

# TELEBEHAVIORAL HEALTH CARE

A Solution to Improve Cost, Access,  
and Quality of Care



01

# INTRODUCTION

Untreated behavioral health conditions, including both mental health and substance use disorders (SUDs), are a major public health concern. Over 44 million United States (U.S.) adults have a mental illness, and fewer than 50 percent receive treatment (1–5); treatment rates are as low as 1 in 10 among the almost 20 million adults diagnosed with SUDs each year (3). Furthermore, national prevalence statistics are known to grossly underestimate the true number of individuals with behavioral health conditions; for every individual diagnosed, one more may go undiagnosed and subsequently untreated (6).



**44**  
MILLION

adults in the United States  
have a mental illness



FEWER THAN  
**50**%

receive treatment for  
mental illness

## The aim of this report is to describe the multidimensional value of telebehavioral health care.

Untreated behavioral health conditions are costly. Beyond the recognized cost of human suffering, behavioral health conditions also result in avoidable overall medical expenditures, lost productivity, and criminal justice costs. While a significant part of this burden is carried by those with severe mental illness, an additional burden is carried by those with chronic medical conditions who experience two-to three-fold higher risk for depression versus their peers, and face health-related limitations that further challenge access to behavioral health care (7–10). Among working adults age 18–64 years, this translates into measurably higher medical utilization and expenditures, as well as disability and impaired work productivity estimated to total more than \$210 billion annually for major depressive disorder alone (11). Among older adults, such as Medicare beneficiaries aged 65 and older, those with depression have almost double the health care costs compared to those without depression (12). These higher medical costs are primarily driven by the cost of treating associated medical comorbidities and not by mental health care costs (11, 12), suggesting there is an opportunity to drive down total health care costs by treating behavioral health conditions.

Over the past decade, telebehavioral health care has gained recognition as a solution to enhance access to quality behavioral health care in the U.S. The aim of this report is to describe

the multidimensional value of telebehavioral health care. In this report, telebehavioral health care is defined as evidence-based behavioral health care administered over the telephone or via secure video by a licensed or otherwise qualified practitioner. There are many other technology-enabled behavioral health interventions including computer or internet-based programs, mobile phone applications (apps), and automated telephone services that are not included in this review. Indeed, telebehavioral health care is a broad concept encompassing a heterogeneous collection of treatment modalities, providers, and clinical conditions. The scope of this report has been limited to telebehavioral health care as defined above in order to specifically describe the value of providing evidence-based telebehavioral health care in direct comparison to traditional face-to-face delivery.

### **BEHAVIORAL HEALTH CONDITIONS INCLUDED IN THIS REPORT**

A wide spectrum of behavioral health conditions merit treatment, ranging from mild presentations of depression and anxiety to severe mental illnesses such as schizophrenia or bipolar disorder. Collectively, this is a group too broad to ensure adequate coverage of each and every condition in a single concise report. As such, this review focuses on those behavioral health conditions that are clinically amenable to telehealth care delivery

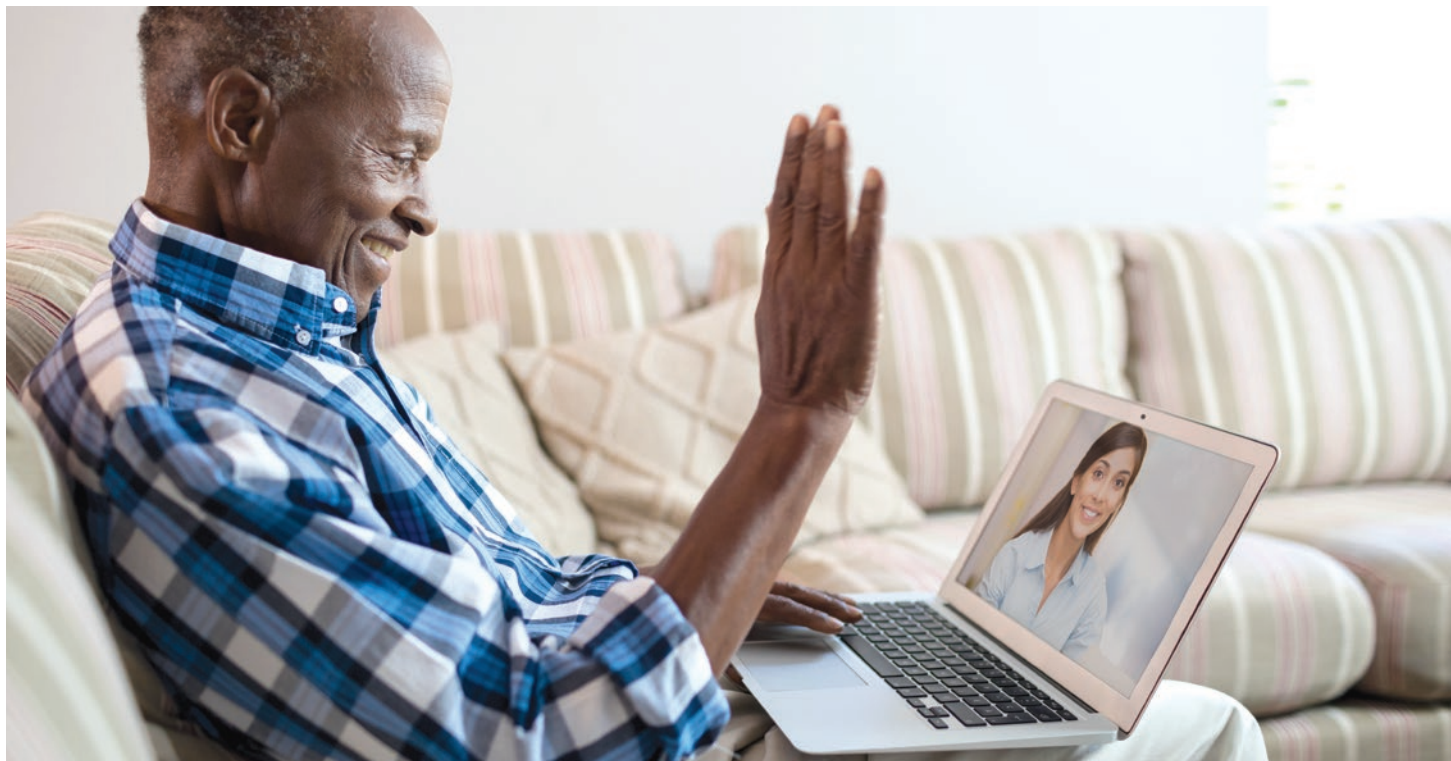
with the evidence summarized herein limited to common conditions formally studied in the context of evidence-based telebehavioral health care.

