

## **Evidence-Base Review of Telepsychiatry**

**Prepared by:**

**David Erich Roth, MD FAAP**

**Sofija Zeković-Roth L. Ac., FABORM, DOM**

## Telepsychiatry is a superior way to provide efficient, high-quality and logistically sustainable psychiatric services to students attending Maui County public schools.

- 1 Numerous short and long-term studies have demonstrated that telepsychiatry is equivalent or superior to traditional, face-to-face psychiatric care. These studies evaluated the treatment of adults, children, and adolescents for a variety of psychiatric conditions.<sup>10, 21, 22, 29, 50, 69, 79, 98</sup>
  - a. Outpatient psychiatric evaluations, consultations, and follow-up care delivered by telepsychiatry produce clinical outcomes that are equivalent to those achieved when the services are provided in person.<sup>1, 2, 3, 4, 5, 6, 61, 130</sup>
  - b. Research has shown that diagnoses and treatment outcomes do not differ in depression,<sup>31, 32, 89, 90, 91, 134</sup> cognitive impairment,<sup>33</sup> behavior disorders,<sup>91</sup> cognitive decline,<sup>87</sup> obsessive-compulsive disorder,<sup>34</sup> anxiety disorders,<sup>35, 87, 91</sup> PTSD,<sup>36, 45, 46-49</sup> phobias and panic disorders,<sup>37, 38, 39</sup> autism,<sup>107, 79</sup> schizophrenia,<sup>40</sup> epilepsy,<sup>41-44</sup> Tourette's syndrome,<sup>82</sup> psychosis,<sup>87</sup> bulimia nervosa,<sup>50, 51</sup> opioid dependence,<sup>52</sup> alcohol abuse,<sup>53, 54</sup> abuse victims,<sup>70-75</sup> ADHD,<sup>8, 21, 83, 136</sup> and dementia.<sup>103-106</sup>
  - c. **Can improve relapse prevention in Schizophrenia patients<sup>145</sup>**
  - d. **Compared to other medical disciplines, results of diagnostic agreement for mental health problems are on par or better. Only 1 to 2 percent of the patients received a wrong diagnosis when using telepsychiatry.<sup>142</sup>**
  - e. **Agreement for mental health diagnoses can be good to excellent (74-84%) even when just online procedure for collecting information and no direct interview is done. 143**
  - f. Telepsychiatry is a feasible mode of health care delivery in forensic adult and adolescent cases.<sup>57- 68, 76-78, 124</sup> **Telemedicine appears to be on the forefront of healthcare in corrections, with telepsychiatry leading the way. Use of telepsychiatry in several correctional facilities across the United States has led to decreased spending and greater access to psychiatric services for inmates.141**
  - g. Patients living in both rural and urban areas are receptive to telepsychiatry services.<sup>47, 116</sup> Telemedicine has improved access to care, referrals, contact between providers, and has also reduced unnecessary referrals in these settings.<sup>77, 78</sup>
  - h. **In VA system implementation of telepsychiatry programs has resulted in a decrease in patient hospitalization rates of 25%. 140**
- 2 Studies with culturally diverse child, adolescent and adult populations have shown that patient satisfaction equals or exceeds standard care.<sup>1, 8, 9, 11, 12, 14, 16-20, 23, 24, 25, 26, 27, 28, 31, 55, 84, 87, 91, 125, 132</sup>
  - a. Patients feel that they have more choices and control over their care.<sup>30, 54</sup>
  - b. They often prefer telepsychiatry to traditional visits.<sup>11, 41, 62, 80, 88, 113</sup>

- c. Researchers have reported better results when treating three populations via telepsychiatry.
  - i. Children and adolescents with ADHD.<sup>79, 133</sup>
  - ii. Children and adolescents with autism spectrum disorders.<sup>79, 137</sup>
  - iii. It is especially helpful in treatment of abuse victims where the clear physical separation can actually facilitate the formation of a therapeutic alliance.<sup>115, 123</sup>
  - a. **Students are more likely to disclose clinical information via video than in conventional sessions. 139**
  - b. **The new model has provided patients who were previously unable to be treated a sense of freedom, confidence, and understanding of their psychiatric illness 141**
  - c. Physicians, parents and caregivers report a high degree of satisfaction with telepsychiatry.<sup>11, 12, 13, 14, 15, 12, 41, 82, 84, 86, 91, 92, 113, 114, 139</sup>
- 3 Telepsychiatry is more cost-effective and logistically more flexible and adaptable than the old model of care.
  - a. Psychiatrist scheduling and transportation
    - i. It reduces the time needed to bring the psychiatrist to one or more clinical sites, reducing travel time, which can exceed five hours a day when inter-island flights are required.<sup>30</sup>
    - ii. It improves scheduling flexibility and increases access to high-quality specialists who usually do not live in rural or medically underserved areas of Hawaii or other states<sup>131</sup>.
    - iii. It allows the psychiatrist to treat students and consult to school counselors and administrators at more than one school each day.<sup>65, 66, 68, 88, 95, 96, 97, 99, 100, 101</sup>
    - iv. It reduces the need for both students and providers to travel to appointments. The reduced travel and lodging cost improve the economic feasibility and sustainability of delivering these specialized services.<sup>41, 50, 56, 84, 113, 116, 126</sup>
    - v. Providers are happy to spend more time providing clinical services and less time traveling to the clinical sites.
    - vi. Improves access to specialty and family focused care to populations that have limited access to these through conventional care model such as Autisms.<sup>138</sup>
    - vii. **Scarcity of specialists in rural areas is associated with an increase in the overall cost of specialists' services.<sup>132</sup> Services rendered via telepsychiatry are cost-effective.<sup>136, 141</sup> It have been shown to reduce overall cost of care by 10% per patient in addition to increasing their access to this specialized care.<sup>1</sup>**
  - b. Improved access to psychiatrists gives them the opportunity to provide a broader range of clinical services to the students, counselors and administrators including: consultation-liaison, neuropsychological and competency assessments, diagnostic assessments, IEP participation, Treatment Team meetings, CSP development, and crisis interventions.<sup>55, 85, 86</sup>
  - c. Student scheduling and transportation
    - i. It improves appointment attendance.<sup>25, 53, 54, 84</sup>

