

THE UNDER-DIAGNOSIS AND UNDER-TREATMENT OF OSTEOPOROSIS DUE TO INACCURATE CODING PRACTICES IN PRIMARY CARE IN UK

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INTRODUCTION

There are clear guidelines on the diagnosis and management of Osteoporosis (1). However evidence suggests that under-diagnosis and under-treatment of the condition is not uncommon (2). This study looks at the underlying reasons for the problem and offers solutions to improve detection rates of osteoporosis.

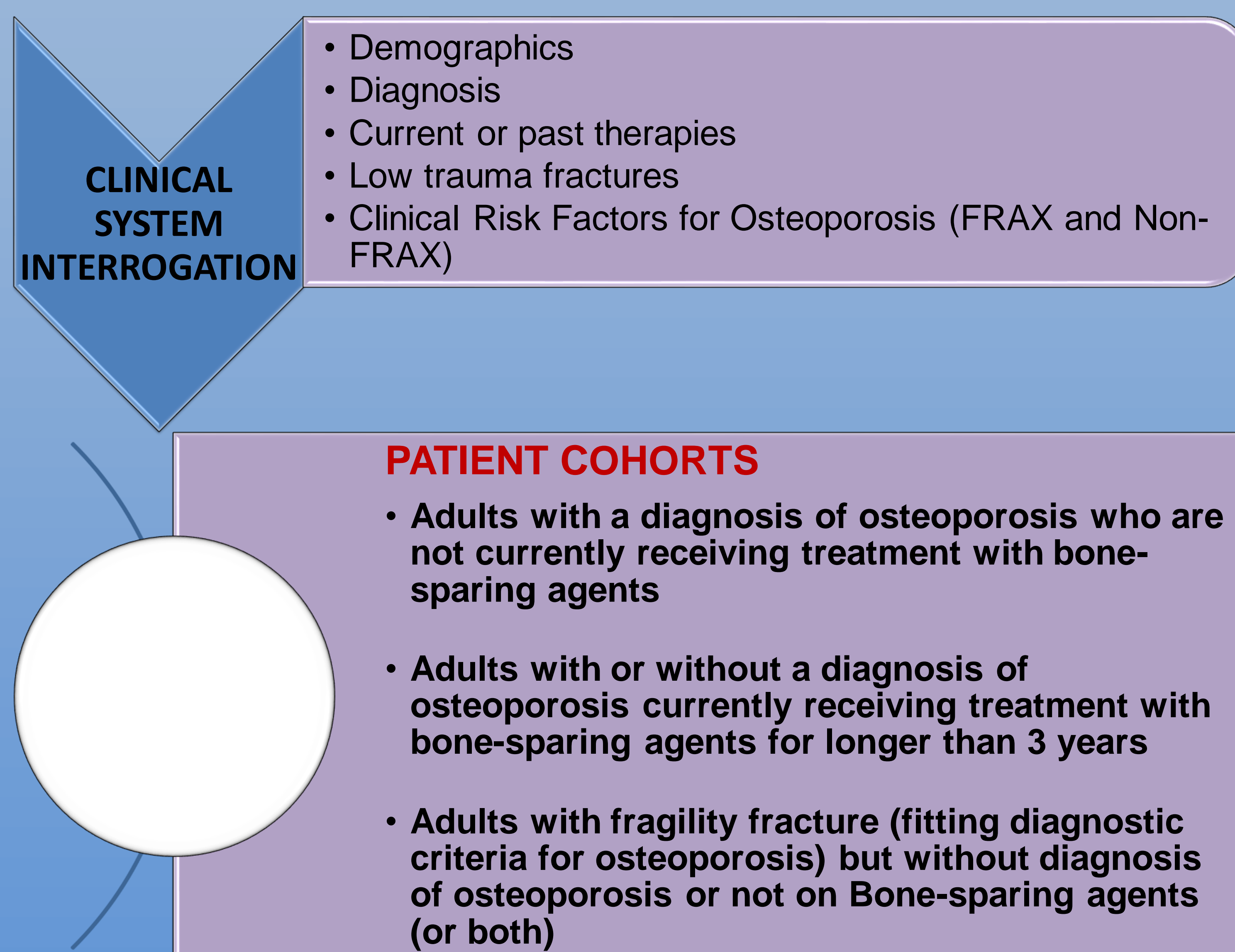
AIMS AND OBJECTIVES

- To study the burden of undiagnosed and untreated osteoporosis in Primary Care in the UK
- To calculate the prevalence rates
- To identify the reasons behind this under reporting

METHODS AND MATERIALS

47988 electronic patient records across 4 GP practices in North-West England (EMIS[®]) were analysed using computerised algorithms (figure 1). The software, that can be run on all electronic patient records, searched for patients with diagnosis codes for fragility fractures, osteoporosis, and clinical risk factors for osteoporosis. Patients on bone sparing therapy, their compliance rates and side effects were also ascertained. The data was used to quantify the prevalence rates, under-diagnosis and suboptimal treatment of patients.

FIGURE 1- IDENTIFICATION OF PATIENT COHORTS



RESULTS

15201 (31.67%) of patients were in the risk category for osteoporosis. The prevalence of osteoporosis was 1.6% (Figure 2). 941 patients were analysed to have fragility fractures but only 336 (35.7%) patients of these patients were coded appropriately (Figure 3). Only 331 (43.38%) patients were on the right treatment for the condition while majority of 432 (58.69%) patients were not. 304 (47.87%) patients, despite being on treatment with bone sparing agents did not have a diagnosis code for osteoporosis (Figure 4).