### **ADDITIONAL SPECIFICATIONS**

The purpose of this report is to describe the value of telehealth delivery of behavioral health care. We recognize that value can be defined differently by different stakeholders, including consumers, providers, payers, policy makers, and others. Therefore, we aim to review varying dimensions of value including, but not limited to, cost-effectiveness, quality of care, and improved access to care.

In order to most directly translate this value for multiple stakeholders, we drew on academic, government, and industry data specifically

collected in the U.S. health care system (with recognition that the value of telebehavioral health care has been demonstrated internationally as well). Additionally, this report will focus solely on telebehavioral health care for adults aged 18 and above. While there is value in telebehavioral health care for individuals under the age of 18 years, the treatment of children and adolescents with telebehavioral health care is more complex and has additional factors that are different from adult treatments and therefore merit a stand-alone report. Finally, quality behavioral health care delivered via telehealth as described in this report should meet the same standards as face-to-face delivery of the same care including that it is evidence-based, safe, effective, person-centered, efficient, and equitable (13–15).



## 02

# CLINICAL EFFICACY OF TELEBEHAVIORAL HEALTH CARE

Evidence-based behavioral health care provided over telephone or secure video has been demonstrated effective and non-inferior to face-to-face care for a variety of common behavioral health conditions among adults of all ages (16–19).

For example, a 2012 randomized controlled clinical trial conducted by Mohr et al. documented clinically significant and similar improvements in depressive symptoms among participants receiving telephone administered cognitive behavioral therapy, versus their counterparts receiving the same intervention face-to-face (27 percent remission at 18-weeks; 16). Most of the research in this area has utilized cognitive behavioral therapy, or other evidence-based psychotherapy approaches, as the intervention (16–25).

Phone or video delivery has been demonstrated efficacious for multiple behavioral health and related conditions, including but not limited to:

- Major depressive disorder (16, 17)
- Generalized anxiety disorder (18)
- Posttraumatic stress disorder (22, 23)

Randomized controlled trials of telebehavioral health care interventions have documented clinically meaningful improvements in depressive symptoms (e.g. depressive symptom response)

and anxiety symptoms (e.g. clinically reduced anxiety symptoms and worry) (16–18). When telebehavioral health interventions are utilized in populations with medical comorbidities (e.g., cardiovascular disease, HIV/AIDS, or multiple sclerosis), clinical benefit has also been demonstrated for additional outcomes including medication adherence and quality of life (26–30).

Telebehavioral health care also offers great potential to enhance treatment and recovery for individuals with SUDs (31–37). Several studies of telebehavioral health care for addiction, as well of the treatment of mental health conditions among individuals with SUDs, have found no statistically significant difference in the treatment results or patient satisfaction with care provided in person versus by telephone or video (32–35). Examples of treatment settings where utility of teledelivery of care for SUDs has been apparent include outpatient follow-up and medication assisted therapy (34, 36, 37).

03

# COST-EFFECTIVENESS OF TELEBEHAVIORAL HEALTH CARE

Telehealth is increasingly viewed as a cost-effective modality for the delivery of care across multiple clinical condition areas. For behavioral health care, remote delivery of easily accessible treatment options may avoid higher cost urgent or emergent mental health care services and also avoid unnecessary medical utilization by addressing behavioral health in individuals with comorbid medical conditions. Moreover, multiple studies have demonstrated the impact of depression on impaired work productivity, and treatment of depression may reduce cost attributable to lost productivity. As with other chronic conditions, early identification and treatment of behavioral health issues can prevent higher cost, severe, and debilitating manifestations of mental illness in the future.

## TELEBEHAVIORAL HEALTH CARE AND HEALTH CARE COSTS

Assessment of the impact of telehealth on health care costs should include both the cost of telehealth services themselves and the impact on reducing avoidable and incremental expenditures arising from unaddressed behavioral and medical health issues. Telebehavioral health care need not cost more than on-site services (38, 39). As one example, a recent study among U.S. Veterans with depression treated via telehealth demonstrated that the trajectory of health care costs was not significantly different versus in-person delivery (39). In fact, an original goal of telehealth was to offer easy-to-access and lower cost alternatives to higher cost care environments (such as in an emergency department).

When the focus is on future cost avoidance, greater access and greater utilization of high value clinical behavioral health services—whether in person or via telehealth—has the potential to significantly reduce medical expenditures. The opportunity for telebehavioral health programs to save money for the health care system has been most evident for individuals with medical and psychiatric

comorbidities (24). For example, telebehavioral health for individuals with comorbid behavioral health and/or chronic health conditions has been shown to reduce medical and psychiatric hospitalizations by as much as 25–30 percent and promote overall medical cost savings (22, 29, 40). In the collaborative care setting, inclusion of telebehavioral health providers has been shown to be cost-effective for primary care and post-operative care as well (41, 42).

## TELEBEHAVIORAL HEALTH CARE AND WORKPLACE COSTS

Working adults comprise another consumer group where telebehavioral health care yields a cost benefit (43, 44). In an intervention described by Wang et al that included telephone-delivered coaching, care coordination, and cognitive behavioral therapy for employed individuals with depression resulted in reduced depression symptoms, higher job retention, and more hours worked at six months to one year (43). And a telebehavioral health care intervention for adults with depression and decreased work productivity developed by Lerner et al improved

Telebehavioral health for individuals with comorbid behavioral health and/or chronic health conditions has been shown to reduce medical and psychiatric hospitalizations by as much as 25–30 percent and promote overall medical cost savings.

Collaborative care-based telebehavioral therapy for coronary artery bypass surgery recipients with depression has been shown to improve quality of care and to be cost effective compared to physician care as usual.

depressive symptoms, at-work productivity loss, and absences compared to usual care, estimated to translate into thousands of dollars saved annually per employee (44, 45).

