Short communication

Rapid implementation of virtual hand therapy clinics during COVID-19; opportunities for the future

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A R T I C L E    I N F O

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Covid-19 has posed many difficulties for health services and hand therapy must adapt to these challenges. In Ireland, non urgent outpatient hospital services were closed overnight to slow the spread of the virus. This proposed a challenge to postoperative and trauma services that provide vital outpatient care. Hand therapy is fundamental to achieve good results from hand surgery, and crucial after procedures such as tendon repairs; both in motivating patients and monitoring progress. Many of these patients require early hand therapy to optimise their outcomes. Furthermore, University Hospital Galway’s hand therapy department provides a supra-regional service to patients from seven hospitals in Ireland – across eight counties, for an estimated population of 730,513 people.

Video consultations were identified as a means to provide this service during the initial lockdown, offering patients access to essential post op care, while minimising social contacts. Removing patients’ inconvenience and travel costs are obvious advantages. Previously described barriers to acceptance included data security, data governance, technology failure, and threat to the therapists’ role and skills. Following the introduction of hand therapy virtual consultations, we wanted to assess patient satisfaction with the service and to assess if this model of care is suitable and satisfactory going forward.

Patients receiving hand therapy were prospectively enrolled and had video consultations between 12th March 2020 and 30th June 2020. Depending on their progress, patients either had further

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video consultations arranged, were discharged from the service, or if there was a clinical concern an in-person appointment had been arranged. The Braun and Clarke approach was used for the thematic analysis of patient satisfaction – for the qualitative data provided by the patients.5

Out of 74 patients to whom the survey questions were sent, 44 (59.6%) responded (Table 1).

The most common positive theme in the comments was the relief of being spared as it is often a significant and costly trip to the outpatients’ department; patients could avoid – driving or commuting using public transport, paying for fuel/parking, taking more than an hour off work, and spending time in the waiting room. Furthermore, they could spare the stress of attending a hospital and potential COVID-19 exposure during the pandemic. All 44 patients agreed that the process was punctual and efficient (Table 2).

Some of the common challenges experienced included poor internet connection that affected communication and patient difficulty with the software/hardware. However, the vast majority of patients commended that they found no challenges with the process.

The vast majority of patients were happy to use telehealth and were comfortable using the software. All of the patients responded that they could interact comfortably with their therapist and the vast majority did not report difficulty seeing/hearing their therapist when asked. Also, 43/44 (97.7%) patients indicated they would be happy to use telehealth for future consultations.

Long-term, socio-economic benefits of the virtual clinic are significant as patients save time and money. They spend less time away from their work/personal commitments. Less travelling also leads to less emissions and the associated environmental benefits.

Despite its success, virtual clinics will not always be able to fully replace face-to-face consultations with tactile feedback. Nine of the 44 patients (20.5%) did not find the virtual consultation to be equal to a face-to-face session. Looking at accessibility, 10/44 (22.7%) of patients required help from a friend/family member to use telehealth. There is also a cohort of patients, especially in rural north/western Ireland, who have inconsistent internet access. Virtual consultation also may be inappropriate with elderly patients, especially those with visual/ hearing difficulties.

As the need for telehealth services arose in response to COVID-19 social distancing guidance, this study was a prospective review of patients experience of accessing health services using a telehealth medium. Consequently, our study cohort consisted of a group of patients with a wide variety of hand trauma injuries and severities – complex upper limb trauma such as complex bone fractures, tendon injuries, nerve injuries, burns, amputation; and minor injuries such as small joint dislocations, ligament injuries, mallet fingers, closed central slip ruptures, and soft tissue injuries. However, despite the range of upper limb injury, all participants reported high satisfaction with the telehealth hand therapy service and indicated support for using telehealth services for future health care needs.

In summary, the vast majority of patients found the process user-friendly, communicated fluently, and would be happy to use it again. As COVID-19 persists with no end to the concept of social distancing in sight, this is important as it ensures continuity of service in accordance with national guidelines. Furthermore, it could provide significant socio-economic benefits in the future – as patients will not have to undergo the burden of travel, waiting in rooms, and missing full days of work/family commitments. Further study is required to compare the outcomes to face-to-face consultation and to measure long-term effects and cost efficiency.

### Table 1

| Patient demographics. |  |
|-----------------------|--|
| Gender                |  |
| Male                  | 33 (75%) |
| Female                | 11 (25%)  |
| Age                   |  |
| <18 (survey answered by guardian) | 7 (15.9%) |
| 18–29                 | 8 (18.1%) |
| 30–49                 | 15 (34.1%) |
| 50–64                 | 8 (18.1%) |
| 65+                   | 6 (13.6%) |
Table 2
Patient satisfaction bespoke survey results.

|                                           | STRONGLY DISAGREE | DISAGREE | NEUTRAL | AGREE | STRONGLY AGREE |
|-------------------------------------------|-------------------|----------|---------|-------|----------------|
| I am comfortable using telehealth software for virtual calls | 0.00%             | 0.00%    | 9.09%   | 29.55%| 61.36%         |
|                                           | 0                 | 0        | 4       | 13    | 27             |
| I was happy to undergo an assessment/treatment for my hand injury using telehealth | 0.00%             | 2.27%    | 9.09%   | 34.09%| 54.55%         |
|                                           | 0                 | 1        | 4       | 15    | 24             |
| The telehealth appointment was punctual and efficient | 0.00%             | 0.00%    | 0.00%   | 9.09% | 90.91%         |
|                                           | 0                 | 0        | 0       | 4     | 40             |
| The instructions given by the therapist during the telehealth session were clear and easy to follow | 0.00%             | 0.00%    | 0.00%   | 11.36%| 88.64%         |
|                                           | 0                 | 0        | 0       | 5     | 39             |
| I was able to interact comfortably with the hand therapist in the telehealth session | 0.00%             | 0.00%    | 0.00%   | 29.55%| 70.45%         |
|                                           | 0                 | 0        | 0       | 13    | 31             |
| I had difficulty seeing the therapist   | 75.00%            | 18.18%   | 2.27%   | 0.00% | 4.55%          |
|                                           | 33                | 8        | 1       | 0     | 2              |
| I had difficulty hearing the therapist  | 75.00%            | 15.91%   | 2.27%   | 2.27% | 4.55%          |
|                                           | 33                | 7        | 1       | 1     | 2              |
| I would rate the telehealth session as being equal to a session traditionally conducted face-to-face | 6.82%             | 13.64%   | 29.55% | 20.45%| 29.55%         |
|                                           | 3                 | 6        | 13      | 9     | 13             |
| I would be happy to use telehealth for future consultations | 2.27%             | 0.00%    | 22.73%  | 25.00%| 50.00%         |
|                                           | 1                 | 0        | 10      | 11    | 22             |
| I needed the help of family or friend to use telehealth | 63.64%            | 9.09%    | 4.55%   | 11.36%| 11.36%         |
|                                           | 28                | 4        | 2       | 5     | 5              |

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Declaration of Competing Interest

None declared.

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