

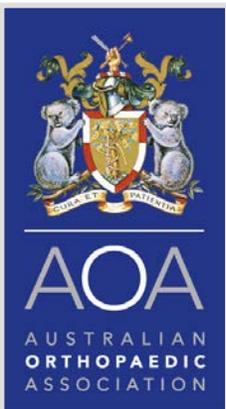
# Nigel Broughton

Human Factors in Healthcare Forum, 6 June 2017

# How to influence surgical practice to improve patient outcomes.

## **Nigel Broughton, FRACS, GAICD**

- Orthopaedic Surgeon, Frankston Hospital
- Board Member and Clinical Governance, Gippsland Southern Health Service
- State Committee Member of RACS and AOA



# Introduction

- Not all patients have good outcomes
- Due to pathology, patients or clinicians
- How to influence practice to improve outcomes

# Characteristics of Surgeons

- Skilful      Decisive      Conscientious
- Dogmatic      Intransigent      Single minded
- Slow to change

# VTE prophylaxis for joint replacements

- NHMRC guidelines 2007
- Fears of bleeding, wound leakage and infection
- Vast majority of patients now have effective prophylaxis

# Australian New Zealand Audit of Surgical Mortality (ANZASM)

- Review all in-hospital surgical deaths
- Peer review
- Feedback any concerns to surgeon

# How does it work?

- All hospitals notify each state ASM of surgical deaths
- Treating surgeon completes Surgical Case Form
- Sent to First Line Assessor (FLA)
- 85% no further action

# How does it work?

- 15% go to Second Line Assessor
- Areas of concern
- Feedback to surgeon
- Qualified Privilege
- De-identified

# How did we get Orthopaedic Surgeons to participate?

- Mandatory through Continual Professional Development (CPD)
- CPD requirements are decided by The Professional Standards Committees of AOA and RACS

# How do we drive change?

- Clinical advocacy
- Understand concerns
- Advocating within our professional body

# How to effect change

- Education
- Guidelines
- Show that it is mainstream
- Professional bodies
- Employers and accreditors

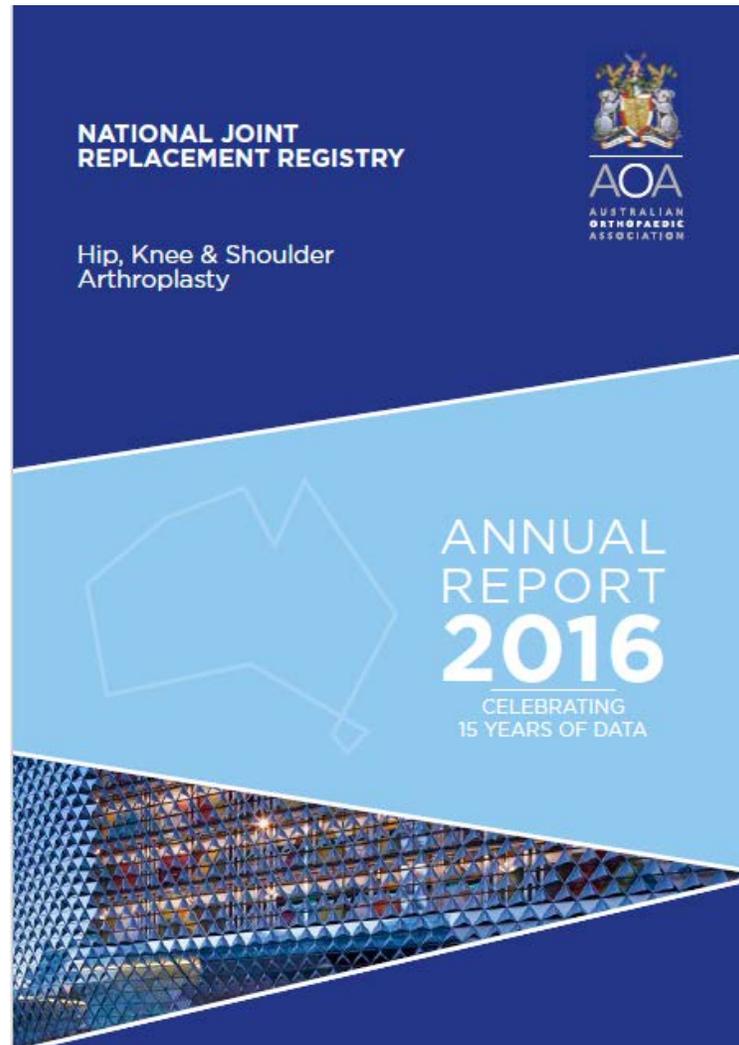
# Anything else?

