

## PEER REVIEW HISTORY

BMJ Paediatrics Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	The Initial Impact of COVID-19 on Paediatric Spinal Services in Scotland
<b>AUTHORS</b>	Newman, Matthew Garrido, Enrique Tsirikos, Athanasios I

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Reviewer name: Dr. Pranav Shah Institution and Country: Univ Hosp Wales United Kingdom of Great Britain and Northern Ireland Competing interests: None
<b>REVIEW RETURNED</b>	23-Aug-2020

<b>GENERAL COMMENTS</b>	Good clarity of thought and precise presentation.
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<b>REVIEWER</b>	Reviewer name: Dr. Gregor M Walker Institution and Country: Royal Hospital for Sick Children, Paediatric Surgery, Yorkhill NHS Trust, Glasgow, G3 8SJ United Kingdom of Great Britain and Northern Ireland Competing interests: None
<b>REVIEW RETURNED</b>	06-Sep-2020

<b>GENERAL COMMENTS</b>	<p>This article examines the wider effect of the restrictions related to Covid-19 pandemic on the delivery of a national service in Scotland. The authors highlight the potential negative effect on the reduction of referrals, outpatient activity (of clinician and affiliated health professionals), and inpatient/theatre activity on the paediatric spinal service in Scotland. This is demonstrated by a direct comparison of the same months in the previous year showing numerical reduction in referrals, elective clinic episodes and elective theatre cases. It is not clear at which point of the referral pathway this reduction has occurred (fewer children being recognised, fewer presenting to local primary or secondary care, reduction in extra-regional referrals, or fewer onward referrals in general). Although there is a reduction in duration of outpatient wait, it is not clear why some patients referred in January-March have still not been seen in July despite newer referrals being seen. The authors suggest that their operative figures are better than other services because they are a tertiary paediatric hospital, not co-located with an adult facility. Many other similar hospitals throughout the UK have seen a more significant reduction in elective capacity throughout this time period.</p> <p>However, although the article demonstrates a reduction in all of these aspects of this service, it mirrors the experience of all surgeons (and non-emergency hospital services). In fact, I suspect that a 64% reduction in referrals (which are mainly related to April-June), and a 34% reduction in elective surgical activity will be</p>
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	<p>modest in comparison to many other services. When I look at my own experiences, I find it astonishing and perplexing that the authors have been able to perform 66% of the operative cases compared to last year. At a time where many surgeons are struggling to find resources, I feel it would be important to demonstrate the clinical prioritisation used to select these patients for inpatient/surgical treatment at this time.</p> <p>Many services are still in the process of recovery, and planning for a medium-term future of delivering services whilst adhering to various restrictions. The authors touch on these but do not provide any novel suggestions to how these aspirations can be achieved (remote consultations, change in processes, reconfiguration of services to name a few).</p> <p>As it is presented, with the Editor's discretion, the information provided could perhaps be truncated into an original research letter.</p>
<b>REVIEWER</b>	<p>Reviewer name: Dr. Sabrina Donzelli  Institution and Country: ISICO, Via Bellarmino 13/1  MILAN, 20141 Italy  Competing interests: None</p>
<b>REVIEW RETURNED</b>	07-Sep-2020
<b>GENERAL COMMENTS</b>	<p>I agree with the authors that there is a need for reporting the secondary effect of the pandemic, as most of the currently available scientific literature is focused on COVID 19 symptoms, detection and treatment, there is a paucity of data on the effect of the pandemic on chronic diseases and on progressive diseases. Spine deformities is a peculiar category as the clinical presentation evolve very quickly during growth, therefore 3 to 6 months delay would mean higher rates of surgery. The impact of this pandemic and the increased in the health system costs will be seen in the coming years, but it is important to be aware of these risks and be prepared to face in the best possible way these issues. I think that it would be important to publish these data to increase the awareness and shift the attention to these long term effect of COVID 19 involving patients with chronic and progressive diseases.</p> <p>On the other side this research is just a description, no statistic is reported and the lack of clinical data is reducing the meaning and the clinical usefulness of the presented data.</p> <p>It would be interesting to know the curve magnitude of those who came compared to those who were visited with delay and the drop out. I would expect and increase in loss to follow up patients. I suggest to consider it to be suitable for a special issue or a commentary.</p> <p>It is well written I have just few suggestions:</p> <ol style="list-style-type: none"> <li>1. in the aim statement I would define better the population and the outcome considered.</li> <li>2. Line 25 there is a typo: was to be changed into way</li> </ol>

## VERSION 1 – AUTHOR RESPONSE

To Whom It May Concern,

Many thanks for your reviewer comments. As per the instructions, we have not replied in detail to each of the reviewer comments however have made relevant amendments to our manuscript.

