Analyzing GP Appointment Capacity and Utilization in NHS England

Key Questions

- Was GP appointment capacity adequate in 2020-2022?

- What factors contributed to missed GP appointments?

The financial and human costs of missed appointments

- **Financial**: 7.2 million missed GP appointments in a year cost the NHS £216 million. (NHS England 2019)

- **Human**: "Missed appointments represent a significant risk marker for all-cause mortality, particularly in patients with mental health conditions." (McQueenie et al 2019)
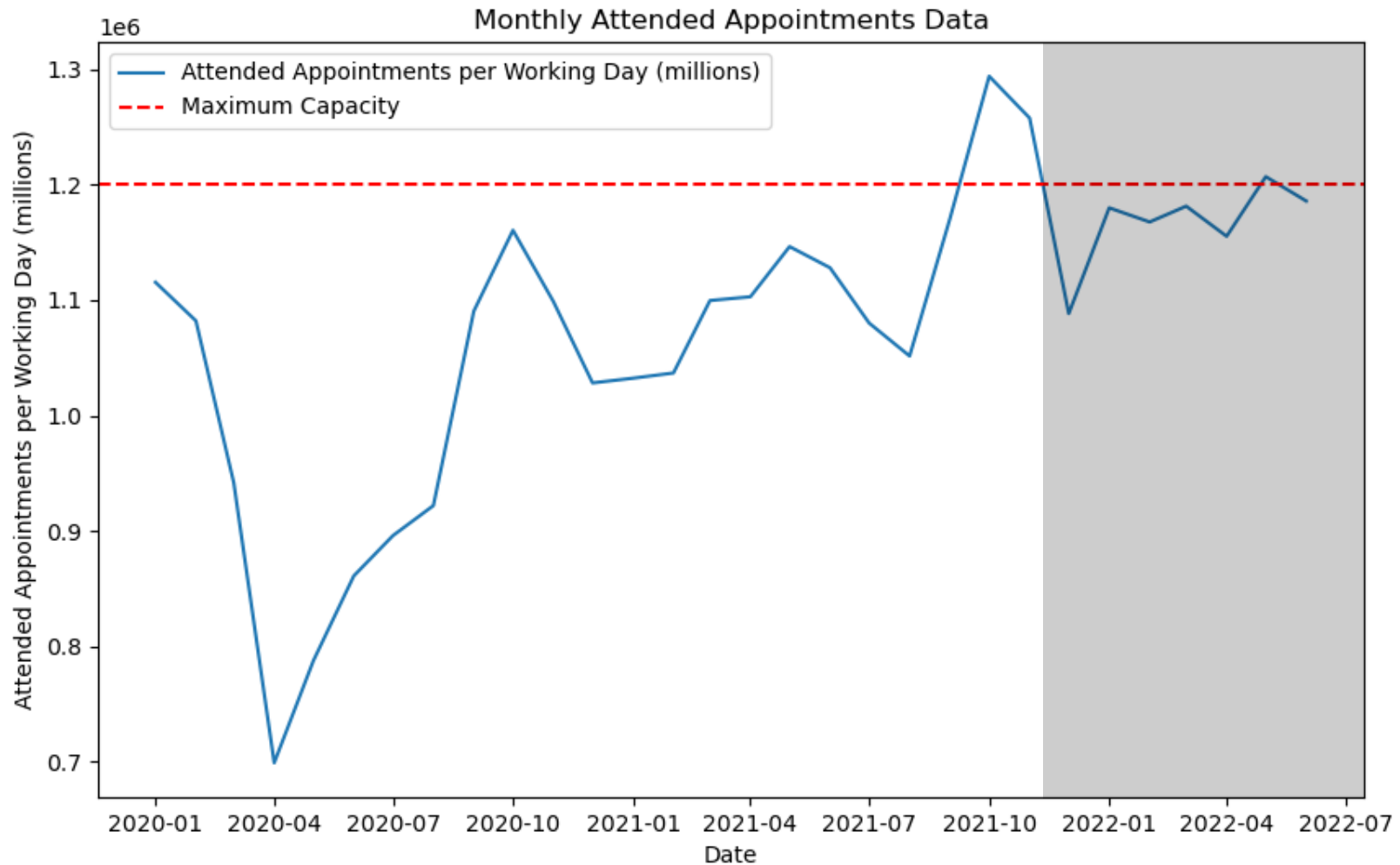
Key Metrics

- **Capacity** is measured by number of appointments per *working* day.