- Address the concerns about increased scrutiny
- Clinician involvement

# Use of Registries

- Cardio-thoracic
- Vascular Surgery Audit
- Prostate Cancer Outcomes Registry
- Breast Cancer
- Colo-rectal

# Annual Report



National Joint Replacement Registry

Courtesy of Richard de Steiger, Deputy Director, NJRR



# AOA NJRR Background

- Data collection was introduced in 1999 commencing with SA
- National implementation was completed in 2002
- Owned by the Australian Orthopaedic Association
- Permanently funded by the Commonwealth Government

# Data Collection

- 300 participating hospitals submitting data
- Voluntary and 100% participation

**HIP FORM**  Australian Orthopaedic Association  
National Joint Replacement Registry SIDE 1

Place **PATIENT DETAILS** label here  
and/or  
if any patient details are not available on the hospital label please complete below

Surname: ..... Female:  Male:   
First Name: ..... Middle Initial: .....  
Address: .....  
Post Code: .....  
Hospital Patient No: ..... DOB: ...../...../.....  
Medicare No: ..... DVA No: .....  
(if applicable)

Name of Hospital: ..... State: .....  
Consultant Surgeon Code: .....

Weight (kg) ..... Height (cm) ..... ASA .....

**PLEASE COMPLETE THIS SECTION IN FULL**  
(IF BILATERAL USE TWO FORMS)

**OPERATION DATE** ...../...../..... **L**  **R**

**OPERATIVE APPROACH** (Tick one box only)  
Posterior  Lateral  Anterior  Other specify: .....

**PRIMARY HIP**  **REVISION HIP**

Includes Unipolar (Austin Moore/Thompson Type), Bipolar or THR Includes removal, exchange or addition of one or more components

**DIAGNOSIS** (Tick more than one box if applicable)

Osteoarthritis ..... <input type="checkbox"/>	Loosening ..... <input type="checkbox"/>
Rheumatoid Arthritis ..... <input type="checkbox"/>	Lysis ..... <input type="checkbox"/>
Other Inflammatory Arthritis ..... <input type="checkbox"/>	Dislocation ..... <input type="checkbox"/>
Osteonecrosis/Avascular Necrosis ..... <input type="checkbox"/>	Infection ..... <input type="checkbox"/>
Developmental Dysplasia ..... <input type="checkbox"/>	Implant Breakage ..... <input type="checkbox"/>
Fractured Neck of Femur ..... <input type="checkbox"/>	Stem ..... <input type="checkbox"/>
Tumour specify ..... <input type="checkbox"/>	Acetabular ..... <input type="checkbox"/>
Other specify ..... <input type="checkbox"/>	Fracture specify ..... <input type="checkbox"/>
	Other specify ..... <input type="checkbox"/>

**ACETABULAR COMPONENTS**  
(Mark relevant box/es, place company labels on coloured areas or complete details by hand)

NONE  CLIP  SHELL  INSERT  BIPOLAR  REINFORCEMENT RING  MESH

Company .....  
Prosthesis Name .....  
Cat/Ref No. ....  
Lot No. ....

Company .....  
Prosthesis Name .....  
Cat/Ref No. ....  
Lot No. ....

Company .....  
Prosthesis Name .....  
Cat/Ref No. ....  
Lot No. ....

