

Chronic pain and disability

A public health and co-ordinated care challenge

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Overview of talk

- › recent evidence that helps define chronic pain as both a condition in its own right, and as a significant public health problem
 - › a population-focussed approach to managing the burden of chronic pain
 - › barriers to progress
-

Chronic pain may change the structure of the brain

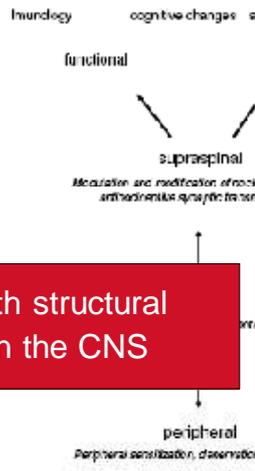
Arne May*

Department of Systems Neuroscience, University of Hamburg Eppendorf (UKE), Martinistrasse 52, D-20246 Hamburg, Germany

Persistent Pain as a Disease Entity: Implications for Clinical Management

Philip J. Siddall, MBBS, PhD, FRPMANZCA, and Michael J. Cousins, MD, FANZCA, FRPMANZCA

Department of Anaesthesia & Pain Management and Pain Management Research Institute, University of Sydney, Royal North Shore Hospital, Sydney, NSW, Australia



Pain has often been regarded merely as a symptom that serves as a passive warning signal of an underlying disease process. Using this model, the goal of treatment has been to identify and address the pathology causing pain in the expectation that this would lead to its resolution. However, there is accumulating evidence to indicate that persistent pain cannot be regarded as a passive symptom. Continuing nociceptive inputs result in a multitude of consequences that impact on the individual, ranging from changes in receptor function to mood dysfunction, inappropriate cognitions, and social disruption. These changes that occur as a consequence of continuing nociceptive inputs argue for the consideration of persistent pain as a disease entity in its own right. As with any disease, the extent of these changes is largely determined by the internal and external environments in which they occur. Thus genetic, psychological and social factors may all contribute to the perception and expression of persistent pain. Optimal outcomes in the management of persistent pain may be achieved not simply by attempting to remove the cause of the pain, but by addressing both the consequences and contributors that together comprise the disease of persistent pain.

(Anesth Analg 2004;99:510-20)

Chronicity is associated with structural and functional changes in the CNS

Fig. 1 Different levels of plasticity in chronic pain. Neuroplastic changes (change in function, chemical profile or structure) during the process of pain chronification can be distinguished on the level of the peripheral, spinal and central nervous system [25-40,51,39].

