



Evolving Trauma Demands: Trends in Orthopaedic Trauma Volume, 2016–2024

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Introduction

Health services in the UK are under pressure from a **growing and aging population** [1], with Trauma and Orthopaedics no exception. New national initiatives are focussed on reducing elective waiting lists [2], however the **rising burden of trauma** has had comparatively little investment [3].

Aim

To **quantify the rising trend in trauma** at a major trauma centre (MTC) between 2016 and 2024, and identify how the service has adapted in order to **aid service planning**.

Methods

This **retrospective operational audit** at Southmead hospital, a UK MTC, collected data from theatre records and archived trauma meeting lists from June and November of 2016, 2019, 2021 and 2024. After exclusions, data were collected for **1376 operations**, including date, diagnosis, operation type and theatre where performed. Data on number of patients discussed and number of patients listed for an operation were collected from **237 trauma lists**.

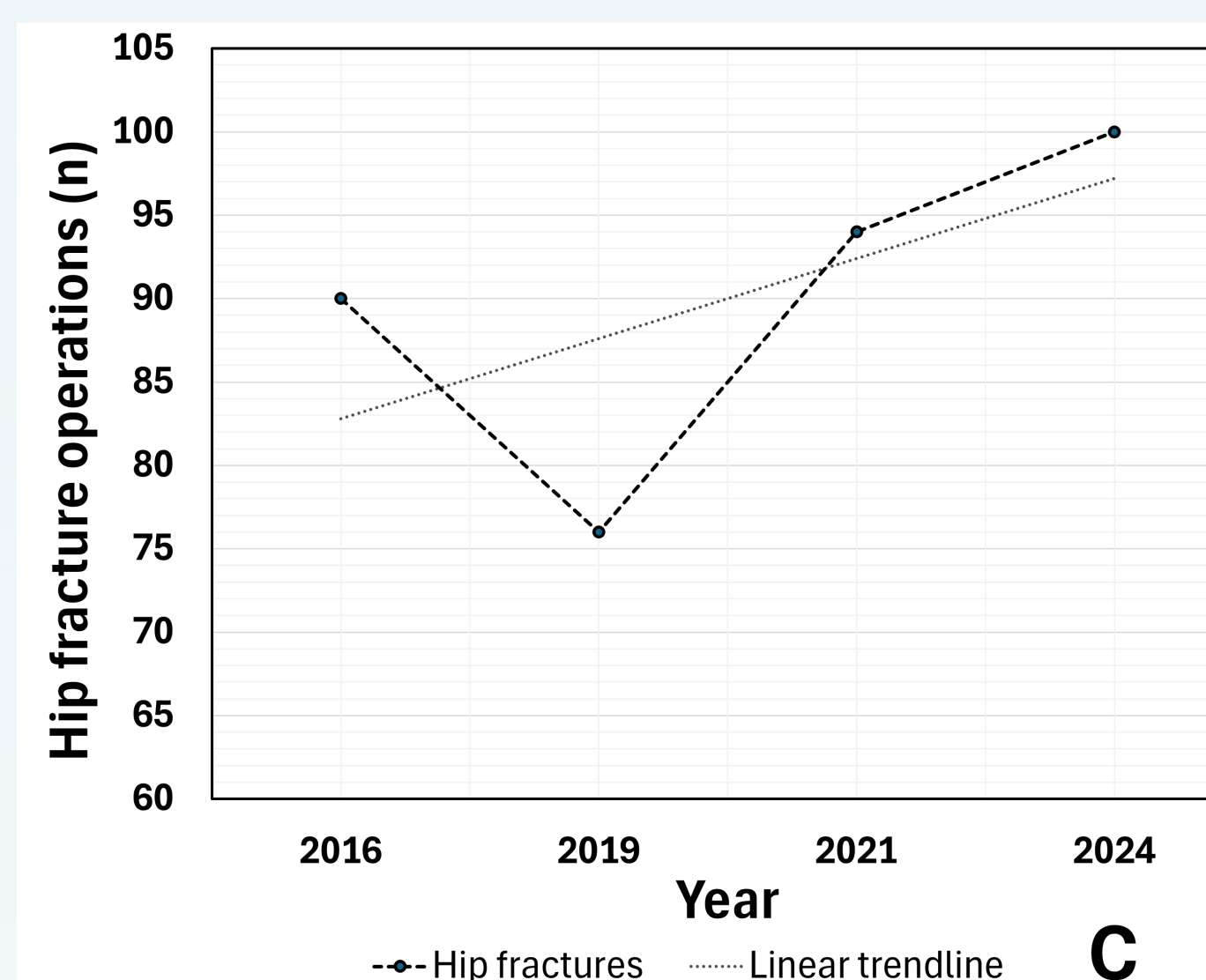
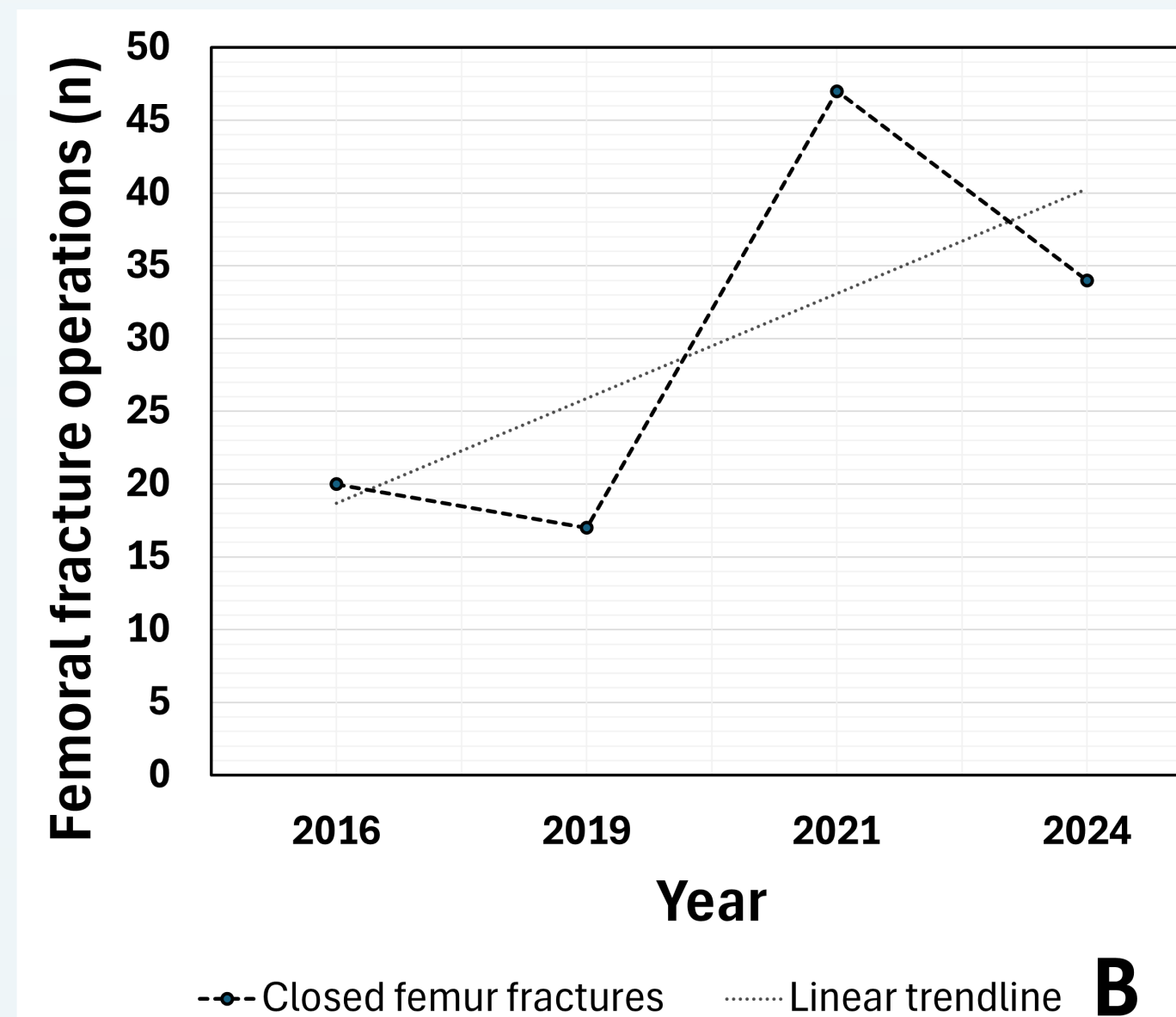
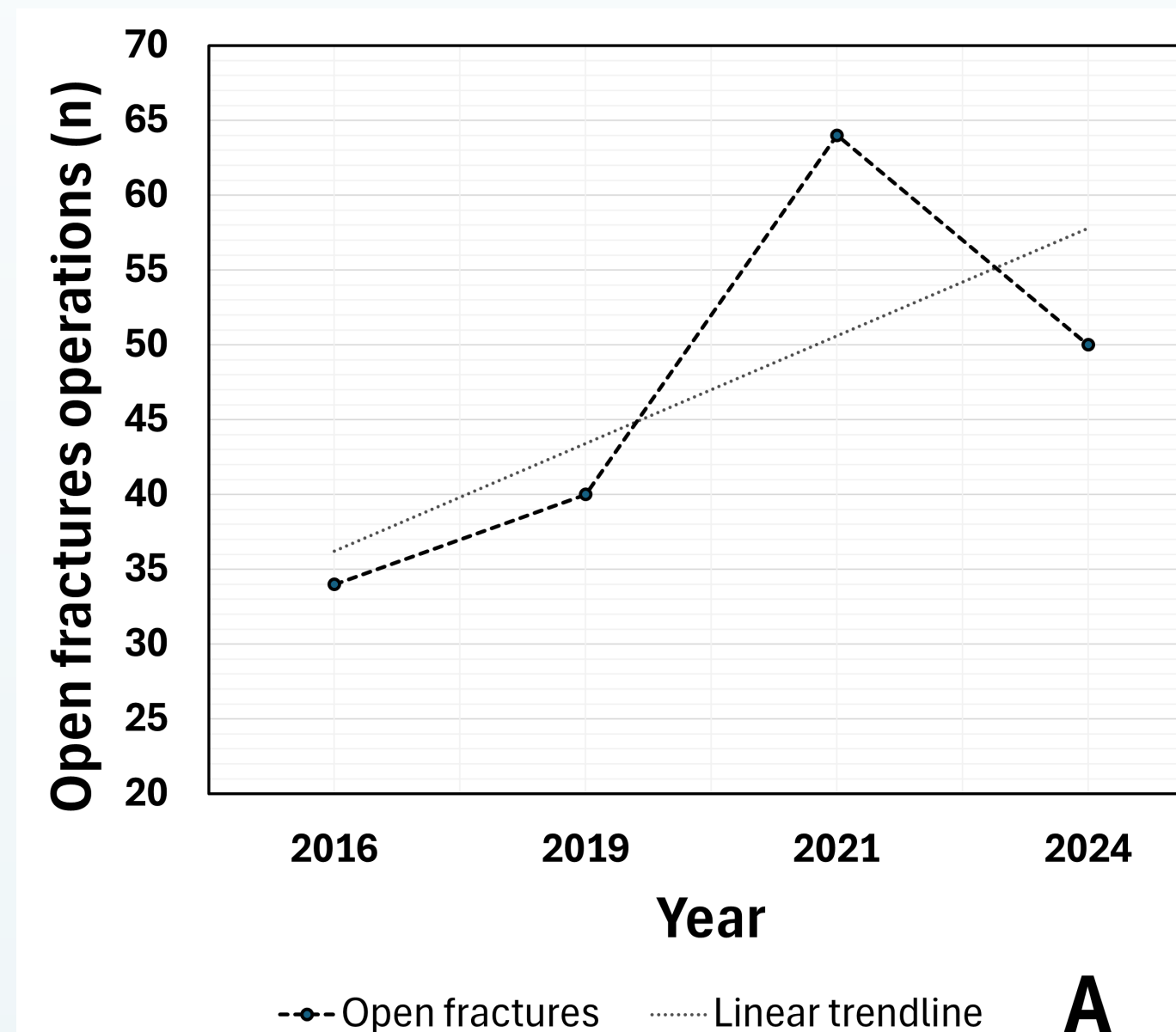
Operation types were cumulated by category. Totals for each year were calculated, displayed graphically and linear trendlines applied.