**ACETABULAR CEMENT** **NO**  **YES**   
See over for femoral cement

**CEMENT NAME:** .....  
(Use company label or complete details: if more than one mix is used, use only 1 label)

(Complete by hand, labels not required)

**SCREWS:** **NO**  **YES**  **Number used** .....

Please return form to Locked Bag 2, Hutt St Post Office, ADELAIDE SA 5000 Please complete Side 2

# 2016 Annual Report

- Analysis of 1,091,237 primary and revision hip – knee procedures recorded by the Registry up to 31.12.2015
- Since 2003 the increase has been **61.9%** for THR and **103%** for TKR

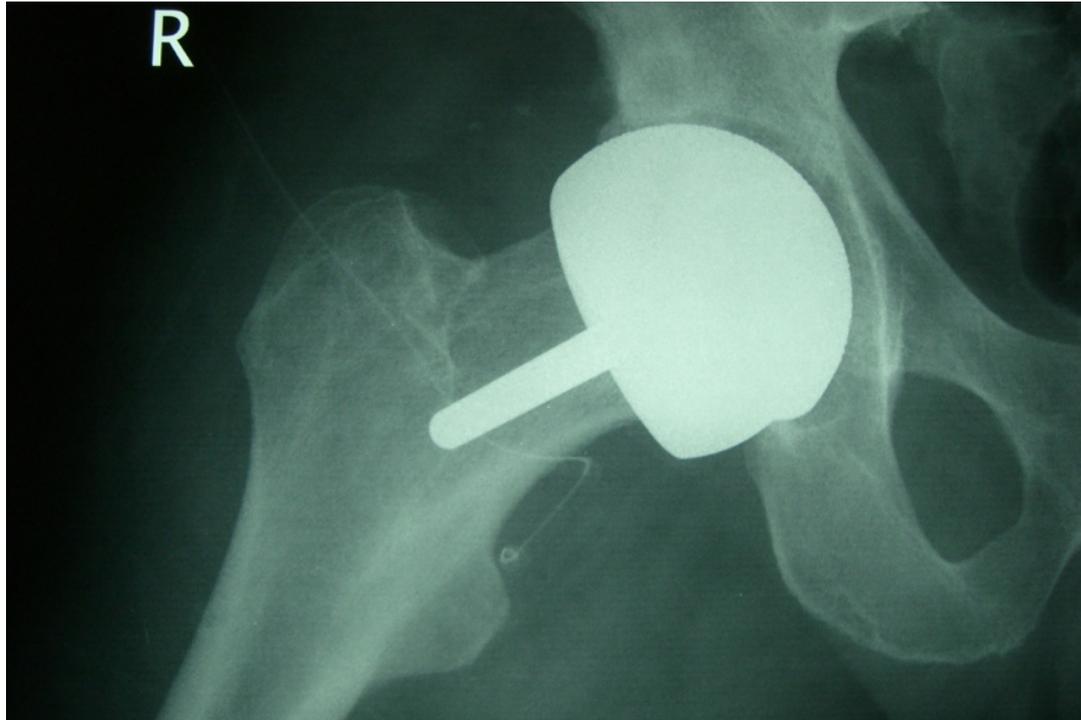
# How does the Registry effect change?