#### **TELEBEHAVIORAL HEALTH CARE AND FUTURE BEHAVIORAL HEALTH RISK**

Earlier intervention via telebehavioral health care has potential to impact prevention of severe and debilitating mental illness. Prevention of major depressive disorder in older adults is projected to reduce the risk of excess mortality after acute

medical events, support maintenance of health-related quality of life, and lower risk of disability (46). It is expected that by treating mild behavioral health conditions early, the risk of developing full clinical psychiatric disorders that are less reversible is lowered; ultimately all of these benefits may be cost-effective and impactful if they can be achieved at scale (46). Telehealth delivery provides a viable mechanism to reach more individuals in need of treatment earlier in the disease life course.





04

# IMPROVING ACCESS TO BEHAVIORAL HEALTH CARE THROUGH TELEHEALTH

Millions of U.S. adults suffer from mental illness, yet nearly one half remain undiagnosed and untreated. Though multiple challenges contribute to these statistics, insufficient access to quality behavioral health care is a major factor. Telehealth is poised to increase access to behavioral health care for those in need of treatment by overcoming limitations due to geography, stigma, system level challenges, and other factors.

## TELEBEHAVIORAL HEALTH CARE OVERCOMES GEOGRAPHICAL CHALLENGES

Individuals with behavioral health disorders in rural areas are about half as likely as those in urban or suburban areas to receive behavioral health treatment; and when they do receive treatment, it is less likely to be delivered by a licensed mental health professional (47). Rural counties of the U.S. are more than twice as likely to have no behavioral health providers than metropolitan counties, resulting in the need to travel long distances to access health care services (48, 49). And in the U.S., lowest income communities are less likely to have any office-based practices for mental health specialists (physicians and non-physicians) versus higher income communities (50). Telebehavioral health care can increase

access to treatment by making providers that reside in distant geographic locations available to individuals in need. For example, designated facilities where individuals can securely videoconference with a provider have been demonstrated effective to improve access to behavioral health care in sustainable fashion over a two-year period (38, 51). Moreover, the provision of telebehavioral health care in an individual's own home or convenient location of one's choosing (e.g., at work) may improve access further by avoiding the costs and time associated with travel to a facility. These opportunities are also relevant in more suburban settings where transportation or traffic to reach providers may sometimes prove challenging, or the ability to take time off from work to seek care may prove a limitation.

## TELEBEHAVIORAL HEALTH CARE SOLVES FOR INDIVIDUAL-LEVEL CHALLENGES

Telebehavioral health care also holds promise to overcome many of the myriad reasons that keep individuals from seeking behavioral health care including personal challenges (e.g. related to one's own thoughts, perceptions, or emotions) and external challenges (e.g. related to day-to-day activities). Stigma remains a powerful barrier to seeking mental health treatment due to stereotypes and prejudice, concerns about discrimination in the workplace, and fear regarding privacy concerns, collectively leading to treatment avoidance (52–54). Telebehavioral health care can solve for concerns related to stigma and privacy by bringing behavioral health care to a private environment (55).

Adults with self-perceived need for treatment frequently cite financial concerns as obstacles to seeking treatment (4). Telebehavioral health care has potential to alleviate a portion of consumer costs associated with treatment, in particular transportation costs (if treatment is provided at home) and the costs associated with missed work hours or child care. Additionally, increasing awareness about the coverage for evidence-based telebehavioral health care services provided by health insurance companies may increase utilization among individuals in need of care.

Perceived and real lack of available treatment is another common barrier to seeking behavioral health care that could be ameliorated through increased penetration of evidence-based telebehavioral health care options (4). Increased awareness about availability of evidence-based telebehavioral health care services may boost utilization among individuals who recognize the need for care, but have not sought it out due to perceived lack of availability. Mental health literacy also plays a role. Provision of information or education about behavioral health conditions, symptoms, and telebehavioral health care treatment options could open the eyes of many individuals in need and increase treatment seeking (2).

Convenience/transportation concerns can impact the busy working professional as well as the homebound individual. Homebound adults may experience limited access to evidence-based therapy due to inability to travel or lack of transportation, that may be effectively overcome through telebehavioral health care (55, 56). In addition, individuals juggling multiple responsibilities such as jobs and caregiving may be confronted with the challenges with finding appointments during a time that they are free, or giving the time to commute to and from a behavioral health visit. Telebehavioral health care solutions can address these challenges, especially treatment options that are provided in the individual's own home (57).

Telebehavioral health care can solve for individuals' concerns about stigma by bringing care into a private environment.

**TELEBEHAVIORAL HEALTH CARE SOLVES FOR SYSTEM-LEVEL CHALLENGES**

There are several health care system-level access challenges including qualified provider shortages and non-participation in health plan networks among available providers (49). A psychiatrist shortage has been identified by the Association of American Medical Colleges and projected to

worsen by 2025 (58, 59). Additionally, the number of psychologists has remained stable and not growing with the need (60). As many as two out of three primary care physicians cannot access psychiatry referrals for their clients in need (61). Telebehavioral health care can address these challenges by further increasing the reach of available qualified providers to more individuals.

Telebehavioral Health Care Overcomes Challenges to Accessing Traditional Face-to-Face Behavioral Health Care

TRADITIONAL CHALLENGES	TELEBEHAVIORAL HEALTH CARE SOLUTIONS
Stigma	
Privacy concerns	<ul style="list-style-type: none"> <li>· In-home appointments</li> </ul>
Long travel distance to provider	<ul style="list-style-type: none"> <li>· Lower transportation or childcare costs</li> </ul>
National provider shortage	<ul style="list-style-type: none"> <li>· Access to providers state-wide</li> </ul>
Low mental health literacy	<ul style="list-style-type: none"> <li>· Evening, weekend, and lunch-hour appointments</li> </ul>
Low in-network appointment availability	<ul style="list-style-type: none"> <li>· HIPAA compliant</li> </ul>
Financial constraints	<ul style="list-style-type: none"> <li>· Proactive education and outreach</li> </ul>
Time limits	<ul style="list-style-type: none"> <li>· Collaborative care integration</li> </ul>
Physical health limitations	<ul style="list-style-type: none"> <li>· Care coordination</li> </ul>
Lack of transportation	<ul style="list-style-type: none"> <li>· Covered by health plan</li> <li>· Reduced work time missed</li> </ul>

Source: AbleTo

05

# TELEBEHAVIORAL HEALTH AS AN OPPORTUNITY TO ENHANCE QUALITY OF CARE

There are several factors associated with quality of telebehavioral health care services that are important to mention including cybersecurity and adherence to evidence-based standards of care.

