

Telehealth @ Home

A Home-Based Telehealth Guidebook



by David E. Roth MD and Sofija Zeković-Roth DOM
Providers of Telehealth Treatment, Training, and Consultation since 2009

We hope you enjoy learning how to do telehealth well from your home. It is our sincere hope that with good preparation and staging you will experience authentic clinical interactions and develop/maintain therapeutic clinician-patient relationships. We wish you good health and good telehealth care!

Telehealth has reinvented the house call

Now with the click of a mouse or a swipe of your finger, you can be face to face with a clinician. Telehealth home visits allow you to get the care you need in the comfort of your own home. Plus, when a clinician sees you in your home he or she learns more about who you are and what may be positively or negatively impacting your health.

When done well, these telehealth home visits help you build a strong therapeutic relationship between yourself and a clinician that lead to better medical care.

This guidebook will help you master the basic technical and room setup guidelines you need to turn these telehealth sessions into authentic clinician-patient experiences. Welcome to the new ‘medical home’ — your home!



Room Selection & Set Up

Having an authentic-feeling medical experience starts with great room selection. You can do the videoconference in any room, but properly choosing and arranging the room can greatly improve the experience.

Privacy

Choose a setting in which only the appropriate people are part of the session. Other people should not be able to hear what is said during the session.

Background Walls


You can significantly improve how well you are seen on camera by selecting a room with an optimal color scheme. To create the best picture, point the camera at a wall that is a neutral





color with no patterns on it. Background patterns can trick the camera into focusing on the background.

Power and Network

You should be close to the Wi-Fi router. If you are using a computer, you should plug it into the router with an Ethernet cable. A strong internet signal will give you the best picture and sound. All internet equipment should be on a surge protector, or a battery backup device.



Make sure the room is close to your Wi-Fi router. Plug into it with an ethernet cable whenever possible!



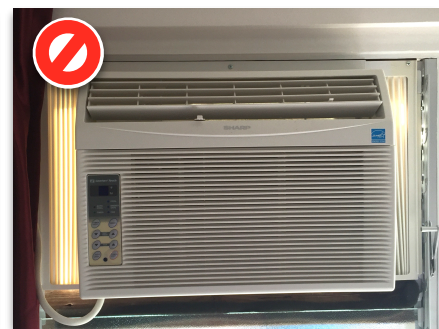
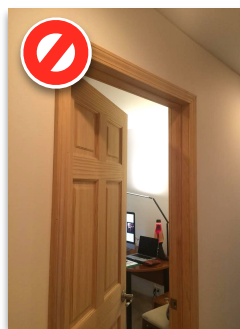
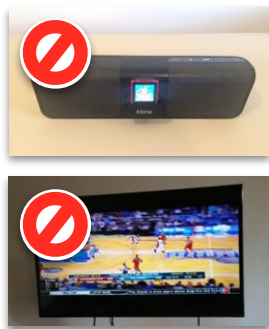
Surge Protector

Sound and Distractions

When choosing between different rooms, minimize the impact of the background noises. How loud is the air conditioner or fan? Can you hear other people talking?

Close windows and doors, turn down window air conditioners to the lowest setting or turn them off for a short session. Keep your loud or curious pets out of the room. Turn off all other electronics like

radios and televisions. If you have to use a public room like a kitchen, ask the other people to stay out of it during the session



Lighting

You won't have to do anything about your lighting if you are in a room filled with natural light that is shining towards you. If the room is insufficiently illuminated the clinician will be unable to see you clearly. This detracts from the therapeutic connection between you, and the clinician.

**The light should be in front of you,
illuminating your face**



Audio & Video Equipment

Microphone, Speakers & Headsets

Under most circumstances your computer, phone, or tablet's built-in microphone and speakers are good enough for you and the clinician to clearly hear each other.

You should also consider using headphones if you would like more privacy. Do not use Plug-in and Bluetooth speakers. They will often induce delays, echoes, and feedback loops.



When you have a poor connection that makes it hard to hear each other, your clinician may need to call you on the phone to ensure you can hear each other well. Once you can hear the clinician well on your phone, you need to **mute your videoconferencing device's microphone and speaker** to avoid distracting echoes and irritating feedback.

Camera Position

Your camera should be pointing straight at you so you will be looking directly at the other participants. If you have a separate web-camera, place it on top of your computer or on a shelf so that it is positioned directly over the clinician's face on the screen.

Eyes are



The 1/3 Rule

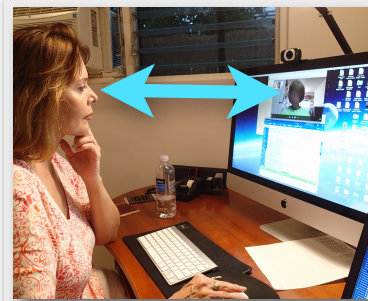
Position yourself and/or adjust the camera so your eyes appear to be about 1/3 down from the top of the screen. This will create the natural framing you see when watching television newscasters.

Ensure your computer or other videoconferencing device is on a desk or table that won't move around. Stabilize it so it doesn't move and keeps you in the camera frame. You should be able to shift a bit in your seat without falling out the frame or jostling the camera.

