



cutting through complexity

A NATIONAL QUALITY IMPROVEMENT PROGRAMME TO REDUCE PRESSURE INJURIES IN NZ: A CASE FOR INVESTMENT

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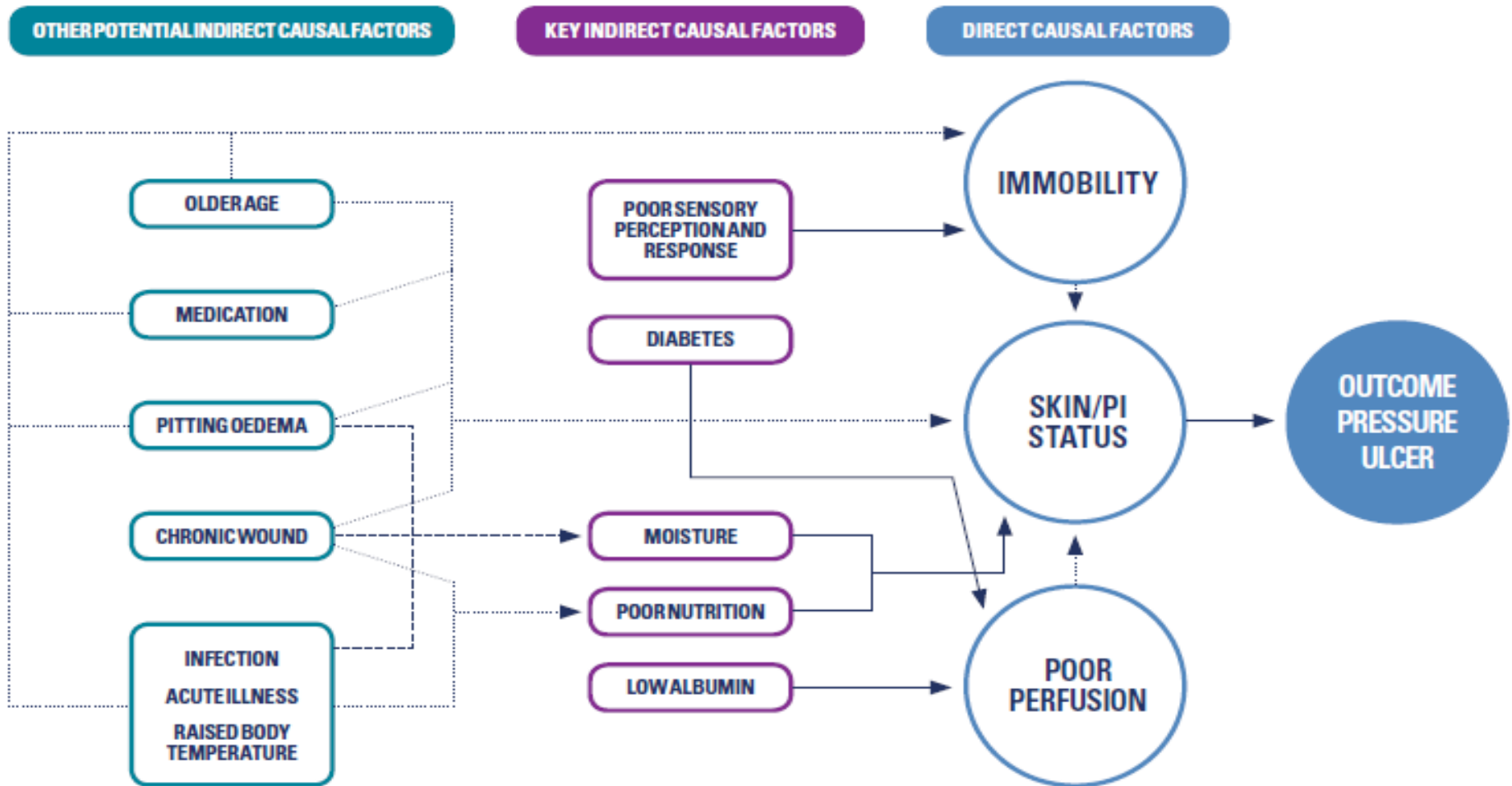
PRESSURE INJURIES

PRESSURE INJURIES ARE AREAS OF DAMAGE TO THE SKIN AND UNDERLYING TISSUE CAUSED BY CONSTANT PRESSURE OR FRICTION.