- ii. It reduces waiting time for appointments.<sup>30, 119, 126</sup>
    - iii. Telepsychiatry decreases interruptions in the students' academic schedules.
    - iv. **Technology has become more affordable in society today versus even a decade ago, the majority of patients are able to connect to their physician by using their own equipment at home. 141**
  - d. Collaboration with schools
    - i. It improves collaboration between psychiatrists, school-based mental health professionals, and teachers.<sup>12, 85, 93, 94, 95, 102, 108, 123, 127, 128</sup>
    - ii. Communication is easier to maintain between the psychiatrist and the student's teachers, counselors, and school administrators.<sup>117</sup>
  - e. Parent or guardian involvement and satisfaction
    - i. Parents often prefer telepsychiatry because they do not have to arrange time away from work, they do not have to inform their employer about their child's treatment, and they do not have to spend as much time traveling to the appointments.<sup>11, 116</sup> These factors reduce the resistance to treatment that is often exacerbated by stigma and logistical complications.<sup>113</sup>
    - ii. Parents often find their inclusion in the treatment sessions to be educational, consultative and therapeutic.<sup>118, 133</sup>
    - iii. **Telehealth improves parent access to training resources for early intervention**<sup>137</sup>
    - iv. **Parent satisfaction with Telepsychiatry consultation model is high.**<sup>136</sup>
  - f. Economics and the efficient provision of care
    - i. Rapid access to psychiatric consultations reduces the need to transfer the student to higher levels of care for crisis evaluation and emergency treatment. This decreases the utilization of emergency department visits, hospital admissions and transfers to acute and residential psychiatric hospital units by up to 50%.<sup>30, 68, 116, 118, 122</sup>
    - ii. The psychiatrists do not have to be transported to the schools. This increases the time available for clinical services. It also saves the expenses of airline, car rental and hotel costs which are barriers to providing consistent high-quality care.<sup>1, 68, 116</sup>
  - g. Telepsychiatry decreases the stigma often associated with psychiatric care. It improves the confidentiality of patient care, which is especially important to patients living in smaller, rural communities.<sup>55, 109-111</sup>
- 4 Telepsychiatry is a well-established and accepted method of practicing psychiatry. Clinical studies have demonstrated its efficacy for 60 years. Local and national organizations have embraced telepsychiatry and are publishing practice parameters and documenting its feasibility.
  - a. The American Academy of Child and Adolescent Psychiatry established Telepsychiatry Practice Parameters in 2008 after an extensive literature review and expert consensus determined that it was equal or superior to the old model.<sup>129</sup>
  - b. Ongoing studies at the University of Hawaii, Hawaii Veterans Administration Hospital, and the Tripler Army Medical Center have demonstrated that

telepsychiatry is an effective method to delivering health care to adults,  
adolescents and children in Hawaii and across the Pacific Rim.<sup>25, 112, 119, 120, 121,</sup>  
130

