Appendix 5
Osteoporosis Project
Pharmacist data collection sheet: initial Summary and 3 month follow up

Code

Name: …………………………………………………………………………………………………………………
Address: …………………………………………………………………………………………………………………
Telephone number: Home…………………………………….
                     Work:…………………………………….
                     Mobile:………………………………...
Name of General Practitioner (GP): ………………………………………..
Address of GP………………………………………………………………………………………………………………
Telephone number of GP…………………………………………………………………………………………

1. Please circle the patient’s risk assessment result:

   Low  Moderate  High

2. Advice provided after risk assessment (please tick the appropriate column)

<table>
<thead>
<tr>
<th>Advice</th>
<th>Verbal</th>
<th>written</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional calcium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional exercise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional vitamin D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce alcohol consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stop smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Preventing osteoporosis” leaflet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Osteoporosis fact sheet”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Medical treatment of osteoporosis” leaflet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Bone density and osteoporosis” leaflet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Osteoporosis and exercise” leaflet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Osteoporosis and menopause” leaflet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacist referral to GP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other……………………………………………………………………………………………………………….</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Have you seen the patient in the three months since the risk assessment?  Yes  No
   Date: ……………………………………….

4. Questions asked of patient by pharmacist on follow up visit (please tick appropriate box):

<table>
<thead>
<tr>
<th>Question</th>
<th>Patient reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you read the information leaflets I gave you?</td>
<td>Yes</td>
</tr>
<tr>
<td>Have you got any questions or concerns about the information?</td>
<td></td>
</tr>
<tr>
<td>Have you been able to increase your calcium intake?</td>
<td></td>
</tr>
<tr>
<td>Have you been able to increase your level of exercise?</td>
<td></td>
</tr>
<tr>
<td>Have you been able to increase your vitamin D intake?</td>
<td></td>
</tr>
<tr>
<td>Have you been able to decrease your alcohol intake?</td>
<td></td>
</tr>
<tr>
<td>Have you been able to stop smoking?</td>
<td></td>
</tr>
<tr>
<td>Have you been to the Doctor to discuss your results?</td>
<td></td>
</tr>
<tr>
<td>Have you had any fracture since the risk assessment?</td>
<td></td>
</tr>
<tr>
<td>Is there any other way I can help you? (Please note patient inquiry and your response)</td>
<td></td>
</tr>
</tbody>
</table>
Six month follow-up

Code

Name: .................................................................

5. Have you seen the consumer in the three months since ............ (please insert date and circle appropriate answer)?
   Yes   No

6. Questions asked of consumer by pharmacist on 2nd follow up visit (please tick appropriate box):

<table>
<thead>
<tr>
<th>Question</th>
<th>Patient reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you been able to increase your calcium intake?</td>
<td>Yes No N/A</td>
</tr>
<tr>
<td>Have you been able to increase your level of exercise?</td>
<td></td>
</tr>
<tr>
<td>Have you been able to increase your vitamin D intake?</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Have you been able to stop smoking?</td>
<td></td>
</tr>
<tr>
<td>Have you been to the Doctor to discuss your results?</td>
<td></td>
</tr>
<tr>
<td>Have you had any fracture since the risk assessment?</td>
<td></td>
</tr>
<tr>
<td>Is there any other way I can help you? (Please note patient inquiry and your response)</td>
<td></td>
</tr>
</tbody>
</table>

Upon completion, please fax (02 63605823) or post a copy of this side of the form to Judith Crockett
Project Officer, Faculty of Pharmacy, University of Sydney (Orange), PO Box 883, Orange NSW 2800
Osteoporosis Project

Upon completion, please post this form to Judith Crockett
Project Officer, Faculty of Pharmacy, University of Sydney (Orange), PO Box 883, Orange NSW 2800

A
36
Appendix 6
**REFERRAL FORM**

Pharmacist Referral to General Practitioner

<table>
<thead>
<tr>
<th>Name</th>
<th>Age (if child)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone (for follow-up)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Reason for referral**

**Action already taken**

**Other relevant information**

**Pharmacist's signature**

**Date**

**Pharmacy name sticker**

© Pharmaceutical Society of Australia

Endorsed by National Council March 2000
Appendix 7
Flow chart of project process for participating pharmacists

Advertising
(in conjunction with the university)

Recruitment of consumers*
(post contact details of consumers to the university)

University informs GP

Booking consumers*

Risk assessment*

BMD (if applicable)

Feedback/counselling/referral*

Follow up at three months*
(University to also do follow-up)

Follow up at six months*
(University to also to follow-up)

Feedback to pharmacist on outcomes of project

**Bold indicates action is required by the pharmacist
A systemic skeletal disease characterized by low bone mass and micro-architectural deterioration of bone tissue with a consequent increase in bone fragility and susceptibility to fracture.

OSTEOPOROTIC FRACTURE
THE MAGNITUDE OF THE PROBLEM

- In Australia, after the age of 60 years: 55% of females and 29% of men will suffer from an osteoporotic fracture.
- Predicted increase in osteoporotic fractures from 1 in every 8 minutes to 1 in every 4 minutes by 2021.
- Current cost estimate $7.4 billion/yr ($1.9 billion in direct costs).

Missed Opportunities
First Fracture
Over 65
Frail Elderly

Patients with prior fracture have a high risk of subsequent fracture & effective treatment established

Incident Vertebral Fracture
Predicts Fracture Within One Year
Risk Depends on Prevalent Fractures

Unrecognized Vertebral Fractures on X-ray

"34 women aged 60 and older, hospitalized for various reasons. Chest X-rays reviewed for fracture.

* p<0.05, vs. patients with prevalent vertebral fractures (10-fold increased risk).
Evidence for antifracture efficacy in randomised clinical trials (effects in excess of calcium and vita D alone)

<table>
<thead>
<tr>
<th></th>
<th>Vertebral</th>
<th>Hip</th>
</tr>
</thead>
<tbody>
<tr>
<td>oestrogen</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>risedronate</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>alendronate</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>etidronate</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>raloxifene</td>
<td>++</td>
<td>0</td>
</tr>
<tr>
<td>calcitriol</td>
<td>+</td>
<td>0</td>
</tr>
</tbody>
</table>

And tomorrow PTH and Strontium

* +++ strong evidence, ++ some evidence, + weak evidence; 0 no evidence; − increased risk

OVER 65
Evidence For Effective Intervention

Cost-effectiveness for treatment of patients aged 65-70 with low BMD (<-2.5) & no prior fracture established

No Medicare reimbursement for BMD and no PBS reimbursement for therapy

Gibbs et al., 1996

FRAIL ELDERLY
Evidence For Effective Intervention

In Australia, Vitamin D deficiency in the elderly is common particularly in residential care (22 - 45%) 1

Calcium and Vitamin D supplements established to prevent hip fractures 2

1. Flicker et al., 2002. 2. Chapuy et al., 1993

Fracture Incidence

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence</td>
<td>Vertebral</td>
<td>Hip</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Vertebral Fractures

- commonest osteoporotic fracture
- Falls account for 30%-60%
- Prevalence and incidence varies different definitions of fracture
  - Clinical (1/3) vs radiologic

Consequences of Vertebral Fractures

- Back pain
- Loss of height
- Deformity- kyphosis, protuberant abdomen
- Reduced pulmonary function
- Diminished quality of life- loss of self-esteem, distorted body image, dependence on narcotic analgesics, sleep disorder, depression, loss of independence
- Increased mortality
**Hip Fractures**
- Second most common osteoporotic fracture
- Most are caused by fall from standing height
  - ~5% are "spontaneous"
- Only 1% of falls lead to hip fracture

**Distal Forearm Fractures**
- Third most common osteoporotic fracture
- Most are caused by fall on outstretched hand
- Increased risk of later hip fracture

**Survival Rates After Fractures**
At 1 year, hip fractures have excess mortality – 20%.
Vertebral fractures similar excess mortality at 5 years.