- Overall usage in Australia



Building a **Healthy**  
**Community**, in Partnership

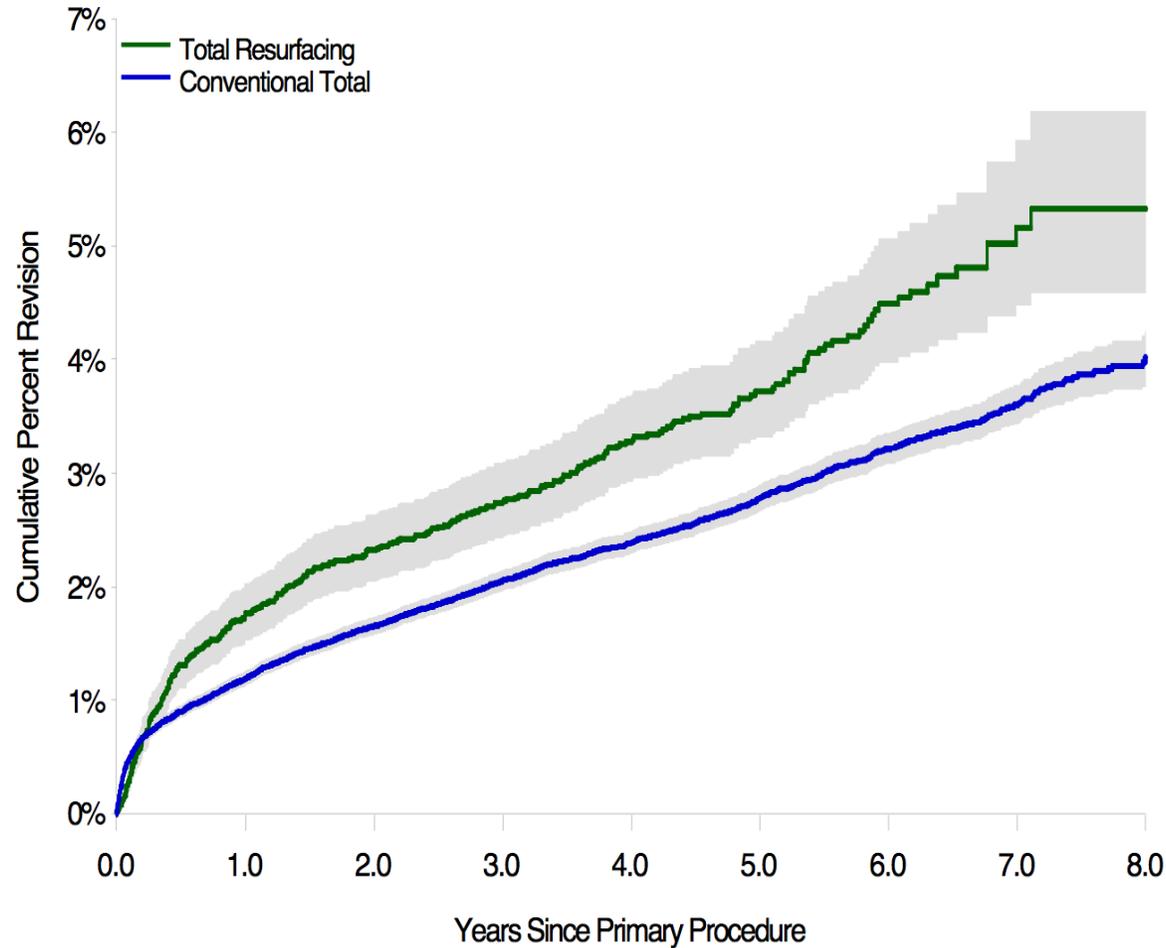
# Resurfacing Hip Replacement



National Joint Replacement Registry