As telehealth has become mainstream practice, the need for specific telehealth quality guidelines has been recognized by accreditation organizations such as URAC and ClearHealth Quality Institute (CHQI). URAC recently released the first independent, third-party national telehealth accreditation (62); while not specific to behavioral health, the accreditation highlights that telehealth offers a unique opportunity for trained providers to administer standardized evidence-based treatment; engage in evidence-based practices; monitor, measure, and report on established performance indicators; ensure safety and privacy; and more (62). Similarly, CHQI in collaboration with the American Telemedicine Association recently drafted their first telehealth accreditation standards to help ensure that organizations providing telehealth services follow quality-based standards (63).

There are specific examples of how telehealth providers can ensure that the highest quality of care is provided. One is in considering the role that **technology** can play in standardizing telebehavioral health care delivery. While a telehealth platform in and of itself only serves to connect client and provider, technology has the unique potential to ensure quality and consistency in the delivery of behavioral health care. The use of electronic clinical records, for example, can facilitate standardized **evidence-based assessment** and follow-up through measurement of quality metrics, including documentation of adherence to behavioral therapy, symptom scores, self-management behaviors, and medication adherence and side effects where applicable (62). Protocols can be embedded within technology platforms to promote and ensure fidelity to evidence-based care in “real world” settings by establishing a defined intervention and trackable outcomes (64).

## Consumer satisfaction is a fundamental determinant of health care quality.

Technology can also open channels for collaboration and integration of care allowing behavioral health providers to “plug in” with a medical provider. Examples of such settings where the utilization of telebehavioral health care is being evaluated as part of these integrated care models are among Veterans, primary care, and chronically ill populations for the treatment of depression, chronic pain, and other common behavioral health conditions (25, 51). In 2010, the Veterans Health Administration established a National Telemental Health Center; in 2013 alone the Center provided over 2,800 video encounters at 53 sites in 24 states (65). Care coordination among behavioral health providers, primary care providers, and other members of the care team is also facilitated by telehealth approaches, in particular those with technology-enabled platforms

that support individual consent for information sharing and Health Insurance Portability and Accountability Act (HIPAA) compliant secure communication.

Finally, consumer satisfaction is a fundamental determinant of health care quality. The value of telebehavioral health care as an acceptable solution to individuals has been demonstrated by recent data, including high satisfaction scores and lower attrition rates among individuals who have engaged in telehealth delivered behavioral therapy versus face-to-face delivery (16, 20, 64). For example, telebehavioral health studies that have evaluated satisfaction using the client satisfaction scale have consistently shown very high satisfaction scores (20, 66, 67).



06

# LEGISLATION, REGULATIONS, AND TELEBEHAVIORAL HEALTH CARE

Consumers, providers, employers, payers, regulators, and legislators have increasingly recognized the value of telehealth as a delivery modality with specific applications for behavioral health, and are supporting payment models to promote telehealth. Medicare regulations have traditionally been narrow in scope, supporting payment for telehealth only when furnished by an eligible practitioner; delivered or received in an “originating site,” defined as certain hospitals, clinics, or health centers; and provided in a rural area or other designated area.

However, on February 9, 2018, President Trump signed the Bipartisan Budget Act of 2018 into law. Included in this law was the Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act which seeks to expand access to telehealth services within several Medicare programs, the End Stage Renal Disease Program, select accountable care organizations, and for individuals with stroke (68, 69); further efforts will be needed to expand coverage more broadly. Another bill that has been introduced in the House and the Senate is the CONNECT for Health Act, which would increase the use of telehealth and eliminate many of the barriers to its accessibility (70). Specifically, it would expand telebehavioral health care by allowing the Secretary of Health and Human Services to lift current Medicare restrictions for some mental health services. Also, the Increasing Telehealth Access in Medicare Act passed a key House of Representatives committee and would allow telehealth services to be included as a basic benefit for Medicare Advantage recipients, rather than a supplemental service (71). Additionally, the Medicare Telehealth Parity Act of 2017 includes proposals to expand the types of practitioners who can provide telehealth services, expand services offered in certain geographic locations including Metropolitan Statistical Areas, and add homes as a covered originating telehealth site (72).

Licensure of providers for telehealth has also proven a challenge and opportunity. Traditional in-person care delivery requires the provider to be licensed in the state in which they are providing care with extension of similar regulations even if the care is by telephone or secure video. Loosening of licensure regulation would enable providers to deliver care across state lines optimizing the availability and reach of telehealth services. This barrier is being addressed though interstate collaborations such as the Psychology Interjurisdictional Compact (PsyPACT) to facilitate tele-psychology practice across jurisdictional boundaries (73). Similar legislation has recently passed for nurses to practice telehealth in multiple states under one license, and the House Committee on Veterans' Affairs (VA) has proposed legislation to remove restrictions on the ability of VA providers to practice telehealth across state lines (74, 75). Changes to the Ryan Haight Online Pharmacy Consumer Protection Act which took effect in 2009, are also under consideration. The Ryan Haight Act does not allow physicians to use telemedicine to prescribe controlled substances without first having an in-person exam (76). Taken together, while regulatory barriers persist, recent legislation is moving toward increasing access and simplifying availability of telebehavioral health care.

Taken together, while regulatory barriers persist, recent legislation is moving toward increasing access and simplifying availability of telebehavioral health care.

## 07

# CONCLUSION AND NEXT STEPS

High quality behavioral health care leads to the best mental and physical health outcomes; however, access to high quality and easily available behavioral health care is a necessary prerequisite. More than 50% of diagnosed behavioral health conditions, including mental health and substance use disorders, go untreated.





ABHW supports the use of telebehavioral health care where appropriate and advocates for the lifting of barriers that prevent its implementation and use.