![Graph showing survival rates after fractures](image)


**WHO Criteria For Postmenopausal Osteoporosis**
The T score compares an individual’s BMD with the mean value for young normals and expresses the difference as a standard deviation score.

![WHO criteria for osteoporosis](image)


**Indications for BMD**
- All women and men aged 65-70 and older
- All (adults) with a fragility fracture
- Anyone with a disease, condition, or medication associated with low bone mass
- Anyone in whom BMD testing would facilitate the decision regarding treatment
- Monitoring therapy
**T and Z Scores**

- T-score: Number of standard deviations patient’s BMD is above or below average BMD of young-adult reference population
  - Used for diagnosis
- Z-score: Number of standard deviations patient’s BMD is above or below average BMD of age-matched reference population
  - Used to suggest need for further evaluation
- Example: 59 year-old with T-score = -2.0 & Z-score = -0.5

---

**Prevalence of Osteoporosis and Lifetime Fracture Risk in 50 year old White Women**

* PA Spine BMD

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**Why Measure Spine and Hip?**

- Spine-Hip discordance
- Find lower BMD site
- Fracture prediction
  - Spine best for spine fractures
  - Hip best for hip fractures
- Flexibility in monitoring
  - Spine preferred, greater change
  - With spine DJD, may use hip

---

**Causes of Discordance**

- Peak adult bone mass and rate of bone loss are not the same throughout skeleton
- In perimenopausal women, rate of bone loss greater in cancellous bone than cortical bone
- Some disorders affect mostly cortical bone (HPT)
- Artifacts (degenerative disease, fractures, etc)
WHO Criteria applies only to DEXA!
Only postmenopausal white women
Only PA spine, hip and forearm DEXA

Percent of 60 y/o White Women at T= -2.5

Normative Data
same patient measured on
different devices =
different T-scores
• different reference
populations
• different statistical
modeling

When to Consider Lab Evaluation
• Men with osteoporosis
• Unexplained fracture
• Low Z-score (< -2)
• Poor response to therapy
• High index of clinical suspicion in any patient with low
bone mass

Tests to Consider
Underlying Causes of Low Bone Mass or Fracture
• Calcium, PTH, ALP, Cr.
• 25-OH vitamin D, PTH
• 24-hour Urine Calcium
• FBC
• Serum/Urine protein
electrophoresis & IFE
• Bone Biopsy rarely indicated
• TSH
• Testosterone in men
• Coeliac disease antibodies
• 24-hour urine cortisol or
DXM suppr.
• Bone turnover markers

For Patients With Fracture
Remember: not all vertebral deformities are
fractures and not all fractures are due to
osteoporosis:
• Consider bone scan if equivocal fracture
• Consider MRI if fracture might be due to
metastatic carcinoma
• Consider MRI if there is question of
lateral or posterior displacement
**Recommendations for Pharmacologic Intervention**

- T-score < -2.5
- Even if no other risk factors
- T-score < -1.0 (1.5)
- Other Major Risk Factors: Prior Fracture, Family History of Fracture

**Great Choice**

- HRT
- SERMS
talofoxifene, tibolone
- BISPHOSPHONATES
alendronate, risedronate, etidronate, pamidronate, zoledronate
- PTH
- STRONTIUM

**Meet three patients**

**Patient #1**
- 50 year old woman
- Natural menopause
- Vaso motor symptoms
- Family History of Osteoporosis

**Patient #2**
- 65 year old woman
- Postmenopausal
- Good health
- No menopausal symptoms
- BMD T score -2.6
- 3 cm height loss
- Vertebral fracture

**Patient #3**
- 75 year old woman
- Presents with a painful vertebral crush fracture
- History of falls, prior wrist fracture
- Low BMD
- 4 cm height loss
- Has never used estrogen

**Patient #1**

- What about her risk of Osteoporosis
  1. Lifestyle measures
  2. HRT
  3. Low dose HRT
  4. Tibolone (Livirel)
  5. Progesterone alone

- Is there still a role for HRT?
- What about HER and WHI?

**WHI Events / 10,000 pt years**

- **Decrease**
  - in fractures, 5 fewer hip fractures & 40 fewer all fractures
- in colon cancer, 6 fewer
- **Increase**
  - in breast cancer, 8 more
  - in venous thrombo sis, 8 more PE
  - in CHD, 7 more

**WHI novelty**

- ↑ breast cancer – from yr 5 - first RCT
- ↓ Colon ca. – from yr 1 = earlier data
- ↑ Heart – from yr 1 = HER
- ↑ Stroke – from yr 1 = earlier data
- ↑ VTE/PE – from yr 1 = earlier data
- ↓ Fracture – from yr 1 = 1st RCT
What is the Women's Health Initiative Study (WHI)?

a prospective, RCT trial
>16,000 healthy, pm women 50-79
>Average age 63

- estrogen plus progestin (if uterus)
  CEE 0.625 mg & medroxyprog 2.5 mg/day
  estrogen alone if hysterectomy

JAMA 2002 288: 321-323

Women's Health Initiative Study

effects on heart disease and stroke,
breast and colorectal cancer
and bone fractures.

not
hot flashes or vaginal dryness for which
-oestrogen is the most effective treatment
cognition, etc as primary endpoints

Why was the oestrogen plus progestin arm halted early (5.2 years)?

increased risk of breast cancer
relatively small for any individual woman
increase of 8 cases per 10,000

as the overall incidence of adverse events was
greater than predetermined safety endpoints.

What does the breast cancer incidence indicate?

HRT 166/8506: placebo 124/8102
Relative risk: 1.26
Absolute harm: 0.08%
increase of 8 cases per 10,000 person yrs

What is the status of the estrogen only arm of the WHI study?

no statistically significant difference in the incidence of breast cancer
planned to continue for the 8.5 years
no statistically significant difference between the mortality rates in any of the groups.

WHI (& HERS) relevance

number adverse events small
short term therapy appropriate
no cardioprotection
no net effect on cancer
effective for osteoporosis
Patient #1

- 50 year old woman
- Natural menopause
- No troublesome vasomotor symptoms
- FH Osteoporosis

What alternatives are there to HRT to prevent Osteoporosis?

“Bisphosphonates can be used instead of oestrogen to prevent osteoporotic fractures”

Rymer et al. Making decisions about HRT. BMJ February, 2003

Risedronate Increases BMD in Early Postmenopausal Women

Lower fracture rates after longterm, 10-20 years, oestrogen therapy

Cauley, 2001

Trials with alendronate and risedronate have shown preservation of BMD but not fracture reduction

Ravn, 1999. Hooper, 1999

Patient #2

- Age 65
- Postmenopausal
- Good health
- No menopausal symptoms
- BMD T score -2.6
- 3 cm height loss
- Vertebral fracture

What has Level 1 evidence of fracture prevention?