Results

The number of **time-sensitive operations rose considerably** between 2016 and 2024. Open fracture operations increased by 47% (n=34 to n=50) (A), femoral fracture operations by 70% (n=20 to n=34) (B), and hip fracture operations by 11% (n=90 to n=100) (C). Upper limb fracture operations increased by 46% (n=41 to n=60). Ankle and tibial fractures did not see much increase.

The **number of trauma operations performed outside of trauma theatres** in elective or ad-hoc lists increased **from 9 in 2016, to 88 in 2021** when spare elective lists were available following the COVID-19 pandemic, falling back to 45 in 2024 when full elective services returned.

The **average number of patients discussed in the daily trauma meeting in November rose by 25%** (from 23.9 ± 3.3 in 2016 to 29.8 ± 7.8 in 2024) and in June by 19% (from 28.7 ± 6.6 in 2016 to 34.1 ± 6.9 in 2024) and in November). The **average number of patients listed per day rose by 22%**, from 6.01 ± 2.55 in 2016 to 7.34 ± 2.75 in 2024.



Discussion

Several service changes have been made to accommodate these rises in trauma. Firstly, **several operation types have been migrated from trauma theatres to elective theatres**, including arthroscopic repairs, prosthetic joint infections, non-unions and removal of metalworks. Secondly, **additional theatre lists are more regularly needed** to manage the trauma burden. Thirdly, there has been an **expansion of semi-elective trauma lists** for ambulatory trauma.

The UK population continues to grow and age, and the trauma burden is predicted to increase with it. If trauma services do not plan for this, they will become overwhelmed, preventing them from providing safe and timely care for patients.

Potential solutions include increasing **dedicated semi-elective ambulatory trauma lists**, and increasing the number of weekly trauma theatre sessions.

References

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