How can pain epidemiology help? - the Australian experience

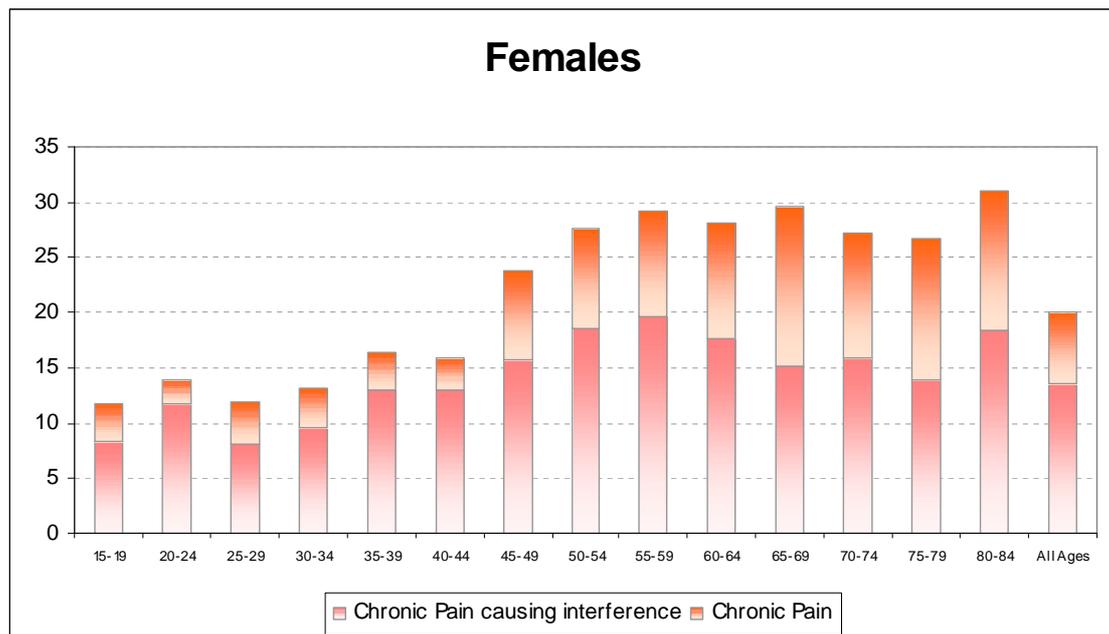
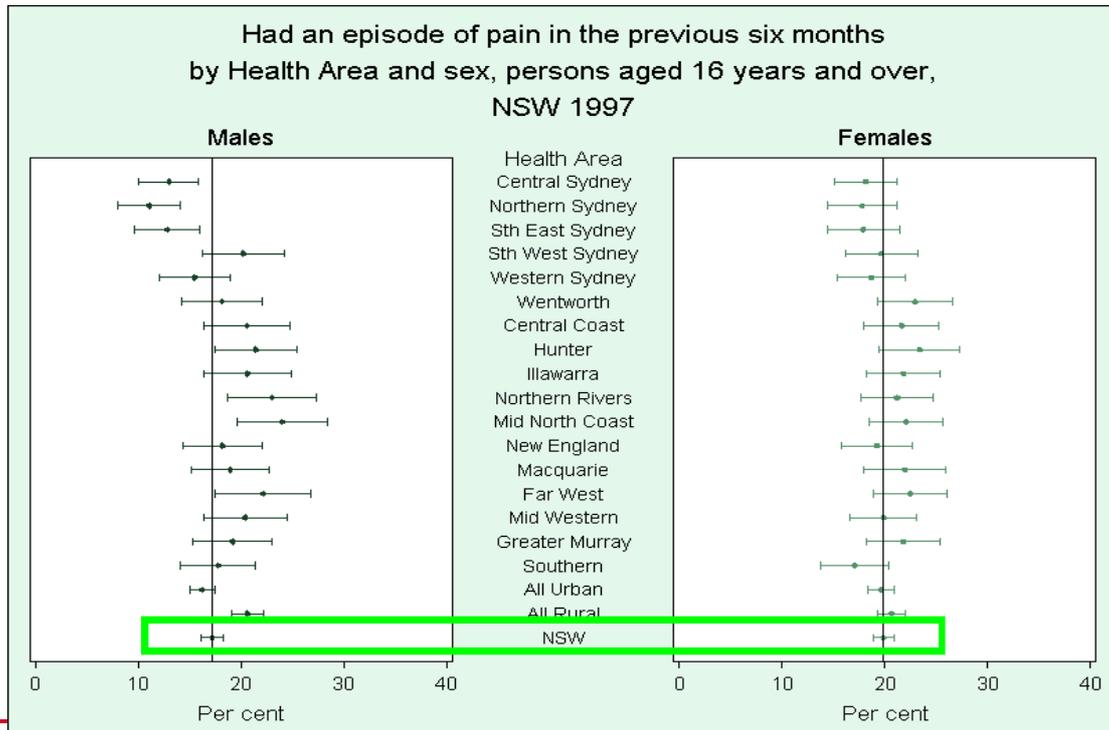
Acute and chronic pain service funding

