

INTRODUCING COMPLEX CHANGE IN HOSPITALS - THE DEMENTIA CARE IN HOSPITALS PROGRAM (DCHP)

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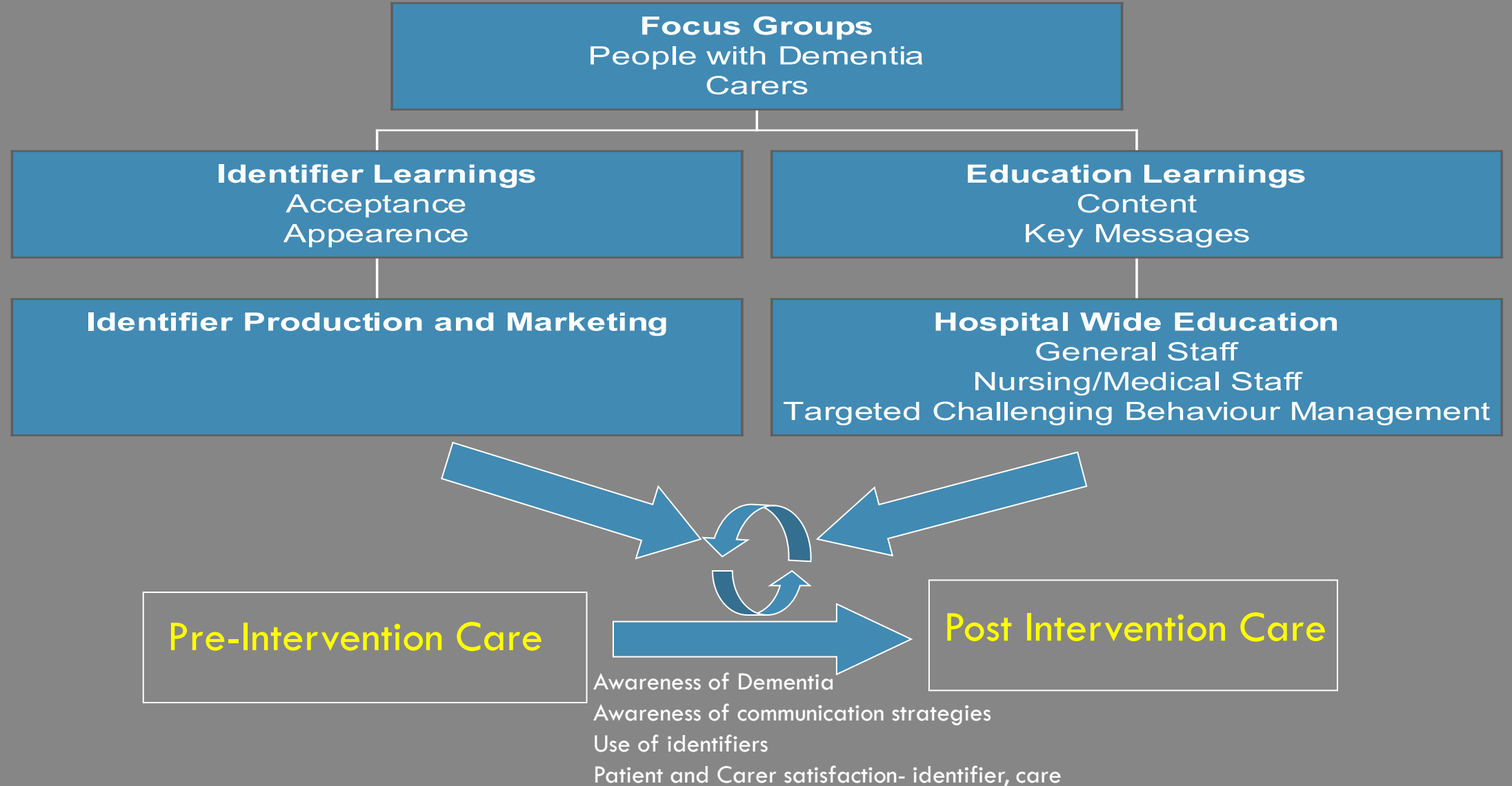
INTRODUCING COMPLEX CHANGE IN HOSPITALS - THE DEMENTIA CARE IN HOSPITALS PROGRAM (DCHP)

- The development of the DCHP
- Driving spread
- The National Rollout of the DCHP – implementation and outcomes
- Key drivers for successful implementation
- Measuring intervention outcomes - effectiveness-implementation studies

THE DEVELOPMENT OF THE DCHP

- 2002 First CNC Cognition
- 2003 High incidence of falls and agitation in orthopaedic patient
- 2004 with Alzheimer's Australia and consumers the DCHP and CII devised

THE DEVELOPMENT OF THE DCHP 2003



THE DEVELOPMENT OF THE DCHP



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Cognitive Impairment Identifier (CII)

Communication Strategies (for Staff working with Patients with CII)

- ▶ Introduce yourself
- ▶ Make sure you always have eye contact
- ▶ Remain calm and talk in a matter-of-fact way
- ▶ Involve carers
- ▶ Keep sentences short and simple
- ▶ Focus on one instruction at a time and give time for responses
- ▶ Repeat yourself.... Don't assume you have been understood
- ▶ Do not give too many choices

