

and physician assistants on a Burn Wound Unit and Burn Intensive Care Unit. Participants were given one month each to complete a pre-test, a self-guided learning module and a post-test. The learning module content included best practice protocols for correct splinting and positioning for the acute inpatient burn population as determined by the occupational therapist and physical therapist. During the entire 3-month period friendly reminders were posted on the unit.

Results: Thirty staff members completed the pre-test. Among the participants, 66.66% also completed the learning tutorial and post-test. At completion of the study, it was found the average score on the pre-test was 77% and the average score on the post-test increased to 98%. Only 20% of participants received a perfect score on the pre-test and 90% of participants who completed the self-guided learning tutorial, received a perfect score on the post-test. Among all participants, questions pertaining to hand and ankle positioning had the highest rate of incorrect answers.

Conclusion: The use of the self-guided learning module is an effective way to educate clinical staff about splinting and positioning for the burn patient. Further research is needed to determine retention of learning module information upon a long-term follow-up with a larger sample size.

The results of this study indicate staff became more familiar with splinting and positioning without increased hours or cost within the hospital from completing a self-guided learning module. Furthermore, the study promoted discussion questions among the burn rehabilitation staff and nursing staff. Providing periodic continuing education on splinting and positioning to nursing and medical staff may be beneficial for patient care on a burn unit.

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Performance-Based Outcome Measures of Dexterity in Hand and Wrist Injuries: A Structured Review of Measured Constructs

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Purpose: Dexterity impairments are common and disabling. To date, there is no consensus on an operational definition to measure dexterity. This review aims to provide an overview of constructs measured by performance-based outcome measures of dexterity and hand function (PBOMD) validated for use in persons with hand and upper limb conditions (HULC).

Methods: Medline, EMBASE, CINAHL, PsychINFO were queried from inception, up to August 2018 using a predefined search criterion; screening was carried out by two independent reviewers. Two reviewers identified studies investigating the psychometric properties of PBOMD in persons with HULC. Additional references were identified from the reference list of included articles. Subsequently, original articles and manuals of validated PBOMD were obtained. Reviewers independently extracted and performed an inductive content analysis of the purpose and constructs of the PBOMD as reported by the authors/developers. A directed content analysis of the subtests and the method of quantification was also done using the International Classification of Functioning for Disability and Health (ICF) and Bernstein's definition of dexterity as a framework.

Results: Twenty-one PBOMD were identified from 4052 citations. There was considerable overlap between the use of the terms: 'dexterity' and 'hand function,' with 38% of PBOMD claiming to measure both. PBOMD either measure: 1) 'dexterity' as a latent construct through abstract tasks (35%), 2) hand function through a representative selection of tasks simulating 'real-world' activities (56%) or 3) hand function as a combination of physical capacities and tasks (9%). There is a shift toward measuring dexterity through representative tasks. The most common tasks include 1) self-care

[dressing, drinking, and feeding] and 2) productivity [writing, manual work, and shopping]. No PBOMD featured leisure activities or modern technologies like computers or smart-phones. Most PBOMD quantified dexterity through task efficiency (76%). Newer PBOMD included 'movement quality' as part of their construct (38%). No PBOMD explicitly measured a domain which Bernstein described as 'resourcefulness': the ability to adapt to environmental changes when completing tasks.

Conclusion: Dexterity is a complex construct which is incompletely captured by current PBOMD. Clinicians should consider tasks included in PBOMD, quantification method, and each PBOMD's limitations when choosing PBOMD. This study did not evaluate other psychometric properties of these PBOMD. Clinicians choosing measures should consider these properties when selecting a measure. Future research should be done to develop and validate PBOMD that include tasks featuring modern technology and leisure activities.