FIGURE 2

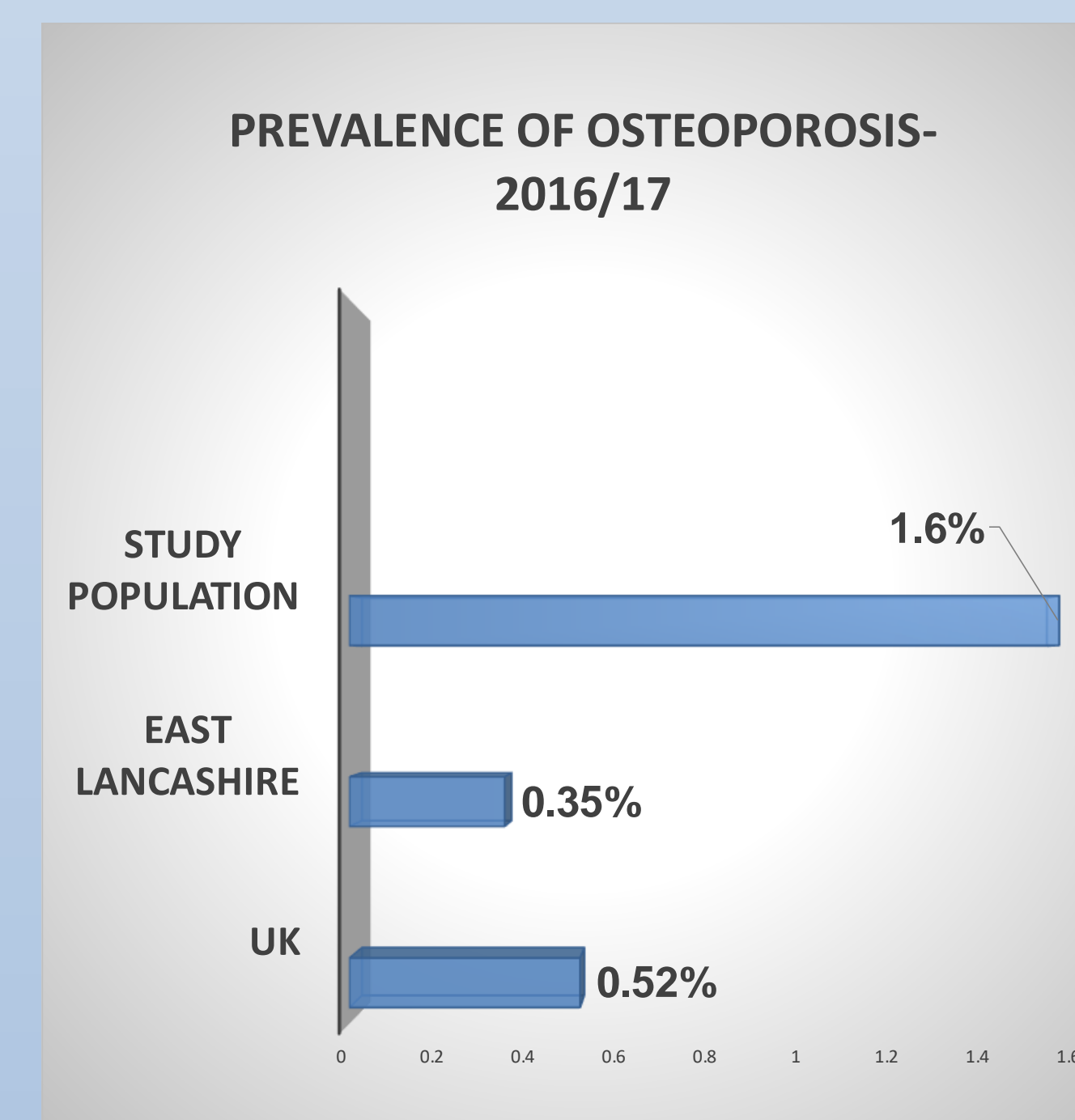


FIGURE 3.

