



**ACI** NSW Agency  
for Clinical  
Innovation

# Working together to prevent osteoporotic refractures

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# Partner Organisations

## Hunter New England Local Health District

- Royal Newcastle Centre

## Murrumbidgee Local Health District

- Wagga Wagga Base Hospital

## Murrumbidgee Medicare Local

## Sydney Local Health District

- Royal Prince Alfred Hospital

# Osteoporosis - a chronic disease

- Is a non-curable condition but in most cases can be managed well
- It is characterised by low density porous bone prone to 'minimal trauma fracture' (MTF)
- MTF results from mere 'slip, trip or fall' from standing height or less
- Affects half of post-menopausal women & a third of men > 60 years of age

# Key health priority of Australian Government since 2002

- Much talk but no action till ...
- In 2009 NSW identified the huge problem
- In spite of poor identification of cases, in 8 years:
  - ▲ 13,000 people re-admitted with re-fracture
  - ▲ 35% refracture rate – admissions same hospital
  - ▲ Average LOS 22 days
  - ▲ 17% mortality rate

# ACI response

- Development of **model of care** for refracture prevention
  - ▲ ‘Must have’ ... fracture liaison coordinator to:
    - **Identify patients**
    - Provide health education
    - Link to investigation
    - Access to treatment
    - Medical and conservative care
    - Follow-up over time

## MUSCULOSKELETAL NETWORK

NSW Model of Care for  
Osteoporotic Refracture Prevention



# Test application in NSW: formative evaluation

## ■ Aim:

- ▲ Is the model applicable for the NSW Health system?
- ▲ To refine data re hospital activity
- ▲ Determine activity and fiscal 10 year projections

# Methods

- Three sites:
  - ▲ Central Sydney based – data review from 10 years of service
  - ▲ Regional based – data review of > 6 years service
  - ▲ Rural based – no service therefore tracked service set-up
  - ▲ All sites collated data re up to 40 consecutive patients

