Equity Through Technology **Addressing Inequalities in Occupational Therapy Using 3D Printing and Telehealth**

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Project Aims and Results

Increase access to occupational therapy (OT) tools and improve outcomes for clients at the Forsyth **Community Care Clinic (CCC)**

- 9 clients were deemed eligible for a 3D printed device intervention and 6 received their device.
- 3 of 4 clients with sufficient follow-up achieved their therapy goals.
- 5 eligible clients were not able to reach device intervention with sufficient follow-up due to COVID-19 restrictions.
- 6 3D printed assistive devices were delivered on a service trip to Ecuador thanks to volunteer students from both courses and the lower-year class.

Train Winston-Salem State University (WSSU) occupational therapy students in 3D printing and basic computer-aided-design skills.

- All 13 students who completed the fall course and progression surveys expressed growth in 3D printing, CAD, device design, and self-guided learning competencies and confidence.
- 13 students in the Spring courses began 3D printing exposure which was interrupted by COVID-19.
- 2 novel devices were designed and released online through open-source licensing.

Increase access to occupational therapy care for children with upper-limb differences via telehealth.

- 8 Telehealth meetings were held with two families.
- Custom posters and exercise "leveling" deliver a kidfriendly gaming aspect to "exercise in disguise".
- Delivered OT resource packets, exercises and consulting at The Helping Hand Project's fall event.

3D Printed Assistive Devices

Seat-Belt Assist



Massage Roller







Fall 2019 Helping Hand Project Family Gathering



Hand Grip Strengthener





Sustainability

- At WSSU, 3D printing and CAD education has been implemented in a mandatory OT class
- The new OT program at Pfeiffer University will support further telehealth meetings for children in the Helping Hand Project's network.
- A student-volunteer chapter of The Helping Hand Project has been established at WSSU.



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