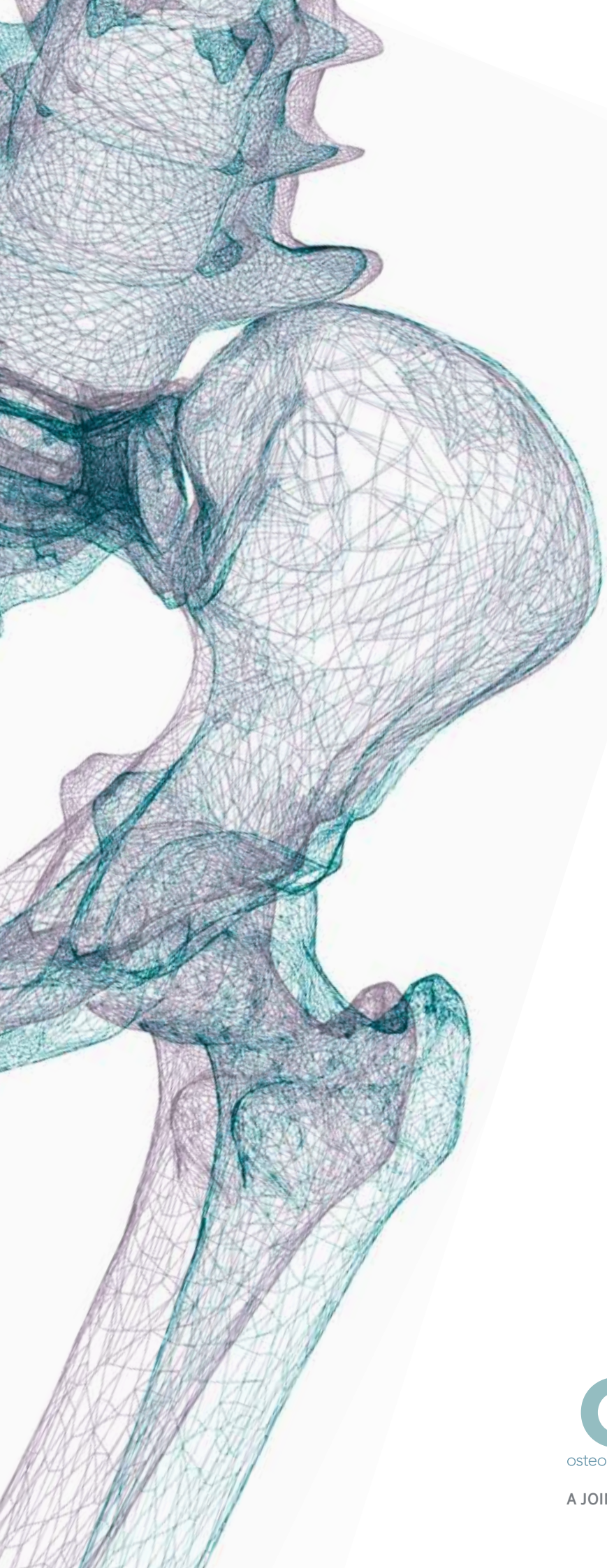


# Know Your Bones Community Risk Report – October 2018



A JOINT INITIATIVE FOR FRACTURE PREVENTION

# Forewords



**Greg Lyubomirsky**  
CEO Osteoporosis Australia

Know Your Bones was developed to help Australians understand their risk of poor bone health and discuss any risks identified with their doctor. Currently over 165,000 broken bones (fractures) are occurring each year in Australia due to poor bone health and we know many of these broken bones could and should be prevented. The solution is taking action – consumers understanding their risk, doctors investigating people at risk, capturing people after a first fracture to diagnose osteoporosis, manage their bone health and prevent repeat fractures. These interventions will all help tackle the issue of poor bone health in Australia.

The data presented in this inaugural Know Your Bones Community Risk Report provides important insights for the community, health professionals and policy makers.



**Professor John Eisman**  
Director of Clinical Translation and Advanced Education  
Bone Biology Division, Garvan Institute of Medical Research

Know Your Bones is based on key findings from Garvan's long running study of osteoporosis in Australia. This collaboration with Osteoporosis Australia is an important example of medical research being translated into real community benefit. Research over many years has given us a clearer picture of what we need to focus on in terms of individual risk of osteoporosis and related fracture.

As both a medical clinician and researcher in the field of osteoporosis I have witnessed the devastating impact of fractures on patients and their families. Identifying people with obvious risk factors for osteoporosis as well as people who have suffered fractures, when they would not have been expected, is an essential first step so appropriate action can be taken to reduce the risk of bone fractures in the future.



**Professor Kerrie Sanders**  
Melbourne University  
Co-author – National/State-based Osteoporosis Burden  
of Disease Reports

Osteoporosis Australia commissioned and released national and state-based burden of disease reports to scope the prevalence and cost of osteoporosis in Australia. The reports clearly demonstrated the impact of fractures on individuals and our healthcare system. Up to 70% of the overall cost of the disease relates to direct fracture costs. Reducing fracture numbers is the priority. Therefore, raising community awareness about risk factors for osteoporosis is part of the solution and the Know Your Bones program is an important consumer tool to address this major health issue.

# Know Your Bones

## Background

Know Your Bones is a joint initiative for fracture prevention developed by Osteoporosis Australia and Garvan Institute of Medical Research.

