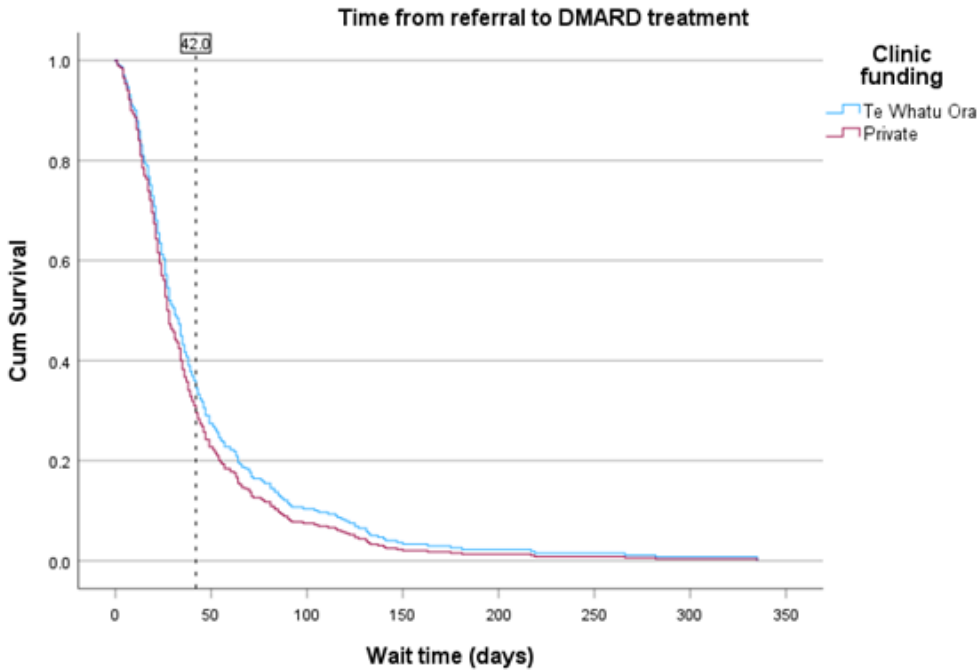


Table 1: Demographic and disease characteristics.

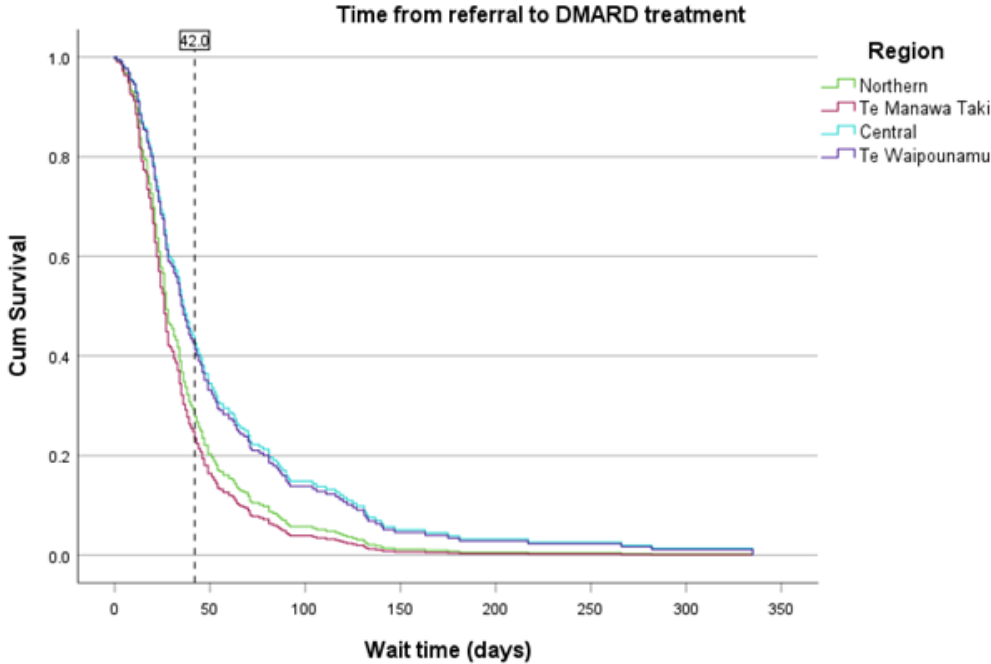
| Variable | | N/355 (%) |
|---|--------------------|-----------|
| Female sex | | 264 (74) |
| Clinic funding by Te Whatu Ora – Health New Zealand | | 286 (80) |
| Domicile of patient, Te Whatu Ora – Health New Zealand region | Northern | 123 (34) |
| | Te Manawa Taki | 54 (15) |
| | Central | 64 (18) |
| | Te Waipounamu | 114 (32) |
| Duration of symptoms | <3 months | 109 (30) |
| | 3 to 12 months | 175 (49) |
| | >12 months | 71 (20) |
| Ethnicity | European | 204 (57) |
| | Asian | 52 (14) |
| | Pacific peoples | 37 (10) |
| | Māori | 31 (8) |
| | Other | 31 (8) |
| NZDep2018 quintile | 1 (most deprived) | 59 (16) |
| | 2 | 89 (25) |
| | 3 | 71 (20) |
| | 4 | 68 (19) |
| | 5 (least deprived) | 66 (18) |
| Rurality (GCH) | U1 (most urban) | 232 (65) |
| | U2 | 48 (13) |
| | R1 | 54 (15) |
| | R2 | 16 (5) |
| | R3 (most rural) | 3 (1) |
| | Not identified | 2 (1) |