1. HRT
2. Bisphosphonate
3. Raloxifene
4. Calcitriol
Evidence for antifracture efficacy in randomised clinical trials (effects in excess of calcium and vit D alone)

<table>
<thead>
<tr>
<th>Vertebral</th>
<th>Hip</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

And tomorrow PTH and Strontium

* +++ strong evidence, ++ some evidence, 0 no evidence, ± increased risk

Effect of HRT and SERMs on Venous Thromboembolic Events (VTE)*

<table>
<thead>
<tr>
<th>Relative Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HRT</th>
<th>tamoxifen</th>
<th>Raloxifene 60 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>HERS</td>
<td>Breast cancer trial</td>
<td>MORE</td>
</tr>
<tr>
<td>Grady ¹</td>
<td>Fisch ²</td>
<td>Adapted from ³</td>
</tr>
</tbody>
</table>

¹ Ann Intern Med 2000;132:669
² Natl Cancer Inst 1998;80:1371 (analysis restricted to age group 50-60)
³ Breast Cancer Res Treatment 2001; 6:123

Bisphosphonates: structural differences

Evidence for antifracture efficacy in randomised clinical trials (effects in excess of calcium and vit D alone)

<table>
<thead>
<tr>
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And tomorrow PTH and Strontium

* +++ strong evidence, ++ some evidence, 0 no evidence, ± increased risk

Efficacy of Raloxifene on New Vertebral Fractures

<table>
<thead>
<tr>
<th>Study Period</th>
<th>Relative Risk (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 0-3</td>
<td>1.0</td>
</tr>
<tr>
<td>Year 4</td>
<td>0.750</td>
</tr>
<tr>
<td>Year 5-3</td>
<td>0.930</td>
</tr>
<tr>
<td>Year 6</td>
<td>0.900</td>
</tr>
</tbody>
</table>

Risk Reduction

- 55%
- 50%
- 30%
- 38%
Osteoporosis Project
How will it work?

Dr Sue Taylor
Luke Kelly
Dr Judith Crockett

Overview of Project

- Research Team
  - Sylvie, Lise, Luke and myself applied to Guild for money, 2002
  - Appointed Judith April 2003

- Steering Committee
  - Includes research team
  - Professor Michael Hooper and
  - Janet Watters, Dubbo Osteoporosis Epidemiology Study

Aim 1 of Project

- To develop, implement and evaluate
  - an integrated service for the prevention of osteoporosis
  - which can be delivered by community pharmacists.

Aim 2

- To determine whether
  - the measurement of BMD in the pharmacy increases the effectiveness of risk assessment and referral services for osteoporosis,
  - compared to the same service offered without BMD.

Development of Protocol

- Development of
  - risk assessment questionnaire
  - decision making tool and protocol for counselling and referral to other health practitioners
  - Trialled by honours student

Recruitment of Pharmacists

- 6 metropolitan sites
  - 3 will deliver Risk Assessment and Advice only
  - 3 Risk Assessment and Advice + BMD

- 6 rural sites
  - 3 will deliver Risk Assessment and Advice only
  - 3 Risk Assessment and Advice + BMD

- All will recruit 20 consumers = 240 total
**Metropolitan Pharmacy Matched Pairs**
- Burwood - Pike's
- Fairfield - Hamilton Rd Phcy
- Blaxland - Blaxland Day 'n' Night
- Bankstown - South Terrace Phcy
- St Mary's - Post Office Phcy
- Wentworthville - Old Toongabbie Phcy

**Rural Pharmacy Matched Pairs**
- Molong - Sue
- Blayney - Paul
- Lithgow - Alan
- Parkes - Chick
- Bathurst (Kelso) - Martin
- Orange - Ken

**Training**
- Today - Training + Randomization
- Training of Second Group very soon
- (?) In Orange
- Follow up on site visit to ensure protocol is working

**After Today**
- Letter to Division of GP’s
  - Explaining the project
  - Naming the Pharmacy involved in their division
- Folder - contents

**Flow Chart (part 1)**
1. Advertising
   - Recruitment of consumers
   - University informs GP
2. Recruitment of consumers
   - Booking of Consumers
3. Risk Assessment

**Flow Chart (part 2)**
6. BMD
   - Follow up 3/12
7. Feedback/counselling/referral
8. Follow up 6/12
9. Feedback to Pharmacists
1. Advertisement
- Ad in your local paper (University)
  + Co-ordinate and communicate timing of visit by INTA for BMD test
- Posters in your Pharmacy
  + any other local mechanisms you use

2. Recruitment of Consumers
- Inclusion Criteria
  + Must live in your area
  + Be over 40 if female, over 50 if male
- Exclusion Criteria
  + If had a BMD test in past 2 years
  + If on treatment before or currently for osteoporosis

Recruitment (cont)
- Subject Information Sheet
  + Subjects must read this
  + Different one for each group
- Consent Form
  + Subjects must complete form
- Patient Details Form
  + For our records
  + Mail this to Project Officer

3. University to Inform GP
- We will send GP a letter
  + Explain that patient has signed up for the study
  + Explain that they might expect
  + A possible referral
  + A possible request for test data

4. Book in Consumers
- Use booking form supplied if necessary
- Probably more necessary for BMD group
- Date to be confirmed with Judith and INTA

5. Conduct Risk Assessment
- Risk Assessment Questionnaires
- Pharmacist to complete with the patient
6. Conduct BMD (Group 1 only)

- If a does this
- but
- pharmacist
  - conducts risk assessment before test
  - is available for information, counselling and referral

7. Give Feedback/Counsel/refer

- Follow sheet with heading
- Information for Pharmacists Only
- Summary of Information to be issued following risk assessment for osteoporosis
- Issue appropriate Leaflets and Booklets
- Complete PSA Referral Form if necessary

Record Keeping

- Complete Pharmacist Data Collection Sheet - Initial Summary
- Mail (in stamped addressed envelopes)
  - Completed Risk Assessments (20)
- Copy of Pharmacist Data Collection Sheet to Project Officer (20)

8. 3/12 follow up

- Pharmacists complete
  - Pharmacist Data Collection Sheet
  - Mail to Project Officer in SAE
- Project Officer
  - Mails longer questionnaire to participant
  - Telephone after a week and goes through the questionnaire with participant

9. 6/12 Follow up

- Pharmacists complete
  - Pharmacist Data Collection Sheet
- Project Officer
  - Mails longer questionnaire to participant
  - Telephone after a week and goes through the questionnaire with participant

10. After data analysis

- Meet to give you feedback on the results
- Publish the results
HouseKeeping

- Your Contact Details

- Invoices with ABN
  - For Locum ($320) and Travel ($250) if rural

Future payment

- Invoice
  - $20 per patient recruited
  - $10 paid after Risk Assessment (and BMD) ($200)
  - $10 after 6/12 follow up ($200)
  - $10 for gift voucher for each patient recruited if no BMD ($200) - paid after risk assessment?

CPE Points

- Negotiating with PSA NSW
- Hope to have approval August 11
- Once approved we inform PSA that you have attended training.

Any More Questions?

- And
- THANK YOU
Effect of Zoledronic Acid on Lumbar Spine BMD in Postmenopausal Osteoporosis

Patient #3
- 75 year old woman
- painful vertebral crush fracture
- prior wrist fracture
- Low BMD
- 4 cm height loss
- Has never used HRT

Risedronate demonstrates significant hip fracture reduction in BMD < -2.5

Patient #3
- 75 year old woman
- painful vertebral crush fracture
- prior wrist fracture
- Low BMD
- 4 cm height loss
- Has never used HRT

Who to treat?
Postmenopausal Women with osteoporosis or osteopaenia and fractures*
with osteoporosis without fractures*
but not those with osteopaenia/normal without fractures

Premenopausal Women
Men
Corticosteroids
Appendix 8
Osteoporosis Project – Newsletter Number 1 (August 2003)

The purpose of this newsletter is to keep you up-to-date with project developments, and to act as a place where you can share your successes and any problems related to the project. Your contributions are welcome and can be emailed to Judith on jcrocket@orange.usyd.edu.au.