Know Your Bones is an evidence-based, consumer-friendly tool to review risk factors for poor bone health. It summarises bone fracture risk by assessing age, gender, history of fracture, bone mineral density investigation, weight and history of falls. For people aged 50 years and over risk of fracture (over five years and 10 years) is assessed and reported. The online assessment also investigates clinical and lifestyle risk factors as well as medication use for users of any age. A summary report is then provided with personalised recommendations to further discuss with a general practitioner as required.

The Know Your Bones project is based on key research findings from Garvan's 28-year-long Dubbo Osteoporosis Epidemiology Study, the world's longest-running osteoporosis study in men and women. The study has provided researchers with a clearer understanding of a person's risk of fracture being based on a combination of factors, which have been incorporated into the 'Know Your Bones' self-assessment tool.

The Know Your Bones website was launched in June 2016 by Federal Health Minister Sussan Ley. The website has been promoted to consumers and general practitioners and has also be utilised within pharmacy. Osteoporosis Australia remains committed to alerting many more Australians about Know Your Bones to promote prevention. Know Your Bones tool provides a valuable insight into the bone health of Australian population that can be monitored over time to understand the progress in the role of intervention and progress in patient outcomes.

## Inaugural Report

This inaugural Know Your Bones Community Risk Report (2018) represents de-identified data which has been self-reported via the online self-assessment questionnaire. Know Your Bones asks users a series of evidence-based questions under 4 broad areas:

- Medical history (including age, weight, previous fracture, previous falls, gender)
- Clinical risk factors
- Lifestyle risk factors
- Medication/supplement use

The report is based on number of assessment completions totalling 41,809 as at 16 September 2018. The report provides a baseline of results against which future reports can be compared.

## Snapshot of Bone Health in Australia

The Know Your Bones program was developed in response to current data on status of bone health in Australia.

- 66% of Australians over 50 years have osteoporosis or osteopenia
- 165,000 estimated fractures due to poor bone health in 2018
- Hip fractures remain the most costly type of fracture and the biggest impact on patients; fractures at other sites (eg wrist, spine, arm and leg) are more common
- Annual cost of osteoporosis \$3.1 billion, of which \$2.1 billion relates to direct fracture costs



# Summary – Key Findings

## Know Your Bones Community Engagement

- Self-assessment completions following visits to website 30%
- Gender break-up of self-assessment usage
  - 21% male and 79% female
- Age break-up of self-assessment usage
  - 86% adults 50 years and over
- Overall age break-up of females and males completing self-assessment ►

Female		Male	
under 50 years	11%	under 50 years	3%
50-69 years	54%	50-69 years	11%
70 years+	14%	70 years+	7%

## Fracture Status and Bone Density Testing Status

- Number of assessments completed that reported a minimal trauma fracture 17%
- Number of assessments completed that reported a minimal trauma fracture and reported status of bone mineral density (BMD) testing:
  - Reported 'yes' for BMD testing 52%
  - Reported 'no' for BMD testing 39%
  - Reported 'don't know' for BMD testing 9%
- Number of assessments completed that reported a minimal trauma fracture and reported medication status:
  - On medication 16%
  - Not on medication 84%
- People over 70 years and Bone Mineral Density (BMD) testing status:
  - Reported 'yes' for BMD testing 54%
  - Reported 'no' for BMD testing 34%
  - Reported 'don't know' for BMD testing 12%

## Clinical Risk Factors and Lifestyle Risk Factors\*

- Number of assessments completed and total clinical risk factors reported:
  - Reported 'yes' to a clinical risk factor 38%
  - Reported 'no' to a clinical risk factor 62%
- Based on those reporting 'yes' to a clinical risk factor the majority 69% had a single clinical risk factor and 31% had 2 (or more) clinical risk factors
- Number of assessments completed and total lifestyle risk factors reported:
  - The majority 98% reported having a lifestyle risk factor