- PI are also variously described as bedsores, or pressure ulcers, and sometimes even pressure sores
- Commonly classified into four categories: Grade I – IV. From a Grade II and upwards, the pressure has caused non-returnable damage to the skin
- Key risk factors for PI:
 - Immobility,
 - Conditions that affect the resilience of skin
 - Conditions that affect the perfusion of skin
- Groups particularly vulnerable to PI:
 - Obese, Critically-ill, Elderly, Peri-operative, Palliative, Neonates, Spinal cord injured.



WHAT CAUSES PRESSURE INJURIES?



WHAT IMPACT DO PRESSURE INJURIES HAVE?

- Major cause of preventable harm for health care services.
- Serious pressure injuries can have profound human costs which are not always fully appreciated by those of us working within the health sector:
 - **Loss of Quality of Life (QoL):**
 - Unnecessary pain, loss of function & mobility
 - Distress, depression and social isolation
 - Prolonged hospital stay, septicaemia, death.
 - **Financial Burden:**
 - Individual
 - Health care organisations
 - Society

THE KEY PROBLEM IS THAT MOST PRESSURE INJURIES ARE AVOIDABLE. THEREFORE PI IS CONTRARY TO THE FUNDAMENTAL ETHOS OF THE HEALTHCARE SYSTEM, WHICH IS, "FIRST, DO NO HARM."

Evidence suggests that up to 95% of PI are avoidable when appropriate interventions are in place.

¹ The Northern Alliance "Do No Harm" point prevalence survey 2014, with an overall prevalence of 4.7% in DHB Hospitals, and the Central DHBs prevalence study 2014, which showed a prevalence range of 7.4% in residential Aged Care to 8.3% in DHB Hospitals.

OUR OBJECTIVES

/ THE PRIMARY OBJECTIVE OF THIS PROJECT WAS TO:

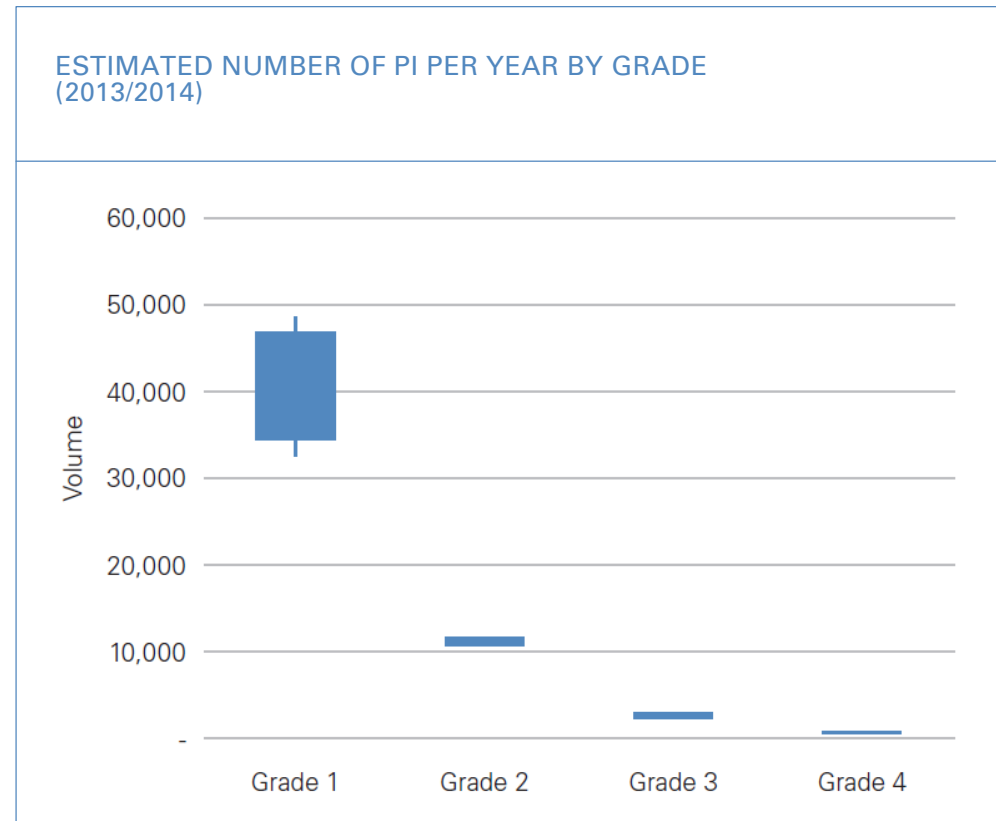
Develop a “value proposition” for an investment in a national quality improvement programme to reduce the prevalence of Pressure Injuries (PI) in the New Zealand Health Sector.