**Reduces suicide rates among suicide attempters. 144**

**Screening for student athlete concussion remotely 146**

1. O'Reilly R., Bishop J., Maddox K, Hutchinson L, Fisman M, Takha Jr. Is Telepsychiatry Equivalent to Face-to-Face Psychiatry? Results From a Randomized Controlled Equivalence Trial. *Psychiatric Services*. 2007; 58:836–843.
2. Shore JH, Savin D, Orton H, Beals J, Manson SM. Diagnostic reliability of telepsychiatry in American Indian veterans. *American Journal of Psychiatry*. 2007; 164:115-118
3. Cullum CM, Weiner MF, Gehrman HR, Hynan LS. Feasibility of telecognitive assessment in dementia. *Assessment*. 2006; 13:385-390.
4. Hilty, D.M., Weiling, L., Marks, S., & Callahan, E. The effectiveness of telepsychiatry: A review. *Canadian Psychiatric Association Bulletin*. 2003; 35, 10–17.
5. Kennedy C, Yellowlees P. The effectiveness of telepsychiatry measured using the Health of the Nation Outcome Scale and the Mental Health Inventory. *Journal of Telemedicine and Telecare*. 2003; 9:12–16.
6. Zaylor C. Clinical outcomes in telepsychiatry. 1990; 5(suppl 1):S59–S60.
7. Ruskin PE, Reed S, Kumar R, et al. Reliability and acceptability of psychiatric diagnosis via telecommunication and audiovisual technology. *Psychiatric Services*. 1998. 49: 1086–1088.
8. Yellowlees, P, Hilty D, Mark S, Neufeld J, Bourgeois J. A Retrospective Analysis of a Child and Adolescent eMental Health Program. *J. Am. Acad. Child Adolesc. Psychiatry*. 2008; 47(1):103Y107
9. Savin D, Garry MT, Zuccaro P, et al. Telepsychiatry for treating rural American Indian youth. *J Am Acad Child Adolesc Psychiatry*. 2006; 45:484-488.
10. Starling, J., & Foley, S. From pilot to permanent service: Ten years of pediatric telepsychiatry. 2006; 12, S80–S82.
11. Elford R, White H, Bowering R, Ghandi A, Maddigan B, St John K, et al: A randomized, controlled trial of child psychiatric assessments conducted using videoconferencing. *J Telemed Telecare*. 2000; 6(2):73-82.
12. Boydell KM, Volpe T, Kertes A, Greenberg N. A review of the outcomes of the recommendations made during paediatric telepsychiatry consultations. *J Telemed Telecare*. 2007;13(6):277-281
13. Myers KM, Valentine JM, Melzer SM. Feasibility, acceptability, and sustainability of telepsychiatry for children and adolescents. *Psychiatr Serv*. 2007; 58(11):1493-1496.
14. Pesamaa, L., Ebeling, H., Kuusima'ki, M.-L., Winblad, I., Isohanni, M., & Moilanen, I. Videoconferencing in child and adolescent telepsychiatry: A systematic review of the literature. *J Telemed Telecare*. 2004; 10, 187–192.
15. Gelber H. The experience in Victoria with telepsychiatry for the child and adolescent mental health service. *J Telemed Telecare*. 2001; 7:S32YS34.
16. Gelber H, Fahey A. Tele-education: A Collaborative Project in the Delivery of Mental Health Education in Rural Victoria. Royal Children's Hospital Mental Health Service (MHSKY) and Bendigo Health Care Group. Melbourne: Royal Children's Hospital; 2001.
17. Kopel H, Nunn K, Dossetor D. Evaluating satisfaction with a child and adolescent psychological telemedicine outreach service. *J Telemed Telecare*. 2001; 7:35Y40.
18. Gelber H, Alexander M. An evaluation of an Australian videoconferencing project for child and adolescent telepsychiatry. *J Telemed Telecare*. 1999; 5:S21YS23.
19. Blackmon LA, Kaak HO, Ranseen J. Consumer satisfaction with telemedicine child psychiatry consultation in rural Kentucky. *Psychiatr Serv*. 1997; 48:1464Y1466.
20. Huston JL, Burton DC. Patient satisfaction with multispecialty interactive teleconsultations. *J Telemed Telecare*. 1997; 3:205Y208.
21. Neufeld j, Yellowlees P, Hilty D, Cobb H, Burgeois J. The e-Mental Health Consultation Service: Providing Enhanced Primary-Care Mental Health Services Through Telemedicine. *Psychosomatics*. 2007; 48:135–141.
22. Johnston D, Jones BN. Telepsychiatry consultations to a rural nursing facility: a two-year experience. *J Geriatr Psychiatry Neurology*. 2001; 14:72–75.
23. Music D. International telepsychiatry: a study of patient acceptability. *J. Telemed Telecare*. 2008; 14(5):241-3.
24. Urness D, Wass M, Gordon A, Tian E, Bulger T. Client acceptability and quality of life—telepsychiatry compared to in-person consultation. *J Telemed Telecare*. 2006; 12(5):251-254.
25. Morland LA, Pierce K, Wong MY. Telemedicine and coping skills groups for Pacific Island veterans with post-traumatic stress disorder: A pilot study. *J Telemed Telecare*. 2004; 10(5):286-289.
26. Brown-Connolly NE. Patient satisfaction with telemedical access to specialty services in rural California. *J Telemed Telecare*. 2002; 8(suppl 2):7–10
27. Bishop JE, O'Reilly RL, Maddox K, Hutchinson IJ. Client satisfaction in a feasibility study comparing face-to-face interviews with telepsychiatry. *J Telemed Telecare*. 2002; 8(4):217-221.