### The data in the report demonstrates a gap in osteoporosis care in Australia

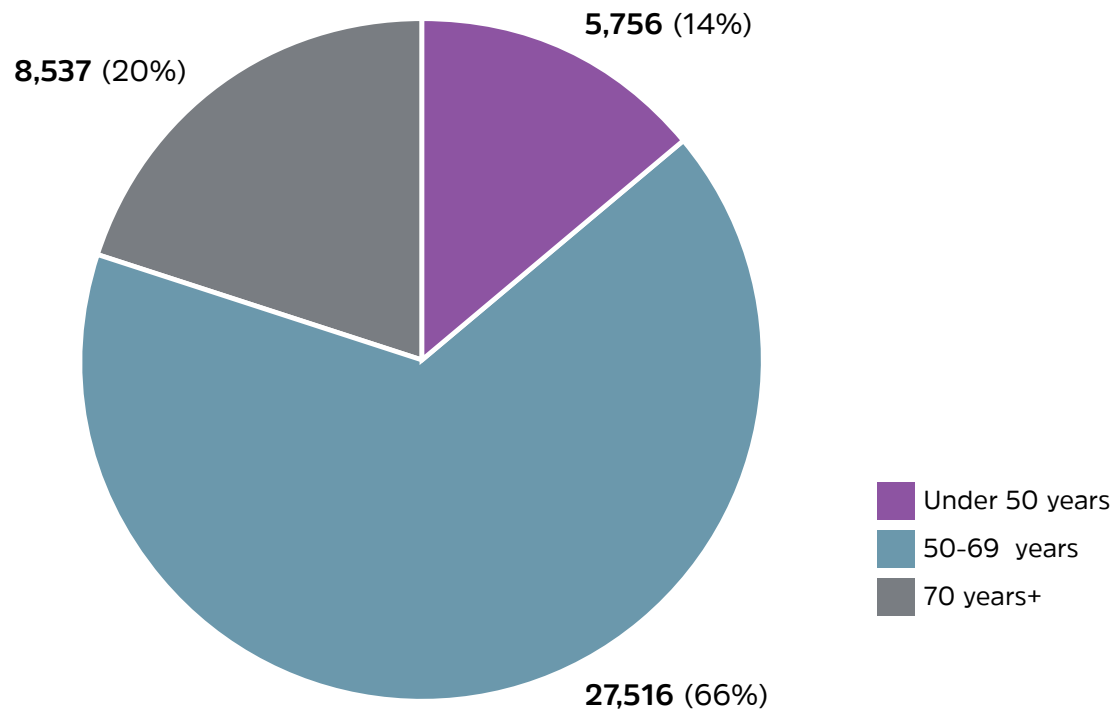
- Vast majority of people (84%) reporting a previous fracture are also reporting not being on medication.
- Only half of people reporting a fracture have reported having a bone mineral density test. Investigation of patients with a bone density test should be higher.
- Bone density testing reimbursement is available for anyone over 70 years and yet only half (54%) of people aged 70 years + reported having a bone density test.
- Over one third of people completing assessment have a clinical risk factor for osteoporosis.
- Over 95% of people completing assessment reported having a lifestyle risk factor.

**The findings of the report are consistent with other studies which suggest osteoporosis is under-investigated and under-treated even where obvious risk factors (signals for development of osteoporosis and subsequent fracture) exist.**

\*Risk factors: Clinical risk includes: Daily oral use glucocorticoids, early menopause/low testosterone, loss of height, coeliac disease, overactive parathyroid, overactive thyroid, rheumatoid arthritis, chronic liver or kidney disease, treatment for breast cancer or prostate cancer. Lifestyle risk includes: smoking, alcohol intake, lack of adequate calcium/vitamin D/exercise.

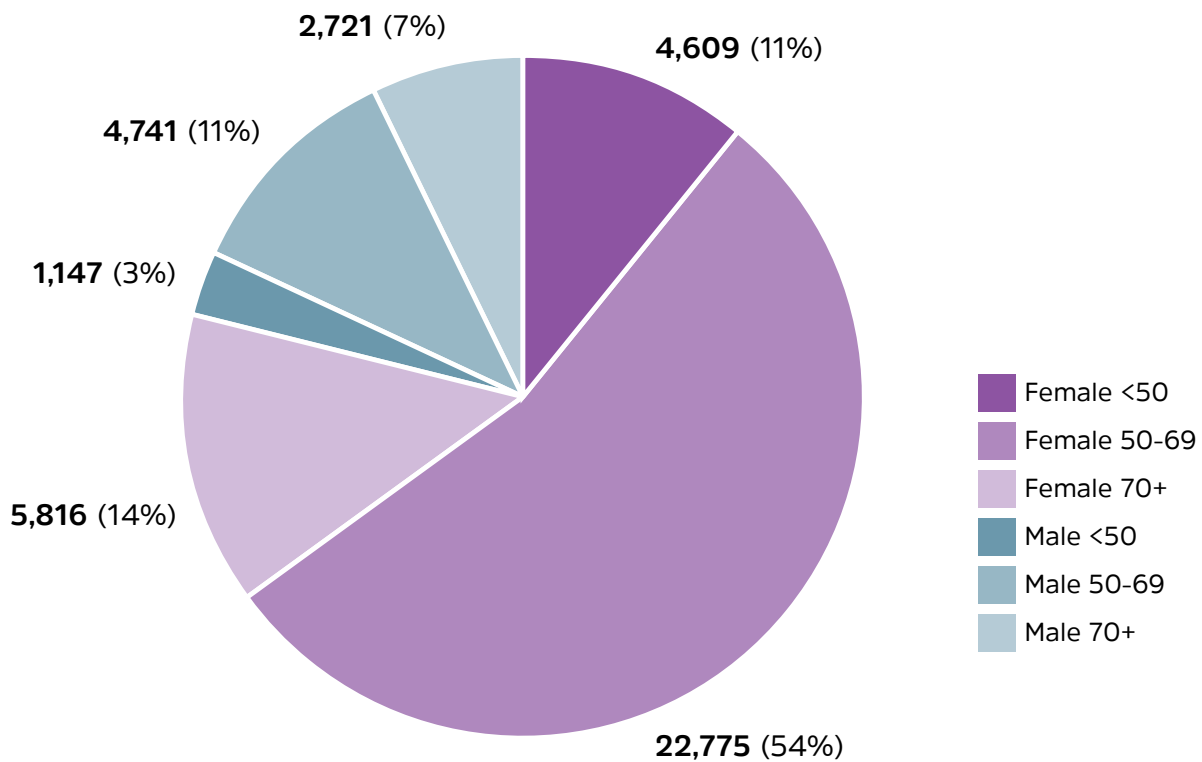
## Number of Assessments split by Age

(Total no: 41,809)