Courtesy of Richard de Steiger, Deputy Director, NJRR

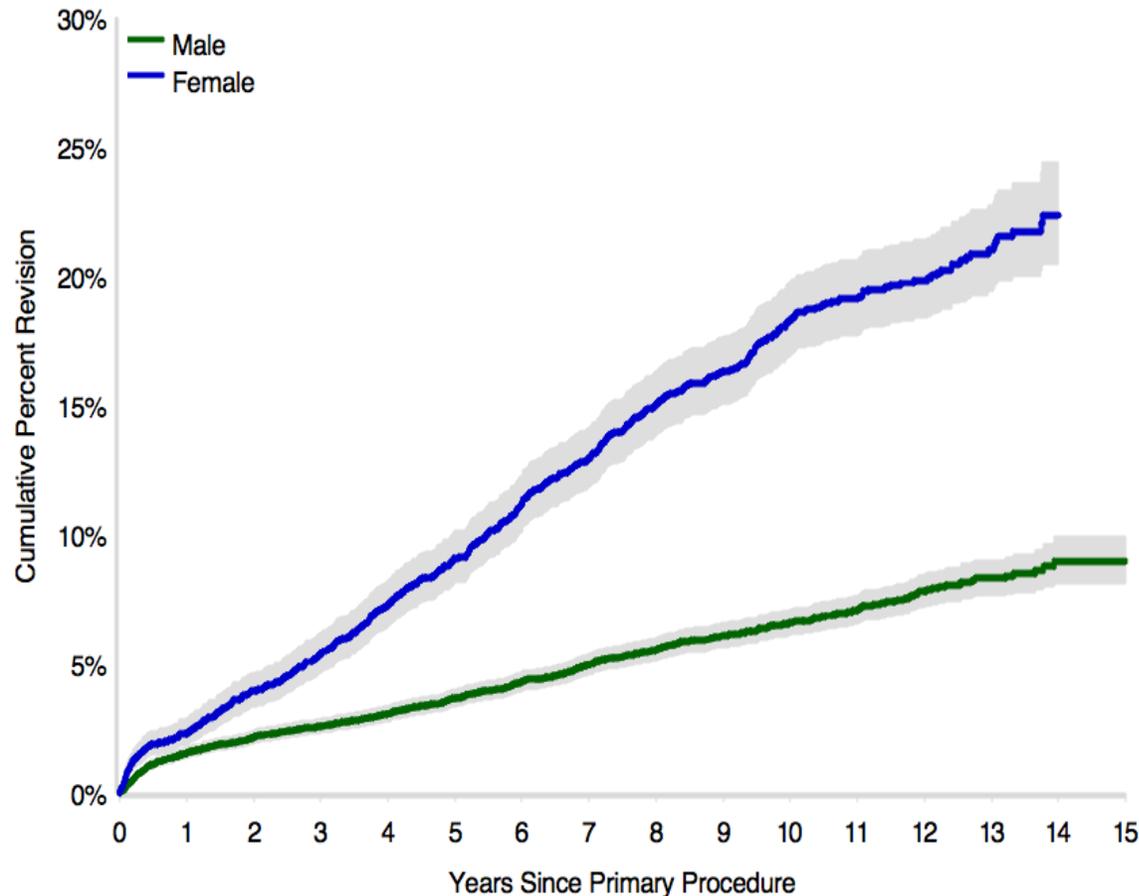
# Resurfacing Hip Replacement (Primary Diagnosis OA excluding Infection)



