- Data from 64 completed surveys analyzed
- Used frequency analysis for Questions 1, 2, 3, 5.
- Used a mixed effects linear model to analyze Questions 4.

Results:

- 3,340 surveys sent to ASHT mailing list.
- At the time of abstract submission, preliminary analysis completed on 180 surveys, 64 surveys considered complete.
- Demographics: 90.6% female, 95.3% occupational therapists, 70.3% certified hand therapists.
- Therapists report treating patients following FS (96.9%), NA (56.3%), and CCH (65.6%).

Q1: What evidence sources do therapists use to inform their clinical practice?

- 93.8% (n = 60) use clinical judgement as evidence; 42.2% use colleague opinion (Figure 1).
- Therapists use a variety of protocols and published texts (Figure 1).

Q2: Do therapists use different assessments after FS, NA, and CCH?

- 86.1% (n = 49) report no difference in assessment choice following different procedures.
- Therapists do not rely on a single assessment (Figure 2).
- 87.5% (n = 56) assess active range of motion, patient-rated function, pain, and edema (Figure 2).
- 57.7% (n = 30) use the Disabilities of the Arm Shoulder and Hand Questionnaire (DASH).

Q3: Do therapists follow different therapy protocols after FS, NA, and CCH?

- 67.2% (41/61) use published protocols after FS, 58.6% (27/46) use published protocols after NA, 52.2% (21/41) use publish protocols after CCH.
- Upon visual inspection, CCH and FS protocols appear to differ least, whereas NA differed most when compared to CCH and FS.

Q4. Do therapists prioritize treatment differently after FS, NA, and CCH?

- Average number of visits following FS is 8.0, NA is 5.0 and CCH is 4.6.
- Therapists treat persons after FS more frequently than NA (p=.001) and CCH (p.<001).
- Following FS, therapists prioritize manual therapies (p=.005), wound care (p<.007), scar management (p<.007), and ADL training (p<.02) significantly higher than they do following NA and CCH (Figure 3).
- There are no significant differences between orthotics, home exercise, education, home programming prioritization for FS, NA, and CCH.

Q5. Do therapists use occupations or activity as treatment?

- 60.3% (n = 38) use occupations/activity as treatment.

Conclusion: Q1. Therapists rely on clinical judgement to inform practices more often than other forms of evidence likely due to insufficent evidence on post-procedural interventions.

Q2. Therapists appear to use diverse assessments based on the variability of clients' needs, not based on the procedure

Q3. More published protocols are followed for FS. Likely because it has been standard for years, is used for more complex cases, and results in greater soft tissue trauma.

Q4. Intervention priorities differ between FS and NA/CCH, as indicated by more treatment sessions and greater priority placed on manual therapy, wound care, scar management, and ADL training.

Q5. Over $^{1}/_{3}$ of therapists may focus on client factors (e.g., wound care) and performance skills (e.g., ROM) in place of occupation-based interventions.

These are highly preliminary results; data analysis will continue. Future related research will include: 1) Exploring survey data to establish trends in protocols and staged progression of rehabilitation, 2) Doing comparative effectiveness trials for these protocols and 3) Testing the impact of occupation/activity-based approaches.

