



The Open Rheumatology Journal

Content list available at: <https://openrheumatologyjournal.com>



RESEARCH ARTICLE

The COVID 19 Pandemic-the Final Straw for Irish Rheumatology Services?

Patrick Mulkerrin^{1,*}, Laura Durcan¹, Shawn Chavrimootoo², David Kane³ and Gary Killeen⁴

¹Department of Rheumatology, Beaumont Hospital, Dublin 9, Ireland

²Department of Rheumatology, Navan General Hospital, Navan, Co Meath, Republic of Ireland

³Department of Rheumatology, Tallaght University Hospital, Dublin 24, Ireland

⁴Royal College of Physicians, Dublin, Ireland

Abstract:

Introduction:

The COVID-19 pandemic has caused disruption to the worldwide provision of acute and chronic care to patients. The effect has been particularly marked in rheumatology in Ireland, where the ability to provide acute and chronic care has been dramatically curtailed due to the combined effects of social distancing, staff redeployment and the repurposing of rheumatology units. Prior to the pandemic, there were significant challenges from an infrastructural and staffing level in Irish rheumatology.

Methods:

Using a questionnaire, the authors evaluated the effect of the first wave of the COVID 19 pandemic on rheumatology services.

Results:

Responses from 87% of Rheumatology specialist services in Ireland indicate that 83% of review appointments were remote, with 87% of new patient assessments in OPD were “in person”. Only 41% of usual outpatient activity could occur within existing infrastructure given guidelines re social distancing which would result a shortfall of 42000 patient appointments. Significant numbers of staff were reassigned from Rheumatology to services elsewhere.

Conclusion:

The COVID-19 pandemic has had a significant negative impact on access to struggling Irish Rheumatology services. Implementation of agreed recommendations for augmenting services must occur urgently.

Keywords: Rheumatology, Waiting, Lists, Reform, Survey, Pandemic.

Article History

Received: January 21, 2022

Revised: April 20, 2022

Accepted: May 16, 2022

1. INTRODUCTION

The COVID pandemic has resulted in over 274 million confirmed infections and 5.4 million deaths worldwide as per the World Health Organisation [1]. The Organisation of Economic Co-operation and Development has highlighted that the pandemic has exposed vulnerabilities in health services worldwide [2]. In Ireland, more than 5800 people have died due to COVID 19 infection [3]. Moreover, a recent report from the United Kingdom has highlighted the direct and indirect impact of COVID 19 pandemic highlighting major negative consequences for non-covid illnesses and their management [4].

Prior to the recent pandemic, the National Doctors Training and Planning (NDTP) report indicated that there is a need for a 149% increase in rheumatology consultant numbers (from 35.34 whole time employed (WTE) consultants to 88) in the Republic of Ireland [5] and the National Clinical Programme for Rheumatology (NCP) recommended the implementation of that report including its model of care. National Treatment Purchase Fund (NTPF) data highlights that 18,179 patients were waiting for an appointment in March 2020, prior to the COVID pandemic's impact on Irish health services. That number had increased by 8% to 18,361 patients in February 2021 [6]. Moreover, there was a 19% increase in the over 65 population in the 2016 Irish census and the number of people in that age group is set to increase by >150% by 2051 (from 629800 to 1.53million people), using the most

* Address correspondence to this author at the Department of Rheumatology, Beaumont Hospital, Dublin 9, Ireland; Tel: 00353860603334; E-mail: mulkerrp@tcd.ie

conservative demographic projections [7]. This ageing population is associated with excess chronic illnesses, with musculoskeletal diseases being a primary cause of excess disability. There are only 35.34 whole time equivalent (WTE) Consultant Rheumatologists for a population of 4.9 million people which compares poorly with published figures from Austria and USA [8, 9]. The authors examined the impact of the Covid-19 pandemic on already overstretched Irish Rheumatology services.

2. METHODS

Tables 1a and 1b highlight the questions included in a Survey Monkey questionnaire, which was completed by senior Rheumatologists in 13/15 services in the Republic of Ireland during the first surge of COVID 19. The aim was to evaluate the impact of the COVID 19 pandemic on these services.

3. RESULTS

The summary of the responses to the questionnaire from the 13/15 services that responded is tabulated in Table 1b. The reallocation of multidisciplinary staff, including Consultants during the first surge is summarized in Table 1a. It is notable that 83% of review appointments were remote while 87% of new patient assessments in OPD were “in person” attendances. Only 41% of usual outpatient activity could occur within existing infrastructure given guidelines regarding social distancing which would lead to a shortfall of 42000 patient appointments. Meanwhile, significant numbers of doctors and Allied health Professionals have been redeployed from Rheumatology outpatient services.