Over the past decade, telebehavioral health care has gained recognition as a solution to enhance access to quality behavioral health care in the U.S. To underscore the value of working to overcome the challenges to telebehavioral health care implementation that remain, this report described what is known about the clinical efficacy and cost-effectiveness of telebehavioral health care, and how telebehavioral health care can improve access to high quality evidence-based care:

- **Clinical efficacy:** Telephone or video delivery of evidence-based therapy has been demonstrated effective for several behavioral health conditions including major depressive disorder, generalized anxiety disorder, and post-traumatic stress disorder.
- **Cost-effectiveness:** Telebehavioral health care can be comparable in cost to traditional face-to-face delivery of care and may result in cost savings attributable to reduced transportation costs, decreased work productivity impairment, avoided unnecessary medical utilization, and early identification and prevention of high-cost severe manifestations of untreated behavioral health conditions.
- **Access to care:** Telebehavioral health care has the potential to increase access to behavioral health care for those in need of treatment by overcoming challenges to care seeking and adherence related to geography, stigma, time constraints, physical health limits, transportation costs, privacy concerns, and provider shortages.

Federal policies related to telebehavioral health care remain narrow in scope to date, limiting implementation in places and populations where care is needed. Ongoing efforts by regulators and legislators to adapt federal legislation continue to extend the reach of telebehavioral health care to populations that require behavioral health treatment.

## References

1. Any Mental Illness among U.S. Adults. National Institute of Mental Health. Retrieved from: <https://www.nimh.nih.gov/health/statistics/prevalence/any-mental-illness-ami-among-us-adults.shtml>. Accessed January 31, 2018.
2. Kazdin AE. Addressing the treatment gap: A key challenge for extending evidence-based psychosocial interventions. *Behav Res Ther.* 2017;88:7-18.
3. Park-Lee E, Lipari RN, Hedden SL, Copello AP, Kroutil LA. Receipt of services for substance use and mental health issues among adults: Results from the 2015 National Survey on Drug Use and Health. NSDUH Data Review. September 2016. Retrieved from: <https://www.samhsa.gov/data/sites/default/files/NSDUH-ServiceUseAdult-2015/NSDUH-ServiceUseAdult-2015/NSDUH-ServiceUseAdult-2015.htm>. Accessed January 31, 2018.
4. Mojtabai R, Olfson M, Sampson NA, Jin R, Druss B, Wang PS, Wells KB, Pincus HA, Kessler RC. Barriers to mental Health treatment: Results from the National Comorbidity Survey Replication (NCS-R). *Psychol Med.* 2011;41:1751-1761.
5. Rowan K, McAlpine DD, Blewett LA. Access and cost barriers to mental health care, by insurance status, 1999 – 2010. *Health Aff.* 2013;32:1723–1730.
6. Goldman LS, Nielsen NH, Champion HC, and for the Council on Scientific Affairs, American Medical Association. Awareness, diagnosis, and treatment of depression. *J Gen Intern Med.* 1999;14:569-580.
7. J. Katon W. Epidemiology and treatment of depression in patients with chronic medical illness. *Dialogues Clin Neurosci.* 2011;13:7-23.
8. Whooley MA. Depression and cardiovascular disease: Healing the broken-hearted. *JAMA.* 2006;295:2874-2881.
9. Bair MJ, Robinson RL, Katon W, Kroenke K. Depression and pain comorbidity. A literature review. *Arch Intern Med.* 2003;163:2433–2445.
10. Katon W. Clinical and health services relationships between major depression, depressive symptoms, and general medical illness. *Biol Psychiatry.* 2003; 54:216-226.
11. Greenberg PE, Fournier AA, Sisitsky T, Pike CT, Kessler RC. The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *J Clin Psychiatry.* 2015;76:155-162.
12. Unützer J, Schoenbaum M, Katon WJ, Fan MY, Pincus HA, Hogan D, Taylor J. Health care costs associated with depression in medically ill fee-for-service Medicare participants. *J Am Geriatr Soc.* 2009;57:506-510.
13. The Six Domains of Health Care Quality. Agency for Healthcare Research and Quality. Retrieved from: <https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/sixdomains.html>. Accessed January 31, 2018.
14. Joint Task Force for the Development of Telepsychology Guidelines for Psychologists. Guidelines for the practice of telepsychology. *Am Psychol.* 2013;68:791-800.
15. Standards for Technology in Social Work Practice. National Association of Social Workers; Association of Social Work Boards; Council on Social Work Education; Clinical Social Work Association. 2017. Retrieved from: <https://www.socialworkers.org/Practice/Practice-Standards-Guidelines>. Accessed January 31, 2018.
16. Mohr DC, Ho J, Duffecy J, Reifler D, Sokol L, Burns MN, Jin L, Siddique J. Effect of telephone-administered vs face-to-face cognitive behavioral therapy on adherence to therapy and depression outcomes among primary care patients: a randomized trial. *JAMA.* 2012;307:2278-2285.
17. Egede LE, Acierno R, Knapp RG, Lejuez C, Hernandez-Tejada M, Payne EH, Frueh BC. Psychotherapy for depression in older veterans via telemedicine: a randomized, open-label, non-inferiority trial. *Lancet Psychiatry.* 2015;2:693-701.
18. Brenes GA, Danhauer SC, Lyles MF, Anderson A, Miller ME. Long-term effects of telephone-delivered psychotherapy for late-life GAD. *Am J Geriatr Psychiatry.* 2017;25:1249-1257.
19. Bashshur RL, Shannon GW, Bashshur N, Yellowlees PM. The empirical evidence for telemedicine interventions in mental disorders. *Telemed J E Health.* 2016;22:87-113.