28. Callahan EJ, Hilty DM, Nesbitt TS. Patient satisfaction with telemedicine consultation in primary care: comparison of ratings of medical and mental health applications. *Telemed J.* 1998; 4:363– 369.
29. Hyler SE, Gangure DP, Batchelder ST. Can telepsychiatry replace in-person psychiatric assessments? A review and meta-hospital. *Behavior Modification.* 2005; 27:458-469.
30. Hilty DM, Marks SL, Urness D, Yellowlees PM, Nesbitt TS. Clinical and educational telepsychiatry applications: a review. *Can J Psychiatry.* 2004; 49(1):12-23.
31. García-Lizana F & Muñoz-Mayorga I. Telemedicine for Depression: A Systematic Review. *Perspectives in Psychiatric Care*, 2010. 46(2).
32. Fortney J, Pyne J, Edlund M, Williams D, Robinson D, Mittal D, et al. A randomized trial of telemedicine-based collaborative care for depression. *Journal of General Internal Medicine.* 2007; 22:1086-1093.
33. Ball CJ, Scott N, McLaren PM, et al. Preliminary evaluation of a low-cost video conferencing (LCVC) system for remote cognitive testing of adult psychiatric patients. *British Journal of Clinical Psychology.* 1993; 32:303–307.
34. Baer L, Cukor P, Jenike MA, Leahy L, O'Laughlin J, Coyle JT. Pilot studies of telemedicine in psychiatric patients with obsessive compulsive disorder. *American Journal of Psychiatry.* 1995; 152:1383-1385.
35. Reger M & Gahm G. A Meta-Analysis of the Effects of Internet- and Computer- Based Cognitive-Behavioral Treatments for Anxiety. *Journal of Clinical Psychology.* 2009; 65(1):53-75.
36. Frueh BC, Monnier J, Yim E, Grubaugh AL, Hamner MB, Knapp RG: A randomized trial of telepsychiatry for post-traumatic stress disorder. *J Telemed Telecare.* 2007; 13(3):142-147.
37. Carlbring, P., Nilsson-Ihrfelt, E., Waara, J., Kollenstam, C., Buhman, M., Kaldo, V., et al. Treatment of panic disorder: Live therapy versus self-help via the internet. *Behavioral Research and Therapy.* 2005; 43(10): 1321–1333.
38. Schneider, A.J., Mataix-Cols, D., Marks, I.M., & Bachofen, M. Internet-guided self help with or without exposure therapy for phobic and panic disorders. *Psychotherapy and Psychosomatics.* 2005; 74(3); 154–164.
39. Bouchard S, Paquin B, Payeur R, Allard M, Rivard V, Fournier T, et al. Delivering cognitive-behavior therapy for panic disorder with agoraphobia in videoconference. *Telemed J E Health.* 2004; 10(1):13-25.
40. Zarate CA Jr, Weinstock L, Cukor P, et al. Applicability of telemedicine for assessing patients with schizophrenia: acceptance and reliability. *Journal of Clinical Psychiatry.* 1997. 58:22–25.
41. Syed Nizamuddin Ahmed, Carly Mann, D. Barry Sinclair, Angela Heino, Blayne Iskiw, Daphne Quigley, and Arto Ohinmaa. Feasibility of epilepsy follow-up care through telemedicine: A pilot study on the patient's perspective. *Epilepsia.* 2008; 49(4):573–585.
42. Rasmusson KA, Hartshorn JC. A Comparison of epilepsy patients in a traditional ambulatory clinic and a telemedicine clinic. *Epilepsia.* 2005; 46:767–770.
43. Ahmed SN, Soderstrom J, Heck K, Quigley D. Is telemedicine a viable option for epilepsy care? *Epilepsia.* 2004; 45(Suppl 7):73–74.
44. Craig J, Patterson V, Russell C, Wooton R. Interactive videoconsultation is a feasible method for neurological in-patient assessment. *European Journal of Neurology.* 2000; 7:699–702.
45. Stojakovic M, Stojakovic B. P03-270 Examination and follow-up war related posttraumatic stress disorder (PTSD) and prolonged posttraumatic stress syndrome (PTSS) by Telepsychiatry service. *European Psychiatry.* 2009; Vol 24, Supplement 1.
46. Hassija C, Gray M. Telehealth-Based Exposure Therapy for Motor Vehicle Accident-Related Posttraumatic Stress Disorder. *Clinical Case Studies.* 2009; 8(1):84-94.
47. Grubaugh A, Cain G, Elhai J, Patrick S, Frueh B.C. Attitudes Toward Medical and Mental Health Care Delivered Via Telehealth Applications Among Rural and Urban Primary Care Patients. *J Nerv Ment Dis.* 2008; 196: 166–170.
48. Shore JH, Manson SM. The American Indian veteran and posttraumatic stress disorder: A telehealth assessment and formulation. *Cultural Medical Psychiatry.* 2004; 28:231– 43.
49. Shore JH, Manson SM. Telepsychiatric care of American Indian veterans with post-traumatic stress disorder: Bridging gaps in geography, organizations, and culture. *Telemed J E-Health.* 2004;10: 64–9.
50. Crow S, Mitchell J, Crosby R, Swanson S, Wonderlich S, Lancaster K. The cost effectiveness of cognitive behavioral therapy for bulimia nervosa delivered via telemedicine versus face-to-face. *Behaviour Research and Therapy.* 2009; 47: 451–453
51. Bakke B, Mitchell J, Wonderlich S, Erickson R. Administering cognitive-behavioral therapy for bulimia nervosa via telemedicine in rural settings. *International Journal of Eating Disorders.* 2001; 30(4): 454-457.
52. Ikelheimer, D. Treatment of Opioid Dependence via Home-Based Telepsychiatry. *Psychiatr Serv.* 2008; 59:1218-a-1219.