4. DISCUSSION

Our results indicate that a “perfect storm” of pre-existing prolonged waiting lists, increases in referrals for care, pent up demand for chronic rheumatological disease management in primary care during the pandemic, reduced clinic capacity due to redeployment of clinicians to General Internal Medicine, an ageing population, insufficient clinical personnel and limited outpatient capacity in inadequate infrastructure is ravaging Rheumatology services in the Republic of Ireland.

The aforementioned NTPF data highlights not only the chronically prolonged waiting lists which predated the COVID-19 pandemic but emphasize a 12% increase in patients on waiting lists for rheumatology assessment during the first 11 months of the crisis [6]. Published data from Austria and the USA which describe severely inadequate senior staffing levels in those jurisdictions, serve to highlight a major dearth of Consultant Rheumatologist staffing numbers in the Republic of Ireland [8, 9]. In fact, Irish consultant/population ratios are 50% less than equivalent Austrian and 37.5% less than USA ratios. The current and projected ageing of the Irish population, with an associated augmentation of age-related rheumatological conditions, further exacerbates the difficulties facing these services [7].

Early diagnosis and introduction of disease modifying anti-rheumatic drugs (DMARDs) is the recommended approach to the management of most autoimmune rheumatological disorders and results in improvement of outcomes and

potentially reduced long term disability [10]. Our study highlights increasing delays in access to multidisciplinary rheumatological outpatient departments, at least partially offset by innovative use of virtual clinics and the use of technology such as video assessments.

Table 1a. Staffing level reductions in rheumatology departments in Ireland.

Did you lose rheumatology staff due to re-allocation to ward and other services since the onset of COVID pandemic service restrictions?	12 Yes (92%) 1 No (8%)
Total WTE of OPD staff who remain re-allocated and have not returned to rheumatology service-June 2020	
Consultants	3.5
NCHDs	18
Nurses	16.5
Physiotherapists	7
Occupational Therapists	3
Total	48

Table 1b. Breakdown of services interrupted by COVID-19 pandemic.

Did you continue to provide new patient services since COVID-19 pandemic began	9 Yes (69%) 4 No(31%)
Is there currently a backlog in new persons' attendance?	13 yes (100%)
Average estimate of how behind new patients attendances are	16 weeks(Range 2-72 weeks)
Did you continue to provide review patient services since COVID-19 pandemic began	12 Yes (92%) 1 No(8%)
Is there currently a backlog in review persons' attendance?	9 Yes (69%) 4 No(31%)
Average estimate of how behind review patients' attendances are	8 weeks (Range 0-24 weeks)
Estimated breakdown of how new patients are seen.	Telephone 13% Video 0% Person 87%
Estimated breakdown of how review patients are seen.	Telephone 82% Video 1% Person 17%
Under the new social distancing restrictions, estimate % of usual OPD attendances at your rheumatology clinic which can now be accommodated in the same clinic time?	41%
What is the main barrier to providing an adequate rheumatology service for the next 12 months?	Lack of OPD clinic space including seating in waiting areas (100%)
Average estimate of how many rooms can be available for virtual clinics at each site.	2.7(Range 0-6)

When patients with rheumatological diseases develop severe arthritis of hip or knee meriting surgery, the best outcomes are associated with the early surgical intervention [11] Likewise, early spinal surgery for conditions such as cervical myelopathy and spinal stenosis [12], both common complications of syndromes such as rheumatoid arthritis and osteoarthritis, results in improved outcomes for affected patients. In the current crisis, such procedures are delayed and limited to those with severe symptoms and/or progressive

spinal compressive signs.

Patients with rheumatoid arthritis are at increased risk of non rheumatological complications such as cardiovascular events, which are more prevalent in sufferers at a rate higher than explained by standard vascular risk factors [13]. Restricted specialist assessment by rheumatologists, will result in delayed identification and management of cardiovascular risk factors and thus a heightened risk of cardiovascular events.

Mental Health issues including anxiety/depression are common among sufferers of rheumatological disease [14]. Similarly, pain syndromes including fibromyalgia are extremely common and are common reasons for referral to rheumatological services [15]. Early referral to specialist pain and mental health services by rheumatologists will be delayed during the pandemic due to poor access to rheumatology clinics.

It would be worthwhile if similar studies exploring the effects of the COVID pandemic on rheumatology services in other jurisdictions were performed.

CONCLUSION

In summary, challenging times loom for sufferers of rheumatological disease and consultant-lead teams involved in their management in the Republic of Ireland. The NCPR recommendation to implement the NDTP Manpower Report including the model of care must be actioned as a matter of urgency and innovative approaches to patient care should be embraced. Moreover, enhancement of resources to other specialties including Internal Medicine should minimize the redeployment of vital staff away from Rheumatology. It would be worthwhile if similar studies exploring the effects of the COVID pandemic on rheumatology in other jurisdictions were performed.