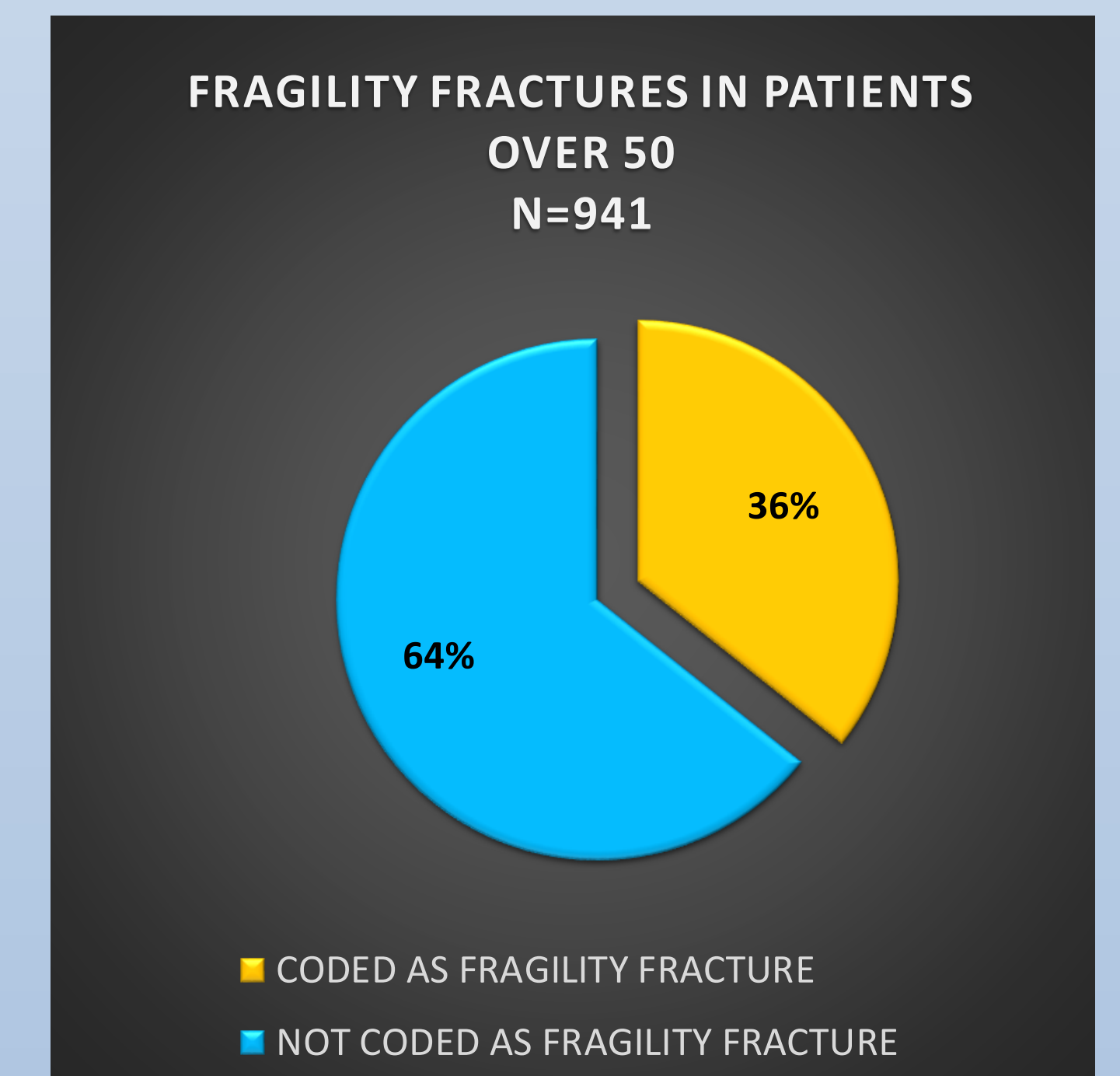