53. Swan A, Tyssen E. Enhancing treatment access: Evaluation of an Australian Web-based alcohol and drug counselling initiative. *Drug and Alcohol Review*. 2009; 28(1): 48-53.
54. Frueh, BC, Henderson S, Myrick H. Telehealth service delivery for persons with alcoholism. *J Telemed Telecare*. 2005; 11:372-375.
55. Brett, A., Blumberg, L. Video-linked court liaison services: Forging new frontiers in psychiatry in Western Australia. *Australasian Psychiatry*. 2006; 14, 53–56.
56. Khalifa, N, Saleem Y, Stankard P. The use of telepsychiatry within forensic practice: A literature review on the use of video link. *Journal of Forensic Psychiatry and Psychology*. 2008; 19, 2–13.
57. Stankard, P, Saleem Y. Forensic telepsychiatry. *Psychiatric Bulletin*. 2007; 31, 155.
58. Lexcen FJ, Hawk GL, Herrick S, Blank MB. Use of video conferencing for psychiatric and forensic evaluations. *Psychiatric Services*. 2006, 57:713-715.
59. Miller T W, Burton DC, Hill K, Luftman G, Veltkemp L J, Swope M. Telepsychiatry: Critical dimensions for forensic services. *Journal of the American Academy of Psychiatry and the Law*. 2005; 33: 539–546.
60. Leonard S. The development and evaluation of a telepsychiatry service for prisoners. *J Psychiatr Ment Health Nurs*. 2004; 11(4):461-468.
61. Nelson E L, Zaylor C, Cook D. A comparison of psychiatrist evaluation and patient symptom report in a jail telepsychiatry clinic. *Telemedicine Journal and e-Health*. 2004; 10, S54–S59.
62. Tucker W, Olfson M., Smiring S, Goodman W, Bienenfeld S. A pilot survey of inmate preferences for on-site, visiting consultant, and telemedicine psychiatric services. *CNS Spectrums*. 2006; 11: 783–787.
63. Merideth, P. Forensic applications of telepsychiatry. *Psychiatric Annals*. 1999; 29: 429–431.
64. Reed JL, Lyne M. Inpatient care of mentally ill people in prison. *British Medical Journal*. 2000; 320:1031–1034.
65. Birmingham, L. The mental health of prisoners. *Advances in Psychiatric Treatment*. 2003; 9: 191–199.
66. Harley J, McLaren P, Blackwood G, Tierney K, Everett M. The use of videoconferencing to enhance tertiary mental health service provision to the island of Jersey. *Journal of Telemedicine and Telecare*. 2002; 8(Suppl. 2): 36–38. (both rural and forensic)
67. Zaylor C, Nelson EL, Cook DJ. Clinical outcomes in a prison telepsychiatry clinic. *Journal of Telemedicine and Telecare*. 2001; 7(Suppl. 1): 47–49.
68. Zaylor C, Whitten P, Kingsley C. Telemedicine services to a county jail. *Journal of Telemedicine and Telecare*. 2000; 6(Suppl. 1): 93–95.
69. Shore JH, Savin D, Orton H, Beals J, Manson SM. Diagnostic Reliability of Telepsychiatry in American Indian Veterans. *American Journal of Psychiatry*. 2007; 164:115–118.
70. Thomas CR, Miller G, Hartshorn JC, Speck NC, Walker G. Telepsychiatry program for rural victims of domestic violence. *Telemedicine and E-Health*. 2005; 11, 567–573.
71. Mattson S, Shearer N, Long C. Exploring telehealth opportunities in domestic violence shelters. *J Am Acad Nurse Pract*. 2002; 14:465– 70.
72. Burton DC, Stanley D, Ireson CL. Child advocacy outreach: Using telehealth to expand child sexual abuse services in rural Kentucky. *J Telemed Telecare*. 2002; 8(Suppl 2):10– 2.
73. Whitworth JM, Mullins HC, Morse K. Design and implementation of an urban/rural telehealth network for the evaluation of abused children: Implications for global primary care applications. *Medinfo*. 2001; 10:863– 5.
74. Pammer W, Haney M, Lmhe N, et al. Use of telehealth technology to extend child protection team services. *Pediatrics* 2001; 108:584–90.
75. Inouye J, Cerny JE, Hollandsworth J, et al. Child abuse prevention program with POTS-based telehealth: A feasibility project. *Telemed J E Health*. 2001;7:325 –32.
76. Fox KC, Connor P, McCullers E, Waters T. Effect of a behavioural health and specialty care telemedicine programme on goal attainment for youths in juvenile detention. *J Telemed Telecare*. 2008; 14(5):227-30.
77. Fox KC, Whitt AL. Telemedicine can improve the health of youths in detention. *J Telemed Telecare*. 2008;14(6):275-6.
78. Myers K, Valentine J, Morgenthaler R, Melzer, S. Telepsychiatry with incarcerated youth. *Journal of Adolescent Health*. 2006; 38:643–648.
79. Pakuyrek M, Yellowlees P, Hilty D. The Child and Adolescent Telepsychiatry Consultation: Can It Be a More Effective Clinical Process for Certain Patients Than Conventional Practice? *Telemedicine and e-Health*. April 2010, 16(3): 289-292.
80. Myers K, Vander Stoep A, McCarty C, Klein J, Palmer N, Geyer J, Melzer S. Child and adolescent telepsychiatry: Variations in utilization, referral patterns and practice trends. *Journal of Telemedicine and Telecare*. 2010;16:128.
81. Paing WW, Weller RA, Welsh B, Foster T, Birnkrant JM, Weller EB. Telemedicine in children and adolescents. *Current Psychiatry Rep*. 2009.
82. Himle M, Olufs E, Himle J, Tucker B and Woods D. Behavior Therapy for Tics via Videoconference Delivery: An Initial Pilot Test in Children. *Cognitive and Behavioral Practices*. 2010.