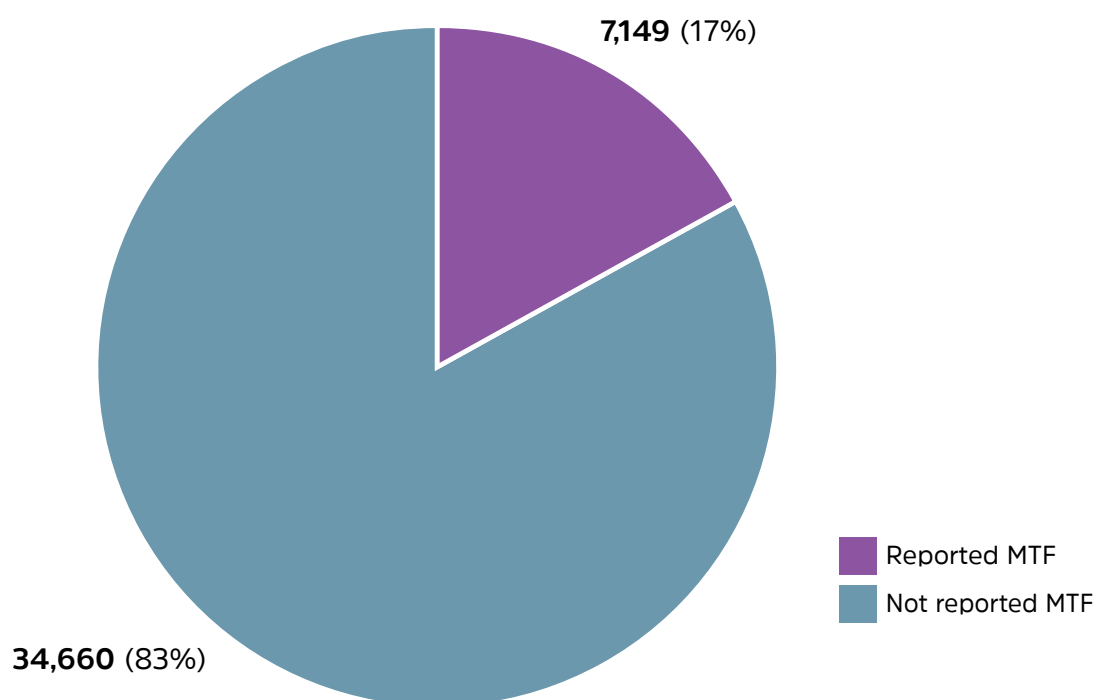
## Number of Assessments split by Gender and Age

(Total no: 41,809)



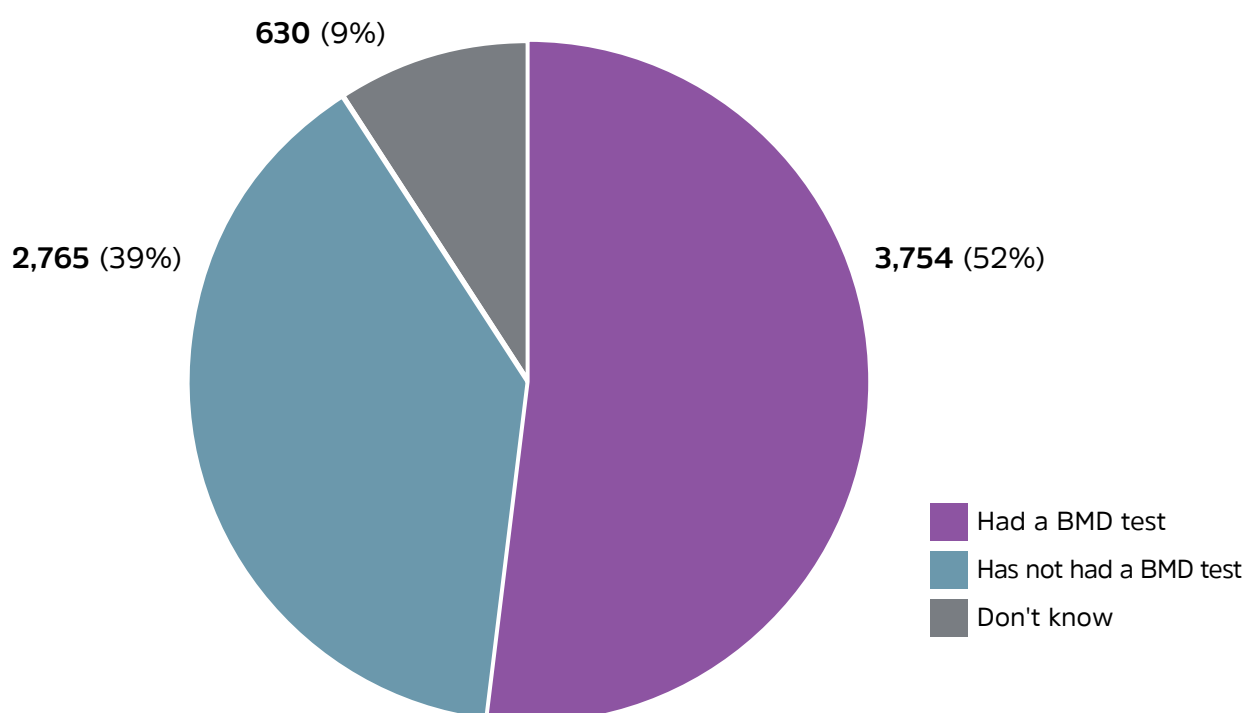
## Number of Assessments and Minimal Trauma Fracture (MTF) Status