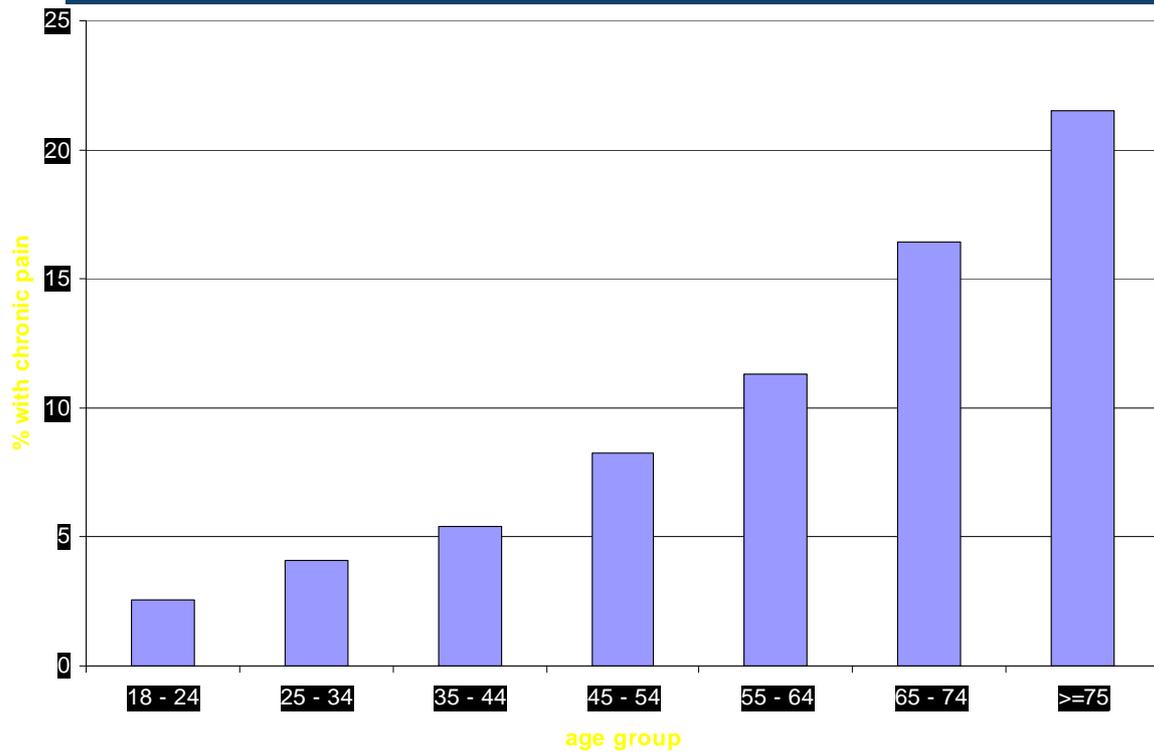
Economic impact of chronic pain



Australasian Faculty of Pain Medicine

Advocacy/support





The high price of pain: the economic impact of persistent pain in Australia

November 2007

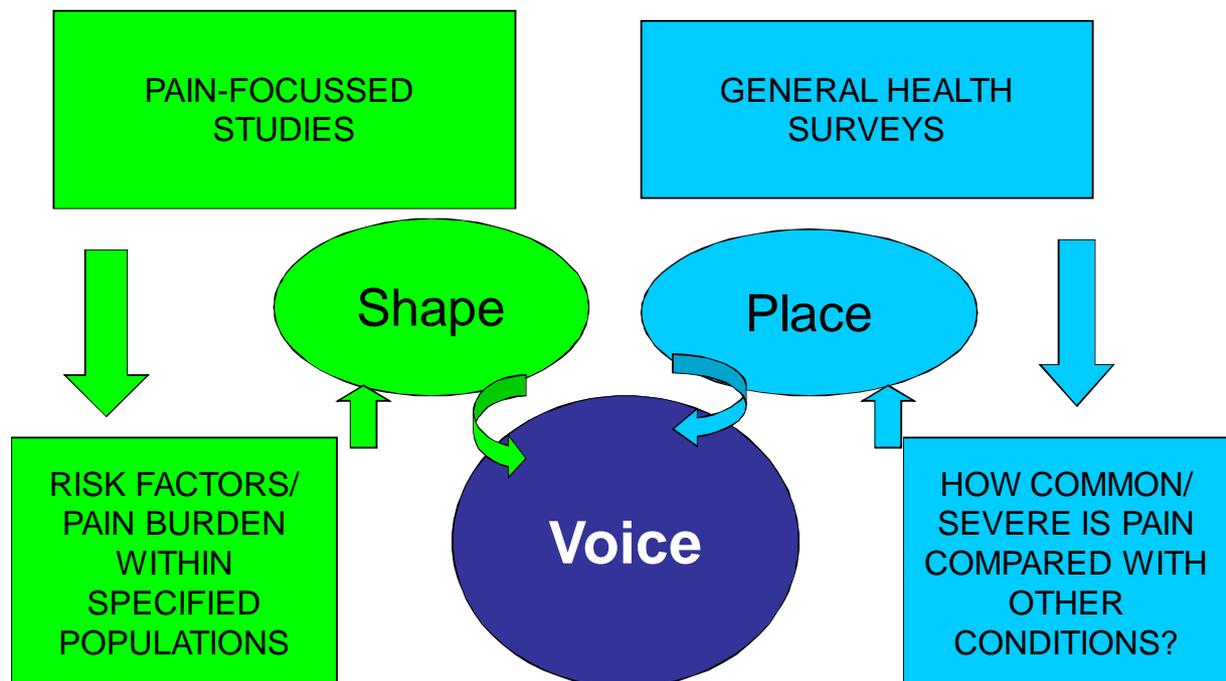
Report by Access Economics Pty Limited for

MBF Foundation

in collaboration with
University of Sydney Pain Management Research
Institute

- › Based on a range of reports using the same methods of costing, chronic pain had the **third highest** level of health expenditure (\$34 billion per year)
 - › Chronic pain outranked cancer, depression, stroke, diabetes and asthma in costs
-

- › Pain has little or no visibility as a health care problem
 - › It is very difficult for chronic pain to compete with other more 'established' conditions for limited health resources
 - › Areas of unmet need go unnoticed
-



What is a public health problem?

- › Lots of it
 - › Costly to individuals (health, quality of life)
 - › Expensive
-

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What is a public health problem?

- › Lots of it
 - › Costly to individuals (health, quality of life)
 - › Expensive
 - › Population-level factors influence incidence and outcomes
 - › Strong ‘social patterning’
 - › Acting at the level of individuals alone will NOT address the problem of population burden
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We need a multi-pronged approach...