83. Cheng K, Jetmalani A. It Takes a Village to Treat ADHD. Community and Clinical Collaborations. *Psychiatric Times*. 2009.
84. Sato A, Clifford L, Silverman A, Davies W.H: Cognitive-Behavioral Interventions Via Telehealth. Applications to Pediatric Functional Abdominal Pain. *Children's Health Care*. 2009; 38(1): 1 - 22
85. Graeff-Martins A, Flament M, Fayyad j, Tyano S, Jensen P, Augusto Rohde L: Diffusion of efficacious interventions for children and adolescents with mental health problem. *Journal of Child Psychology and Psychiatry*. 2008; 49(3):335–352.
86. Cloutier P, Cappelli M, Glennie JE, Keresztes C. Mental health services for children and youth: a survey of physicians' knowledge, attitudes and use of telehealth services. *J Telemed Telecare*. 2008; 14(2):98-101.
87. Yellowlees, P, Hilty D, Mark S, Neufeld J, Bourgeois J. A Retrospective Analysis of a Child and Adolescent eMental Health Program. *J. Am. Acad. Child Adolesc. Psychiatry*. 2008; 47(1):103Y107.
88. Sulzbacher S, Vallin T, Waetzig E.Z. Telepsychiatry improves paediatric behavioural health care in rural communities. *Journal of Telemedicine and Telecare*. 2006; 12, 285-288.
89. Nelson E L, Barnard M, Cain S. Feasibility of telemedicine intervention for childhood depression. *Counseling and Psychotherapy Research*. 2006; 6:191–195.
90. Nelson EL, Barnard M, Cain S. Treating childhood depression over videoconferencing. *Telemed J E Health*. 2003. 9(1):49-55.
91. Starling J, Rosina R, Nunn K, Dossetor D. Child and adolescent telepsychiatry in New South Wales: moving beyond clinical consultation. *Australasian Psychiatry*. 2003; Vol 11 Supplement.
92. Myers, K. M., Valentine, J., & Melzer, S. M. Child and adolescent telepsychiatry: Utilization and satisfaction. *Telemedicine and e-Health*. 2008; 14: 131–137.
93. Mackert M, Whitten P. Successful Adoption of a School-Based Telemedicine System. *Journal of School Health*. 2007; 77(6): 327-330.
94. Whitten P, Cook D, Kingsley C, Swirczynski D, Doolittle G. School-based telemedicine: teachers', nurses', and administrators' perceptions. *J Telemed Telecare*. 2000; 6(S1):129-132.
95. Whitten P, Cook D. School-based telemedicine: using technology to bring health care to inner-city children. *J Telemed Telecare*. 1999; 5(S1):23-25.
96. Hilty, Nesbitt, Kuenneth, Cruz and Hales. Rural Versus Suburban Primary Care Needs, Utilization, and Satisfaction With Telepsychiatric Consultation. *National Rural Health Association*. 2007.
97. Griffiths K, Christensen H. Internet-based mental health programs: a powerful tool in the rural medical kit. *Aust. J. Rural Health*. 2007; 15: 81–87.
98. De Las Cuevas C, Arredondo M, Cabrera M, Sulzenbacher H, Meise U. Randomized clinical trial of telepsychiatry through videoconference versus face-to-face conventional psychiatric treatment. *Telemed J E Health*. 2006; 12(3):341-350.
99. Griffiths I, Blignault I, Yellowlees P. Telemedicine as a means of delivering cognitive behavior therapy to rural and remote mental health clients. *J Telemed Telecare*. 2006; 12(3):136-140.
100. Hilty DM, Yellowlees PM, Cobb HC, et al. Use of secure e-mail and telephone psychiatric consultations to accelerate rural health care delivery. *J Telemed E-Health*. 2006; 12:490Y495.
101. Bischoff RJ, Hollist CS, Smith CW, Flack P. Addressing the mental health needs of the rural underserved: Findings from a multiplecase study of a behavioral telehealth project. *Contemporary Family Therapy. An International Journal*. 2004; 26:179-198. 32.
102. Machalicek, O'Reilly M, Chan J.M., Rispoli M, Lang R, Davis T, Shogren K, Sorrells A, Lancioni G, Sigafos J, Green V, Langthorne P. Using videoconferencing to support teachers to conduct preference assessments with students with autism and developmental disabilities. *Research in Autism Spectrum Disorders*. 2009; 3(1):32-41.
103. Poon P, Hui E, Dai D, Kwok T, Woo J. Cognitive intervention for community-dwelling older persons with memory problems: Telemedicine versus face-to-face treatment. *International Journal of Geriatric Psychiatry*. 2005; 20:285-286.
104. Cullum CM, Weiner MF, Gehrman HR, Hynan LS. Feasibility of telecognitive assessment in dementia. *Assessment*. 2006; 13:385-390.
105. Loh P.K, Maher S, Goldswain P, Flicker L. Diagnostic accuracy of telehealth community dementia assessment. *JAGS*. 2005; 53 (11).
106. Shores MM, Ryan-Dykes P, Williams RM, Mamerto B, Sadak T, PascualyM, et al. Identifying undiagnosed dementia in residential care veterans: comparing telemedicine to in-person clinical examination. *International Journal of Geriatric Psychiatry*. 2004; 19:101-108.
107. Reese M, Jamison R, Wendland M, Braun M, Turek J. Reliability and Validity of Autism Assessments and Diagnosis Using Telemedicine. *University of Kansas Medical Center Research Institute*. 2009.
108. Kriechman A, Salvador M, Adelsheim S. Expanding the Vision: The Strengths-Based, Community-Oriented Child and Adolescent Psychiatrist Working in Schools. *Child and Adolescent Psychiatric Clinics of North America*. 2010; 19 (1): 149-162.