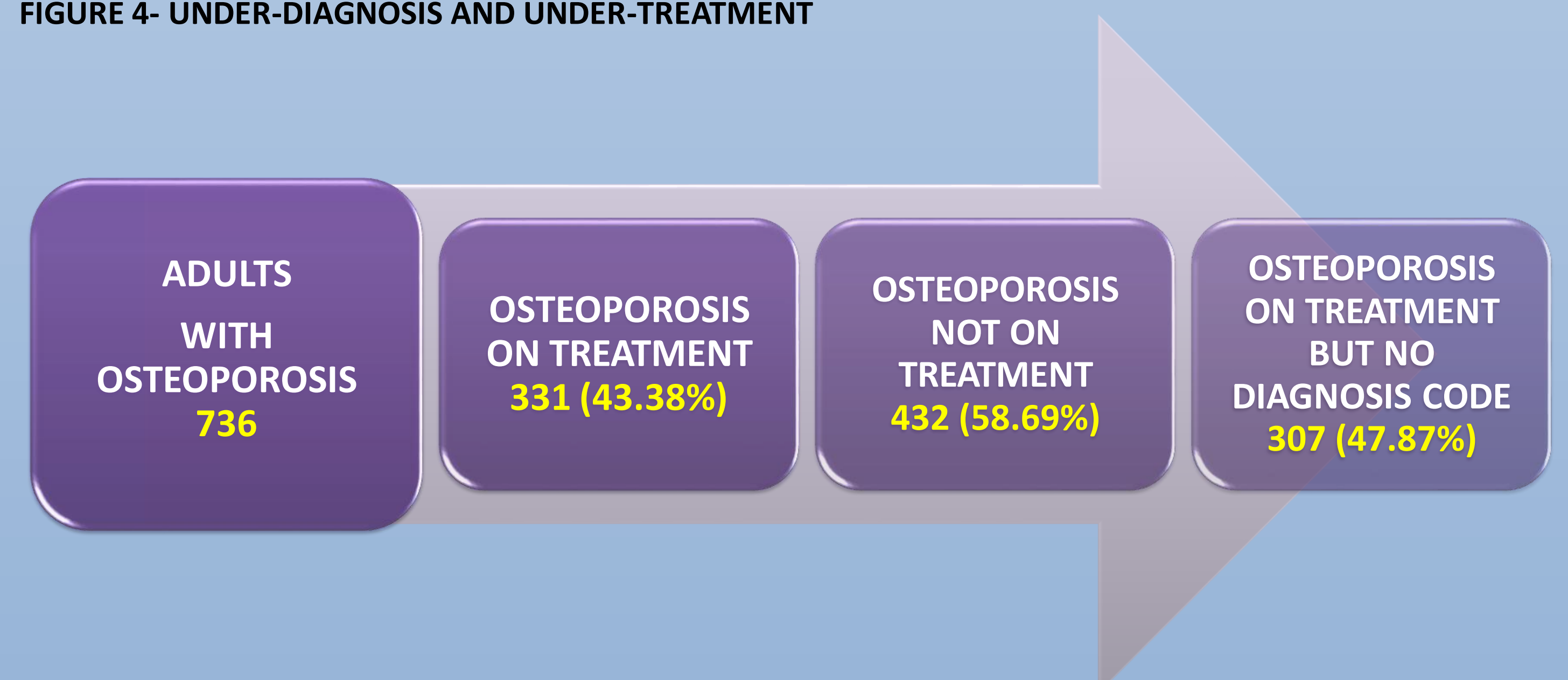