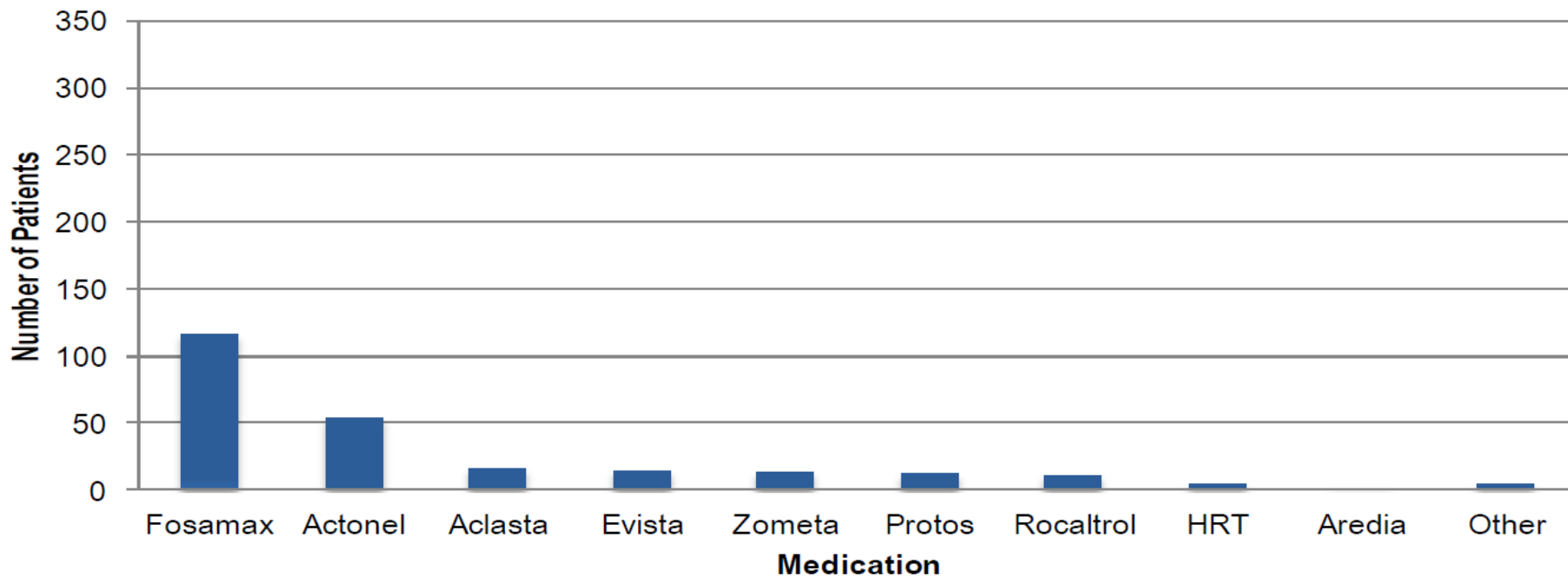
# Methods – data collated

- Patient Surveys
  - ▲ SF-10
  - ▲ Purpose specific
- Systems level data collected by NSW Ministry of Health
- Economic analysis based on:
  - ▲ Data from the sites
  - ▲ System admission data
  - ▲ In consideration of ABF



# Results – access to treatment pre FLC

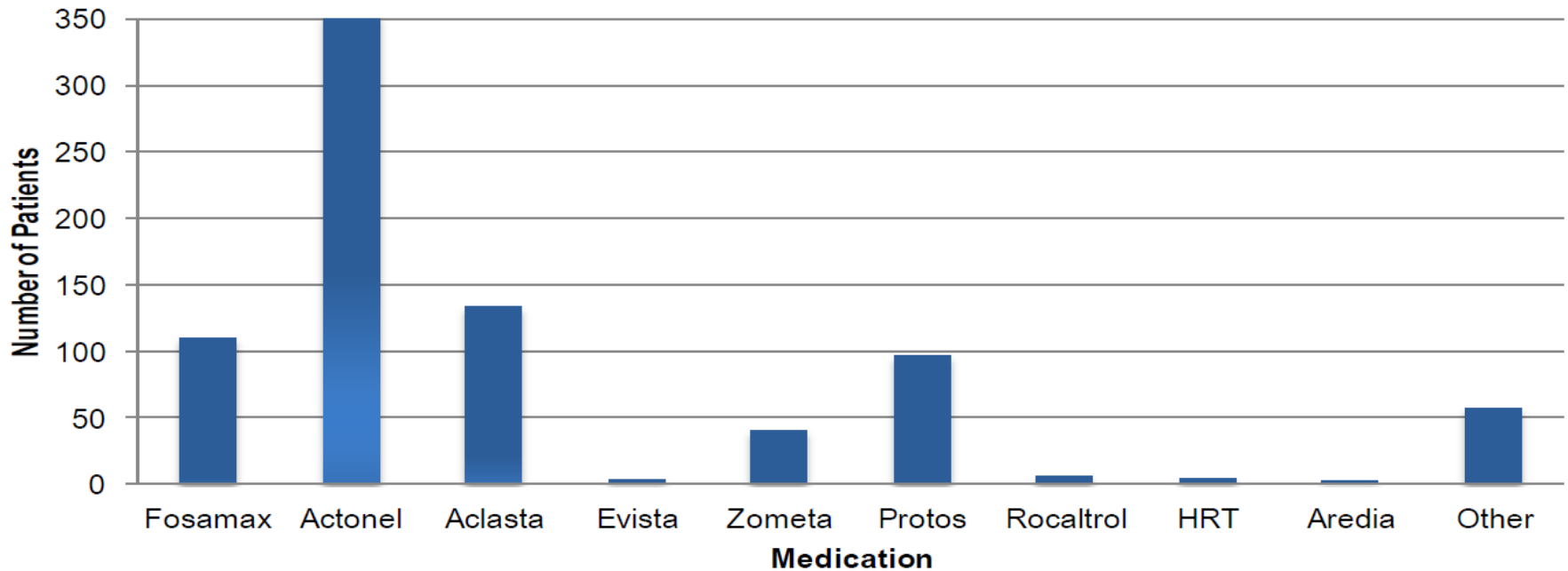
Figure 7-25 Medications before attending Osteoporosis Clinic at RNC (n = 1310)