Figure 1: Time to DMARD treatment for patients treated within Te Whatu Ora – Health New Zealand compared to those in the private sector.



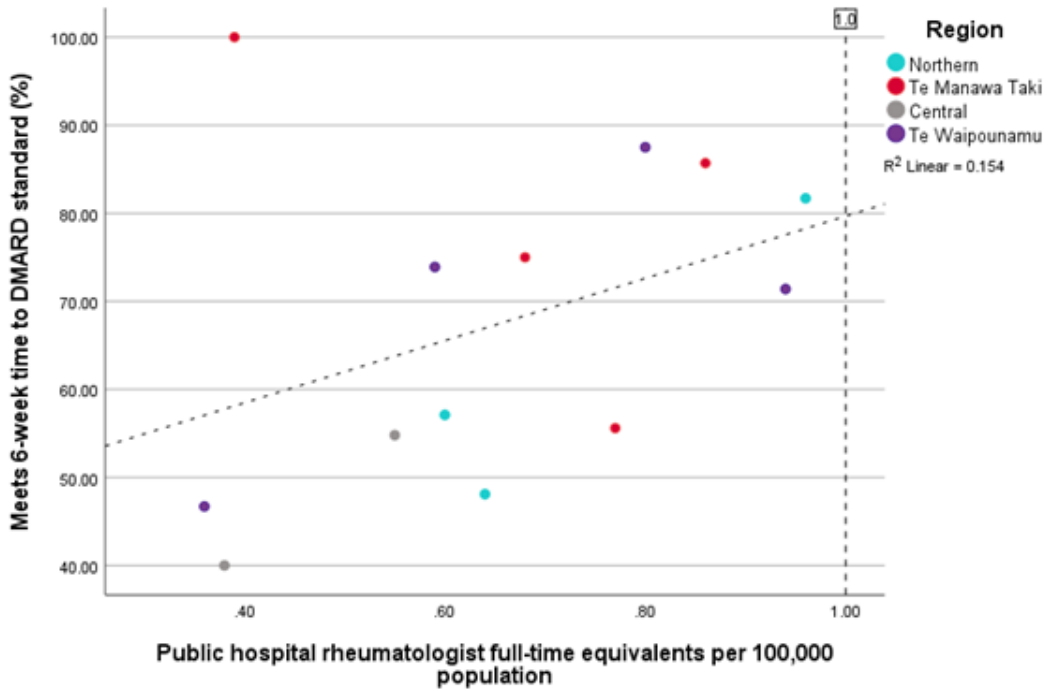
The vertical line at *wait time* = 42 days shows the proportion of patients not commencing DMARD treatment by 6 weeks.

Figure 2: Time to DMARD treatment by Te Whatu Ora – Health New Zealand region of patient residence.