We set out to ask a range of questions – in particular why, despite two decades of research and numerous recent quality initiatives, pressure injuries remain at persistently high levels?



HOW BIG IS THE PROBLEM?

- **Prevalence:** 4-8% of those that receive healthcare in New Zealand experience a pressure injury¹
- **Incidence:** 55,000 people receive a PI annually in the New Zealand health sector
- **Aetiology:** PI develop rapidly (1-4 hours)
- **Risk factors:** PI is associated with age, immobility, incontinence, and malnutrition. Point of patient transfer is greatest risk.

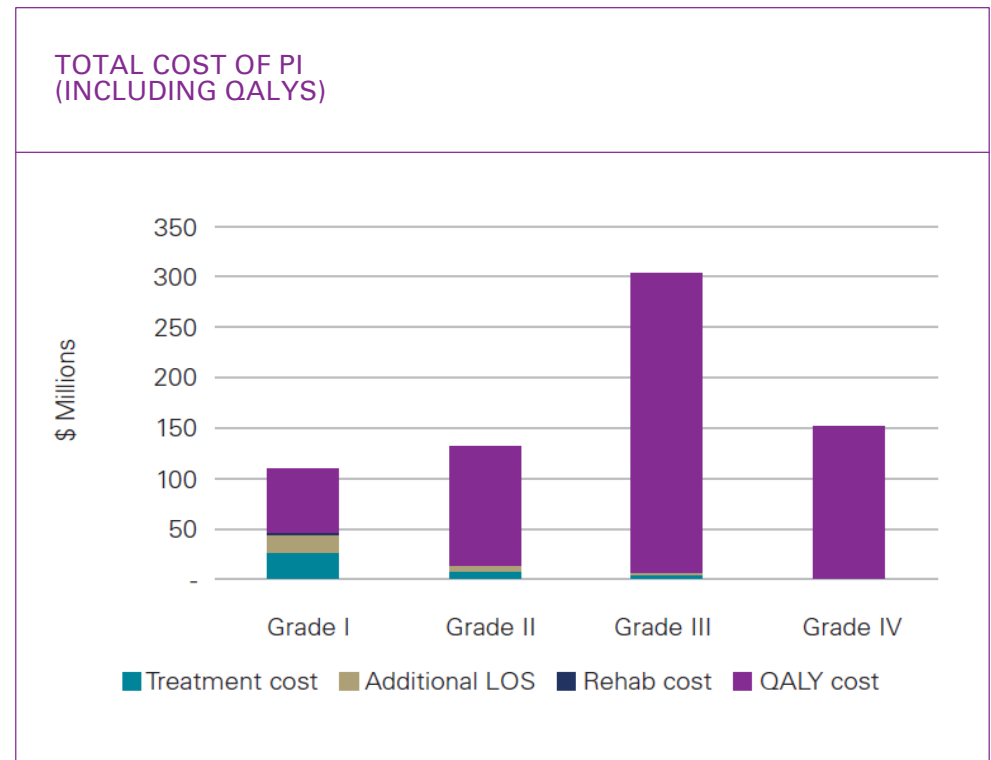


1. The Northern Alliance "Do No Harm" point prevalence survey 2014, with an overall prevalence of 4.7% in DHB Hospitals, and the Central DHBS prevalence study 2014, which showed a prevalence range of 7.4% in residential Aged Care to 8.3% in DHB Hospitals.

WHAT ARE THE COSTS?

EVERY GRADE III PRESSURE INJURY IN A NEW ZEALAND HOSPITAL COSTS SOCIETY \$123,000.

