on the effectiveness of videoconferencing for cannabis use disorder, stimulant use disorder and hallucinogen use disorder. CHBRP also concluded that there is insufficient evidence on the effectiveness of store-and-forward, remote patient monitoring, and effectiveness by provider type in telehealth treatments for substance use disorders. It should be noted that a grading of insufficient evidence is given when there is an absence of robust, high-quality studies available in the literature. It does not mean there is no effect; it means that the effect is unknown. Additional medical and clinical research is needed to definitively examine the potential for telehealth to improve substance use disorder treatment in the Medi-Cal population.

APPENDIX A TEXT OF BILL

CALIFORNIA LEGISLATURE— 2017–2018 REGULAR SESSION

ASSEMBLY BILL **No. 2861**

Introduced by Assembly Member Salas

February 16, 2018

An act to add Section 14132.731 to the Welfare and Institutions Code, relating to Medi-Cal.

LEGISLATIVE COUNSEL'S DIGEST

AB 2861, as introduced, Salas. Medi-Cal: telehealth: substance use disorder services.

Existing law provides for the Medi-Cal program, which is administered by the State Department of Health Care Services and under which qualified low-income individuals receive health care services. The Medi-Cal program is, in part, governed and funded by federal Medicaid Program provisions.

Existing law provides that in-person contact between a health care provider and a patient is not required under the Medi-Cal program for services appropriately provided through telehealth, as defined, subject to reimbursement policies adopted by the department to compensate a licensed health care provider who provides health care services through telehealth that are otherwise reimbursed pursuant to the Medi-Cal program. Existing law, for purposes of payment for covered treatment or services provided through telehealth, prohibits the department from limiting the type of setting where services are provided for the patient or by the health care provider.

This bill would require the department to allow a licensed practitioner of the healing arts or a certified substance use disorder counselor to receive Medi-Cal reimbursement for substance use disorder services provided through telehealth in accordance with the Medicaid state plan.

DIGEST KEY

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

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

SECTION 1.

Section 14132.731 is added to the Welfare and Institutions Code, immediately following Section 14132.73, to read:

14132.731.

The department shall allow a licensed practitioner of the healing arts or a certified substance use disorder counselor to receive Medi-Cal reimbursement for substance use disorder services provided through telehealth, as defined in Section 2290.5 of the Business and Professions Code, in accordance with the Medicaid state plan.

APPENDIX B LITERATURE REVIEW METHODS

This appendix 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 telehealth treatments for substance use disorders were identified through searches of PubMed, the Cochrane Library, Web of Science, Embase, Scopus, and PsycINFO. Websites maintained by the following organizations that produce and/or index meta-analyses and systematic reviews were also searched: the Agency for Healthcare Research and Quality (AHRQ), the International Network of Agencies for Health Technology Assessment (INAHTA), the National Health Service (NHS) Centre for Reviews and Dissemination, the National Institute for Health and Clinical Excellence (NICE), the National Institute on Drug Abuse (NIDA) and the Substance Abuse and Mental Health Services Administration (SAMHSA).The search was limited to abstracts of studies published in English.

The search was limited to abstracts of studies published in English. The medical effectiveness search was limited to studies published from 2009 to present. The majority of the articles returned did not focus on relevant telehealth modalities, were not high quality randomized controlled trials, had small sample sizes, or were not generalizable.

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.

The literature review returned abstracts for 310 articles, of which 65 were reviewed for inclusion in this report. A total of 10 studies were included in the medical effectiveness review for AB 2861.

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.*[10] 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:

[10] Available at: www.chbrp.org/analysis_methodology/docs/medeffect_methods_detail.pdf.

- *Clear and convincing evidence;*
- *Preponderance of evidence;*
- *Limited evidence*
- *Inconclusive evidence; and*
- *Insufficient evidence.*

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 *inconclusive 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 (* indicates truncation of word stem)

1. Telehealth*[1]
2. Telemedicine*[1]
3. Live Video, Video Conferencing* [1]
4. (Asynchronous) Store and Forward * [1]
5. Remote (patient) monitoring (consultation)* [1]

[1] Indicates all above treatments/services* conditions and substance categories below

1. Substance use disorders
2. Substance abuse (treatment)
3. (Drug) Addiction
4. Alcohol, Alcoholism
5. Tobacco
6. Cannabis
7. Marijuana
8. Stimulant
9. Hallucinogen
10. Opioid

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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 researchers and analysts who are **Task Force 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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**A small percentage of AJ Scheitler's time is available to serve as a backup CHBRP staff resource.*

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