(Total no: 41,809)



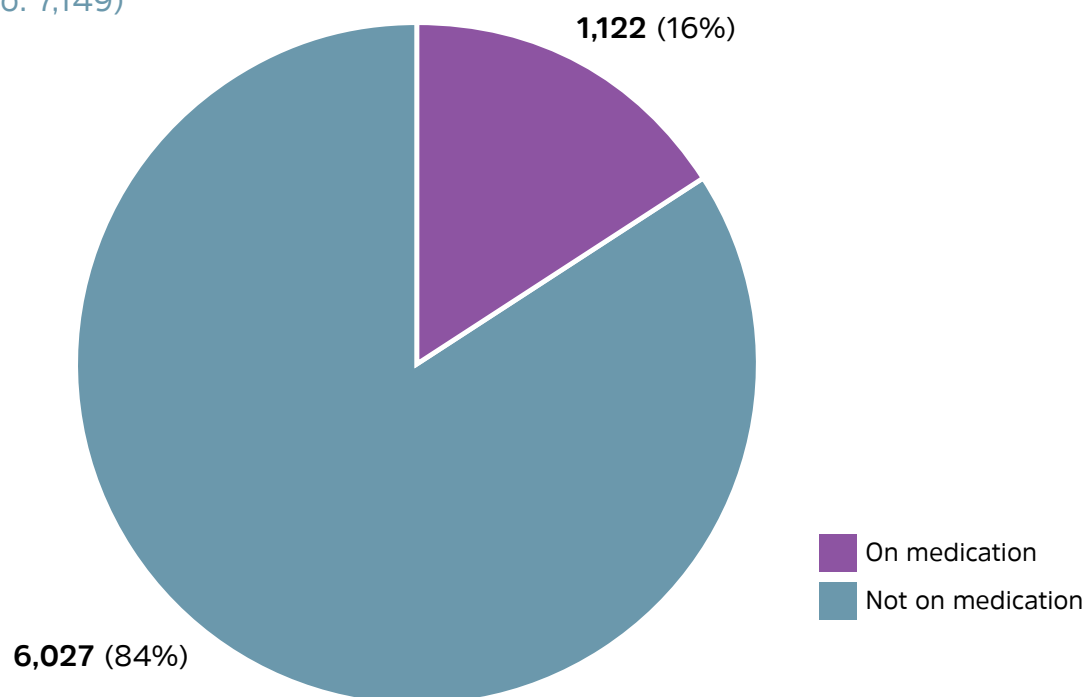
## Number of Assessments that reported a Minimal Trauma Fracture (MTF) by Bone Mineral Density (BMD) Test Status

(Total no: 7,149)



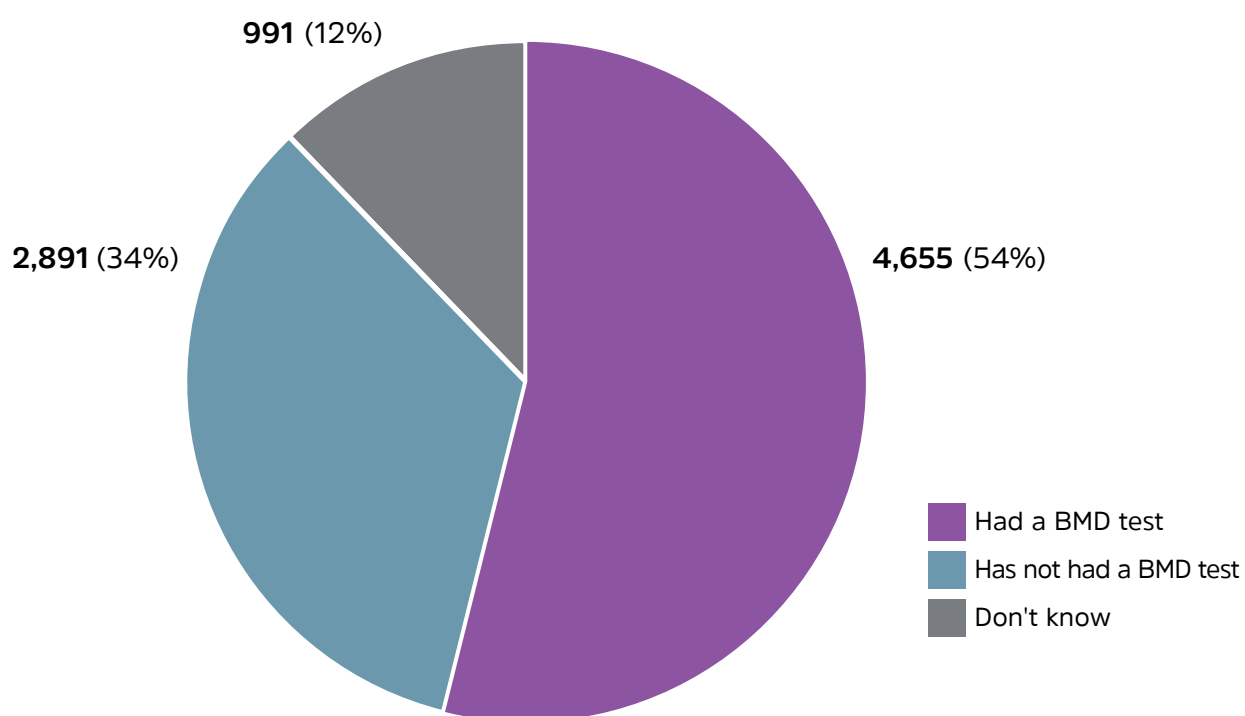
## Number of Assessments that reported a Minimal Trauma Fracture (MTF) by Status of Treatment