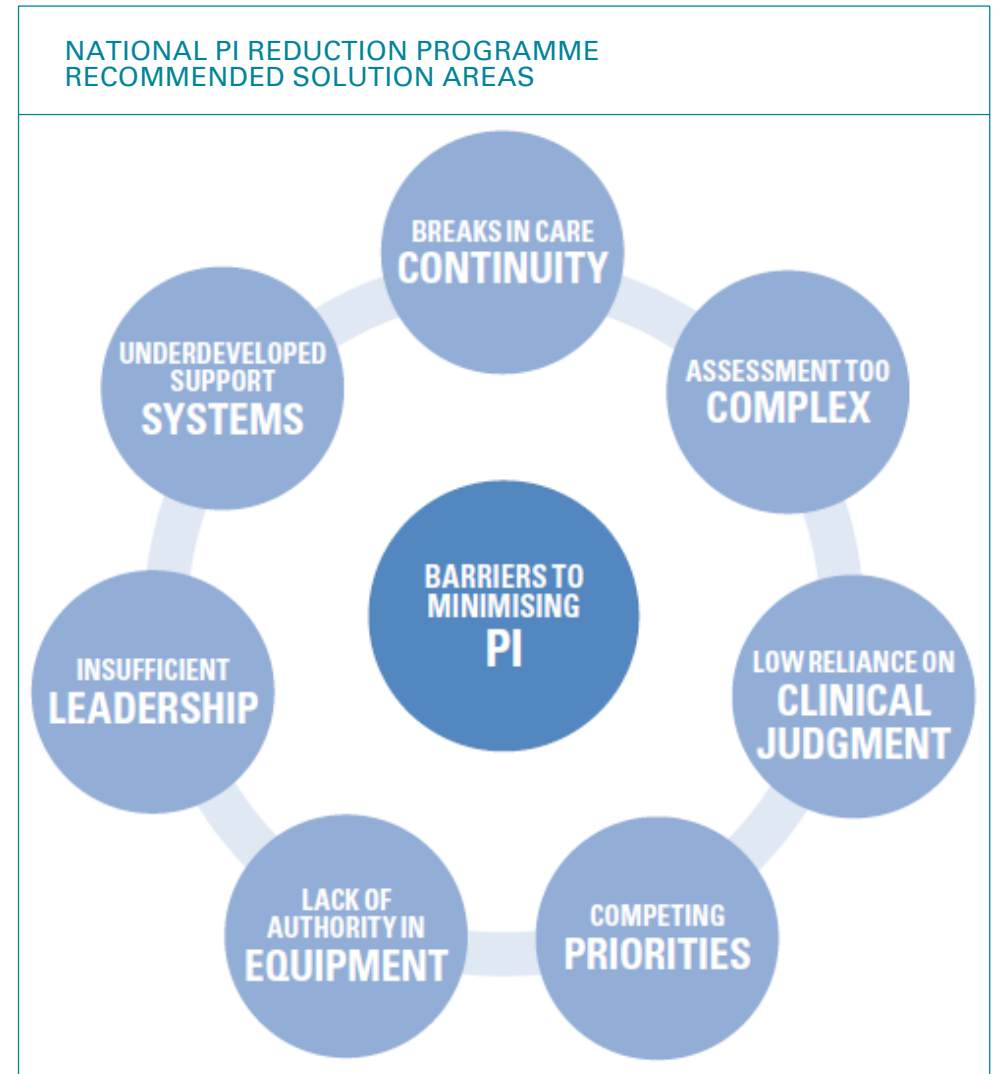
- **Cost of PI:** The total cost of PI to New Zealand is estimated at \$694 per annum (including QALYs)
- **Impact:** Grade III injuries have the most significant impact, attributing 40% (approximately \$302m of total cost)
- **Direct costs to the health sector:** Time and treatment costs, increased average length of stay (ALOS) costs, and rehabilitation costs is estimated at \$68m per annum.
- **Cost to individuals and society:** The personal and social costs of avoidable injury are significant; pain, depression, lost days of work, infection, sepsis, fasciitis, death.



WHY HAVE WE NOT MINIMISED PIs?

PI OFTEN OCCUR DUE TO WEAKNESSES OR FAILINGS OF SYSTEMS, RATHER THAN THE PEOPLE WITHIN THE SYSTEM.

- Breaks in the continuity of care
- Assessment tools are too complex
- Low reliance on clinical judgement
- Competing priorities
- Lack of access and authority in equipment
- Insufficient leadership
- Underdeveloped support systems.



SYSTEMIC ISSUES

DRIVERS INHIBITING EFFORTS TO FURTHER REDUCE PI TO AN ACCEPTABLE LEVEL ARE:

- **Prevention:** The health system places too little emphasis on prevention in all settings.
- **Empower:** Organisations do not authorise line staff to make prevention decisions.
- **Visibility:** Many people working in healthcare do not see the devastating consequences of actions or inactions on PI and quality of life.
- **Whanau support:** Healthcare organisations could do more to assist patient to use the skills of the individual or their family/whanau.
- **Measurement:** Health providers do not routinely submit treatment injury claims for PI, so the problem remains largely unrecognised at higher levels.