109. Emmelkamp, P.M. Technological innovations in clinical assessment and psychotherapy. *Psychotherapy and Psychosomatics*. 2005; 74(6), 336–343.
110. Carter, J.A., Buckey, J.C., Greenhalgh, L., Holland, A.W., & Hegel, M.T. An interactive media program for managing psychosocial problems on long-duration spaceflights. *Aviation, Space, and Environmental Medicine*. 2005; 76(6, Suppl.), B213–B223.
111. Chandra, A., & Minkovitz, C.S. Stigma starts early: Gender differences in teen willingness to use mental health services. *Journal of Adolescent Health*. 2006; 38(6): 754.e1–754.e8.
112. Delaplain CB, Lindborg CE, Norton SA, Hastings JE. Tripler pioneers telemedicine across the Pacific. *Hawaii Med J*. 1993 Dec; 52(12):338-9.
113. D R Eloff DR, White H, St John K, Maddigan B, Ghandi M, Bowering R. A prospective satisfaction study and cost analysis of a pilot child telepsychiatry service in Newfoundland. *J Telemed Telecare*. 2001;7:73-81.
114. Greenberg N, Boydell KM, Volpe T. Pediatric Telepsychiatry in Ontario: Caregiver and Service Provider Perspectives. *The Journal of Behavioral Health Services and Research*. 2006; 33(1): 105-111.
115. Bryant B. Telepsychiatry Gets Good Reception With Texas High School Students. *Psychiatric News*. 2007; 42 (5): 22.
116. Young T, Ireson C. Effectiveness of School-Based Telehealth Care in Urban and Rural Elementary Schools. *Pediatrics*. 2003; 112(5): 1088-1094.
117. Broder E, Manson E, Boydell K, Teshima J. Use of telepsychiatry for child psychiatric issues: First 500 Cases. *CPA Bulletin*. 2004; June 11-15.
118. Keilman P. Telepsychiatry with Child Welfare Families Referred to a Family Service Agency. *Telemedicine and e-Health*. 2005; 11(1): 98-101.
119. Norton S, Floro C, Bice S, Dever G, Mukaida L, Scott J. Telemedicine in Micronesia. *Telemedicine Journal*. 1996; 2(3): 225-231.
120. Folen R, James LC, Earles JE, Andrasik F. Biofeedback Via Telehealth: A New Frontier for Applied Psychophysiology. *Applied Psychophysiology and Biofeedback*. 2001; 26:3
121. Levin A. Psychiatrists Get Creative in Hawaii's Remote Regions. *Psychiatric News*. 2010; 45(2):17
122. Telemedicine Averted Costly Transfers to Federal Medical Centers. *National Institute of Justice*. 1999.
123. Morgan M. Telemedicine Advances Could Expand Psychiatric Care. *Psychiatric News*. 2004; 39 (6):14.
124. Khalifa N, Saleem Y, Stankard P. The use of telepsychiatry within forensic practice: A literature review on the use of videolink. *Journal of Forensic Psychiatry & Psychology*. 2008; 19 (1): 2 – 13.
125. Jaime A. B. Wilson, M. Gawain Wells: Telehealth and the Deaf: A Comparison Study. *The Journal of Deaf Studies and Deaf Education*. 2009; 14(3):386-402.
126. Simpson J, Doze S, Urness D, Hailey D, Jacobs P. Telepsychiatry as a routine service - the perspective of the patient. *J Telemed Telecare*. 2001;7:155-160.
127. Whitten P, Kingsley C, Cook D, Swirczynski D, Doolittle G. School-based telehealth: an empirical analysis of teacher, nurse, and administrator perceptions. *J Sch Health*. 2001;71(5):173-180.
128. Whitten P, Spaulding R. Telemedicine for school children in Kansas. In: Wooton R, Batch J, eds. *Telepediatrics: Telemedicine and Child Health*. London, UK: Royal Society of Medicine Press Ltd; 2004: 249-258.
129. Practice Parameter for Telepsychiatry for Children and Adolescents. *J. Am. Acad. Child Adolesc. Psychiatry*, 2008;47:(12).
130. **Andrus, Jason, David E. Roth. Harnessing High-Tech: Psychiatric Trainees at the Forefront of Telepsychiatry. *Psychiatric Residents' Newsletter*. APA. Spring 2000.**
131. Wun Jung Kim; Child and Adolescent Psychiatry Workforce: A Critical Shortage and National Challenge. *Academic Psychiatry*. 2003 Dec; 27(4):277-282.
132. Akechi, T; Suicidal Ideation in Unrespectable Lung Cancer Patients. In *The Academy of Psychosomatic Medicine*. 2001
133. Yuhuan Xie, J. Faye Dixon, Ong Min Yee, Junshun Zhang, Y. Ann Chen, Sascha DeAngelo, Peter Yellowlees, Robert Hendren, and Julie B. Schweitzer: A Study on the Effectiveness of Videoconferencing on Teaching Parent Training Skills to Parents of Children with ADHD *Telemedicine and e-Health*. March 2013, 19(3): 192-199.
134. 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.
135. Klemen Naveršnik and Aleš Mrhar: Cost-Effectiveness of a Novel e-Health Depression Service. *Telemedicine and e-Health*. February 2013, 19(2): 110-116.
136. Jacob MK, Larson JC, Craighead WE: Establishing a telepsychiatry consultation practice in rural Georgia for primary care physicians: a feasibility report. *Clin Pediatr (Phila)*. 2012 Nov;51(11):1041-7.