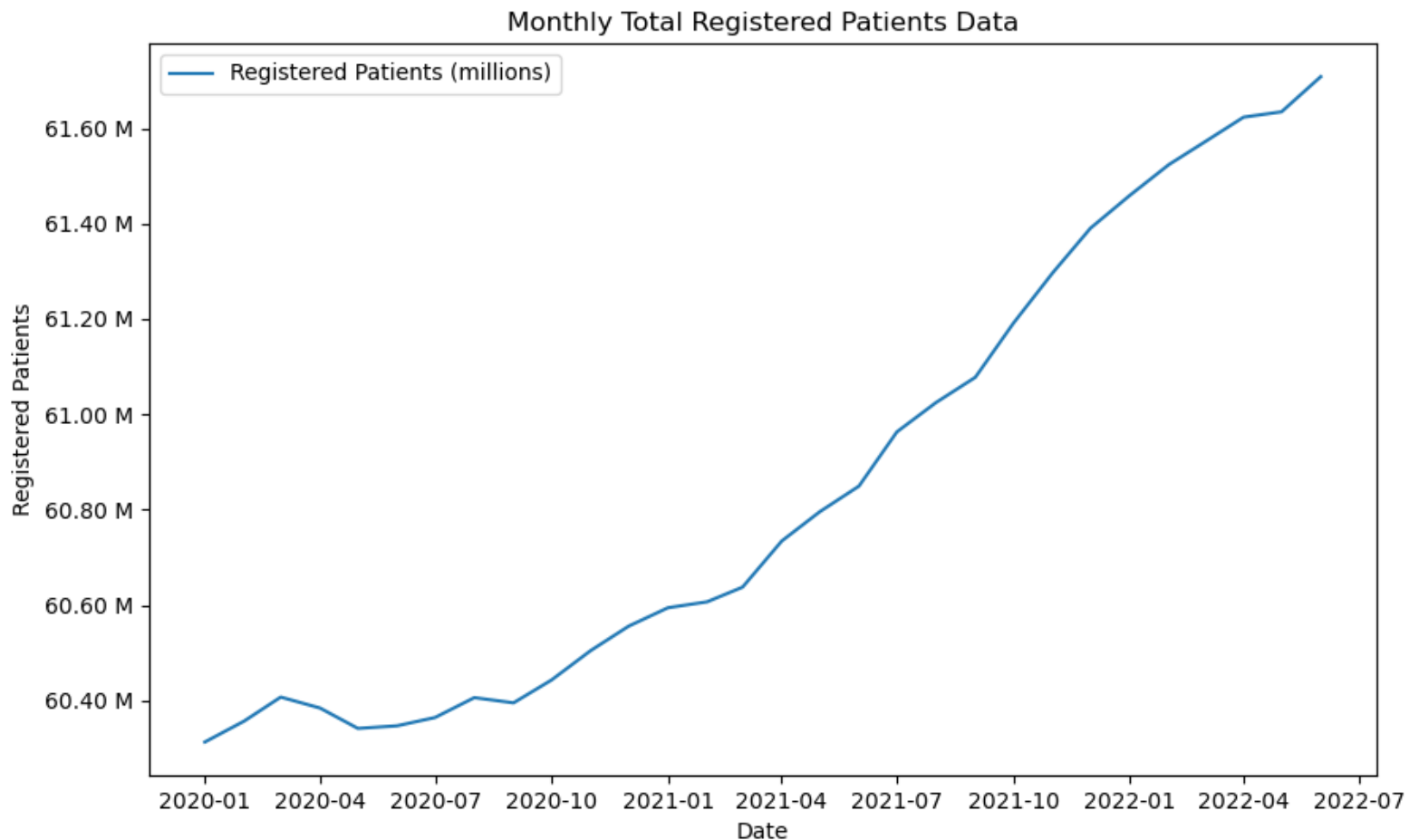- **Utilization** is measured by the percentage of *attended* appointments.

Appointments per working day were near or above max capacity from September 2021.
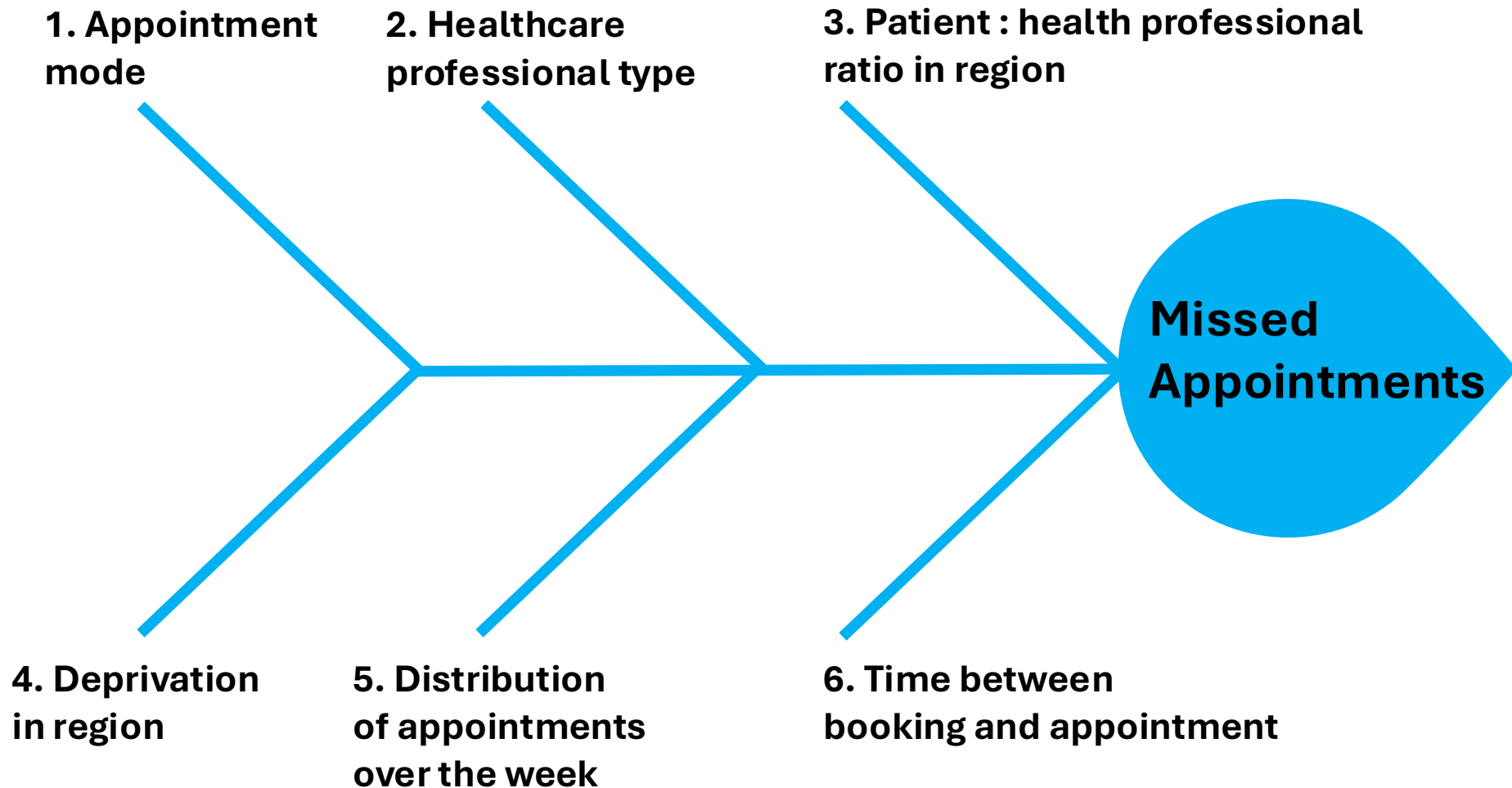