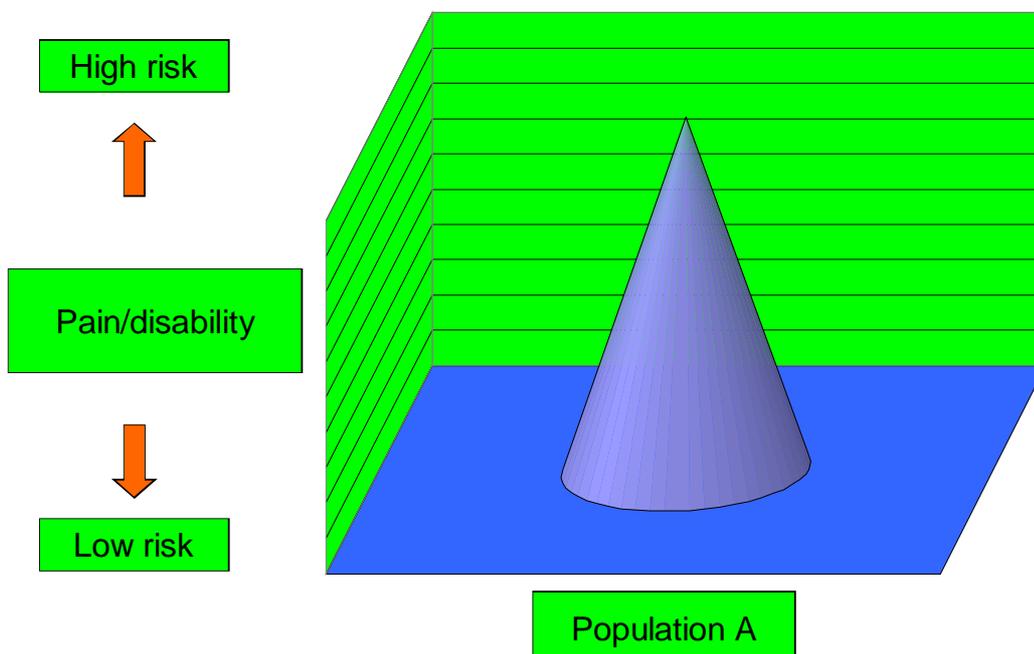
“...societal, lifestyle, and molecular explanations of disease are interconnected and mutually reinforcing, not stark alternatives locked in mortal combat” *Poole and Rothman J Epidemiol Community Health 1998*

In other words, the biopsychosocial model!

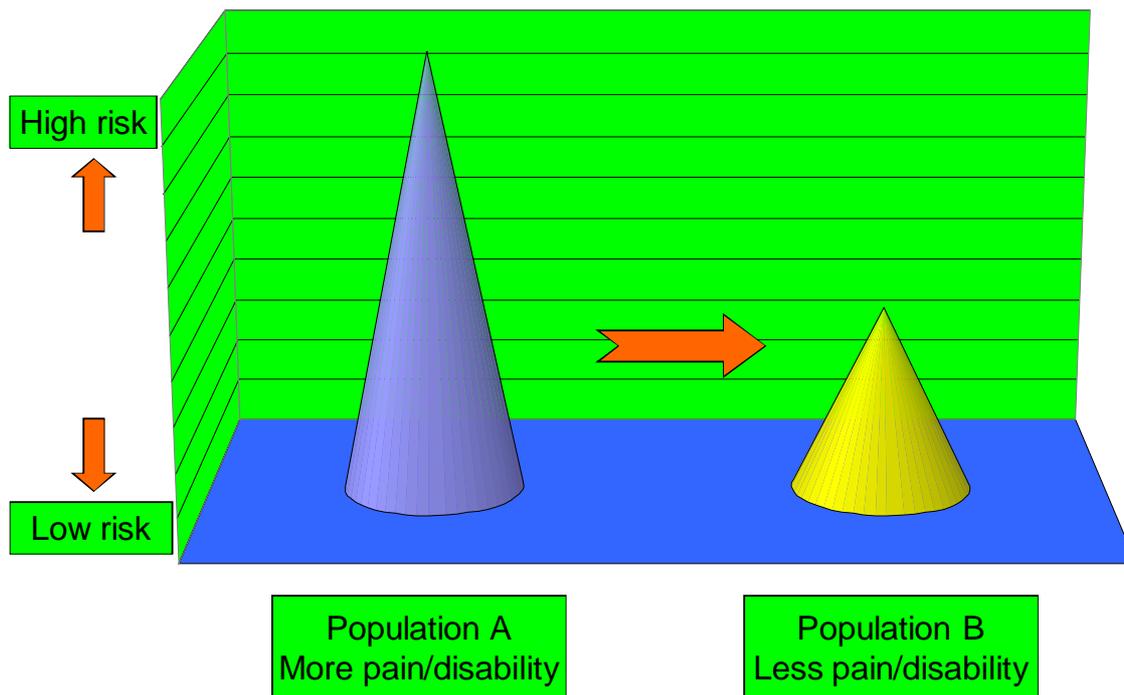
Why is the public health/population approach important?

