

Importance of Routine Data Collection at Times of Disruption: Lessons from Speech and Language Therapy

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Introduction

- The pandemic has had an impact on all professions contributing to rehabilitation services, their methods of practice, the clients that they routinely serve and patient outcomes, including speech and language therapy (SLT)¹.
- Disruption theory indicates that a sudden interruption of usual practice and established routine may lead to innovation as well as positive and negative unintended consequences².
- The RCSLT Online Outcome Tool (ROOT)³ collects Therapy Outcome Measure (TOM)⁴ data from SLT services across the UK^{5,6}. Data has been submitted prior to and during the pandemic.

Methods

- Data captured in the 'peak' COVID19 period between 01 March – 31 August 2020 and from the same period in 2019 were analysed descriptively to calculate:
 - the difference in the total number of patients receiving SLT and treatment episodes delivered
 - the difference in the composition of cases in each period, exploring gender and age
- Data for patients with a primary medical diagnosis of stroke were selected for analysis to exemplify neuro-rehabilitation outcomes for dysphagia and aphasia.
- Data for patients with a positive diagnosis of COVID19 (COVID19+) were selected for analysis to identify the communication and swallowing needs associated with COVID19 and outcomes.

Results

The results presented below are from routinely collected data recorded in the ROOT.

Table 1 Comparison of ROOT data in 2019 and 2020

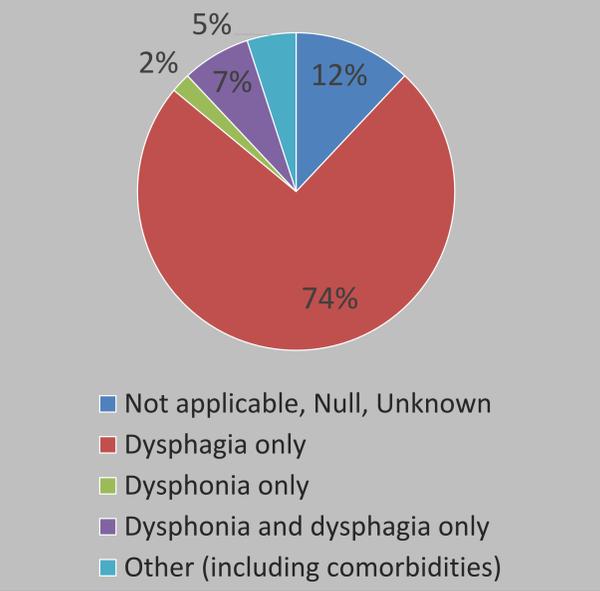
Overall data	39,356 patients	44,911 episodes of care
ROOT total data for completed episodes of care between 01 March-31 August	2019	2020
Total number of patients	3628	2324
Total number of episodes of care	3948	2464
Mean age of patients	64	65
Proportion - Male (where specified)	55%	57%
Proportion- Female (where specified)	45%	43%
ROOT Stroke data for completed episodes of care between 01 March-31 August	2019	2020
<i>Applies to patients with a primary medical diagnosis of Stroke</i>		
Total number of patients	506	122
Total number of episodes of care	587	122
Proportion with dysphagia	12%	55%
Proportion with aphasia	5%	32%
Median change in Impairment domain	0.5*	1.0**
Median change in Activity domain	0.5*	1.0**
Median change in Participation domain	0.5*	1.0**
Median change in Wellbeing domain	0.5*	1.0**
Median change in Carer-wellbeing domain	0.5*	0.75*

Table 2 Outcomes for COVID19+ dysphagia patients

Care pathway	Number of patients (n=81)	Median impairment start score	Median impairment end score	Median change in impairment
Improvement	26	3.0	4.5	1.5***
Sustain	16	3.0	3.0	0.0
Managed decline	14	2.0	1.0	0.0
Not specified	25	3.5	4.0	0.0

N.B. for Table 1 & 2: A clinically significant change in the TOMs (0.5)⁴ is indicated with *.

Figure 1 SLT diagnosis for COVID19+ patients



Key findings

- There were 43% fewer treatment episodes recorded when comparing the time period in the pandemic with that of the previous year, and 35% fewer patients.
- The patient profile of age and gender remained similar.
- Stroke patients improved more, on average, in 2020 than 2019, which was unexpected, and possibly related to the fact that patients referred to SLT in the pandemic excluded those with complex conditions which had been referred in previous years.
- Data for 163 COVID19+ patients were recorded, just over half of whom had completed datasets. Of these, almost ¼ presented with dysphagia. Clinically significant improvement is demonstrated for a subset of patients.

Discussion

- Overall, the data presented in Table 1 shows changes in SLT services between the same period prior to and during the pandemic. The most notable difference between the 2019 and 2020 periods is the reduction in patients and episodes of care recorded in the ROOT. This could reflect a delay in data entry to the ROOT, however this finding is strongly in line with results from a survey of practising UK speech and language therapists⁷ which indicates reductions in referrals and delivery of intervention during the pandemic.
- The differences observed in the stroke data were surprising. Further exploration of the data is required to identify the reasons for this, e.g. examining the patient characteristics or methods of practice. Or, this may signal innovation prompted by the disruption arising from the pandemic. It would be interesting to evaluate whether this change has sustained at a later point in time.
- The COVID19 dataset highlights the variability in patients' presenting condition (Figure 1). There is also variability in the focus of intervention for dysphagic patients (as illustrated in Table 2), highlighting that improvement is not always the objective. The role of SLT can be to maintain abilities or to support a managed decline. For those whose objective it is to improve, they are able to do so significantly.
- Collecting routine data is of benefit to the profession. It has enabled thorough examination of the impact of the profession at times of crisis compared with 'usual' service and can flag specific points of interest for further investigation.

References. 1. RCSLT (2020). Impact of the COVID-19 pandemic on the speech and language therapy profession. [Online]. Available at: [https://www.rcslt.org/-/media/docs/Covid/RCSLT-Survey---impact-of-COVID---FINAL-\(1\).pdf?la=en&hash=D06FBB0A50799AB99FF91F5DC814565019F79570](https://www.rcslt.org/-/media/docs/Covid/RCSLT-Survey---impact-of-COVID---FINAL-(1).pdf?la=en&hash=D06FBB0A50799AB99FF91F5DC814565019F79570) [Accessed 28/10/20 October 2020]; 2. Christensen, C., M. (2006) The Ongoing Process of Building a Theory of Disruption. Journal of Product Development & Management, 23, 39–55.; 3. RCSLT & Different Class Solutions Ltd. (2020). RCSLT Online Outcome Tool [Software]. Available at: <https://rcslt-root.org/>. Accessed [1708/20].; 4. Enderby, P. and John, A., (2015). Therapy Outcome Measures For Rehabilitation Professionals. J&R Press Ltd., Guildford, UK. ; 5.Moyse, K., Enderby, P., Chadd, K., Gadhok, K., Bedwell, M. and Guest, P., 2020. Outcome Measurement In Speech And Language Therapy: A Digital Journey. BMJ Health & Care Informatics. 27:e100085. doi: 10.1136/bmjhci-2019-100085.; 6.Enderby, P. & John, A. (1999) Therapy outcome measures in speech and language therapy: comparing performance between different providers. International Journal of Language and Communication Disorders, 34, 417-429; RCSLT (2020).; 7. RCSLT Surveys: Impact of the Pandemic of Service Provision. [Online]. Available at: <https://www.rcslt.org/learning/covid-19/rcslt-guidance#section-7>. [Accessed 28/10/20]