Monthly Appointments Data
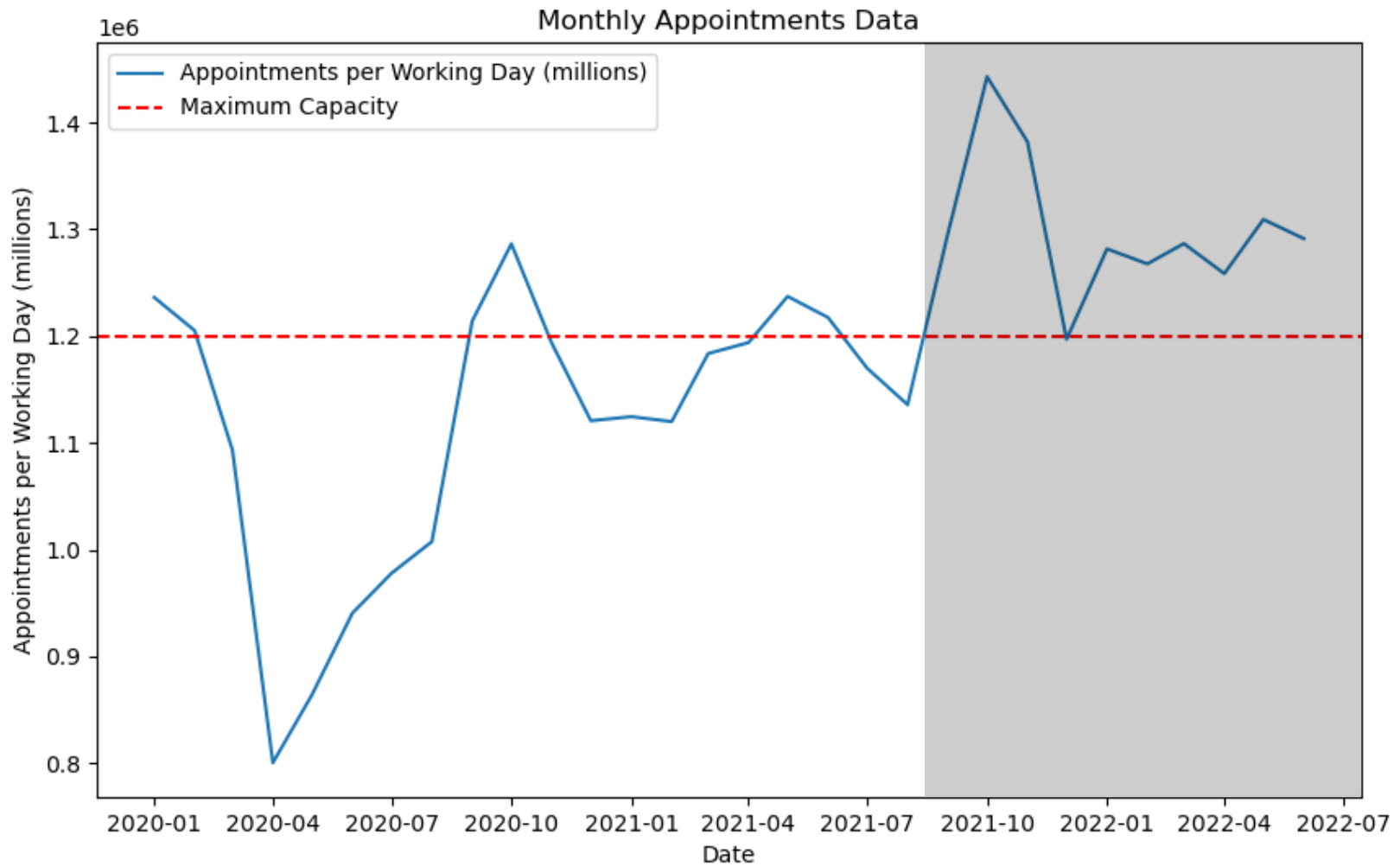
Attended appointments are below or near max capacity from December 2021.