- › A high-risk individual approach to chronic pain will NOT succeed in reducing the problem at population level
 - › Important intervention targets will be overlooked if uniquely population-level risk factors are not identified
 - › We are not optimising our intervention strategies
-

The high risk approach



The population approach



Thinking about risk factors



- › Is there a threshold effect?
 - › What is the contribution of current vs. former pain?
 - › What is the contribution of childhood vs. adult-onset pain?
 - › What is the contribution of maximum pain versus duration of pain?
 - › At what level of pain does increased susceptibility to chronic pain begin?
-

- › These questions are not new...

 - › There are other examples of recently-emerging public health problems, for example overweight/obesity...
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- › Is there a threshold effect?
 - › What is the contribution of current vs. former **obesity**?
 - › What is the contribution of childhood vs. adult-onset **weight**?
 - › What is the contribution of maximum **overweight** versus duration of overweight?
 - › At what level of **overweight** does increased susceptibility to **diabetes** begin?
-

- › Longitudinal studies show that chronic pain is dynamic over time
 - › Risk factors for *getting* chronic pain are not necessarily also risk factors for *staying* in chronic pain
 - › Risk exposures and pain experience are dynamic across the lifespan
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Editorial

Musculoskeletal health—how early does it start?

Fiona M. Blyth, Gareth T. Jones, and Gary J. Macfarlane
Musculoskeletal health—how early does it start?
Rheumatology Advance Access published on July 20, 2009
Rheumatology 2009 48: 1181-1182; doi:10.1093/rheumatology/kep213



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Problems of competition:

- My disease is bigger than yours
 - My disease is better-funded than yours
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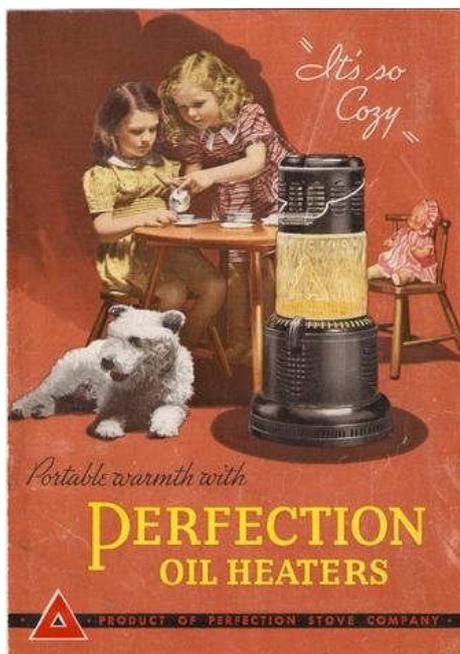
Problems of recognition:

- How do we give pain a 'shape' like cancer?
 - Symptom vs. condition debate
 - Case definitions
 - Unambiguous coding within the health system (e.g. ICD codes)
 - Disease registries
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How does pain relate to other health priority areas?