20. Brenes GA, Ingram CW, Danhauer SC. Benefits and challenges of conducting psychotherapy by telephone. *Prof Psychol Res Pr.* 2011;42:543-549.
21. Bee PE, Bower P, Lovell K, Gilbody S, Richards D, Gask L, Roach P. Psychotherapy mediated by remote communication technologies: a meta-analytic review. *BMC Psychiatry.* 2008;8:60.
22. Painter JT, Fortney JC, Austen MA, Pyne JM. Cost-effectiveness of telemedicine-based collaborative care for posttraumatic stress disorder. *Psychiatric Serv.* 2017;68:1157-1163.
23. Fortney JC, Pyne JM, Kimbrell TA, Hudson TJ, Robinson DE, Schneider R, Moore WM, Custer PJ, Grubbs KM, Schnurr PP. Telemedicine-based collaborative care for posttraumatic stress disorder: a randomized clinical trial. *JAMA Psychiatry.* 2015;72:58-67.
24. Simon GE, Ludman EJ, Tutty S, Operskalski B, Von Korff M. Telephone psychotherapy and telephone care management for primary care patients starting antidepressant treatment. A randomized controlled trial. *JAMA.* 2004;292:935-942.
25. Aburizik A, Dindo L, Kaboli P, Charlton M, Dawn K, Turvey C. A pilot randomized controlled trial of a depression and disease management program delivered by phone. *J Affect Disord.* 2013; 151:769-774.
26. Himelhoch S, Medoff D, Maxfield J, Dihmes S, Dixon L, Robinson C, Potts W, Mohr DC. Telephone based cognitive behavioral therapy targeting major depression among urban dwelling, low income people living with HIV/AIDS: results of a randomized controlled trial. *AIDS Behav.* 2013;17:2756-2764.
27. Mohr DC, Likosky W, Bertagnolli A, Goodkin DE, Van Der Wende J, Dwyer P, Dick LP. Telephone-administered cognitive-behavioral therapy for the treatment of depressive symptoms in multiple sclerosis. *J Consult Clin Psychol.* 2000;68:356-361.
28. Cosio D, Jin L, Siddique J, Mohr DC. The effect of telephone-administered cognitive-behavioral therapy on quality of life among patients with multiple sclerosis. *Ann Behav Med.* 2011;41:227-234.
29. Godleski L, Darkins A, Peters J. Outcomes of 98,609 US Department of Veterans Affairs patients enrolled in telemental health services, 2006–2010. *Psychiatric Serv.* 2010;63:383–385.
30. Muller I, Yardley L. Telephone-delivered cognitive behavioural therapy: a systematic review and meta-analysis. *J Telemed Telecare* 2011;17:177-184.
31. Molfenter T, Boyle M, Holloway D, Zwick J. Trends in telemedicine use in addiction treatment. *Addiction Science and Clinical Practice.* 2015;10:14.
32. Farabee D, Cousins SJ, Brecht M-L, Antonini VP, Lee AB, Brummer J, Hemberg J, Karno M, Rawson RA. A comparison of four telephone-based counseling styles for recovering stimulant users. *Psychol Addict Behav.* 2013;27:223–229.
33. King VL, Stoller KB, Kidorf M, Kindbom K, Hursh S, Brady T, Brooner RK. Assessing the effectiveness of an internet-based videoconferencing platform for delivering intensified substance abuse counseling. *J Subst Abuse Treat.* 2009;36:331–338.
34. Zheng W, Nickasch M, Lander L, Wen S, Xiao M, Mashalek P, Dix E, Sullivan C. Treatment outcome comparison between telepsychiatry and face-to-face buprenorphine medication-assisted treatment for opioid use disorder: A 2-year retrospective data analysis. *J Addict Med.* 2017;11:138-144.
35. Kalapatapu RK, Ho J, Cai X, Vinogradov S, Batki SL, Mohr DC. Cognitive-behavioral therapy in depressed primary care patients with co-occurring problematic alcohol use: effect of telephone-administered vs. face-to-face treatment – A secondary analysis. *J Psychoactive Drugs.* 2014;46:85-92.
36. Shepard DS, Daley MC, Neuman MJ, Blaakman AP, McKay JR. Telephone-based continuing care counseling in substance abuse treatment: economic analysis of a randomized trial. *Drug and alcohol dependence.* 2016;159:109-116.
37. McKay JR, Van Horn D, Oslin D, Ivey M, Drapkin M, Coviello D, Yu Q, Lynch KG. Extended telephone-based continuing care for alcohol dependence: 24 month outcomes and subgroup analyses. *Addiction.* 2011;106:1760-1769.
38. Neufeld J, Case R. Walk-in telemental health clinics improve access and efficiency: A 2-year follow-up analysis. *Telemed J E Health.* 2013;19:938-941.
39. Egede LE, Gebregziabher M, Walker RJ, Payne EH, Acierno R, Frueh BC. Trajectory of cost overtime after psychotherapy for depression in older veterans via telemedicine. *J Affect Disord.* 2017; 207:157-162.
40. Pande RL, Morris M, Peters A, Spettell CM, Feifer R, Gillis W. Leveraging remote behavioral health interventions to improve medical outcomes and reduce costs. *Am J Manag Care.* 2015;21:e141-e151.