The number of registered patients is increasing over time.

Monthly Total Registered Patients Data

Structured Thinking Approach

1. Appointment mode

2. Healthcare professional type

3. Patient : health professional ratio in region

Missed Appointments

4. Deprivation in region

5. Distribution of appointments over the week

6. Time between booking and appointment

1. Remote appointments are better attended than face-to-face ones.

Appointment Attendance by Appointment Mode

Telephone — 95.1%

Video/Online — 91.2%

Face-to-Face — 89.3%

Home Visit — 73.9%

Avg = 91.2%

Attendance Percentage
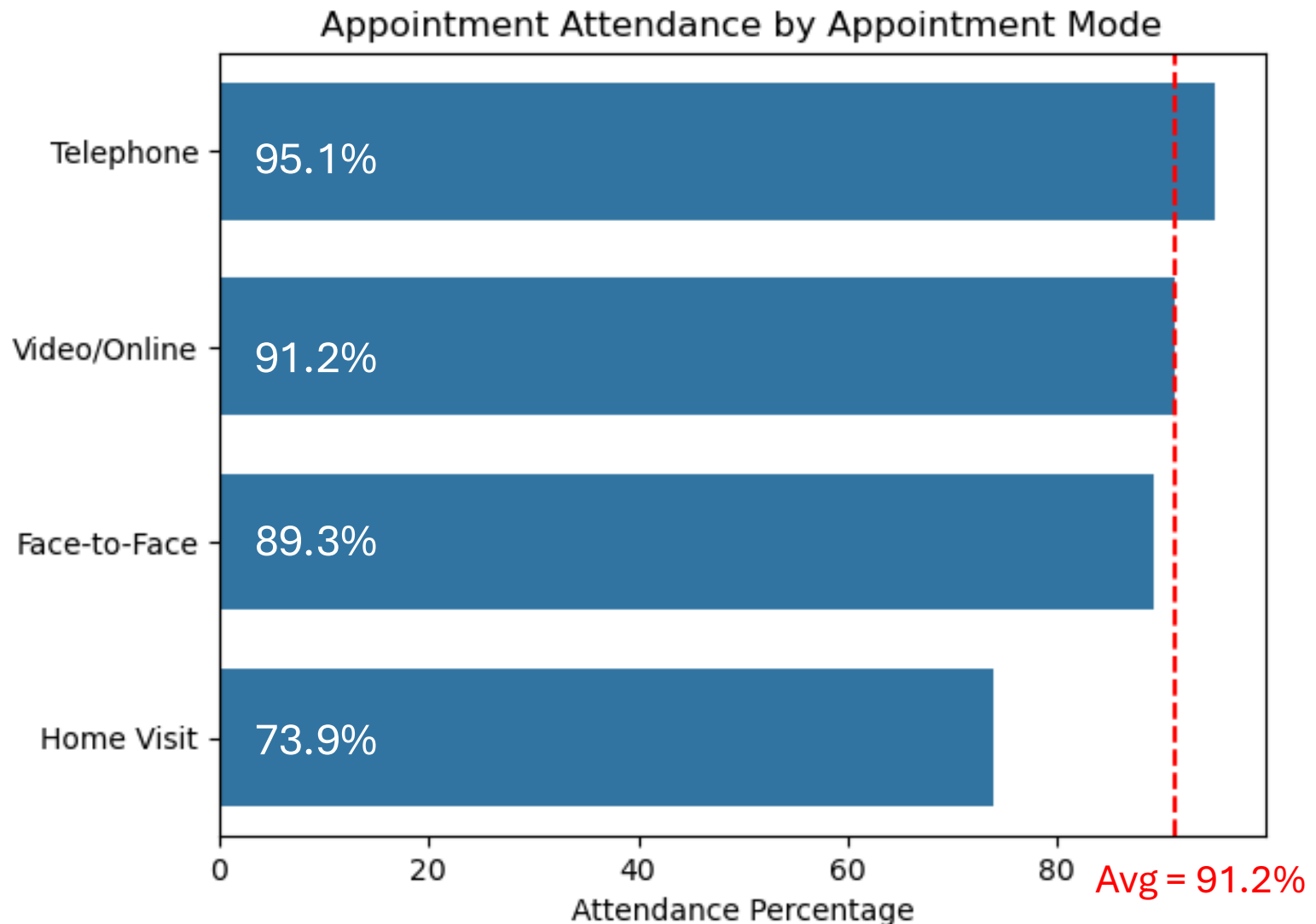
2. Attendance is higher at appointments with GPs than with other staff.