(Total no: 7,149)



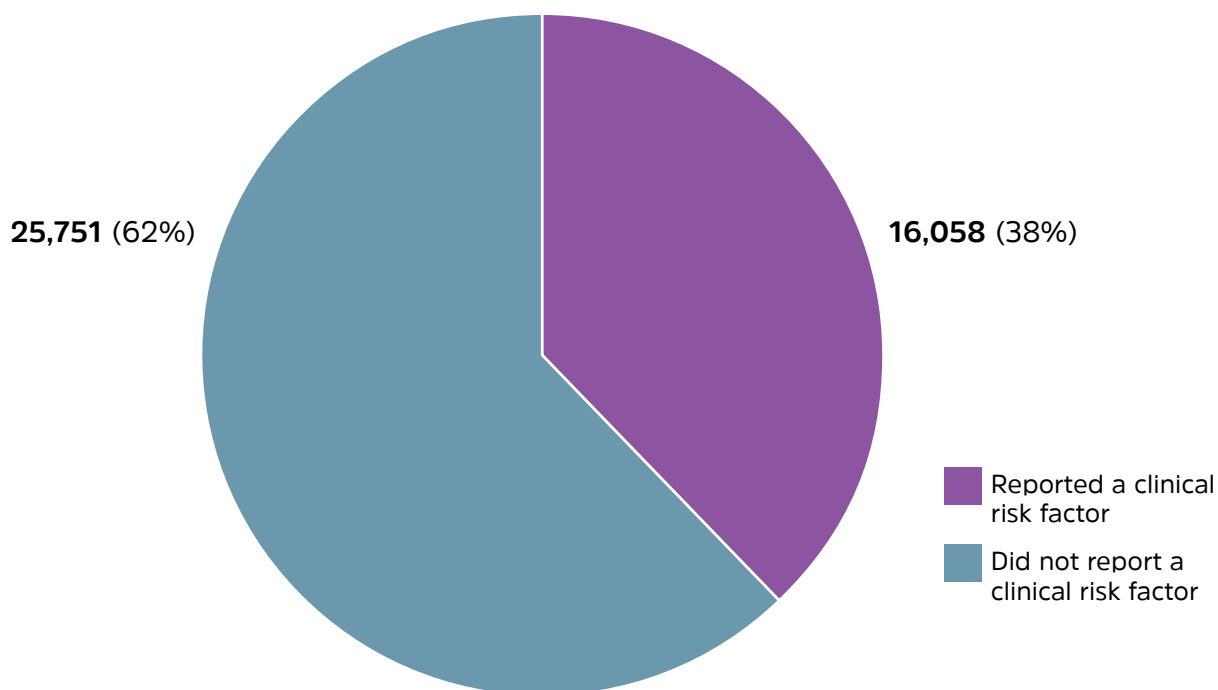
## Number of Assessments for People Age 70+ and Bone Mineral Density (BMD) Test Status

(Total no: 8,537)



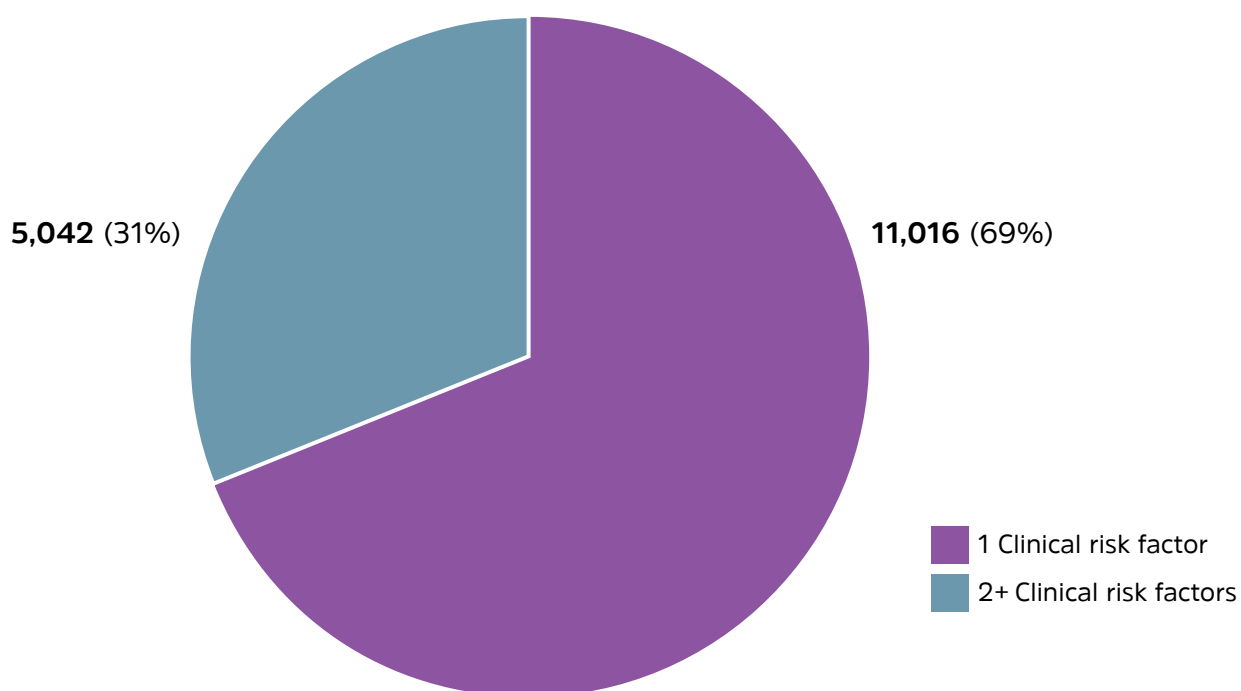
## Number of Assessments by Total Clinical Risk Factors (CRF) Reported