41. Pyne JM, Fortney JC, Mouden S, Lu L, Hudson TJ, Mittal D. Cost-effectiveness of on-site versus off-site collaborative care for depression in rural FQHCs. *Psychiatr Serv.* 2015;66:491-499.
42. Donohue JM, Belnap BH, Men A, He F, Roberts MS, Schulberg HC, Reynolds CF 3rd, Rollman BL. Twelve-month cost-effectiveness of telephone-delivered collaborative care for treating depression following CABG surgery: a randomized controlled trial. *Gen Hosp Psychiatry.* 2014;36:453-459.
43. Wang PS, Simon GE, Avorn J, Azocar F, Ludman EJ, McCulloch J, Petukhova MZ, Kessler RC. Telephone screening, outreach, and care management for depressed workers and impact on clinical and work productivity outcomes: a randomized controlled trial. *JAMA.* 2007;298:1401-1411.
44. Lerner D, Adler DA, Rogers WH, et al. A randomized clinical trial of a telephone depression intervention to reduce employee presenteeism and absenteeism. *Psychiatr Serv.* 2015;66:570-577.
45. Lerner D, Adler D, Hermann RC, Chang H, Ludman EJ, Greenhill A, Perch K, McPeck WC, Rogers WH. Impact of a work-focused intervention on the productivity and symptoms of employees with depression. *J Occup Environ Med.* 2012;54:128-135.
46. Reynolds CF 3rd, Cuijpers P, Cohen A, Dias A, Chowdhary N, Okereke OI, Dew MA, Anderson SJ, Mazumdar S, Lotrich F, Albert SM. Early intervention to reduce the global health and economic burden of major depression in older adults. *Annu Rev of Public Health.* 2012;33:123-135.
47. Wang PS, Lane M, Olfson M, Pincus HA, Wells KB, Kessler RC. Twelve-month use of mental health services in the United States. Results from the National Comorbidity Survey Replication. *Arch Gen Psychiatry.* 2005;62:629-640.
48. Rural Health Information Hum. Healthcare Access in Rural Communities. Retrieved from: <https://www.ruralhealthinfo.org/topics/healthcare-access>. Accessed January 31, 2018.
49. The Doctor is Out. Continuing Disparities in Access to Mental and Physical Health Care. National Alliance on Mental Illness. Retrieved from: <https://www.nami.org/About-NAMI/Publications-Reports/Public-Policy-Reports/The-Doctor-is-Out/>. Accessed March 29, 2018.
50. Cummings JR, Allen L, Clennon J, Ji H, Druss BG. Geographic access to specialty mental health care across high- and low-income US communities. *JAMA Psychiatry.* 2017;74:476-484.
51. Lindsay JA, Kauth MR, Hudson S, Martin LA, Ramsey DJ, Daily L, Rader J. Implementation of video telehealth to improve access to evidence-based psychotherapy for posttraumatic stress disorder. *Telemed J E Health.* 2015;21:467-472.
52. Corrigan PW, Druss BG, Perlick DA. The impact of mental illness stigma on seeking and participating in mental health care. *Psychol Sci Public Interest.* 2014;15:37-70.
53. Substance Abuse and Mental Health Services Administration. (2016). Rural behavioral health: Telehealth challenges and opportunities. In Brief, Volume 9, Issue 2.
54. Bryant K, Greer-Williams N, Willis N, Hartwig M. Barriers to diagnosis and treatment of depression: Voices from a rural African-American faith community. *J Natl Black Nurses Assoc.* 2013;24:31-38.
55. Choi N, Marti N, Bruce M, Hegel M, Wilson N, Kunik M. Six-month post-intervention depression and disability outcomes of in-home telehealth problem-solving therapy for depressed, low-income homebound older adults. *Depress Anxiety.* 2014;31:653-661.
56. Health Research & Educational Trust. (2017, November). Social determinants of health series: Transportation and the role of hospitals. Chicago, IL: Health Research & Educational Trust. Retrieved from: [www.aha.org/transportation](http://www.aha.org/transportation). Accessed January 31, 2018.
57. Pruitt LD, Luxton DD, Shore P. Additional clinical benefits of home-based telemental health treatments. *Professional Psychology. Research and Practice.* 2014;45:340-346.
58. IHS Inc. 2015. The complexities of physician supply and demand: Projections from 2013 to 2025. Prepared for the Association of American Medical Colleges. Washington, DC: Association of American Medical Colleges.
59. Bishop TF, Seirup JK, Pincus HA, and Ross JS. Population of US practicing psychiatrists declined, 2003-13, which may help explain poor access to mental health care. *Health Aff.* 2016; 35:1271-1277.

60. Olfson, M. Building the mental health workforce capacity needed to treat adults with serious mental illnesses. *Health Aff.* 2016;35:983-990.
61. Cunningham PJ. Beyond Parity: Primary care physicians' perspectives on access to mental health care. *Health Aff.* 2009;28:w490-w501.
62. Telehealth Accreditation. URAC. Retrieved from: <https://www.urac.org/accreditation-and-measurement/accreditation-programs/all-programs/telehealth/>. Accessed January 31, 2018.
63. ClearHealth Quality Institute. Welcome to the ClearHealth Quality Institute (CHQI) Telemedicine Accreditation Program. Retrieved from: <https://chqi.com/programs-and-services/telemedicine/>. Accessed January 31, 2018.
64. Dent L, Peters A, Kerr P, Mochari-Greenberger H, Pande RL. Using telehealth to implement cognitive-behavioral therapy. *Psychiatr Serv.* [ePub Ahead of Print March 2018].
65. Darkins A. Telehealth Services in the United States Department of Veterans Affairs (VA), *Veterans Health Admin.* (2014). Retrieved from: <http://c.ymcdn.com/sites/www.hisa.org.au/resource/resmgr/telehealth2014/adam-darkins.pdf>. Accessed January 31, 2018.
66. Brenes GA, Miller ME, Williamson JD, McCall WV, Knudson M, Stanley MA. A randomized controlled trial of telephone-delivered cognitive-behavioral therapy for late-life anxiety disorders. *Am J Geriatr Psychiatry.* 2012;20:707-716.
67. Lovell K, Cox D, Haddock G, et al. Telephone administered cognitive behaviour therapy for treatment of obsessive compulsive disorder: randomised controlled non-inferiority trial. *BMJ.* 2006;333:883.
68. Bipartisan Budget Act of 2018 – H.R. 1892. Retrieved from: <https://www.congress.gov/bill/115th-congress/house-bill/1892/text?q=%7B%22search%22%3A%5B%22bipartisan+budget+act+of+2018%22%5D%7D&r=1>. Accessed March 29, 2018.
69. Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act of 2017. S870 – 115th Congress (2017-2018). Retrieved from: <https://www.congress.gov/bill/115th-congress/senate-bill/870>. Accessed January 31, 2018.
70. Connect for Health Act of 2017 – H.R. 2556. Retrieved from: <https://www.congress.gov/bill/115th-congress/house-bill/2556?q=%7B%22search%22%3A%5B%22%5C%22connect+for+health+act%5C%22%22%5D%7D&r=2>. Accessed January 31, 2018.
71. Increasing Telehealth Access in Medicare Act (ITAM) – H.R. 3727. Retrieved from: <https://www.congress.gov/bill/115th-congress/house-bill/3727/titles?q=%7B%22search%22%3A%5B%22Increasing+Telehealth+Access+in+Medicare+Act%22%5D%7D&r=1>. Accessed January 31, 2018.
72. Medicare Telehealth Parity Act of 2017 – H.R. 2550. Retrieved from: <https://www.congress.gov/bill/115th-congress/house-bill/2550/text>. Accessed January 31, 2018.
73. Center for Connected Health Policy. The National Telehealth Policy Resource Center. Psychology Interjurisdictional Compact (PsyPACT). Retrieved from: <http://www.cchpca.org/psychology-interjurisdictional-compact-psympact>. Accessed January 31, 2018.
74. Enhanced Nurse Licensure Compact (eNLC) Enactment: A Modern Nurse Licensure Solution for the 21st Century. Website: <https://www.ncsbn.org/11070.htm>. Accessed January 31, 2018.
75. Veterans E-Health and Telemedicine Support Act of 2017 or the VETS Act of 2017. H.R. 2123 – 115th Congress (2017-2018). Retrieved from: <https://www.congress.gov/bill/115th-congress/house-bill/2123>. Accessed January 31, 2018.
76. Ryan Haight Online Pharmacy Consumer Protection Act of 2008 – H.R. 6353. Retrieved from: <https://www.congress.gov/bill/110th-congress/house-bill/6353>. Accessed March 29, 2018.