Visit to Sydney

Sue and I have visited all the Sydney pharmacies. Thank you for making us feel welcome.

Please don’t hesitate to call us with any questions, no matter how insignificant they seem to you. We need to know if something is working well, or not working at all, as this will help in our evaluation of the project.

Several of you have already started making contact with customers. Kim has recruited 9, Amal and Emile 3 each, and the other pharmacies have had several enquiries. Well done!!

Bone density testing

We hope BMD testing will carried out during the first week of October in the Sydney pharmacies (South Terrace, Hamilton Road, and Old Toongabbie). These pharmacies should be receiving a phone call from Inta Marsden within the next few days to arrange the date for her visit.

We are planning to have the BMD in the rural pharmacies done during the first week in November.

Training day

The training day for all those who were unable to attend in Sydney will be held on Sunday 21 September at the University’s campus at Orange. Please contact Judith (02 63 605 582) for further information.

Logos

Thanks to all who have provided logos. We are waiting for the University’s marketing Department to finalise details of the adverts and press releases. Ads for pharmacies participating in the risk survey (no BMD) will be submitted to your local paper as soon as possible – we’ll let you know prior to their publication. Fliers will be made based on the advertisement, and sent to you for distribution.

Ads for pharmacies offering BMD will be placed in local papers closer to the date of the tests.

Record keeping

We know that keeping records is a real chore, but it’s really important to keep them up to date so far as the project is concerned.

Thanks again

„„for your willingness to participate. We wish you every success in recruiting your participants.

Keeping in touch,

Judith
Osteoporosis Project – Newsletter Number 2 (October 2003)

Risk assessments

Thank you to those who have already posted in the contact details of project participants.

It’s time for us to start entering data from the risk assessments. Could you please send us all completed risk assessments to date (it doesn’t matter if you’ve only done a couple) as soon as you’ve transferred the assessment’s result onto the ‘Pharmacist data collection sheet’.

Bone density testing

Bone mineral density tests will be carried out:
- In Fairfield on 1st October
- In Wentworthville on 8th October
- In Bankstown on 31st October
- In Kelso on 10th November
- In Parkes on 11th November
- In Molong on 12th November

Training day

The final training day for participating pharmacists was held on the 21st September. Thanks to all who made the day a success.

Time taken to provide customer service

As part of our monitoring of the project, we need to know approximately how long you are spending with each customer in terms of:
- a) explaining the study and recruiting the customer. Could you please write the time taken to explain the project and recruit the customer on the top of the patient consent form.
- b) booking times of the BMD test (if appropriate)
- c) assisting the customer in filling out the risk assessment survey and determining the level of risk. Could you please write the time you’ve taken to assist the customer in filling out the risk assessment survey on top of the survey. Please also write down the length of time you have taken to actually work out the level of risk.
- d) customer counselling. Please record the length of time taken to provide advice after the risk assessment next to question 2 (advice provided after risk assessment) on the Pharmacist data collection sheet.

If you have any queries, don’t hesitate to call me.

Lists of risks (including medications and medical conditions) predisposing individuals to osteoporosis

We have received a number of inquiries regarding the medications and medical conditions predisposing individuals to osteoporosis. They are listed here for your information.

Modifiable risk factors
- low intake of calcium
- low intake of vitamin D (less than 15 minutes of sunlight 4-6 times a week, outside periods of highest U.V.)
- sedentary lifestyle (less than 30 minutes of weight bearing exercise 3 times a week)
- cigarette smoking (especially more than 20 a day)
- reduced weight for one’s height
- excessive alcohol intake
- administration of medications that will increase risk of falls (anticholinergic, antihypertensive agents, certain psychoactive agents)
- Certain medications such as glucocorticoids (equivalent to oral prednisolone 7.5mg daily for three months or more), antiepileptic drugs, excessive thyroid replacement and heparin

**Disease related risk factors**
- Asymptomatic primary hyperparathyroidism
- Hyperthyroidism
- Cushing’s syndrome
- Addison’s disease
- Chronic cardiorespiratory disease
- Malabsorption syndromes (e.g. Crohn’s disease; calcium leakage resulting in kidney stones)
- Leukemia
- Chronic renal disease
- Type 1 diabetes
- Rheumatoid arthritis
- Chronic medical conditions contributing to bone loss
- Bilateral oophorectomy
- Hypogonadism

A more detailed discussion of these can be found in the attached document ‘Identification, prevention and treatment of osteoporosis’ under the heading ‘Risk factors’.

**Keeping in touch,**

**Judith**
Update on risk assessments

We’re well underway in the entering of results from the risk assessment surveys and pharmacist data collection sheets.

Thank you to those of you – Ken, Deb, Sue, Amal and Gina - who have sent in all their risk assessment surveys and pharmacist data collection sheets.

Sonya has forwarded all her risk assessment surveys and we’re only waiting on copies of her data collection sheets. Kim is in much the same position, and is making great progress.

Despite entering the project at a later stage Terry, Paul and Alan have completed quite a few risk assessment surveys.

BMD testing has also taken place in Bathurst and Fairfield, and we’re looking forward to receiving the results from both locations.

Could you please send us all risk assessments and pharmacist data collection sheets completed to date, as soon as you’ve transferred assessment results onto the ‘Pharmacist data collection sheet. We need to get as much of the data entered prior to Christmas as possible.

Customer follow ups

Judith will be starting the 3 monthly follow up interviews in the Orange district during the next fortnight. Follow up interviews for customers from Fairfield, Old Toongabbie and Bankstown will be carried out during January and early February.

January will also be the time when Ken, Sonya, Emile and Amal start following up their participating customers. This will involve a brief chat with the person concerned, either on the phone or in the pharmacy to obtain answers to question 3 (‘Have you seen the patient in the three months since the risk assessment?’) and question 4 (‘Questions to be asked of patient by pharmacist on follow up visit’) on the pharmacist data collection sheet.

Thank you

We would like to thank you for your participation in the project to date. We’ve identified a number of people at medium and high risk of osteoporosis who might otherwise have gone undetected – an excellent outcome.

We’d also like to take this opportunity to wish you a safe and happy holiday season, and a prosperous New Year.

Regards

Judith and Sue
Osteoporosis Project – Newsletter Number 4 (June 2004)

Update on risk assessments and follow-ups

All the data from the risk assessments and three month follow-ups of patients have been processed and partially analysed.

Thank you to Amal for sending all her 3 month Pharmacist data sheets. We’d appreciate receiving all other pharmacist 3 month follow-up data sheets as soon as possible. If you haven’t made a start on this, it’s very important from the Pharmacy Guild’s perspective that we have some information on pharmacist follow-up.

All this involves is a brief chat with the person concerned, either on the phone or in the pharmacy to obtain answers to question 3 (‘Have you seen the patient in the three months since the risk assessment?’) and question 4 (‘Questions to be asked of patient by pharmacist on follow up visit’) on the pharmacist data collection sheet.

Sue is presenting a paper on the project to a Pharmacy Practice conference in Malta in July and we need to obtain as much of the outstanding data as possible before the end of June. A copy of the paper will be forwarded to you in July.