(Total no: 41,809)



## Number of Assessments Reporting Either 1 or 2 or More Clinical Risk Factors (CRF)

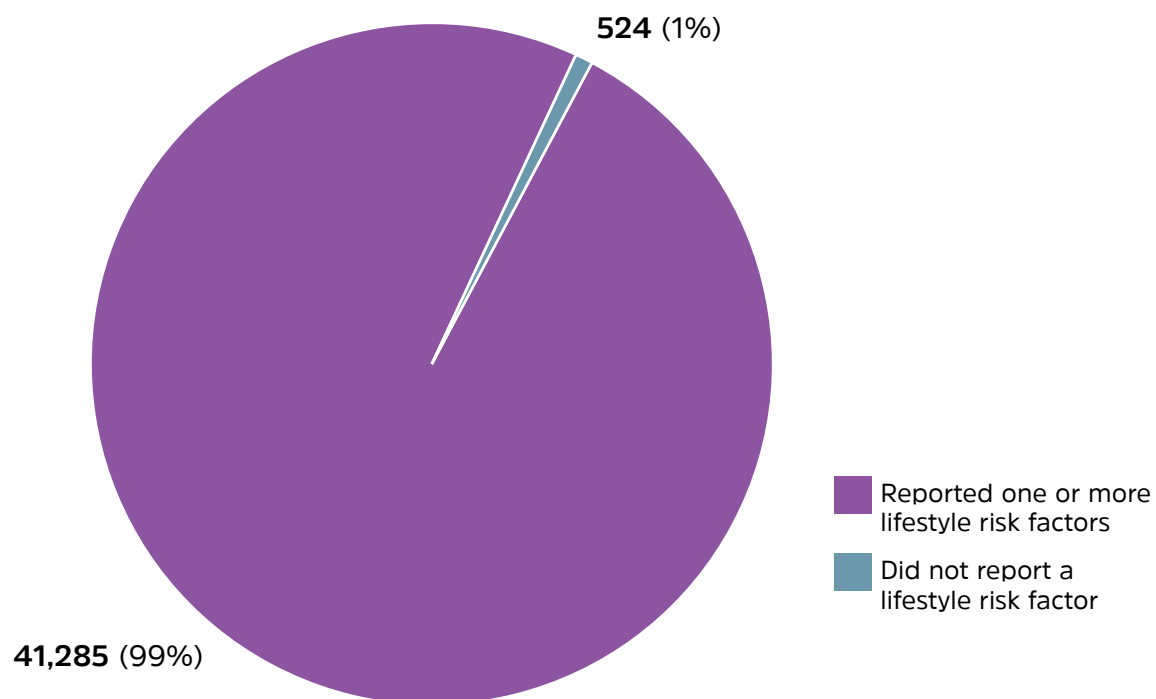
(Total no: 16,058)





## Number of Assessments by Total Lifestyle Risk Factors (LRF) Reported

(Total no: 41,809)