Appointment Attendance by Healthcare Professional Type

GP — 94.3%

Other Practice staff — 88.1%

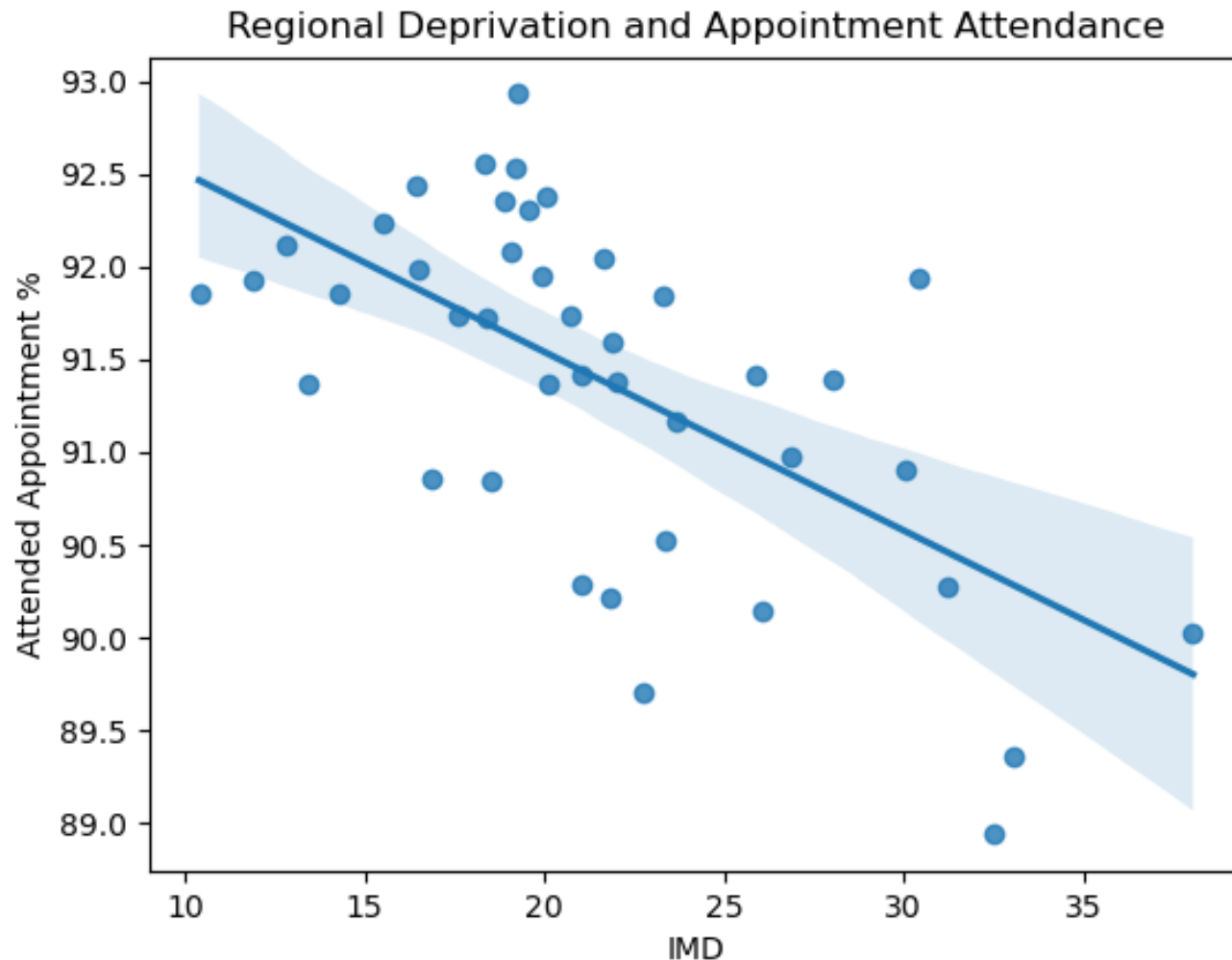Attendance Percentage

Avg = 91.2%
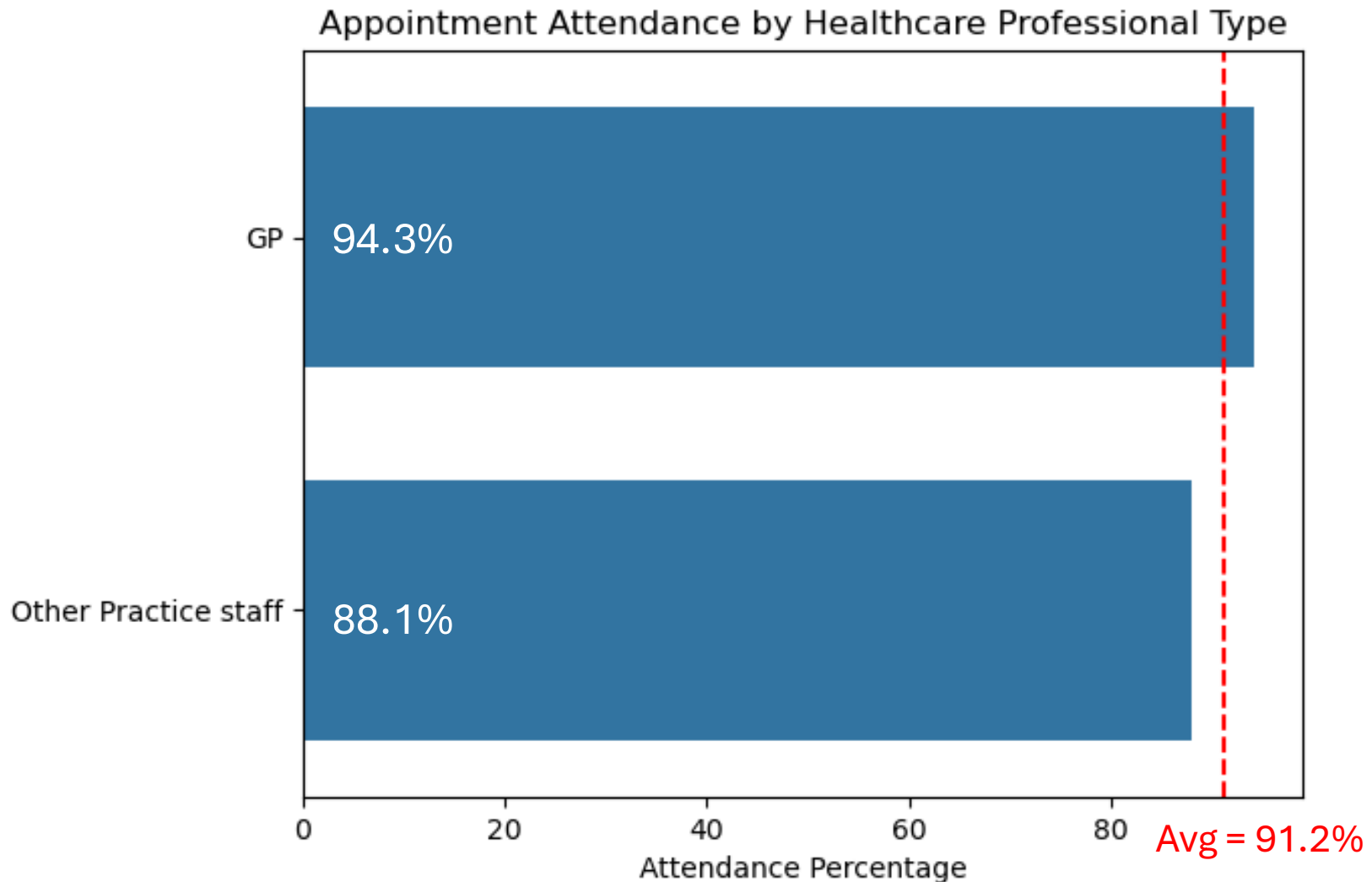