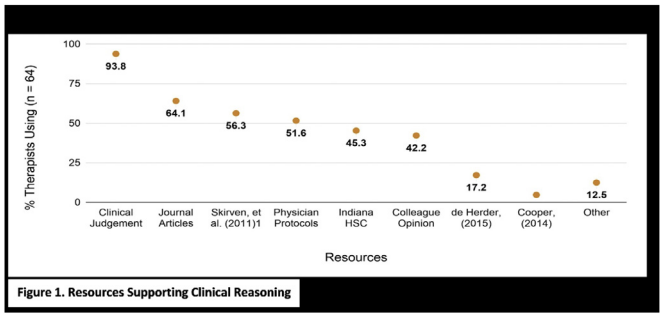

Figure 1. Resources Supporting Clinical Reasoning

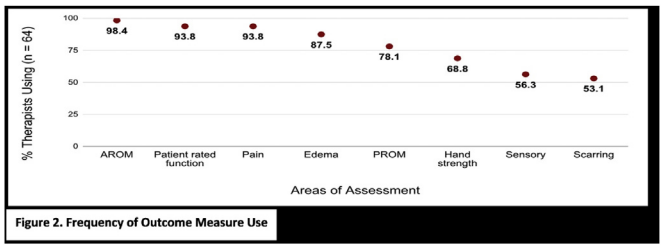

Figure 2. Frequency of Outcome Measure Use

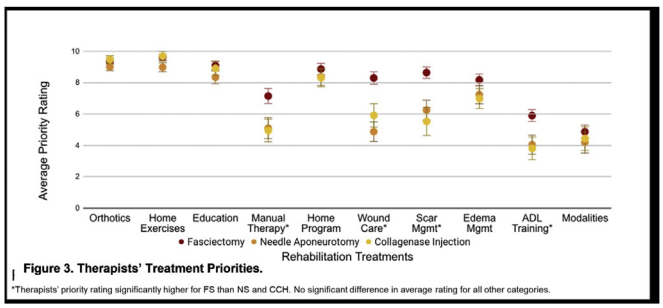

Figure 3. Therapists' Treatment Priorities.
*Therapists' priority rating significantly higher for FS than NS and CCH. No significant difference in average rating for all other categories.

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Developing a Hand and Upper Limb Therapy Practice in Rwanda

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Purpose: To provide hand therapy education to the OTs and PTs employed at the University Teaching Hospital of Kigali located in Rwanda.

Methods: Travel to Rwanda for 10 days including travel days. Dr. Charles Furaha, chief surgeon at the University Teaching Hospital of Kigali, initiated the request for a hand surgery and hand therapy team to travel to Rwanda to teach the surgeons and therapists at the hospital in the management of hand and upper limb conditions, especially brachial plexus injuries.Rwanda is a country whose primary mode of transportation is motorbikes and brachial plexus injuries are common. Both PT and OT education are very new to Rwanda. The schools are located in Kigali, Rwanda. There is no education in hand therapy provided in the schools. The team included 5 surgeons, 2 nurses, 1 surgical technician, and 2 certified hand therapists. The team worked alongside our colleagues at the hospital to teach hand surgery and therapy in real time in the most practical manner.

Goals and objectives for this first trip:

1) To consult with the therapists and surgeons at the hospital on all hand and upper limb cased presented to the team, especially those patients with brachial plexus injuries.
2) To provide equipment, supplies, and educational resources (books, protocols) to the clinic, so that they are able to treat patients with hand and upper limb conditions.
3) To educate the therapists employed at the hospital in the specific therapeutic management of patients with hand and upper limb conditions presented.
4) To teach basic orthotic fabrication skills to the therapists.
5) To provide learning opportunities to OT and PT students and local therapists in Kigali on hand therapy topics.
6) Explore the resources at the hospital to determine if they can participate in the established reverse fellowship program offered by AAHS to therapists and surgeons in Ghana.
7) Identify the needs of the therapy clinics and schools to ensure future program development on future trips and/or in collaboration with other organizations including WCPT, WCOT, and IFSHT.

Results: The team worked a total of 6 days at the facility. Day one was a screening day to determine and prioritize the surgical cases. Additional screening examinations were performed over the next few days until the surgery schedule was full. Nineteen surgeries were performed including a tendon repair, PIP joint contracture release, and knee contracture release on a little boy with a severe burn. The rest of the procedures were related to brachial plexus reconstruction in children and adults. There were some cases seen for hand therapy consult that were not scheduled for surgery. In the first couple of days, we set up a hand therapy clinic space within the existing rehabilitation clinic areas. Prior to the start of training for the post-operative cases, the hand therapists were introduced to foundational skills in hand therapy including clinical examination techniques and orthotic fabrication. The team of physiotherapists and occupational therapists requested us to consult on other rehabilitation cases including a stiff hand due to hand infection, overuse soft tissue injuries, and patients post CVA and CP. We were able to introduce graded motor imagery and constrained induced therapy to encourage use of the impaired upper limb. Ample hand therapy supplies were left to be used for new and continuing patients. Educational resources including audionarrated presentations were also left behind for the therapists to continue their professional devleopment in hand and upper limb rehabilitation. Follow-up has been limited in the 10 months since the trip for the post-operative cases. A few of the therapists remain in communication with the hand therapy team. All of the goals except one were met. The team in Rwanda is not participating in the reverse fellowship offered in Ghana through AAHS. The hospital in Rwanda has the communications necessary to participate, but communication from the surgeons has been limited.

Conclusion: The team established some important foundations for hand and upper limb rehabilitation. Future trips are needed to provide more training. The rehabilitation needs in many areas of practices are great and future teams should include other physical and occupational therapists with other specialty skills.

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