FIGURE 4- UNDER-DIAGNOSIS AND UNDER-TREATMENT



DISCUSSION

The prevalence of osteoporosis in this study population, exceeds the national and regional estimate. This is because more cases were detected as a part of this study. It therefore reinforces the belief that osteoporosis is underdiagnosed in primary care.

This study identifies inconsistent coding of index events and lack of appreciation of co-existing clinical risk factors as the prime cause for under-diagnosis. Fragility fractures are not being picked up in time leading to a delay or missed diagnosis of osteoporosis. Patients are therefore not being treated in a timely manner. Inconsistent use of diagnostic codes for fragility fractures in the hospital setting too adds to this problem. Diagnosis is missed when the patient is transferred from Secondary care to Primary care. A case-finding approach, as undertaken in this study improves identification of patients with osteoporosis in primary care. Instituting timely treatment will reduce the risk of further fractures and improve the morbidity and mortality (3). There needs to be a concerted effort to improving coding practice in primary care. Increasing awareness of fragility fractures and osteoporosis and focussing on staff training on the correct use of clinical codes are areas of improvement suggested by this study.

CONCLUSIONS

- A Case-finding approach is an efficient and cost-effective way of detecting undiagnosed and under-treated cases of Osteoporosis.
- The computer algorithm used in this study is robust in identifying the patients in whom the diagnosis has been missed. It is easily replicable and can be applied to all electronic patient records.
- Inconsistent coding practice in Primary care can be addressed by investing in staff training and improving coding practice to improve detection and timely secondary prevention measures.

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References

- 1) NOGG 2017. Clinical guideline for the prevention and treatment of osteoporosis. March 2017. Available from <https://www.sheffield.ac.uk/NOGG/NOGG%20Guideline%202017.pdf> [Accessed 20/1/2018]
- 2) Nguyen TV, Center JR, Eisman JA. Osteoporosis: underrated, underdiagnosed and undertreated. *Med J Aust.* 2004 Mar 1;180 (5 Suppl):S1822. Available online at <https://www.ncbi.nlm.nih.gov/pubmed/14984358> [accessed on 20/1/2018]
- 3) National Osteoporosis Society. Effective Secondary Prevention of Fragility Fractures: Clinical Standards for Fracture Liaison Services. Available at <https://staging.nos.org.uk/media/1776/clinical-standards-report.pdf> [accessed on 20/1/2018]