# Results – access to treatment post FLC



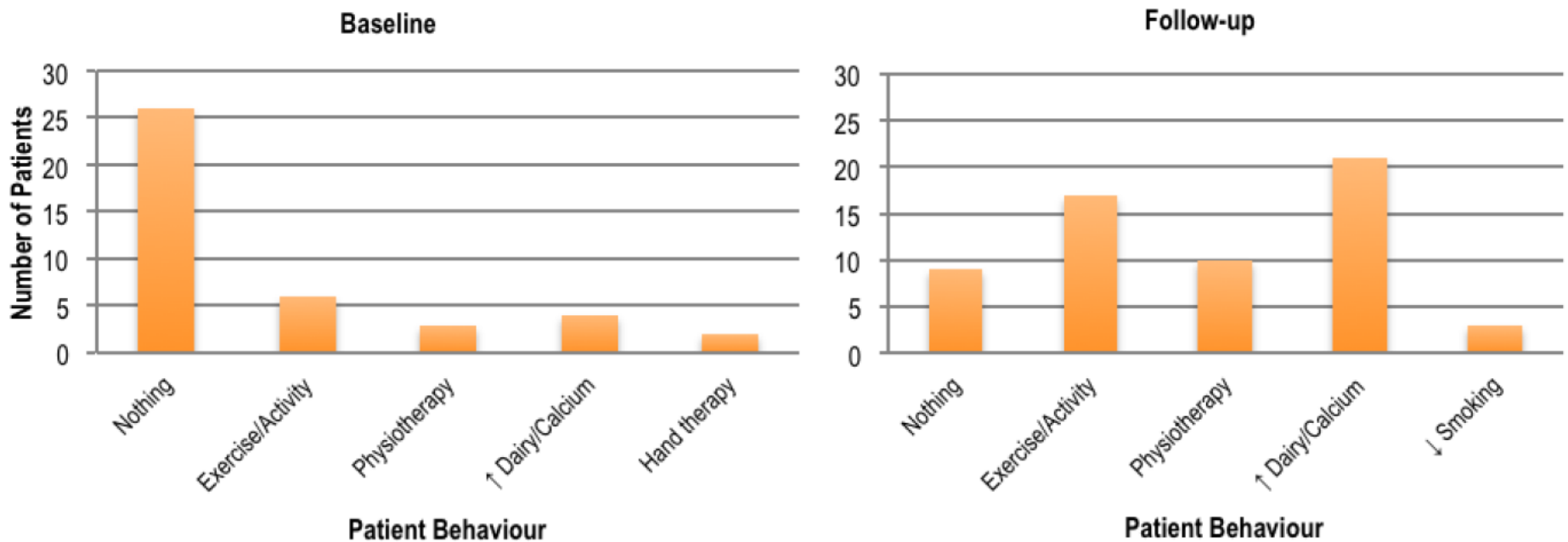
Figure 7-26 Medications after attending Osteoporosis Clinic at RNC (n = 1310)