Seating and Screen Arrangement

Arrange the tables and chairs in the room so all the participants can be seen in the camera frame. If there is only one participant, he or she should sit close to the camera. A single participant should be sitting two to four feet away from the camera and screen. If you have more people in the room, move them back an additional two feet from the camera for each additional participant. So, if you have three people in the session, the participants should be sitting at least six feet back from the camera.

You can create the appearance of good eye contact by placing the clinician's image as close to your camera as possible. When you do this, you will appear to be looking at the clinician when you are looking at their picture on your screen.



Create realistic eye contact

Holding a Cellphone



When using a portable device for a telehealth session, place it at eye level on a desk or table so it won't move around. Handheld devices should be propped up at shoulder height and at arms length from the user's body to make the eye contact look and feel natural. If a single participant is using a phone or tablet, it should be positioned in vertical/portrait orientation. This improves the eye contact between participants because the other participant's eyes are closer to the camera.

If the device needs to capture two or more people in the frame, turning the device horizontal/landscape will often create a larger frame that encompasses more of the room, but eye contact may be misaligned.



In a Car

If you are meeting in your car, remain parked! Do not drive during your session! It is unsafe and the internet connection becomes unstable.

Aloha, & enjoy your sessions!

About the Authors

The authors are available to provide consultation and training programs to individuals and organizations around the world, either in person or via videoconference. Contact Dr. Roth at: frontdesk@mind-bodyworks.com or (808) 923-7684.



David Roth M.D., F.A.A.P., F.A.P.A. is a triple Board-Certified physician who has been practicing medicine in Hawaii for 18 years. Dr. Roth earned his Bachelors Degree from Northwestern University and his Medical Degree from the University of Louisville. He completed the prestigious Triple Board Residency Program at University of Hawaii where he trained in General Pediatrics, Child & Adolescent Psychiatry, and Adult Psychiatry & Neurology. He is a Fellow of both the American Academy of Pediatrics and the American Psychiatric Association. Dr. Roth serves on the American Academy of Child and Adolescent Psychiatry's Telemedicine Committee and helped author the Academy's 2016 Telemedicine Practice Parameter along with textbook chapters and articles on how to do telemedicine well.

Dr. Roth has been a passionate telemedicine pioneer and advocate for 19 years. He has personally conducted over 10,000 telehealth sessions and under his leadership our clinic has conducted over 25,000 patient care and collaborative care sessions. He created one of the nation's first self-sustainable private practice psychiatry and developmental pediatrics telemedicine clinics in 2009. He then launched one of the nation's first sustainable school-based and home-based telepsychiatry programs in 2010 that has treated hundreds of moderately to severely mentally ill students. These psychiatric services are now delivered statewide to Hawaii public school students in both urban and rural areas. These youth are treated in their homes and schools in collaboration with their families, school-based mental health providers, and teachers.

The material in this book is distilled from presentations given at several national conferences including the Annual Conference on Advancing School Mental Health in 2013, the Annual Meeting of the American Academy of Child and Adolescent Psychiatry in 2014, 2016 and 2018.

Dr. Roth continues to teach clinicians around the world how to do telemedicine well at local, national, and international conferences.



Mrs. Sofija Zeković -Roth D.OM. has been practicing in Honolulu, Hawaii for 12 years as a Board Certified Oriental Medicine practitioner. As the Clinical Director of Mind & Body Works, Inc., she developed the clinical and administrative telemedicine models for home-based and school-based telepsychiatry services that have effectively delivered medical care to children, adolescents, and adults throughout the Hawaiian Islands and California. These innovative models have helped them sustain one of the oldest self-sufficient telemedicine private practices in the nation. Mrs. Zeković-Roth and Dr. Roth have conducted several telehealth workshops at national conferences since 2013.

Mrs. Zeković -Roth graduated summa cum laude from Spalding University in Louisville, Kentucky with Bachelor Degrees in both Chemistry and Biology. She then earned her Masters Degree in Acupuncture and Oriental Medicine from the World Medicine Institute in Honolulu, Hawaii. She is a master practitioner of both Pilates and yoga, who has developed and conducted training seminars across the Pacific Rim.



Michael Yasutake B.A. is an award winning producer, director of videography and editor based in Honolulu Hawaii. He has 26 years of experience in television and video production. He has received several Telly awards, several Emmy award nominations, and he won an Emmy award for Best Regional Sports Programming. Mr. Yasutake has shot and edited television shows and sporting events for PGA Tour Entertainment, E! Entertainment, EXTRA!, NBC's national news, The Golf Channel, TLC, Entertainment Tonight, ABC's national news, MTV, HGTV, and The Discovery Channel. He received his Bachelor Degree in Telecommunications and Film from the University of Oregon.

Mr. Yasutake co-presented the telehealth media skills workshops Mind & Body Works, Inc. conducted at the American Telemedicine Association's Annual Meetings in 2015 and 2016.



Mrs. Mahealani Richardson B.A. has been an anchor woman on Hawaii's premier network news station for over 17 years. She is a distinguished journalist who has won many awards including the prestigious Edward R. Murrow Award for her nationally televised documentary on the Iraq War.

Mrs. Richardson co-presented the telehealth media skills workshops Mind & Body Works, Inc. conducted at the American Telemedicine Association's Annual Meetings in 2015 and 2016.

Ms. Kierdre Kalani Howard edited and helped design this guidebook.