Six monthly follow-ups

Our original intention was for the project officer to follow up all patients at 3 months and 6 months. However, the time and cost of actually contacting patients was far greater than expected. As a result, we will only be carrying out our own 6 monthly follow-ups with patients who were identified as being of medium or high risk.

Thank you

We would like to thank you for your participation in the project to date. We’ve identified a number of people at medium and high risk of osteoporosis who have changed their lifestyle as a result of your advice after the risk assessment. Calcium intake and exercise levels have increased in a significant number of cases.

Change in staff

Judith has been appointed as a Lecturer in the Faculty of Rural Management at the University and will be leaving her role at Project Officer on the 29th April. Her place is being taken by Lynette McLeod, who can be contacted by phone 02 63605557 or email: lynette@pharm.usyd.edu.au

Judith will still be helping out with data analysis and report writing, but from the 3rd May, Lynette is your primary contact person for the project.

Regards

Judith, Lynette and Sue
Appendix 9
Are you female aged over 40, or male aged over 50?

You may be at risk of osteoporosis!

Join our research study and find out if you are at risk.

Risk factors include:
- Inadequate calcium intake
- Not enough regular exercise
- Smoking
- Family history of osteoporosis and/or fracture

If you have NOT had a Bone Mineral Density test in the last 2 years or treatment for osteoporosis in the past

FOR MORE INFORMATION CONTACT [NAME AND PHONE NUMBER OF PHARMACY]
Are you female aged over 40, or male aged over 50?

You may be at risk of osteoporosis!

Join our research study and find out if you are at risk.

**Risk factors include:**
- Inadequate calcium intake
- Not enough regular exercise
- Smoking
- Family history of osteoporosis and/or fracture

If you have NOT had a Bone Mineral Density test or treatment for osteoporosis in the past

FOR MORE INFORMATION ASK FOR A SUBJECT INFORMATION SHEET OR CALL THE FACULTY OF PHARMACY, UNIVERSITY OF SYDNEY ON 0263605512
Appendix 10
An integrated service, initiated by community pharmacists, for the prevention of osteoporosis

Patient Consent Form

I, ............................................. hereby voluntarily consent to participate in the study entitled ‘An integrated service, initiated by community pharmacists, for the prevention of osteoporosis’.

The project is being conducted by Dr Susan Taylor and Dr Judith Crockett (Faculty of Pharmacy, University of Sydney), Ms Sylvia Shepherd (Arthritis Australia), Mr Luke Kelly, (Community Pharmacist) and Ms Inta Marsden (Diagnostic Radiographer).

I give permission to my GP or Specialist doctor .............................................................. to release any health status information sought by researchers.

I give permission for the pharmacist or project officer to contact me in three months time, and in six months time, for follow up.

I understand any data collected for the purposes of this study will remain strictly confidential and not be used to identify any general practitioner, pharmacy, pharmacist or patient. I have been informed that information from this research may be used in future research or may be published.

Details of the study have been clearly explained by the researcher. I am aware of the purpose of this project and what my involvement entails. My participation is entirely voluntary.

I have been informed of my right to question any part of the procedure or withdraw from the project at any time.

Participant
Name: ..........................................................
Address: .......................................................................................................................

Signature: ................................................. Date: ..................................................

Witness
Name: ..........................................................
Address: ....................................................................................................................
Signature: ..........................................................
Date: ..........................................................

Any person with complaints about the conduct of the research study can contact the secretary of the Human Ethics Committee, The University of Sydney, on 02 93514811
Contact details of consumer

Name: .............................................................................................................

Address: .............................................................................................................

.........................................................................................................................

.........................................................................................................................

Telephone numbers:

Home: ........................................

Work: .................................

Mobile: ..............................

Email address: ..........................................................

Name of General Practitioner
(GP): ..........................................................

Address of
GP: ..................................................................................................................

.........................................................................................................................

Telephone number of GP: ............................................

Please keep a copy of this information (for the duration of the project) and post the
original, as soon as possible, to:
Dr Judith Crockett
Project Officer
Faculty of Pharmacy
University of Sydney – Orange
PO Box 883
Orange NSW 2800
Appendix 11
Bone image not for diagnosis
Your Forearm Bone Density has been measured using a Norland Deka Scanner.

The “T” score compares your bone density to that of a young normal person (20-23 yr old = peak bone mass) This determines your fracture risk, and if treatment is necessary.

The “Z” score compares your bone density to the normal value for someone of your age. This is not used to determine fracture risk. It is basically used after menopause when most bone loss occurs, to determine if bone density is low whether it is still within normal range for your own age.

Your risk of fracture is indicated by the “T” score value.

<table>
<thead>
<tr>
<th>T-SCORE</th>
<th>FRACTURE RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 or above</td>
<td>Low</td>
</tr>
<tr>
<td>0 to -1</td>
<td>Low</td>
</tr>
<tr>
<td>-1 to -2</td>
<td>Moderate</td>
</tr>
<tr>
<td>-2 to -2.5</td>
<td>Moderate to High</td>
</tr>
<tr>
<td>-2.5 or less</td>
<td>High to very high</td>
</tr>
</tbody>
</table>

World Health Organization classify: -2.5 as Osteoporosis

Statistically (taken from numerous surveys and research programs) DEXA results usually form a general pattern, which enables comparisons and relativity to be demonstrated.

Spine result is commonly the highest in bone density
Forearm result traditionally is in the middle
Hip result usually is just below that of the forearm reading.

The results of your tests should not be taken in isolation
BMD results should supplement your medical history.
If your results are of concern to you then consult your doctor.
Your doctor may wish to add these results to your records.

A progress BMD forearm scan is recommended 2 yearly.
1 year progress is necessary if on treatment, or if you have a lifestyle change.
Appendix 12
Osteoporosis screening in community pharmacy

Client Follow Up Survey (at three months) – received BMD test in Pharmacy

Client name:
ID:
Date:

1. Recruitment

1.1 How did you first become aware of the screening service?
My pharmacist invited me to participate......................
Advertisement in the pharmacy..............................
Advertisement in the local newspaper......................
Friends/family......................................................
Other..............................................................(please specify)

2. Referral advice (as per needs assessment questionnaire)

2.1 Have you visited the pharmacist for a 3 months follow up visit?
Yes
No
Not required

3. Intervention delivered by the pharmacist

3.1 Were you given advice on increasing calcium intake?
Yes
No

3.1.1 If yes, what was it?

Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th>Verbal advice</th>
<th>Very Helpful</th>
<th>Unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Written advice

<table>
<thead>
<tr>
<th>Written advice</th>
<th>Very Helpful</th>
<th>Unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

3.1.2 Are you increasing your calcium intake at present?
Yes
No

3.1.3 If yes, how have you been increasing your calcium intake?
Change in diet
Supplement
Other

3.1.4 If no, did you find you were able to increase your calcium intake for a little while?
Yes for how long?.................
No
3.1.5 What made it difficult for you to stay on increased calcium levels?

3.2 Were you given advice on increasing weight bearing exercise?  
   Yes  
   No

3.2.1 If yes, what was it?  
   Please rate how helpful you found each type of advice

   a) Verbal advice
   b) Written advice

<table>
<thead>
<tr>
<th>Unhelpful</th>
<th>Very unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

   For those needing to increase exercise (as per risk factor summary sheet)

3.2.2 If yes, are you taking exercise each week?  
   Yes  
   No

3.2.3 If yes, how often are you engaging in regular weight bearing exercise or activity (such as brisk walking, dancing, active gardening, active work around the home, using stairs, jogging, keep fit classes, swimming) for at least 30 minutes a day?