3. There is a negative relationship between patient : clinical staff ratio and appointment attendance.

ICB Patient:Clinical Staff Ratio and Appointment Attendance Data for June 2022
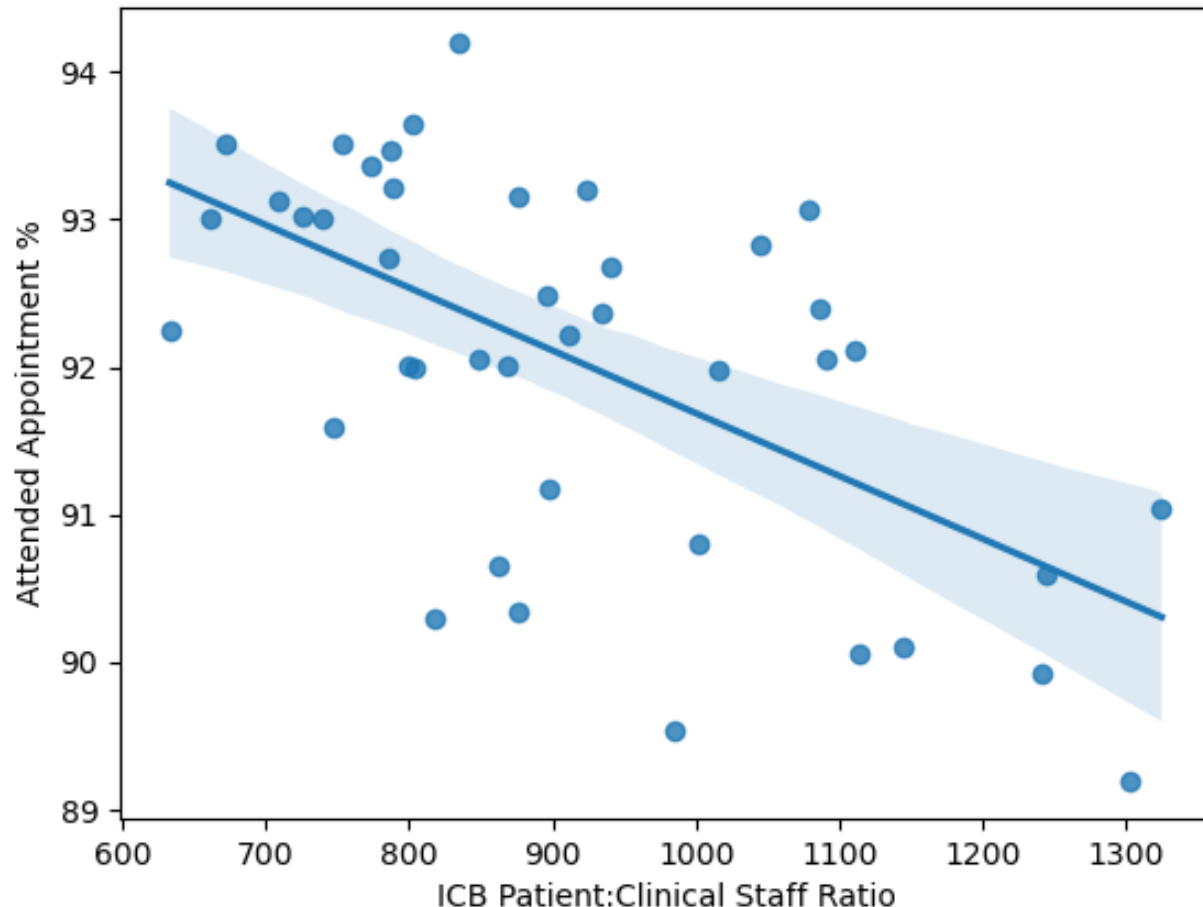
4. More deprived areas have lower appointment attendance rates.