## ABHW & AbleTo

This report is the result of a collaboration between AbleTo, Inc. and Association for Behavioral Health and Wellness (ABHW), created out of a mutual passion for increased access to high quality, evidence-based behavioral health care and the desire to realize positive health outcomes by addressing behavioral health. This manuscript describes the great potential of telebehavioral health care to address and solve for many of the challenges that prevent progress on improving population health today. We hope this report informs our broad audience of readers about the multidimensional value of telebehavioral health care to improve cost, access, and quality of care.

### Association for Behavioral Health and Wellness

1325 G Street, NW, Suite 500,  
Washington DC, 20005

### AbleTo Inc.

320 W. 37th Street, 7th floor  
New York, NY 10018

## Authors

### Heidi Greenberger, PhD., MPH

Senior Director of Clinical Research, AbleTo Inc. (Lead author)

### Pamela Greenberg, MPP

President and CEO, ABHW

### Tiffany Huth, MA

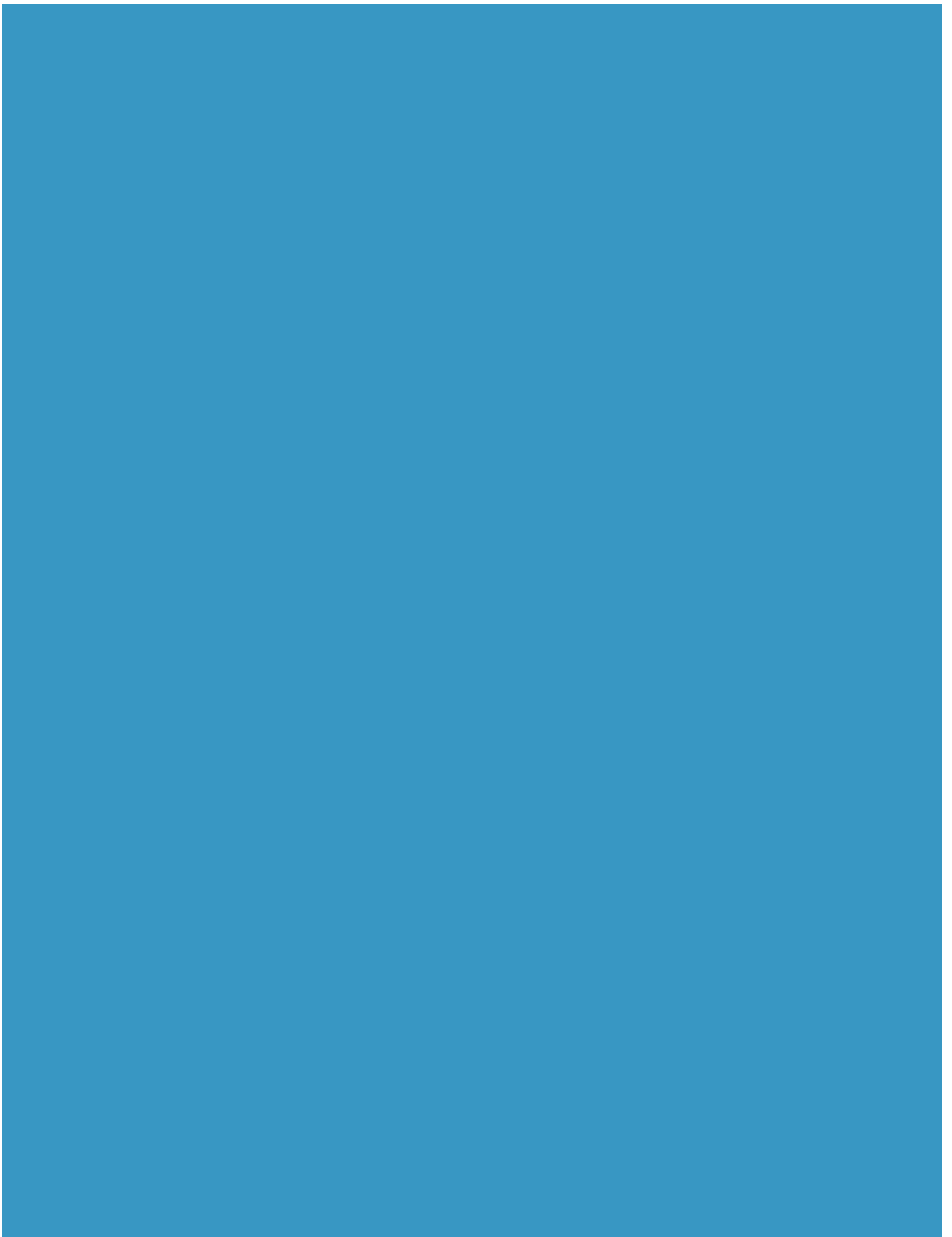
Director of Communications and Public Affairs, ABHW

### Rebecca Murow Klein

Director of Government Affairs, ABHW

### Reena Pande, MD

Chief Medical Officer, AbleTo Inc.



Association for Behavioral Health and Wellness  
1325 G Street, NW, Suite 500, Washington DC 20005  
202.449.7660

**ABHW.ORG**