<table>
<thead>
<tr>
<th>Never</th>
<th>seldom</th>
<th>1-2 times/wk</th>
<th>3-4 times/wk</th>
<th>More times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td>Dancing</td>
<td>Active gardening</td>
<td>Active house work</td>
<td>Using stairs</td>
</tr>
</tbody>
</table>

3.2.4 If no, did you find you were able to take enough exercise for a little while?  
   Yes  
   No

3.2.5 What made it difficult for you to take enough exercise?

3.3 Were you given advice on increasing Vitamin D intake?
3.3.1 If yes, what was it?  

Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhelpful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

a) Verbal advice  
b) Written advice  

3.3.2 If yes, are you following the advice?  
Yes  
No  

3.3.3 If yes, how are you obtaining sufficient vitamin D?  
Additional time outdoors  
Supplement  
Other  

3.3.4 If no, were you able to obtain sufficient Vitamin D for a little while?  
Yes  
No  

3.3.5 What made it difficult for you obtain sufficient vitamin D?  

3.4 Were you given advice on **stopping smoking**?  
Yes  
No  
Not required  

3.4.2 If yes, how many cigarettes were you smoking each day at the time of the risk assessment?  
1-10  
11-20  
more than 20 a day  

3.4.3 If yes to 3.4, was the advice?  

Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhelpful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

a) Verbal advice  
b) Written advice  

3.4.4 Are you smoking at the moment?  
Yes  
No  

3.4.5 If yes, how many cigarettes are you smoking each day?  

A  
74
3.4.6 If yes, were you able to stop smoking for a while?
Yes for how long _________________
No

3.4.4 What made it so difficult for you to give up smoking?

3.5 Were you given advice on decreasing alcohol consumption?
Yes
No
Not required

3.5.1 If yes, how much alcohol would you have consumed in a day?
A standard drink is any drink that contains 10gm of alcohol (see attached standard drinks guide)
For women
No more than 2 standard drinks a day on average
More than 2 standard drinks a day on average

For men
No more than 4 standard drinks a day on average
More than 4 standard drinks a day on average

3.5.1 If yes, what was the advice?

Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th></th>
<th>Very unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Verbal advice Unhelpful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b) Written advice</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3.5.2 If yes to 3.5, have you been able to decrease your alcohol consumption?
Yes
No

3.5.3 If no, were you able to decrease your alcohol consumption for a little while?
Yes
No

3.5.4 If yes, how much alcohol would be consuming a day, at the moment?
For women
No more than 2 standard drinks a day on average
More than 2 standard drinks a day on average

For men
No more than 4 standard drinks a day on average
More than 4 standard drinks a day on average
3.5.5 What made it difficult for you to decrease your alcohol consumption?

3.6 Have you had a fracture since you had your osteoporosis risk assessed?
   Yes
   No

3.6.1 If yes, where was the fracture located?

4. Intervention by the General Practitioner

4.1 Have you seen your GP since the osteoporosis risk assessment?
   Yes
   No

4.2 Was the purpose of this visit
   a) to follow up on the risk assessment
   b) for other medical reasons
   Yes           No
   Yes           No

4.3 If the visit was to follow up on the risk assessment, what was the advice given to you by the GP?
   a) Referral to specialist
   b) Drug treatment
   c) BMD testing
   d) Other tests
   e) other therapy

4.4 If yes to 4.3b, what drug treatment did the doctor prescribe?
   Actonel
   Biocalcium
   Caltrate
   Vitamin D tablets
   Citracal
   Citrihexal
   Deca-Durabolin
   Didrocal
   Evista
   Fosamax
   Kosteo
   Livial
   Premarin
   Premia
   Primobolan
   Provelle 28
   Rocaltrol
   Sandocal
   Sitriol
   Other

4.5 If yes to 4.3c, have you had a bone mineral density test since your visit to the Doctor?
   Yes
   No

4.6 Can you tell me what the result of that test was?
Yes  Low (0 or above) or (0 to -1)  
  Moderate (-1 to −2)  
  Moderate to high (-2 to −2.5)  
  High to very high (-2.5 or less)  
No  (may I contact your Doctor to obtain the result of the test?)

4.7  If yes to 3.7.2d have you had this medical test done since you visited the Doctor?  
  Yes (what tests?)______________________  
  No

4.8  If yes to 4.3e, what other treatment did your Doctor suggest?  
  Yes (what?)______________________  
  No

5.  Attitudes to the provision of health promotion and screening services in the pharmacy

For each of the following statements, I will ask for your level of agreement which will range from strongly disagree to strongly agree. There are no right or wrong answers – all we are interested in is a response that best shows how you feel about the provision of a health promotion and screening service in the pharmacy.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1  It is appropriate for the pharmacist to have health information leaflets Or brochures available in the pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.2  The pharmacist has a role in promoting good health in the community</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.3  It is good to make available tests such as bone mineral density</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.4  The pharmacist should be a source of general health information for the public</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.5  A pharmacy is not the place to be performing tests such as bone mineral density testing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.6  The pharmacist can help in the early detection of diseases by performing screening tests</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.7  As well as dispensing prescriptions, a pharmacist has other roles in health care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.8  Screening tests such as measurement of bone density can be performed in a pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
6. Satisfaction with the health promotion and screening service in the pharmacy

For each of the following statements, I will ask for your level of satisfaction, which will range from extremely dissatisfied to extremely satisfied. Again, there are no right or wrong answers – all we are interested in is a response that best shows how satisfied you are with the health promotion and screening service provided in your pharmacy.

<table>
<thead>
<tr>
<th>Extremely Satisfied</th>
<th>Dissatisfied</th>
<th>No opinion</th>
<th>Satisfied</th>
<th>Extremely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Generally, how do you feel about the health screening and health promotion services offered at this pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.2 Generally, how do you feel about the health information you received from the health screening and health promotion service at this pharmacy?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.3 Would you be willing to pay for this program if it was offered as a regular service?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.4 How much would you be prepared to pay for the program? $______________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.5 If the same service were offered without BMD, would you be willing to pay for it?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.6 If yes, how much would you be willing to pay? $______________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.7 Are there any other comments you would like to make?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your cooperation in completing this survey. Your involvement in this study is much appreciated.
Osteoporosis screening in community pharmacy

Client Follow Up Survey (at three months) – risk assessment in pharmacy

Client name: 
ID: 
Date: 

1. Recruitment

1.1 How did you first become aware of the screening service?
My pharmacist invited me to participate
Advertisement in the pharmacy
Advertisement in the local newspaper
Friends/family
Other (please specify)

2. Referral advice (as per needs assessment questionnaire)

2.1 Have you visited the pharmacist for a 3 months follow up visit?
Yes
No
Not required

3. Intervention delivered by the pharmacist

3.1 Were you given advice on increasing calcium intake?
Yes
No

3.1.1 If yes, what was it?

Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th>Verbal advice</th>
<th>Very Unhelpful</th>
<th>Unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Written advice

<table>
<thead>
<tr>
<th>Written advice</th>
<th>Very Unhelpful</th>
<th>Unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

3.1.2 Are you increasing your calcium intake at present?
Yes
No

3.1.3 If yes, how have you been increasing your calcium intake?
Change in diet
Dietary supplement
Other

3.1.4 If no, did you find you were able to increase your calcium intake for a little while?
Yes for how long?
No

3.1.5 What made it difficult for you to stay on increased calcium levels?
3.2 Were you given advice on increasing weight bearing exercise?  
Yes  
No  

3.2.1 If yes, what was it?  
Please rate how helpful you found each type of advice  

<table>
<thead>
<tr>
<th>Advice</th>
<th>Very</th>
<th>Unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Verbal advice</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b) Written advice</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

For those needing to exercise (as per risk factor summary sheet)  

3.2.2 If yes, are you taking exercise each week?  
Yes  
No  

3.2.3 If yes, how often are you engaging in regular weight bearing exercise or activity (such as brisk walking, dancing, active gardening, active work around the home, using stairs, jogging, keep fit classes, swimming) for at least 30 minutes a day?  