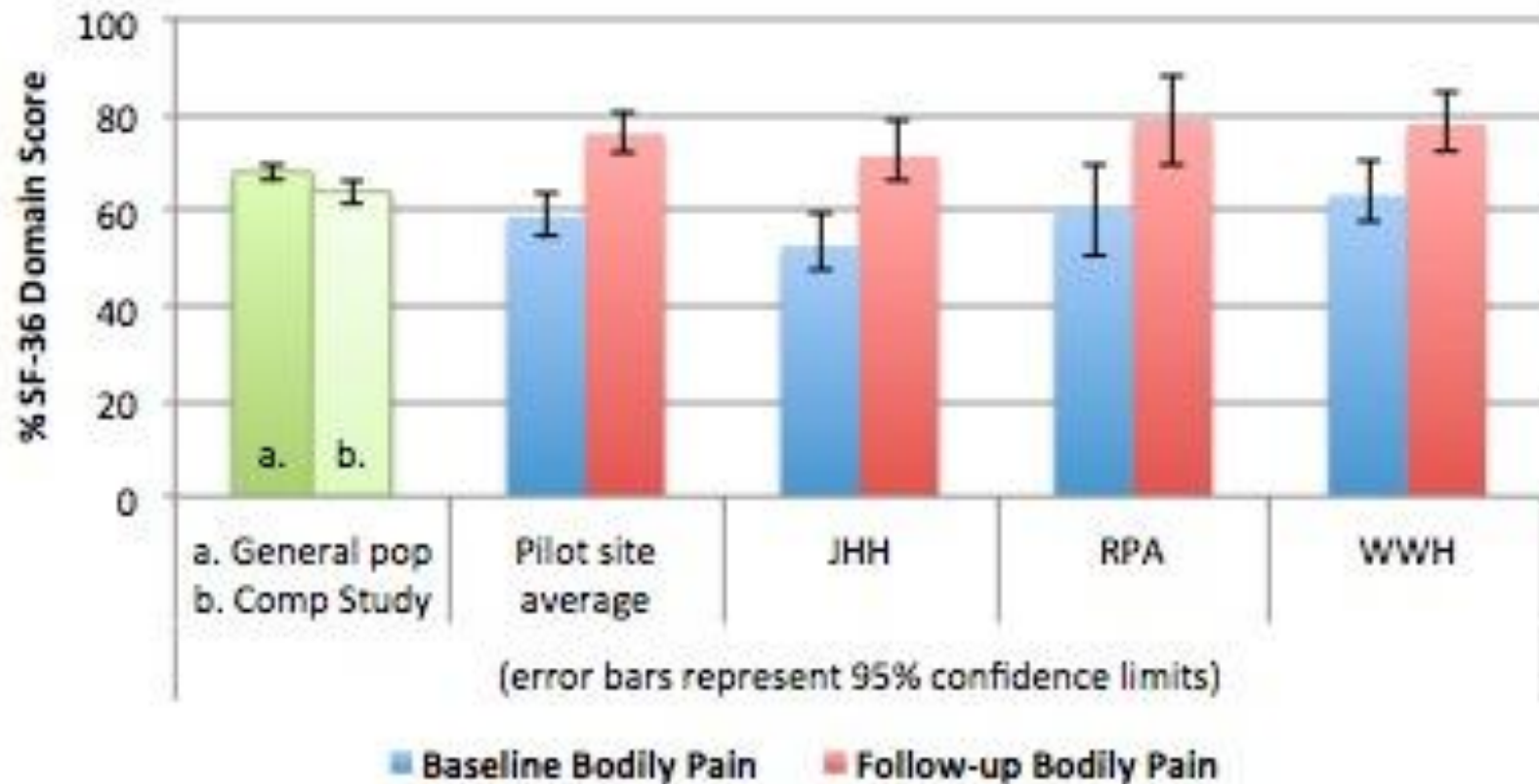
# Results – patient behaviours



Figure 8-6 Patient Behaviours to Manage Osteoporosis at Baseline and Follow-up



# Results – patient quality of life



# Results – fracture projections

- 46.5% of people over 50 years of age with a “first” minimal trauma fracture are likely to refracture again over a 24 month period
- Of this patient cohort around 10% of readmitted refractures could be prevented

# With implementation of the ORP model of care ...

- Around 250,000 beddays could be used for other patients
- Notional savings of \$238 million could be realised
- Nearly 22,000 patient separations could be avoided
- Around 242,000 refractures of previously admitted patients prevented
- Nearly 150,000 patient readmissions within 28 days avoided

# Conclusions

- The NSW model of care for OPR will produce results such as:
  - ▲ Significant decreases in re-fractures
  - ▲ Significant improvements in use of appropriate medications to improve bone health
  - ▲ Improved health behaviours
  - ▲ Significant improvements in quality of life
- The model of care is fiscally important to the NSW health system.

# Resources e.g.

- Experts in Network
- Model of Care document
- NSW & LHD patient activity & fiscal projections for next 10 years
  - ▲ 'Do nothing' scenario v 'implementation' of MoC
- Template for FLC position description
- Full report of Formative Evaluation
- Currently working up state-wide data system



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