Regional Deprivation and Appointment Attendance

5. Appointments aren't spread evenly across weekdays.

Appointments by Day of Week

Day	Average Appointments
Monday	1.24m
Tuesday	1.29m
Wednesday	1.23m
Thursday	1.19m
Friday	1.11m

Max Capacity

Average Appointments per Day (million)

1e6
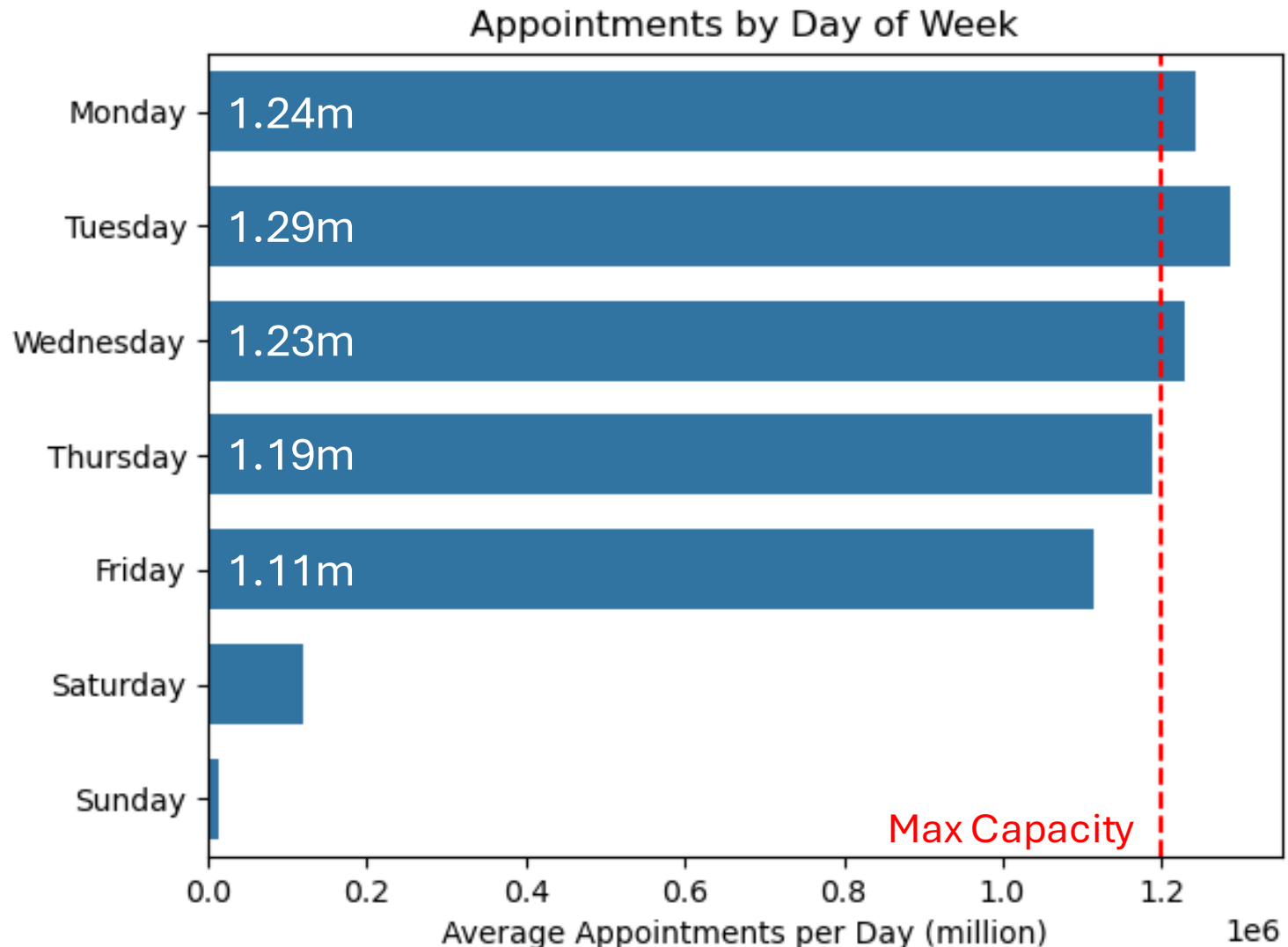
6. Attendance decreases when time between booking and appointment increases.