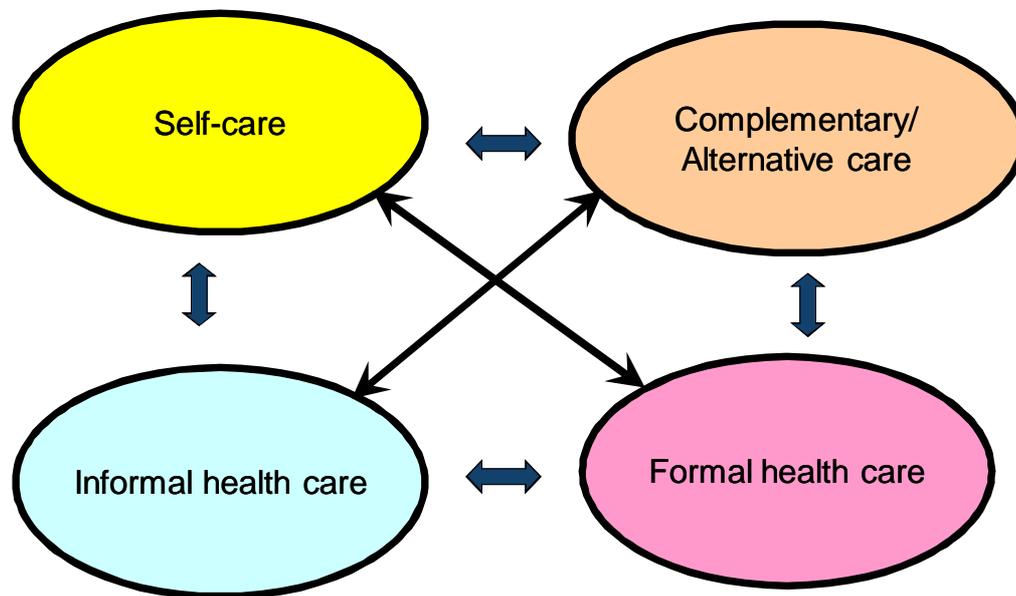
- Injury, musculoskeletal conditions, cancer, healthy ageing
 - Pain as a long-term outcome of injury is rarely recorded
-

Models of care – the ideal world



- › Abundantly well-funded
 - › Targeted at well-defined groups with clear potential to benefit from interventions
 - › Have a 'whole of population focus'
 - › Underpinned by effective, evidence-based interventions
-

Types of care used in the community



NATIONAL PAIN SUMMIT

MARCH 11, 2010



With the assistance of unencumbered grants from:
Janssen Cilag | Mundipharma | Pfizer Australia | CSL Biotherapies | Merck Sharp and Dohme

Inaugural Supporters

Why was it the right time in Australia?

- › Disease burden now known: 1 in 5 people
 - › Associated disability known
 - › Financial costs of \$34 bn per year
 - › Chronic Pain increasingly seen as a disease entity
 - › BUT pain NOT on national radar
 - › Major changes to national health care system on the way
-

NATIONAL PAIN SUMMIT – AUSTRALIA who was involved

- › Led by ANZCA / AFPM, APS and Consumer groups (Chronic Pain Australia & Consumer Health Forum)
 - › Inaugural supporters: PMRI and MBFF
 - › Grants from pharmaceutical, biotechnology and insurance companies
 - › More than 130 health & Consumer organisations
 - › Over 200 stakeholder participants
 - › Multidisciplinary input AND interdisciplinary input
-



NATIONAL PAIN SUMMIT – AUSTRALIA processes

- › Steering Committee Meetings: Nov 08, Feb, Apr, June, Oct 09
 - › Working Groups: Models of Care, Primary Care, Evidence
 - › Leaders Meeting: ANZCA Sept 09
 - › Draft National Pain Management Strategy: launched Oct 09
 - › Summit: 11 March 2010
-



NATIONAL PAIN SUMMIT – AUSTRALIA activities

- › Reference Groups – Acute, Cancer, Paediatrics, Geriatrics
 - › Consultation – Industry
 - › Visits – Canada, USA, UK – Oct – Nov 09
 - › Political advocacy – Oct 09 – March 10 & beyond
 - › Media program – Oct 2009 – March 10
 - › Pain Summit March, 2010 – Parliament House
 - › Next steps underway
 - › Montreal
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- › People in pain as a National Health Priority
 - › Knowledgeable, empowered and supported consumers
 - › Access to skilled professionals and evidence-based care
 - › Access to interdisciplinary care at all levels
 - › Quality improvement and evaluation
 - › Research agenda, adequate resources & translation to care
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- “If the world should blow itself up, the last audible voice would be that of an expert saying it can't be done”

Peter Ustinov