# OSTEOPOROSIS AWARE

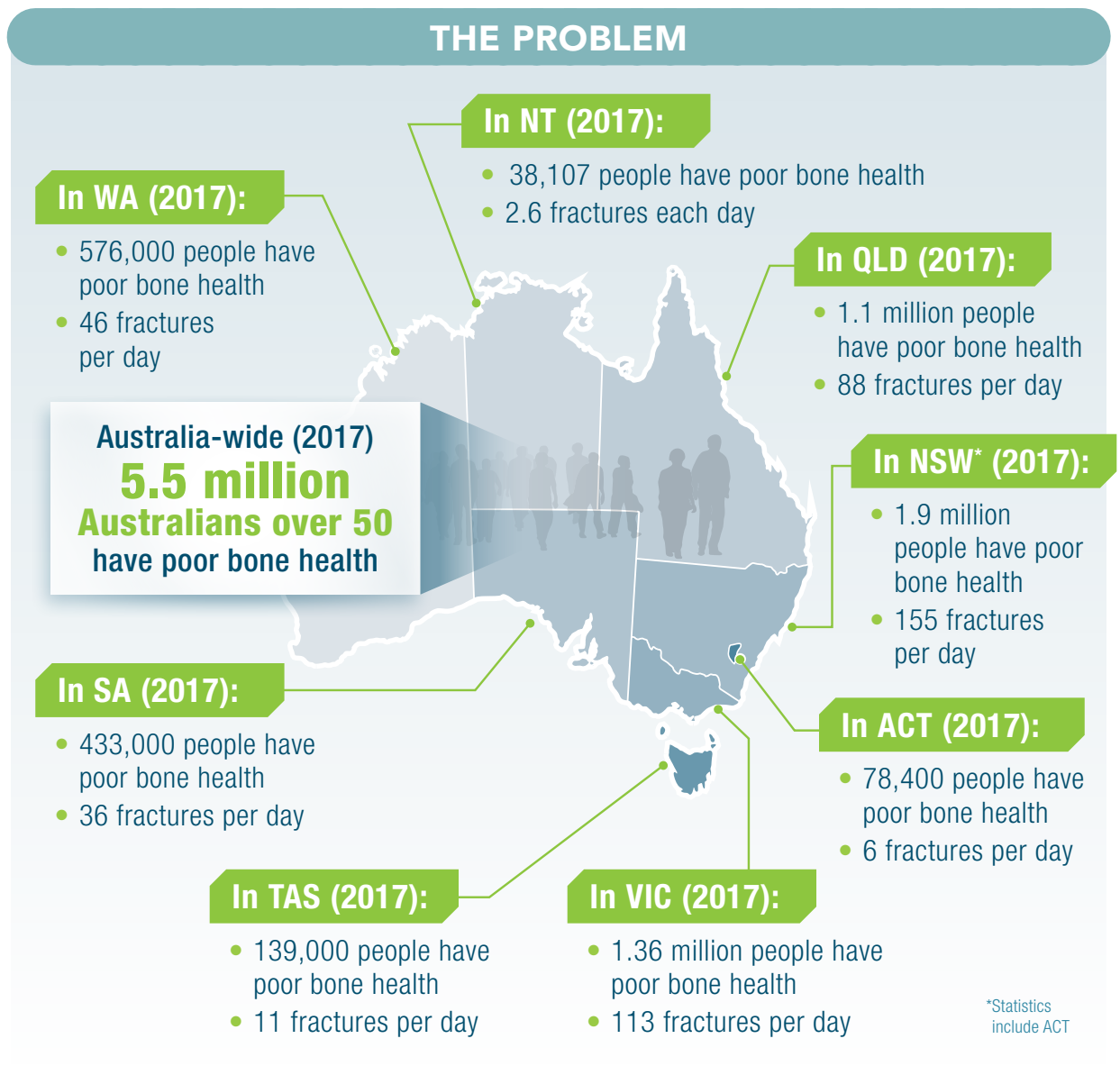
## About Osteoporosis

**Osteoporosis** is the fragile bone disease that causes painful, debilitating and costly fractures, particularly of the hip and spine. Every year in Australia, ~165,000 fractures occur; often from just a minor bump or fall. Many of these could have been prevented with earlier diagnosis and treatment.



**1 bone broken  
every 3.3 minutes**

### THE PROBLEM



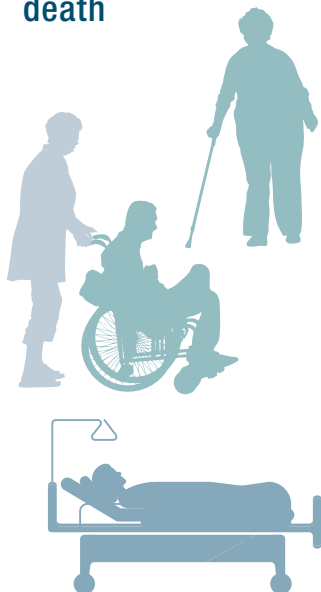
**In Australia, osteoporosis is under-diagnosed and undertreated with as many as **80% of patients** failing to receive appropriate investigation and treatment post fracture.**

# NESS AND PREVENTION

## THE COST

### INDIVIDUAL

Pain, disability,  
loss of independence,  
death



### AUSTRALIAN HEALTH SYSTEM

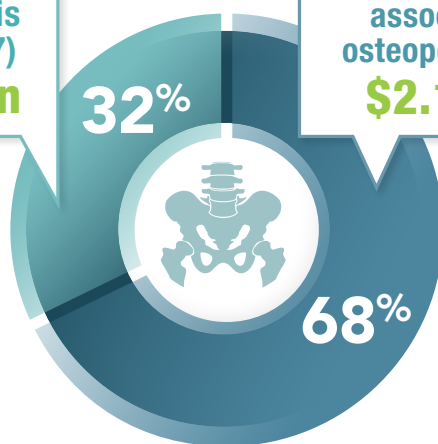
**FEDERAL**  
Non-fracture  
osteoporosis  
costs (2017)  
**\$1 billion**

Includes:  
General medical  
Pharmaceuticals



**STATES/TERRITORIES**  
Cost of fractures  
associated with  
osteoporosis (2017)  
**\$2.1 billion**

Includes:  
Hospital costs  
Emergency  
Rehabilitation  
Home care



Australia-wide the total cost of fractures over  
10 years is projected to reach \$21.9 billion

## OSTEOPOROSIS CAN BE TREATED AND FRACTURES PREVENTED

Effective treatments  
are available and  
can halve the risk  
of fracture



**Osteoporosis =  
increased risk of fracture**



**Diagnosis and treatment of osteoporosis  
can halve the risk of fracture**



osteoporosis australia  
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[www.knowyourbones.org.au](http://www.knowyourbones.org.au)