HOW DO WE REDUCE PIs?

PROVIDING PI PREVENTION AT TRANSFER MAINTAINS CONTINUITY OF CARE.

- Solution Set A: Streamline Clinical Practice
- Solution Set B: Authority to Access Equipment
- Solution Set C: Build a Leadership Culture
- Solution Set D: Improve Support Systems.

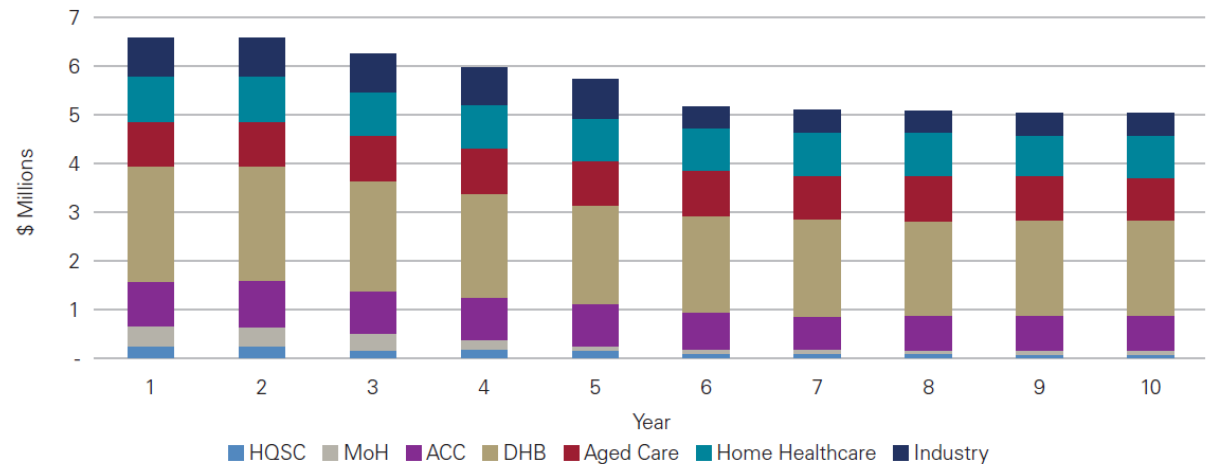
NATIONAL PI REDUCTION PROGRAMME RECOMMENDED SOLUTION AREAS



A NATIONAL INVESTMENT:

- Average annual investment \$5.7m
- Co-funded & co-ordinated investment over seven sector groups
- Private sector agencies provide 42% of investment
- Comparable international quality programmes have been successful in the Netherlands³ (LPZ PI) and the USA⁴ (CaINOC)

ANNUAL INVESTMENT BY SECTOR GROUP



3. Strating, M.M.H, Nieboer, A.P, Zuiderent-Jerak, T. & Bal, R.A. (2011). Creating effective quality-improvement collaboratives: a multiple care study. *BMJ Quality and Safety*, 20(4),344-50.

4. Stotts, N.A, Brown, D, Donaldson N.E, Aydin C. & Fridman M. (2013). Eliminating hospital acquired pressure ulcers within our reach. *Advances in skin and wound care*. Vol. 26 No.1(13-18).

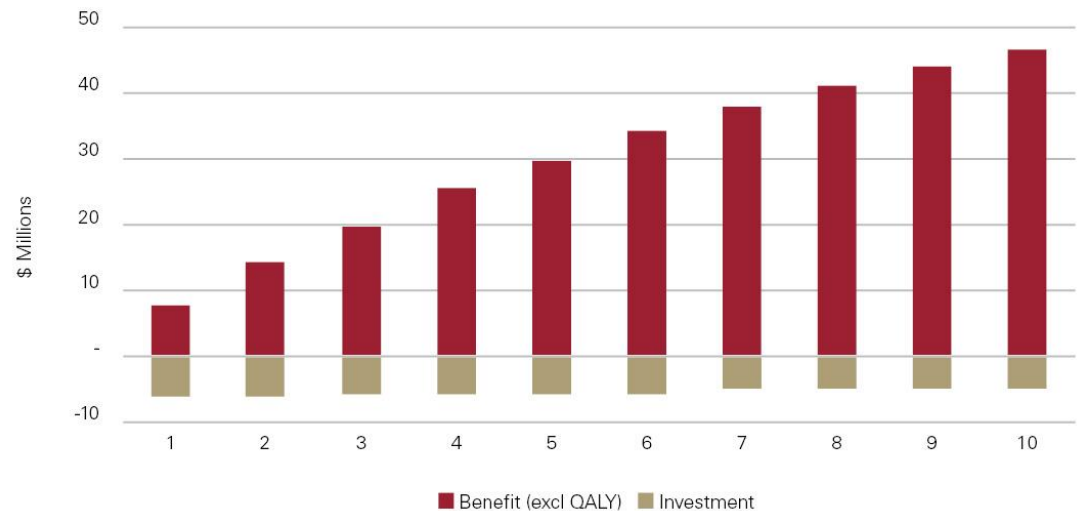
WHAT IS THE VALUE PROPOSITION?