Total Resurfacing vs Conventional Total  
Entire Period: HR=1.37 (1.22, 1.55), p <0.001

Note: Adjusted for age and gender

# Yearly Cumulative Percent Revision of Primary Total Resurfacing Hip Replacement by Gender (Primary Diagnosis OA)

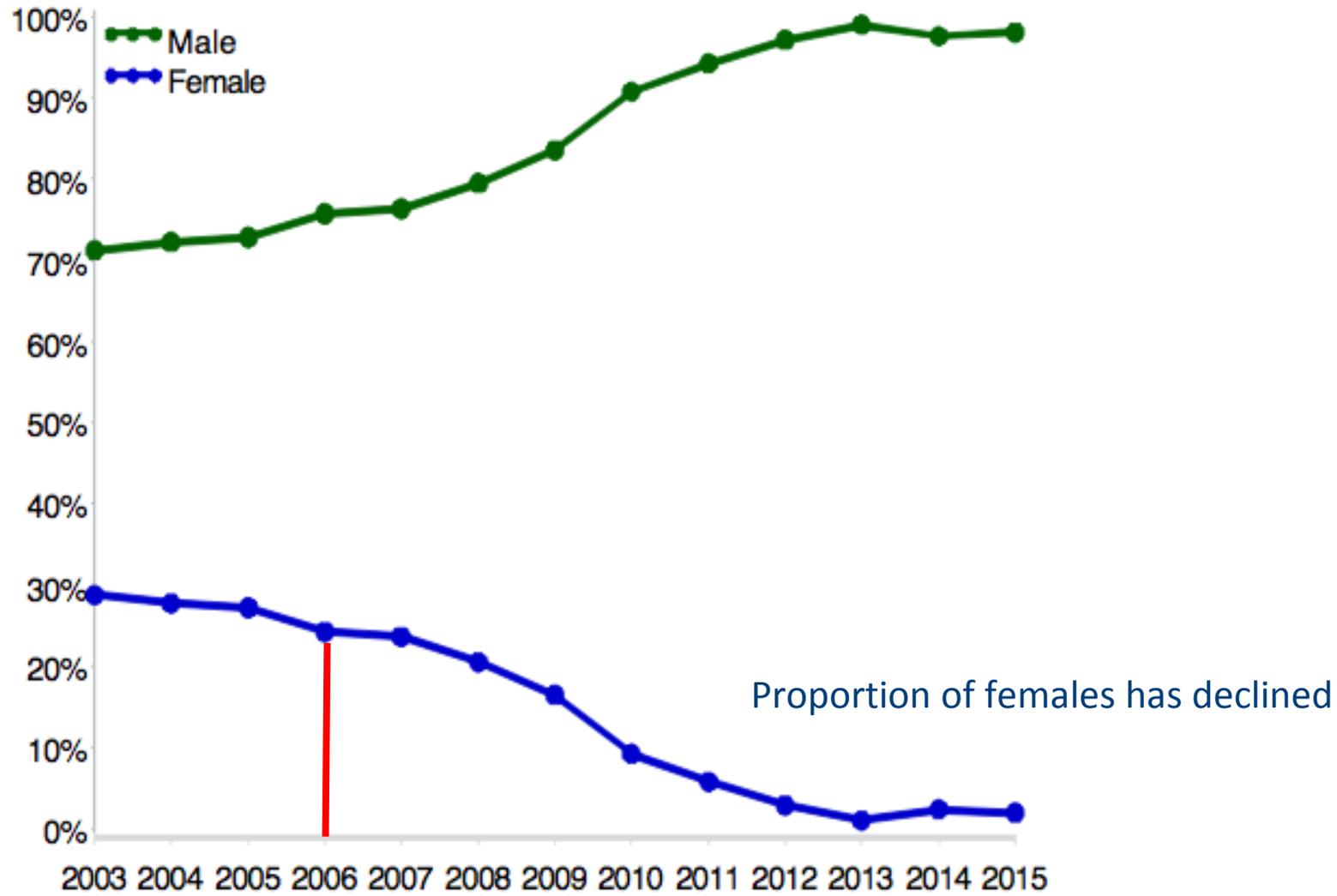


HR - adjusted for age

### Female vs Male

- 0 - 3Mth: HR=2.05 (1.42, 2.94), p<0.001
- 3Mth - 6Mth: HR=1.18 (0.68, 2.03), p=0.557
- 6Mth - 1Yr: HR=0.92 (0.50, 1.70), p=0.800
- 1Yr - 2.5Yr: HR=2.72 (2.01, 3.69), p<0.001
- 2.5Yr - 6Yr: HR=3.62 (2.99, 4.40), p<0.001
- 6Yr - 6.5Yr: HR=4.53 (2.62, 7.83), p<0.001
- 6.5Yr+: HR=2.87 (2.35, 3.49), p<0.001

## Primary Total Resurfacing Hip Replacement by Gender



National Joint Replacement Registry

Courtesy of Richard de Steiger, Deputy Director, NJRR

# How does the Registry effect change?

- Individual Surgeon's practice

## Primary Hip Procedures Performed by Surgeon at Peninsula Health Service (Frankston) and Peninsula Private Hospital and Number Revised for 2008 - 2012

Hospital	Primary Procedures	Revisions of Primary
<a href="#">Peninsula Health Service (Frankston)</a>	61	5
<a href="#">Peninsula Private Hospital</a>	247	3
<b><u>TOTAL</u></b>	<b>308</b>	<b>8</b>