We wish to re-submit our manuscript as a research letter. We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

Please let me know if you require further information.

Thank you for your consideration

Dr Matthew Newman

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Reviewer name: Dr. Gregor M Walker Institution and Country: Royal Hospital for Sick Children, Paediatric Surgery, Yorkhill NHS Trust, Glasgow, G3 8SJ United Kingdom of Great Britain and Northern Ireland Competing interests: None
<b>REVIEW RETURNED</b>	10-Oct-2020

<b>GENERAL COMMENTS</b>	<p>The majority of my earlier comments have been addressed in this revision. In my opinion, the message of the "hidden morbidity" of children from to a reduction in elective services is important to publicise.</p> <p>My only concern relates to the comparison of patient being seen on a monthly basis in 2019 and 2020 (figure 2). The split columns for 2020 relate to children who were still waiting to be seen in July, so I am confused as to why a child referred in January has still not been seen, when there is a shorter wait on average. The last paragraph suggests that these children have more severe deformities, and complex associated anomalies leading to them shielding. Would it be possible to include some data to demonstrate that this is the case? It would highlight that these particularly vulnerable patients, perhaps with the highest need for surgical input are being further disadvantaged by this situation (which is unlikely to improve in the short term).</p> <p>Also I realise that I am being pedantic in this point, but all the patients in 2019 have been seen because we are analysing the data from July 2020. Had all the 2019 patients been seen by July 2019?</p> <p>One minor point - since the National Health Service Reform (Scotland) Act 2004, the NHS in Scotland refers to the 14 geographic areas as "Health Boards" rather than "Trusts".</p>
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<b>REVIEWER</b>	Reviewer name: Dr. Sabrina Donzelli Institution and Country: ISICO, Via Bellarmino 13/1 MILAN, 20141 Italy Competing interests: None
<b>REVIEW RETURNED</b>	09-Oct-2020

<b>GENERAL COMMENTS</b>	I want to congratulate the authors the manuscript is suitable for publication. It is important to reveal how much this pandemic is affecting patients management in all the other diseases. In the near future the patients will pay this bill.
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## VERSION 2 – AUTHOR RESPONSE

Dear reviewers

Many thanks for your comments.

I agree with reviewers 1 and 2 - there will certainly be a price to pay for the morbidity associated with non-covid19 conditions.

In response to reviewer 2, I hope our revised manuscript has made this more clear.

The reason why some patients who were referred in January were still waiting at the time of data collection despite a shorter wait time, is that the mean wait time has been calculated based on those patients who had been seen in clinic. Those who were still waiting to be seen in clinic were excluded from the mean wait time calculation as we were not sure when they would be given a suitable clinic appointment.

We delved deeper into this point in the original manuscript, however with a limited word count for our research letter, we were not able to explore this further.

To make this more clear, we have amended the graph so that it shows only the number of referrals, and does not split this into number of patients seen and those still waiting to be seen.

Unfortunately data is not available on underlying conditions of patients still awaiting to be seen, however we do re-iterate the point that these patients are likely to be further disadvantaged due to the shielding policy and therefore less able to attend their clinic.

Thank you for pointing out the discrepancy that all patients have been seen from the 2019 cohort because we are analysing in 2020. The main reason for mentioning that there are still 60 patients waiting to be seen was for the readers to be aware that the mean wait time to be seen in clinic is likely to change, once we know how long these other 60 patients have had to wait for their clinic appointment.

We have substituted 'Trusts' for 'Health Boards' as per your suggestion.

In response to Editor in Chief:

We have made these amendments.

Many thanks

Matt Newman