WE RECOMMEND A MULTI AGENCY CO-FUNDED NATIONAL PREVENTION & QUALITY IMPROVEMENT PROGRAMME.

- Average investment of \$5.7m p.a. across the sector over the next 10 years could achieve a 70% reduction in PI with end prevalence of 2-3%⁵
- Expected ROI is \$508m p.a. including QALY by year 10
- Direct ROI to sector is \$46m p.a. excluding QALY by year 10

5. Assumes a 15% annualised reduction in PI per annum as experienced in the Netherlands and the USA. If a 10% annualised reduction in PI is achieved p.a., prevalence will fall to 53%. If a 5% annualised reduction in PI is achieved, prevalence will fall to 32%.

INVESTMENT AND DIRECT BENEFITS
(EXCL QALY)



KEY MESSAGES

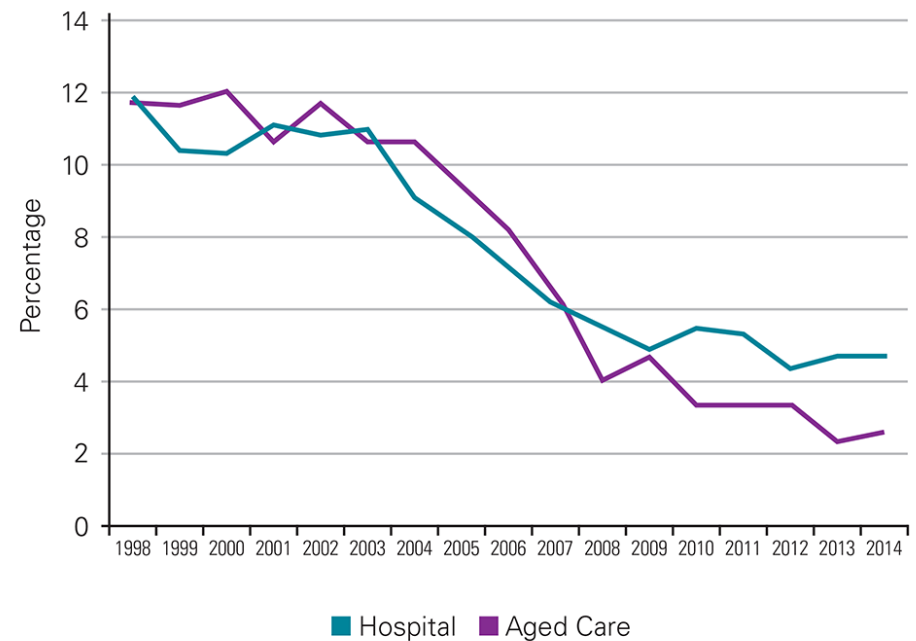
VERY LOW LEVELS OF PI ARE ACHIEVABLE

- **Commit to a 10 year programme:** to achieve sustainable reduction of 70% in PI
- **Adopt a multi-agency approach:** The best way to achieve success is through a multi-agency co-funded approach lead by the HQSC
- **Empower staff:** There is a need to empower staff at the front line to take the preventative action they believe is necessary.

The Netherlands experience represents a similar national quality improvement and PI to reduce PI¹

1. Strating, M.M.H, Nieboer, A.P, Zuiderent-Jerak, T. & Bal, R.A. (2011). Creating effective quality-improvement collaboratives: a multiple care study. *BMJ Quality and Safety*, 20(4),344-50.

PI REDUCTION IN THE NETHERLANDS 1998-2014 (HOSPITAL AND AGED CARE)





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Thank you

QUESTIONS?

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