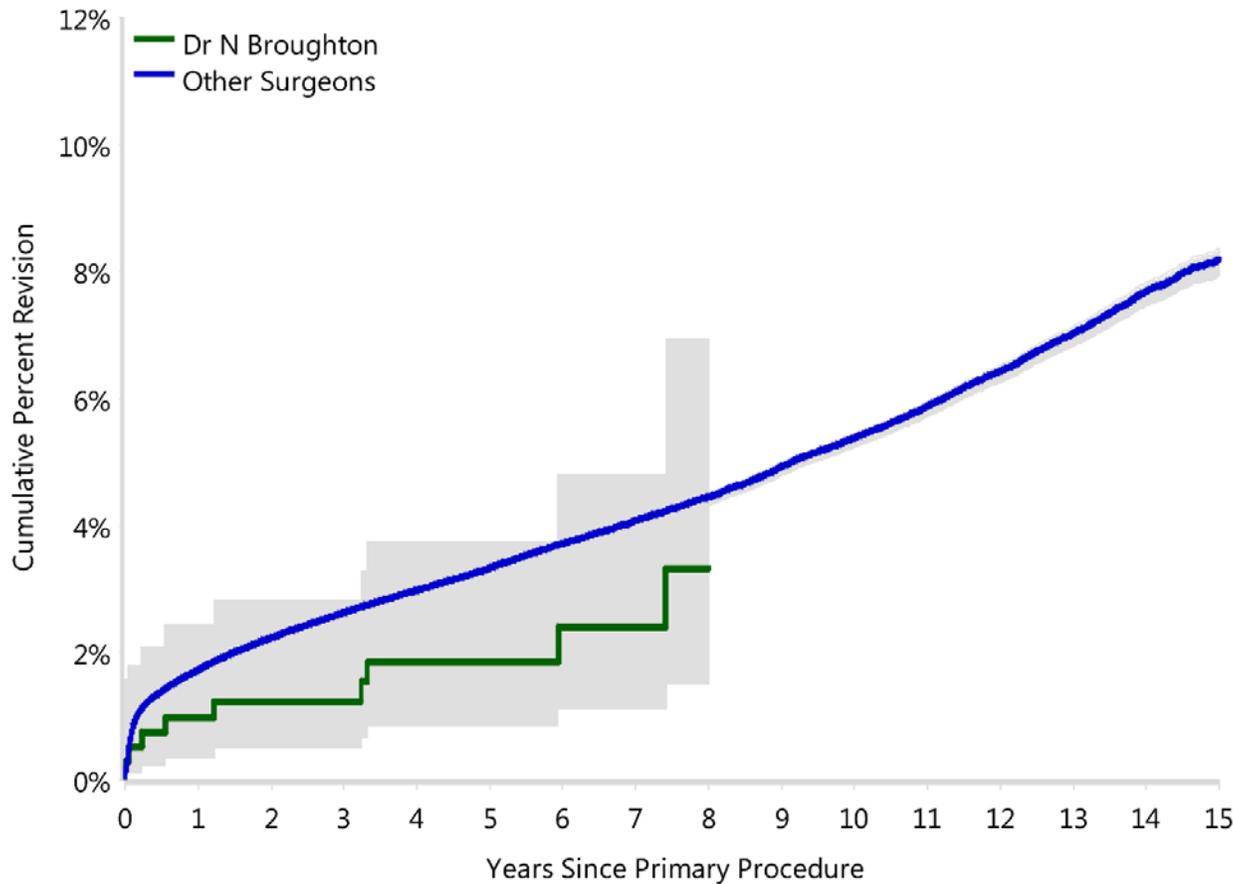
## Revision Rates of Primary Hip Replacement Performed by Surgeon at Peninsula Health Service (Frankston) and Peninsula Private Hospital by Hip Class for 2008 - 2012

Hip Class	N Revised	N Total	Obs. Years	Revisions/100 Obs. Yrs (95% CI)
Unipolar Monoblock	3	34	115	2.60 (0.54, 7.61)
Unipolar Modular	0	9	40	0.00 (0.00, 9.14)
Total Conventional	5	265	1620	0.31 (0.10, 0.72)
<b>TOTAL</b>	<b>8</b>	<b>308</b>	<b>1776</b>	<b>0.45 (0.19, 0.89)</b>

