**MDHHS**
Michigan Department of Health & Human Services
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*School Telehealth Programs* use registered nurses (RNs) working under physician standing orders to provide high quality, comprehensive health care to students while they are at school. For care that is needed beyond what a RN can provide, they use specialized video and audio connections to link youth at the school clinic to primary care providers located in a pediatric or school-based health center in their community.

## + Office Layout

Give special consideration to the room design and set up at both the originating school site and the distant telehealth provider site. Consider the flow of student intake, care, and discharge when setting up all areas.

**Consider the following:**
- Where will the telehealth clinic be located? Is there a dedicated space in the school that is already used by a school nurse, or will a multi-purpose room be used?
- Does the space allow for student privacy?
- Is it easy for students to enter and exit without problems?
- Do you have enough designated space for exam tables, sinks, lab collection and waiting area?
- Is there a bathroom nearby so students can self-collect specimens when needed?

## + Telehealth specific student exam room considerations

- **Room location** — ideally a quiet area away from noise sources, with no windows or with shades and curtains that are fully light blocking.
- **Room size** — must be large enough to move around and work with students comfortably, with space for a chair for family members if present.
- **Wall color** —
  - Avoid white or very light walls, avoid dark walls, and avoid any extreme colors and contrasts.
  - Light blues and light grays work well with all skin tones.
  - Use flat paint to avoid reflection off the walls.
  - Video test the selected color before painting the entire wall — how does it look at both sites on camera? Note that different lighting conditions will affect color appearance.
- **Placement of equipment and furniture** —
  - Avoid mounting cameras on top of computer monitors or placing students too close to the camera.
  - Camera should be able to pan out for a full view of the room with the student and the RN presenter, and zoom in for close-up views of the student.
  - Both student and distant telehealth provider should be able to look directly at each other during the video call.
  - Student should be able to both sit in a chair and use the exam table and be in the camera's view.
  - Exam table should be positioned so the RN presenter can see both the student and the monitor when using scopes that transmit images to the distant telehealth provider site.
  - Avoid clutter in the background for optimal camera images.
  - Consider posting pictures of the distant telehealth providers in the exam room.

- Lighting —
  - True color reproduction is essential! Use a diffused soft light source (full spectrum lighting is recommended) positioned in front of the student, shining on them diagonally. Avoid harsh lighting sources and shadows on faces.
  - Use supplemental lighting when necessary, but avoid having light sources directly behind the student/clinician (e.g., windows, overhead lights). Note that shades/blinds generally cannot reduce this kind of lighting enough.
  - Color accuracy is also affected by the "white balance" of cameras and from peripheral scopes.
  - A blue towel behind skin can be helpful to view skin tone and rashes.
- Electrical and telecommunications connections —
  - Choose the best place for the exam table and telemedicine unit and then install/expand the telecom and electrical outlets to be near them. Avoid long runs of cables on the floor.
  - A 120v electrical outlet with surge protector is necessary.
  - A high speed (T1 and above) network, to support high definition / quality images, is necessary infrastructure at each site.
  - A hardwire (vs. wireless) connection is recommended where applicable. (It may make things less portable, but will decrease variability.)

## + The Distant Telehealth Provider Consultation Room

- While it may be significantly smaller than the student exam room, consider the camera viewing area and angle.

## + Waiting Room Considerations

- A private desk area for confidential scheduling and check-in.
- Consider ease of cleaning along with comfort in selecting waiting room chairs.
- Design — cheerful/engaging décor; consider an education board that is changed frequently; age appropriate reading materials (students tend to prefer small wallet sized cards to traditional pamphlets).
- TV/DVD player — helps with background noise for privacy, and can play informational videos.

## + Telehealth Equipment and Software Requirements

- Required telehealth equipment and software may include:
  - Utility or telemedicine cart
  - Web-cam
  - Telehealth Stethoscope
  - Examination Camera
  - Telehealth Otoscope
  - Telehealth Monitor and Headphones (Including an additional monitor and headphones at the distant telehealth provider site). Sites may want to consider a high definition wide screen monitor at the distant site.
  - Video conferencing software at both locations.
  - A VPN tunnel with a secure connection between the distant and originating school clinic site.

Information on telehealth equipment vendors can be found here:
http://thetelemedicinedirectory.com/lc/telemedicine-equipment-devices/

Michigan has experience working with AMD Global Telemedicine. Note that vendor systems (equipment and software) may not work interchangeably with other vendor systems.