

# An Evaluation of Implant Complications at the Edinburgh Dental Institute to Aid Service Planning for the Aging Population in NHS Lothian.

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## Introduction

In Scotland, over 30,000 frail older adults live within nursing or care homes and a proportion of older adults are entirely housebound<sup>1</sup>. The Restorative Department at the Edinburgh Dental Institute (EDI) currently manages the majority of Lothian's NHS implant-related complications. However, it is the Public Dental Service (PDS) who regularly manages a large proportion of the ageing population, especially those requiring domiciliary visits.

With the increase in dental implants, it is inevitable that the PDS will begin to see more frail older patients with implant-related complications. However, due to limited exposure to dental implants, they may lack the confidence and training to manage these complications.

This retrospective study aims to compare the complications, survival<sup>2</sup> and success rates<sup>3</sup> of dental implants in patients aged over 65 years with those under 65 years old, placed at the Edinburgh Dental Institute to aid future service planning for the ageing population in NHS Lothian.

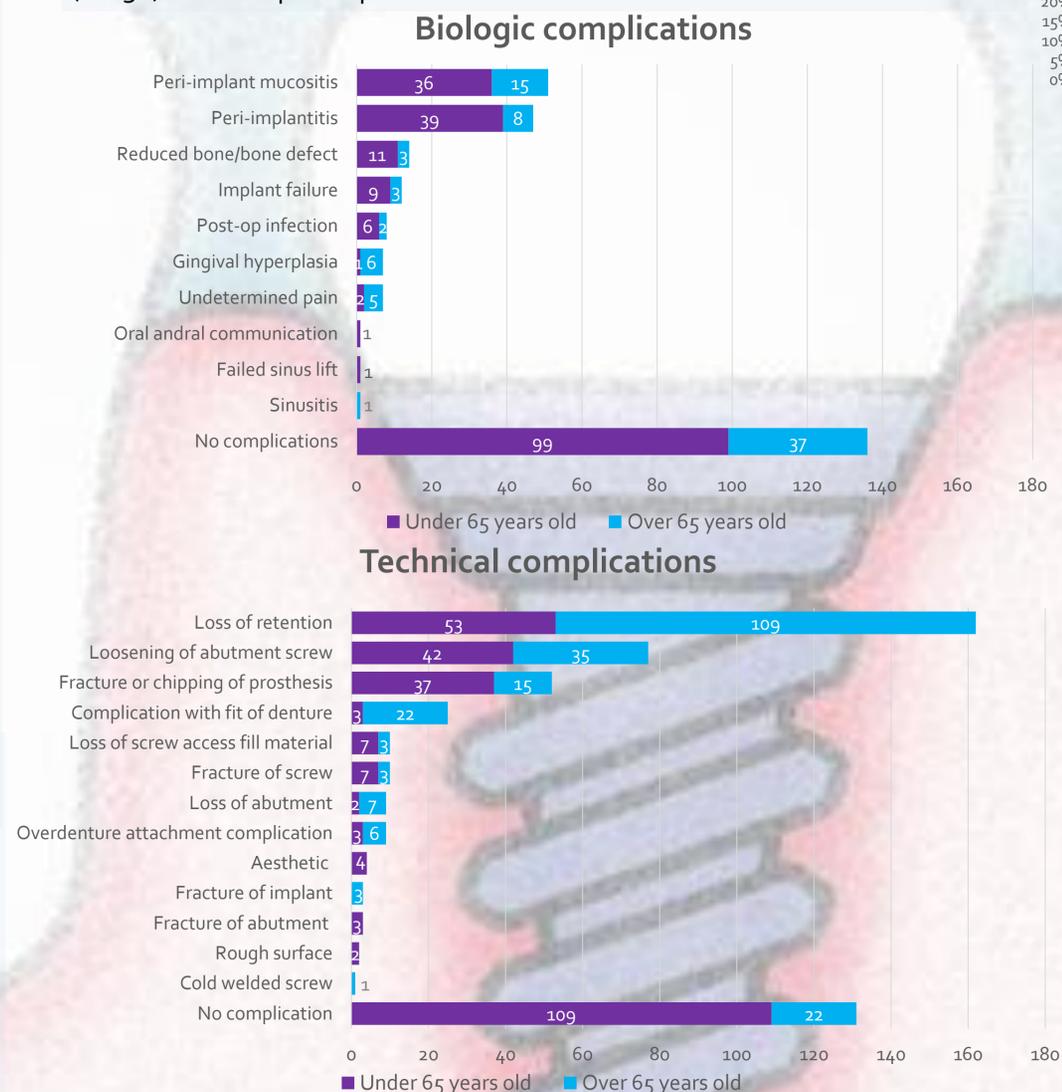
## Methods

Data was collected retrospectively from patients notes for all implants placed in the EDI from start of November 2010 until end of October 2014. With a **mean follow up time of 7.7 years**.

All complications were recorded from the date of implant placement until the end of October 2019, excluding technical complications associated with the temporary prosthesis. Information was recorded on patient demographics, medical history, social history, implant details, prosthesis type, implant complication (biologic/technical, minor/medium/major)<sup>4</sup>, treatment provided, outcome, follow up and if failure (early/late)<sup>5</sup> occurred.

## Results

Preliminary results for the 232 patients recorded showed that there were 540 implants placed over the 4 year period. Preliminary data showed that 26.3% (n=61) of these patients were over 65 years old, making up 25.1% (n=136) of the implants placed.



Figures 1 & 2 show the number of biologic and technical complications respectively for both age groups. Biologic complication n=285, technical complications n=498.

## References

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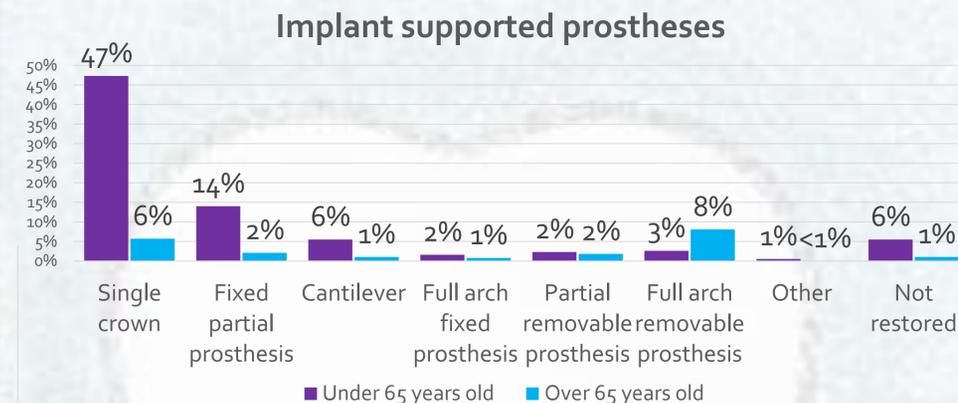


Figure 3 shows the percentage of implant supported prostheses for both age groups. N=385



Figure 4 shows survival and success rates, where success is an implant free of complications over the observed period.

## Discussion

There were significantly higher technical complications in the over 65 year old age group ( $p < 0.05$ ), with the majority of complications presenting at a minor level (61.8%) and mainly appeared to be due to the loss of retention of removable implant supported prostheses.

With adequate training, the PDS could manage the many of these minor complications either in their clinics or on domiciliary visits. This would potentially reduce the need for travel to clinics, increasing accessibility to care for this potentially vulnerable group and reduce the patient load on the NHS Lothian Restorative Department.