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Seldom</th>
<th>1-2 times/wk</th>
<th>3-4 times/wk</th>
<th>More times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dancing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active gardening</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active house work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using stairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jogging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keep fit classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2.4 If no, did you find you were able to take enough exercise for a little while?  
Yes  
No  

3.2.5 What made it difficult for you to take enough exercise?  

3.3 Were you given advice on increasing Vitamin D intake?  
Yes  
No
3.3.1 If yes, what was it?  
Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unhelpful</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Helpful</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

a) Verbal advice

b) Written advice

3.3.2 If yes, are you following that advice?  
Yes  
No

3.3.3 If yes, how are you obtaining sufficient vitamin D?  
Additional time outdoors  
Supplement  
Other __________________________

3.3.4 If no, were you able to obtain sufficient Vitamin D for a little while?  
Yes  
No

3.3.5 What made it difficult for you obtain sufficient vitamin D?

3.4 Were you given advice on stopping smoking?  
Yes  
No  
Not required

3.4.1 If yes, how many cigarettes were you smoking a day at the time of the risk assessment?  
1-10  
11-20  
more than 20 a day

3.4.2 If yes, was it?  

Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unhelpful</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Helpful</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

a) Verbal advice

b) Written advice

3.4.3 Are you smoking at the moment?  
Yes  
No

3.4.4 If yes, were you able to stop smoking for a while?  
Yes for how long __________________

No
3.4.5 If yes, how many cigarettes are you smoking each day?
1-10
11-20
more than 20 a day

3.4.6 What made it so difficult for you to give up smoking?

3.5 Were you given advice on decreasing alcohol consumption?
Yes
No
Not required

3.5.1 If yes, how much alcohol would you have consumed in a day? (A standard drink is any drink that contains 10gm of alcohol: see attached standard drinks guide for further detail)
For women
No more than 2 standard drinks a day on average
More than 2 standard drinks a day on average

For men
No more than 4 standard drinks a day on average
More than 4 standard drinks a day on average

3.5.2 If yes, what was it?
Please rate how helpful you found each type of advice

<table>
<thead>
<tr>
<th>a) Verbal advice</th>
<th>Very unhelpful</th>
<th>Unhelpful</th>
<th>No opinion</th>
<th>Helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Written advice</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

3.5.3 If yes, have you been able to decrease your alcohol consumption?
Yes
No

3.5.4 If yes, how much alcohol would you be consuming a day, at the moment?
For women
No more than 2 standard drinks a day on average
More than 2 standard drinks a day on average

For men
No more than 4 standard drinks a day on average
More than 4 standard drinks a day on average

3.5.5 If no, were you able to decrease your alcohol consumption for a little while?
Yes
No

3.5.6 What made it difficult for you to decrease your alcohol consumption?
3.6 Have you had a fracture since you had your osteoporosis risk assessed?
Yes
No

3.6.1 If yes, where was the fracture located?

4. Intervention delivered by General Practitioner

4.1 Have you seen your GP since the osteoporosis risk assessment?
Yes
No

4.2 Was the purpose of this visit
a) to follow up on the risk assessment
b) for other medical reasons

4.3 If the visit was to follow up on the risk assessment, what was the advice given to you by the Doctor?
a) referral to specialist
b) drug treatment
c) BMD testing
d) Other tests
e) Other therapy

4.4 If yes 4.3b, what drug treatment did the Doctor prescribe?
Actonel
Biocalcium
Caltrate
Vitamin D tablets
Citracal
Citrihexal
Deca-Durabolin
Didrocal
Evista
Fosamax
Kosteol
Livial
Premarin
Premia
Primobolan
Provelle 28
Rocaltrol
Sandocal
Sitriol
Other

4.5 If yes to 4.3c, have you had a bone mineral density test since you had your osteoporosis risk assessed?
Yes
No
4.6 Can you tell me what the result of that test was?
   Yes  Low (0 or above) or (0 to -1)
        Moderate (-1 to -2)
        Moderate to high (-2 to -2.5)
        High to very high (-2.5 or less)
   No  (may I contact your Doctor to obtain the result of the test?)

4.7 If yes to 4.3d, have you had this medical test since you visited the Doctor?
   Yes (what tests)?
   No

4.8 If yes to 4.3e, what other treatment did the Doctor suggest?

5. Attitudes to the provision of health promotion and screening services in the pharmacy

For each of the following statements, I will ask for your level of agreement which will range from strongly disagree to strongly agree. There are no right or wrong answers – all we are interested in is a response that best shows how you feel about the provision of a health promotion and screening service in the pharmacy.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 It is appropriate for the pharmacist to have health information leaflets or brochures available in the pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.2 The pharmacist has a role in promoting good health in the community</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.3 It is good to make available tests such as bone mineral density in a pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.4 The pharmacist should be a source of general health information for the public</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.5 A pharmacy is not the place to be performing tests such as bone mineral density testing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.6 The pharmacist can help in the early detection of diseases by performing screening tests</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.7 As well as dispensing prescriptions, a pharmacist has other roles in health care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.8 Screening tests such as measurement of bone density can be performed in a pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
6 Satisfaction with the health promotion and screening service in the pharmacy

For each of the following statements, I will ask for your level of satisfaction, which will range from extremely dissatisfied to extremely satisfied. Again, there are no right or wrong answers – all we are interested in is a response that best shows how satisfied you are with the health promotion and screening service provided in your pharmacy.

<table>
<thead>
<tr>
<th></th>
<th>Extremely Dissatisfied</th>
<th>Dissatisfied</th>
<th>No opinion</th>
<th>Satisfied</th>
<th>Extremely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Generally, how do you feel about the health screening and health promotion services offered at this pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.2</td>
<td>Generally, how do you feel about the health information you received from the health screening and health promotion service at this pharmacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.2</td>
<td>Would you be willing to pay for this program if it was offered as a regular service? Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.3</td>
<td>If yes, how much would you be prepared to pay for the program? $</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.4</td>
<td>If no, but the pharmacist provided a BMD testing service, would you be prepared to pay for the service you received and a BMD test? Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.5</td>
<td>If yes, how much would you be prepared to pay for the program, including the BMD test? $</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.6</td>
<td>Are there any other comments you would like to make?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your cooperation in completing this survey. Your involvement in this study has been much appreciated.
Appendix 13
Client Name: 
ID: 
Date: 

1. Pharmacy

1.1 Have you visited the pharmacist for a 6 month follow up?
   Yes
   No
   Not required

1.2 If no, have you been back to the pharmacy for other reasons?
   Yes – Did he/she mention the risk assessment? Y/N
   No

2. Intervention delivered by the pharmacist

2.1 Were you given advice on increasing calcium intake?
   Yes go to 2.1.1
   No go to 2.2
   Not required go to 2.2

2.1.1 Are you increasing your calcium intake at present?
   Yes go to 2.1.2
   No go to 2.1.3

2.1.2 How have you been increasing your calcium intake?
   Change in diet
   Supplement
   Other go to 2.2

2.1.3 Did you find you were able to increase your calcium for a short period?
   Yes for how long? _______________
   No

2.1.4 What made it difficult for you to stay on increased calcium levels?

2.2 Were you given advice on increasing weight bearing exercise?
   Yes go to 2.2.1
   No go to 2.3
   Not required go to 2.3

