

## 0097 Systematic Review of Factors Affecting Medication Adherence Among Patients With Osteoporosis

Yeap Cheng Teng<sup>1</sup>, Tan Hui Cheng Candy<sup>1</sup>, Shermain Chia<sup>2</sup>, Kwan Yu Heng<sup>1</sup>, Fong Weng Seng Warren<sup>2</sup>, Seng Jun Jie Benjamin<sup>1</sup>

<sup>1</sup>Duke-NUS Medical School, <sup>2</sup>Singapore General Hospital

**Aims:** We aimed to identify factors that influence patients' adherence to anti-osteoporotic therapy.

**Methodology:** A systematic review of literature was performed for articles published until January 2018 using PubMed®, PsychINFO®, Embase® and CINAHL®, using relevant keywords. Peer-reviewed articles in English language which examined factors associated with medication adherence to anti-osteoporotic medication were reviewed by two independent reviewers for inclusion. Classes of anti-osteoporotic medication included bisphosphonates, parathyroid hormone analogue, denosumab, selective estrogen receptor modulators, estrogen/progestin therapy, calcitonin, strontium ranelate and, calcium and vitamin D related supplementation. A manual search involving the reference lists of included articles was performed. Meta-analyses, case reports, case series and other systematic reviews were excluded. Identified factors were classified using the World Health Organisation's five dimensions of medication adherence which are condition, patient, therapy, health-system and socio-economic related domains.

**Result:** Of the 1813 articles reviewed, 124 relevant articles were identified. The prevalence of medication adherence ranged from 12.9% to 95.4%. 24 factors with 139 sub-factors were identified. Bisphosphonates were the most well-studied class of medication (n=59, 48%). The most common condition-related factors associated with poorer medication adherence included history of falls or fractures, polypharmacy, and less frequent osteoporotic screening/monitoring.

Common patient-related factors which were associated with poorer medication adherence included older age, male gender and misconceptions about osteoporosis while therapy-related factors associated with lower medication adherence included higher dosing frequency and medication side effects. Health system-based factors associated with poorer medication adherence included care under different medical specialties and lack of patient education. Socioeconomic related factors associated with poorer medication adherence included current smoker, living in a city compared to rural areas and lack of medical insurance coverage.

**Conclusion:** Factors affecting medication adherence in patients with osteoporosis are multifactorial. To optimise therapeutic outcomes for patients with osteoporosis, clinicians need to be aware of the multifaceted nature of factors affecting medication adherence.