LIST OF ABBREVIATIONS

NDTP	= National Doctors Training and Planning
WTE	= Whole Time Employed
NCPR	= National Clinical Programme for Rheumatology
NTPF	= National Treatment Purchase Fund
DMARDs	= Disease Modifying Anti-Rheumatic Drugs

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

No human or animal was used in this study.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

Not applicable.

FUNDING

None.

CONFLICT OF INTEREST

All of the authors confirm that they have no conflict of interest.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES

- <https://www.google.ie/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjBr7rt3fD0AhWshOAKHYbWB2oQ7OUFegQIIRA D&url=https%3A%2F%2Ffourworldindata.org%2Fcoronavirus-data&usg=AOvVaw368K2JuuArUhrj06R2R7n2021>.
- <https://www.google.ie/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewi-kqKSgPD0AhWillkEHUunA40QFnoECAIQAQ&url=https%3A%2F%2Fwww.oecd.org%2Fhealth%2F-covid-19.htm&usg=AOvVaw3u-sH20y5MnLS7DJEOqHE02021>.
- <https://www.google.ie/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjDzviBgvD0AhWgkIkEHV2BAwYQ7OUFegQIIRA D&url=https%3A%2F%2Fgithub.com%2FCSSSEGISandData%2FCOVID-19&usg=AOvVaw1vKpECdLTiTa7d-LqfWRs02021>.
- https://www.google.ie/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewi31PCAg_D0AhX0j4kEHUaiCCgQFnoECBIQAQ&url=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F1018698%2F1373_Direct_and_Indirect_Health_Impacts_of_C19_Detailed_Paper_.pdf&usg=AOvVaw3Erhl6XaUQJFR4q68dy6xQ2021.
- <https://www.hse.ie/eng/staff/leadership-education-development/met/plan/high-level-demand-report.pdfhttps://www.ntpf.ie/home/pdf/2021/04/nationalnumbers/out-patient/National02.pdf>
- <https://www.ntpf.ie/home/pdf/2021/02/nationalnumbers/out-patient/National02.pdf>
- <https://www.cso.ie/en/releasesandpublications/ep/p-plfp/populationandlabourforceprojections2017-2051/>
- Puchner R, Vavrovsky A, Pieringer H, Hochreiter R, Machold KP. The supply of rheumatology specialist care in real life. Results of a nationwide survey and analysis of supply and needs. *Front Med (Lausanne)* 2020; 7: 16-21. [<http://dx.doi.org/10.3389/fmed.2020.00016>] [PMID: 32083088]
- Battafarano DF, Ditmyer M, Bolster MB, *et al.* 2015 American College of Rheumatology Workforce Study: Supply and Demand Projections of Adult Rheumatology Workforce, 2015-2030. *Arthritis Care Res (Hoboken)* 2018; 70(4): 617-26. [<http://dx.doi.org/10.1002/acr.23518>] [PMID: 29400009]
- Vell VP, Machold KP, Eberl G, Stamm TA, Uffmann M, Smolen JS. Benefit of early referral and very early therapy with DMARDs in patients with RA. *Rheumatology* 2004; 43(7): 906-91. [<http://dx.doi.org/10.1093/rheumatology/keh199>] [PMID: 15113999]
- Mandl LA. Determining who should be referred for total hip and knee replacements. *Nat Rev Rheumatol* 2013; 9(6): 351-7. [<http://dx.doi.org/10.1038/nrrheum.2013.27>] [PMID: 23478495]
- Hacker RJ, Cauthen JC, Gilbert TJ, Griffith SL. A prospective randomized multicenter clinical evaluation of an anterior cervical fusion cage. *Spine* 2000; 25(20): 2646-55. [<http://dx.doi.org/10.1097/00007632-200010150-00017>] [PMID: 11034651]
- Crowson CS, Liao KP, Davis JM III, *et al.* Rheumatoid arthritis and cardiovascular disease. *Am Heart J* 2013; 166(4): 622-628.e1. [<http://dx.doi.org/10.1016/j.ahj.2013.07.010>] [PMID: 24093840]
- Matcham F, Rayner L, Steer S, Hotopf M. The prevalence of depression in rheumatoid arthritis: a systematic review and meta-analysis. *Rheumatology (Oxford)* 2013; 52(12): 2136-48. [<http://dx.doi.org/10.1093/rheumatology/ket169>] [PMID: 24003249]
- Pollard LC, Kingsley GH, Choy EH, Scott DL. Fibromyalgic rheumatoid arthritis and disease assessment. *Rheumatology (Oxford)* 2010; 49(5): 924-8. [<http://dx.doi.org/10.1093/rheumatology/kep458>] [PMID: 20100795]