2.2.1 Are you taking enough exercise each week?
   Yes go to 2.2.2
   No go to 2.2.3
2.2.2 How often do you engage in regular weight bearing exercise or activity for at least 30 minutes a day? Please tick the most appropriate box for each activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>seldom</th>
<th>1-2 times/wk</th>
<th>3-4 times/wk</th>
<th>More times a wk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dancing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active gardening</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active housework</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using stairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jogging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keep fit classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

go to 2.3

2.2.3 Did you find you were able to increase your exercise for a short period?
Yes for how long? _______________
No

2.2.4 What made it difficult for you to continue to take enough exercise?

2.3 Were you given advice on increasing **Vitamin D intake**?
Yes go to 2.3.1
No go to 2.4
Not required go to 2.4

2.3.1 Are you increasing your Vitamin D intake at present?
Yes go to 2.3.2
No go to 2.3.3

2.3.2 How are you obtaining sufficient Vitamin D?
Additional time outdoors
Supplement
Other go to 2.4

2.3.3 Where you able to obtain sufficient Vitamin D for a short period?
Yes for how long? _______________
No

2.3.4 What made it difficult for you to obtain sufficient Vitamin D?

2.4 Were you given advice on **stopping smoking**?
Yes go to 2.4.1
No go to 2.5
Not required go to 2.5
2.4.1 Are you smoking at present?
Yes go to 2.4.2
No go to 2.5

2.4.2 How many cigarettes are you smoking a day?
1 – 10
11 – 20
more than 20 a day

2.4.3 Did you find you were able to stop/decrease smoking for a short period?
Yes for how long?______________
No

2.4.4. What made it so difficult to give up smoking?

2.5 Were you given advice on decreasing alcohol consumption?
Yes go to 2.5.1
No go to 2.6
Not required go to 2.6

2.5.1 Have you been able to decrease your alcohol consumption?
Yes go to 2.5.2
No go to 2.5.3

2.5.2 How much alcohol would you consume in a day?

For women
No more than 2 standard drinks a day on average
More than 2 standard drinks a day on average

For men
No more than 2 standard drinks a day on average
More than 2 standard drinks a day on average go to 2.6

2.5.3 Were you able to decrease alcohol consumption for a short period?
Yes for how long?______________
No

2.5.4 What made it difficult for you to decrease alcohol consumption?

2.6 Have you had a fracture in the last 3 months / since the 3 month follow up?
Yes
No

2.6.1 If yes, where was the fracture located?________________________
3. **Intervention by the General Practitioner**

3.1 Have you seen your GP in the last 3 months / since the 3 month follow up?
   - Yes
   - No

3.2 Was the purpose of this visit
   - a) to follow up on the risk assessment  
     - Yes
     - No
   - b) for other medical reasons  
     - Yes
     - No

3.3 If the visit was to follow up on the risk assessment, what advice was given?
   - a) Referral to specialist
   - b) Drug Treatment
   - c) Bone mineral density (BMD) Testing
   - d) Other Tests
   - e) Other therapy
   - f) None

3.4 If yes to 3.3b, what drug treatment did the GP prescribe?
   - Actonel
   - Didrocal
   - Primobolan
   - Biocalcium
   - Evista
   - Provelle 28
   - Caltrate
   - Fosamax
   - Rocaltrol
   - Vitamin D tablets
   - Kosteo
   - Sandocal
   - Citracal
   - Livial
   - Sitriol
   - Citrihexal
   - Premarin
   - Other
   - Deca-Durabolin
   - Premia

3.5 If yes to 3.3c, have you had a BMD test since your visit to the GP?
   - Yes
   - No

3.5.1 What was the result of the BMD Test?
   - Low (0 or above) or (0 to –1)
   - Moderate (-1 to –2)
   - Moderate to high (-2 to –2.5)
   - High to very high (-2.5 or less)
   - Don’t know (may I contact your GP to obtain the result?)

3.6 If yes to 3.3d, have you had this medical test done since you visited the GP?
   - Yes (what?) ______________________________
   - No

3.7 If yes to 3.3e, what other treatment did your GP suggest?
   ___________________________________________________________________

Thank you for your cooperation in completing this survey. Your involvement in this study is much appreciated.
Appendix 14
Osteoporosis Project – Evaluation Questionnaire (Group 1)

1. Training
1.1 For each of the following statements indicate level of satisfaction of information content of training day

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neutral</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>The training day increased my knowledge of osteoporosis</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I felt equipped / confident to carry out the osteoporosis risk assessments</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I felt able to provide interpretation of risk assessment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I increased my knowledge of Bone mineral density (BMD) testing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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A 92
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1.4 What could be changed / added to improve the quality of the training?
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_____________________________________________________________________
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2. Recruitment

2.1 i) Was it difficult to recruit participants? Yes / No

   ii) Do you feel that offering the BMD test made it easier to recruit participants? Yes / No

2.2 Estimate the number of participants that were: regular customers _______
     new customers _______

2.3 Estimate the number of these new customers that became regular customers after the service: _______

2.4 i) Did you offer BMD testing prior to this project? Yes / No

   ii) If yes – Do you feel that offering this free BMD test attracted participants who otherwise would not have paid for it? Yes / No

   iii) If no – Do you feel that offering this free BMD test attracted new participants? Yes / No
3. Service Delivery

3.1 Estimate the time it took to deliver the service per patient:
   a) Risk assessment        __________
   b) BMD Test         __________
   c) Counselling        __________
   d) Follow up         __________
   e) Total         __________

3.2 If you were to deliver this service in the future what changes, if any, would you make?

_____________________________________________________________________

_____________________________________________________________________  
_____________________________________________________________________


4. Risk Assessment

4.1 Were the risk assessment guidelines adequate?        Yes / No

4.2 Did the BMD test result change your initial risk assessment?   Yes / No

4.3i) Was the risk assessment result submitted on the patient’s record independent of the BMD test result?      Yes / No

OR

ii) Was the BMD result taken into account when finalising the patient’s risk assessment?        Yes / No

5. BMD Testing

5.1 Rate your involvement with the BMD Testing

<table>
<thead>
<tr>
<th>Your interaction with the Radiographer</th>
<th>Very involved</th>
<th>Involved</th>
<th>Neutral</th>
<th>Not involved</th>
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</tr>
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5.2 Do you think pharmacists should conduct the BMD measurement themselves (if adequately trained) ?         Yes / No
6. Advice given

6.1 Comment on the usefulness of each of the handouts

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<tr>
<th>Handout</th>
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6.2 Estimate the number of customers you have managed to follow up since the risk assessment:

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<td>a) Personally</td>
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Are there any other comments you would like to make about the project:

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Thank you for your participation

Have a good day
Osteoporosis Project – Evaluation Questionnaire (Group 2)

1. Training
1.1 For each of the following statements indicate level of satisfaction of information content of training day

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   ii) Do you feel that not offering the BMD test made it more difficult to recruit participants? Yes / No

2.2 Estimate the number of participants that were: regular customers _______

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2.3 Estimate the number of these new customers that became regular customers after the service: _______

2.4 i) Did you offer BMD testing prior to this project? Yes / No

   ii) If yes – Do you feel that not offering the BMD test reduced the patients attraction to the service? Yes / No
3. Service Delivery

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