Appointment Attendance by Time between Booking and Appointment

Duration	Attendance Percentage
Same Day	95.8%
1 Day	92.4%
2 to 7 Days	89.8%
8 to 14 Days	86.5%
15 to 21 Days	83.9%
22 to 28 Days	81.5%
More than 28 Days	72.5%

91.2% Avg.
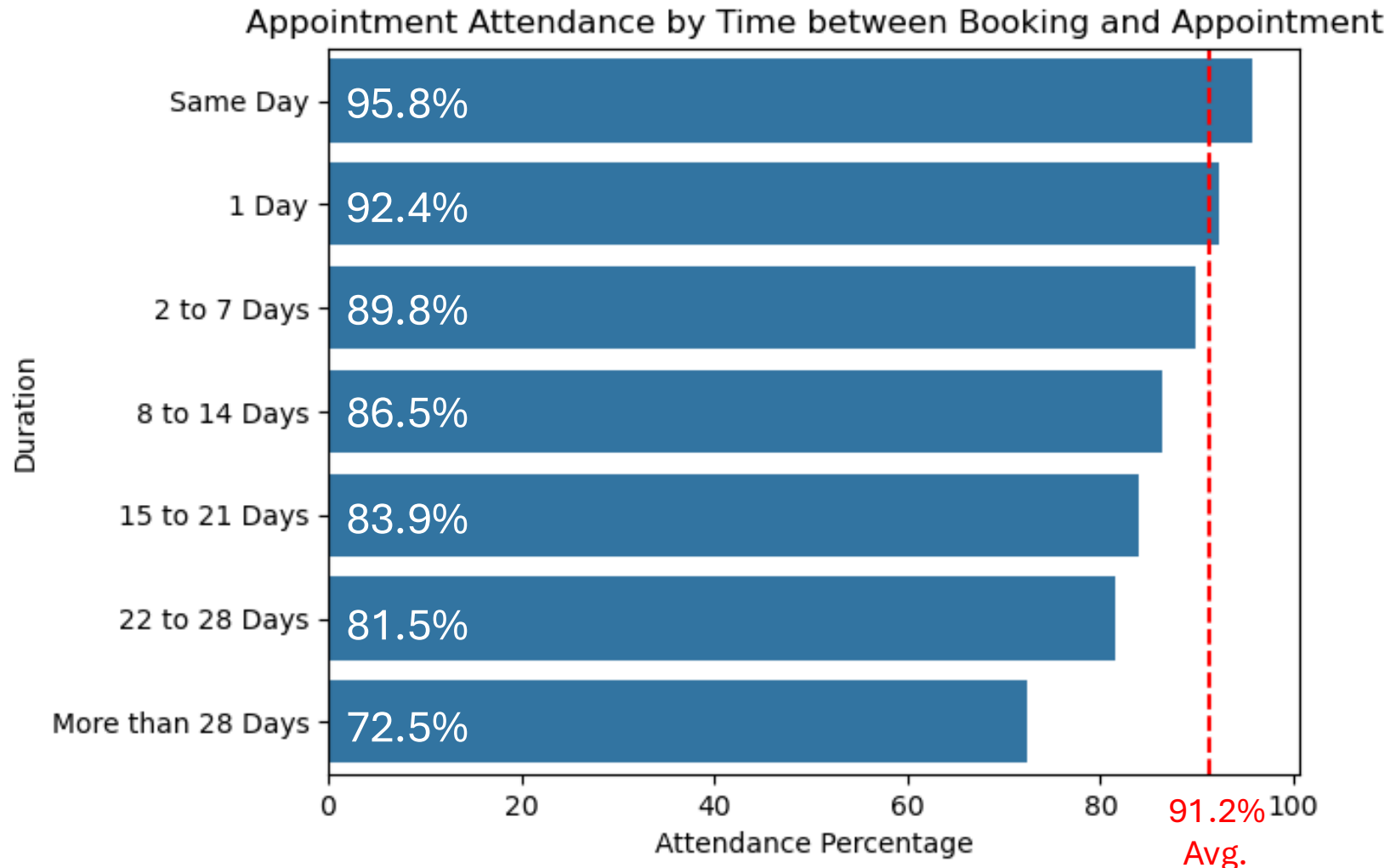
Recommendations

- Hire more healthcare professionals in deprived regions to increase appointments per working day, ideally scheduled later in the week.

- Doing so will likely decrease the time between booking and appointments, which in turn will improve appointment utilization through increased attendance.

- Implement cost effective means for increasing appointment attendance, such as training receptionists to encourage patients to write down their own appointment details and to notify the practice if they cannot attend. (Bull et al 2023)

Reference List

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- London School of Economics and Political Science (2022) New research suggests patients don't like Mondays when it comes to appointments, with important implications for appointment scheduling. Available at: https://www.lse.ac.uk/News/Latest-news-from-LSE/2022/i-September-22/This-study-emerged-to-solve-a-problem-that-costs-millions-and-causes-lots-of-frustration-amongst-NHS-staff (Accessed: 24 February 2025).

- McQueenie, R. et al (2019) Morbidity, mortality and missed appointments in healthcare: a national retrospective data linkage study. Available at: https://bmcmedicine.biomedcentral.com/articles/10.1186/s12916-018-1234-0 (Accessed: 24 February 2025).

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- NHS (2019) Missed GP appointments costing NHS millions. Available at: https://www.england.nhs.uk/2019/01/missed-gp-appointments-costing-nhs-millions/ (Accessed: 24 February 2025).