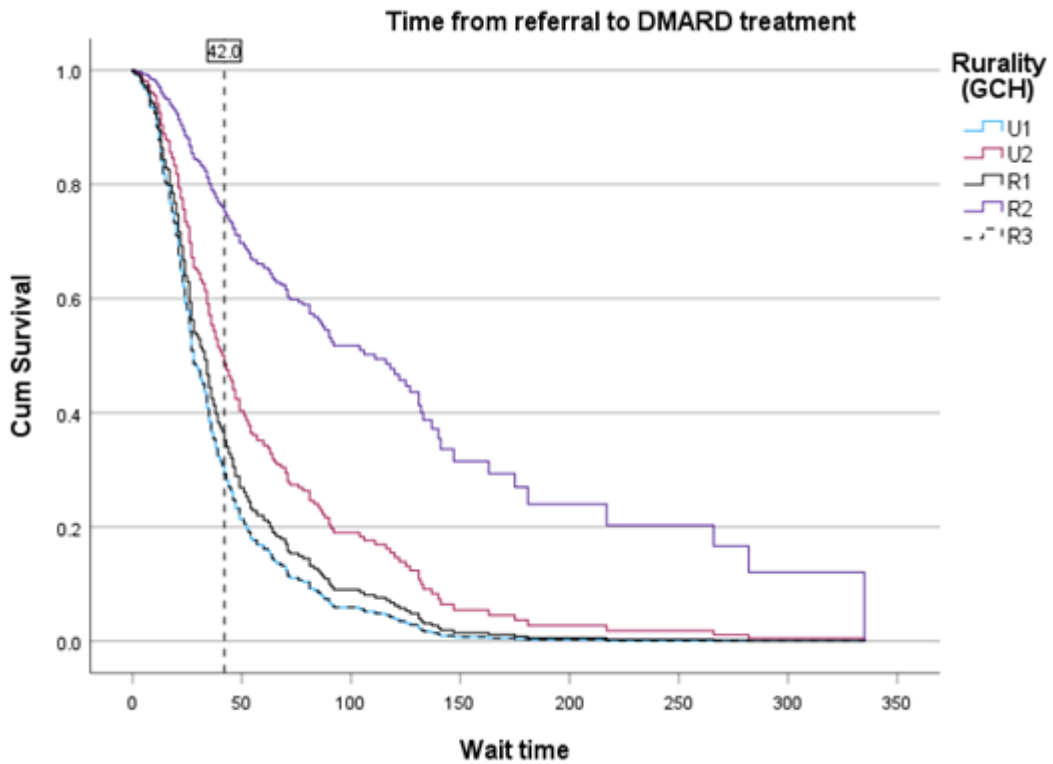
The vertical line at *wait time* = 42 days shows the proportion of patients not commencing DMARD treatment by 6 weeks. Only patients seen through Te Whatu Ora – Health New Zealand clinics are included.

Figure 3: Variation in proportion of patients commencing DMARD by 6 weeks, by specialist rheumatologist staffing levels.



Each data point represents a particular district rheumatology service, which are coloured according to Te Whatu Ora – Health New Zealand region in which the service is based. The vertical line at FTE/100,000 = 1.0 suggests that at this level of staffing, 80% of patients would be started on DMARD therapy by 6 weeks. Only patients seen through Te Whatu Ora – Health New Zealand clinics are included.

Figure 4: Time to DMARD treatment by rurality of patient residence.



The vertical line at wait time = 42 days shows the proportion of patients not commencing DMARD treatment by 6 weeks. Only patients seen in Te Whatu Ora – Health New Zealand clinics were included. Note that the lines for U1 and R3 are superimposed.

Table 2: Multivariable Cox proportional-hazard model* for factors that might be associated with time from referral to starting DMARD treatment. Only patients seen through Te Whatu Ora – Health New Zealand clinics are included.

| Variable | | HR (95% CI) | P-value |
|---------------------------------------|---------------------------------------|---------------------|---------|
| Rheumatologist FTE/100,000 population | | 2.47 (1.27 to 4.81) | 0.008 |
| Ethnicity (p=0.42) | Non-Māori/non-Pacific peoples (n=219) | Reference | |
| | Māori (n=29) | 0.93 (0.59 to 1.47) | 0.76 |
| | Pacific peoples (n=36) | 0.76 (0.51 to 1.14) | 0.19 |
| NZDep2018 quintile (p=0.51) | Categories not shown | | |
| Rurality (GCH, p<0.001) | U1 (n=183) | Reference | |
| | U2 (n=41) | 0.61 (0.41 to 0.90) | 0.01 |
| | R1 (n=46) | 0.86 (0.62 to 1.21) | 0.39 |
| | R2 (n=11) | 0.20 (0.09 to 0.43) | <0.001 |
| | R3 (n=3) | 0.90 (0.27 to 3.04) | 0.86 |
| Gender | Male (n=68) | 1.06 (0.79 to 1.42) | 0.71 |
| Age (decades) | | 0.94 (0.87 to 1.02) | 0.12 |

* Overall model -2 log likelihood 249, p<0.001.