137. Vismara, L. A., Young, G. S., & Rogers, S. J. Telehealth for expanding the reach of early autism training to parents. *Autism research and treatment*, 2012.
138. Hyman, S. L., & Johnson, J. K: Autism and pediatric practice: Toward a medical home. *Journal of autism and developmental disorders*; 2012: 42(6), 1156-1164.
139. Dana L. Cunningham, Elizabeth H. Connors, Nancy Lever, and Sharon H. Stephan. Providers Perspectives: Utilizing Telepsychiatry in Schools. *Telemedicine and e-Health*. 2013;
140. Godleski L, Darkins A, Peters J. Outcomes of 98,609 U.S. Department of Veterans Affairs Patients Enrolled in Telemental Health Services, 2006–2010. *Psychiatric Services* 2012;
141. Deslich S, Stec B, Tomblin S, Coustasse A. Telepsychiatry in the 21(st) century: transforming healthcare with technology. *Perspect Health Inf Manag*. 2013 Jul 1;10:1f.
142. Singh S. P., Arya D., Peters T. Accuracy of Telepsychiatric Assessment of New Routine Outpatient Referrals. *BioMed Psychiatry*. 2007;7(55):1–13.
143. Brondbo H, Mathiassen B, Martinussen M, Heiervang E, Erisken M, Kvernmo S: Agreement on Web-based Diagnoses and Severity of Mental Health Problems in Norwegian Child and Adolescent Mental Health Services
144. Marasinghe, R. B., Edirippulige, S., Kavanagh, D., Smith, A., & Jiffry, M. T. Effect of mobile phone-based psychotherapy in suicide prevention: a randomized controlled trial in Sri Lanka. *Journal of Telemedicine and Telecare*. 2012 18(3), 151-155.
145. Komatsu, H., Sekine, Y., Okamura, N., Kanahara, N., Okita, K., Matsubara, S, ... & Iyo, M. Effectiveness of Information Technology Aided Relapse Prevention Programme in Schizophrenia excluding the effect of user adherence: A randomized controlled trial. *Schizophrenia research*. 2013.
146. Vargas, B. B., Channer, D. D., Dodick, D. W., & Demaerschalk, B. M. Teleconcussion: An Innovative Approach to Screening, Diagnosis, and Management of Mild Traumatic Brain Injury. *Telemedicine and e-Health*. 2012 18(10), 803-806.