

## **Age- and sex-specific incidence rates and future projections for hip fractures in Zimbabwe**

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### **Abstract**

**Introduction** Population ageing in Africa is increasing healthcare demands. Hip fractures require multidisciplinary care and are considered an indicator condition for age-related health services. We aimed to estimate current hip fracture incidence in Zimbabwe, compare rates against other regional estimates and estimate future fracture numbers.

**Methods** All hip fracture cases in adults aged  $\geq 40$  years, presenting to any hospital in Harare over 2 years, were identified. From this, age- and sex-specific hip fracture incidence rates per 100 000 person-years were estimated using 2022 Zimbabwean Census data and compared with South African and Botswanan estimates. Furthermore, using the United Nations population projections, future hip fracture numbers were estimated to 2052 for Zimbabwe.

**Results** In 2022, 1 83 312 women and 1 79 212 men aged  $\geq 40$  years were living in Harare (14.9% of the city's population). Over 2 years 243 hip fracture cases, 133 (54.7%) female, mean (SD) age 71.2 (15.9) years, were identified. Most presented to public hospitals (202 [83.1%]) and were fragility hip fractures (211 [86.8%]); high-impact trauma (eg, traffic accidents) was more common in younger men. Presentation delays of  $>2$  weeks were common (37.4%). Incidence rates for adults aged  $\geq 40$  years in Harare (observed) and Zimbabwe (estimated) were 33.5 and 53.8/100 000 person-years, respectively. Over age 50, rates increased with age, with the highest rates seen in women aged  $\geq 85$  years (704/100 000 person-years). Age-standardised hip fracture incidence rates are broadly comparable between Zimbabwe, Botswana and Black South Africans in those aged 40–69 years; thereafter, rates in Zimbabwean women and men exceed those in Botswana and South Africa. Across Zimbabwe, the number of hip fractures occurring annually is expected to increase more than 2.5-fold from 1709 in 2022 to 4414 by 2052.

**Conclusion** In Zimbabwe, most hip fractures in adults  $\geq 50$  years are fragility fractures, consistent with age-associated osteoporosis; incidence rates exceed those previously reported regionally. Demands on already challenged healthcare systems will increase.