# Cumulative Percent Revision of Primary Total Conventional Hip Replacement

Dr N Broughton n = 446

All other surgeons n = 372,706

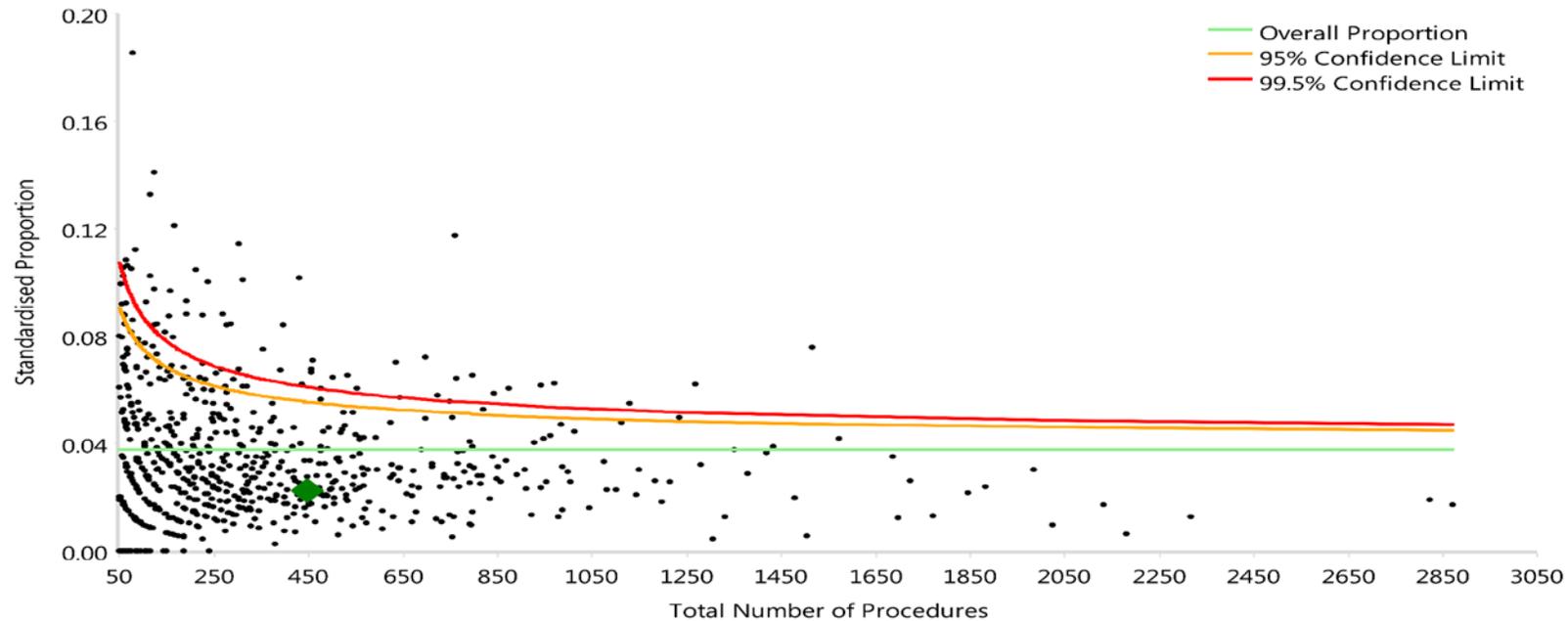


HR - adjusted for age and gender

Dr N Broughton vs Other Surgeons

Entire Period: HR=0.69 (0.37, 1.27), p=0.231

# Funnel Plot of Revisions of Primary Total Hip Replacement



# Federal Quality Assurance Activity

- Ensures absolute confidentiality of data held by AOANJRR
- Ensures freedom from subpoena
- Prevented from releasing information that could identify a patient, surgeon or hospital

# Lessons to be learnt

- Clinicians need to trust the data
- Surgeons will change their practice
- Clinicians need to look at the data

# Who should be looking at individual surgeons data?

- Themselves
- With a buddy
- ?Professional bodies (AOA)
- ?AHPRA
- ?The public



JOAN BRYDEN PHOTOGRAPHY



Building a **Healthy** Community, in Partnership



Carnforth Station -  
where “Brief  
Encounter” was  
filmed



**AOA**  
AUSTRALIAN  
ORTHOPAEDIC  
ASSOCIATION

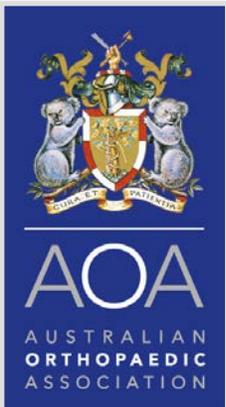


**FRACS**



Peninsula  
Health

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Building a **Healthy**  
**Community**, in Partnership

“Weak appraisal system allowed rogue surgeon to slip through the net”



Daily Telegraph  
April 30, 2017

# Ian Paterson - a story of failed governance

- 1996 Suspended by Good Hope Hospital then asked to leave
- 1998 Appointed to Solihull Hospital
- 2003-4 Reports documenting unsatisfactory treatment
- 2007-8 Further reports and private hospital informed
- 2012 GMC suspends registration

# Notifications to Regulator

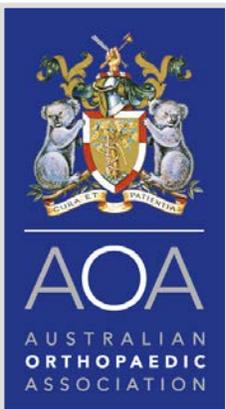
- Usually by patients and relatives
- Whistle blower problems

# Improving the culture around analysis of events

- Just culture
- Fear of litigation/public shaming/restriction of practice
- Professional bodies can help here

# Conclusions

- Surgeons want to improve outcomes on the basis of good data
- Benchmarking within registries
- Role of professional bodies in mentoring and educating
- Role of employers and accreditors
- Improving culture



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**Community**, in Partnership