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Post-Surgical And Post-Procedural Interventions for Dupuytren's Contracture: Preliminary Outcomes of a Survey on Hand Therapy Practice Patterns

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Purpose: Background:

- Hand therapists play an important role in treating patients with Dupuytren's disease.
- Current literature describes rehabilitation following fasciectomy (FS), needle aponeurotomy (NA), and collagenase clostridium histolyticum injection (CCH) Dupuytren's contracture release.
- A comprehensive exploration of the practice patterns of rehabilitation therapists following surgical and procedural interventions for Dupuytren's contracture does not exist.

Research Questions:

How do hand therapist practice patterns differ following fasciectomy, needle aponeurotomy, and collagenase clostridium histolyticum Dupuytren's contracture release interventions? Specifically:

1. What evidence sources do therapists use to inform their clinical practice?
2. Do therapists use different assessments after FS, NA, and CCH?
3. Do therapists follow different therapy protocols after FS, NA, and CCH?
4. Do therapists prioritize treatment differently after FS, NA, and CCH?
5. Do therapists use occupations/activity as treatment?

Methods: Survey Design:

- Conducted literature review to identify gaps in evidence related to rehabilitation practices following surgical and procedural Dupuytren's contracture release interventions.
- Online survey designed on Qualtrics Survey Engine.
- Consulted survey design expert to improve survey format.

Ethics Review:

- IRB exempt status.

Survey Validation:

- Five expert hand therapists piloted survey for content validity.
- ASHT Research Board critically reviewed content/usability and approved survey for delivery via "eblast" to ASHT mailing list.

Delivery:

- Qualifying therapists who treated patients (within the last 8 years), following FS, NA, or CCH procedures.

Analyses:

- Analyzed with SPSS 25, & SAS 9.4.

- 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 published 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 insufficient 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.

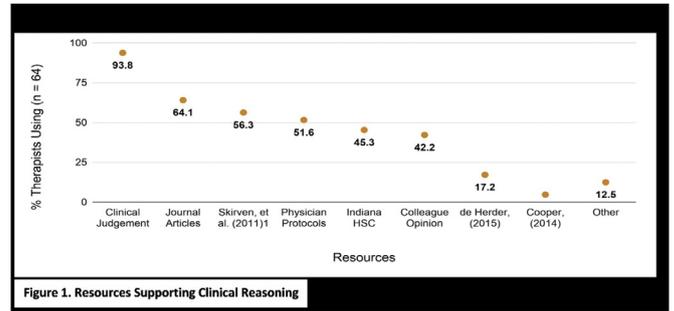


Figure 1. Resources Supporting Clinical Reasoning

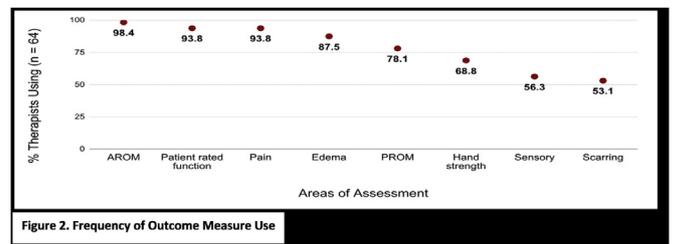


Figure 2. Frequency of Outcome Measure Use

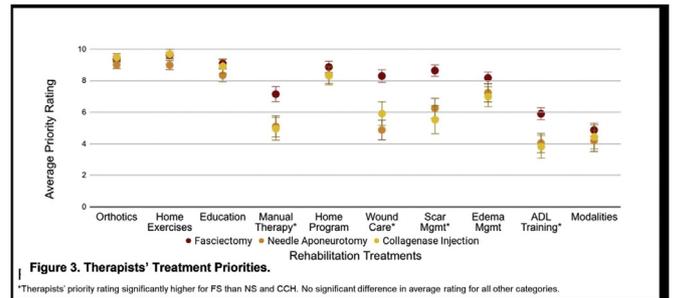


Figure 3. Therapists' Treatment Priorities. *Therapists' priority rating significantly higher for FS than NS and CCH. No significant difference in average rating for all other categories.

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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.