Hospital Education Program Results 2005

Self-rated measures:		Means (1)		
		Direct care staff	Non-direct care staff	Total
How would you rate your confidence in dealing with patients with dementia, delirium or memory and thinking difficulties?	Pre	3.06	2.90	3.00
	Post	3.24*	3.03*	3.15*
How would you rate your level of comfort in dealing with patients with dementia, delirium or memory and thinking difficulties?	Pre	3.12	3.00	3.07
	Post	3.32*	3.10*	3.22*
How would you rate your level of job satisfaction in dealing with patients with dementia, delirium or memory and thinking difficulties?	Pre	2.71	2.82	2.75
	Post	2.97*	2.93*	2.95*
How would you rate the level of organisational support you receive in dealing with patients with dementia, delirium or memory and thinking difficulties?	Pre	2.79	2.56	2.71
	Post	3.00*	2.68*	2.86*
In your experience how well equipped is the hospital environment to meet the needs of patients with dementia, delirium or memory and thinking difficulties?	Pre	2.21	3.24	2.57
	Post	2.17	2.96	2.52

Notes: (1) 1 = Very low, 2= Low, 3= Satisfactory, 4= High, 5= Very high.

* Change in "desired" direction.

CII impact on practice – 2005

Change in practice	Direct-care staff (% yes)	Non-direct care staff (% yes)	Total (% yes)
Did seeing the CII change the way you interact with the patient?	79	61	76
Did seeing the CII change the way you interact with carers?	43	29	40

“I thought more about the communication mode and made sure the patient understood what I was saying. Previously might have assumed they understood”

“It made me involve the carer a lot more and ask them questions about the patient”

Carer Response – 2005

Question to Carer	Satisfied (%)		Dissatisfied (%)	
	Pre	Post	Pre	Post
	(n=25)	(n=30)	(n=25)	(n=30)
That the staff knew the patient has CI	80	87	20	6
Staff introduced themselves	70	81	25	0
Staff did not expect more than patient capable of	75	84	20	6
Staff explained things simply	65	90	15	6
Carer invited to provide information	80	78	15	9
Notice taken of information volunteered by carer	80	84	20	6
Staff understanding of challenging behaviour	55	87	10	3
Carer given information about treatment given	70	78	25	19
Carer given option to receive discharge information	70	81	15	3
The hospital is "dementia friendly"	85	92	15	6
Per cent satisfied or dissatisfied	73	84.2	18	6.4

Satisfied = Very Satisfied + Satisfied

Dissatisfied = Unsure + Dissatisfied + Very Dissatisfied

ACHIEVING CHANGE AND DRIVING SPREAD

- Established program
- Supported by Victorian Government

<https://www.bhs.org.au/services-and-clinics/dementia-care-in-hospitals-program/>



Cognitive Impairment Identifier Project

An All of Hospital Education Program to Improve the Awareness of and Communication with People with Dementia - Linked to a Visual Cognitive Impairment Identifier.

Ballarat Health Services

July 2004



ACHIEVING CHANGE AND DRIVING SPREAD

- 3 Victorian phases
 - Phase 1 – 2004
 - Phase 2 – 2005-7
 - Phase 3 – 2007-10



AUSTRALIAN INSTITUTE
FOR PRIMARY CARE

Communiqué

National Consumer Summit on Dementia

5–6 October 2005

Parliament House Canberra



People with dementia and carers need to see a national symbol for cognitive impairment so that people with dementia are treated appropriately particularly in the delivery of service.

Evaluation of Education and Training of Staff in Dementia Care and Management in Acute Settings

A report for the Aged Care Branch
Department of Human Services

August 2007

05 Victorian Public Healthcare Awards

Category 2
Excellence in consumer participation

Highly commended

Dementia care at Ballarat Health Services
Ballarat Health Services



Ballarat Health Services
Putting your health first

ACHIEVING CHANGE AND DRIVING SPREAD

- Phase 4- 2011-13
 - Private sector evaluation



Thinking Ahead

Report on the inquiry into dementia: early diagnosis and intervention

June 2013
Canberra

**House of Representatives
Standing Committee on Health and Ageing**

Recommendation 14

The Australian Government Department of Health and Ageing, as part of the *Living Longer. Living Better.* reforms and through the Council of Australian Governments, trial the following initiatives to investigate their capacity to assist in improving dementia care in acute hospital settings, with a view to these initiatives being implemented nationally:

- The introduction of Clinical Nurse Specialists in dementia in hospitals;
- The introduction of a Cognitive Impairment Identifier in hospitals; and
- The introduction of a protocol for the identification of cognitive issues at the point of triage. (*para 6.95*)

ACHIEVING CHANGE AND DRIVING SPREAD

COGNITIVE IMPAIRMENT SYMBOL: CREATING DEMENTIA FRIENDLY ORGANISATIONS

A REPORT FOR ALZHEIMER'S AUSTRALIA
PAPER 32 MAY, 2013

In 2003 Ballarat Health Services (BHS) in Victoria, Australia conducted a comprehensive project to introduce a Cognitive Impairment Identifier (CII) symbol, incorporating staff training and education (Figure 1). Consumer consultations undertaken as a part of the project revealed a consumer preference for an abstract symbol that is readily recognisable. The results of the study overlap with findings from the Dementia Symbol Research Project undertaken in 2008 in which consumers highlighted their preference for a small, abstract symbol in an acceptable colour to be released in conjunction with staff education in the various settings.¹



Figure 1 Cognitive impairment identifier – Ballarat Health Services
© Ballarat Health Services.¹

DEMENTIA CARE IN HOSPITALS PROGRAM

- National support for the CII
- National Evaluation announced

Media Release

National hospital program to protect people with dementia

Today The Hon Ken Wyatt AM, MP, Assistant Minister for Health and Aged Care visited the Canberra Hospital along with Alzheimer's Australia National CEO, Carol Bennett and Associate Professor Mark Yates, Consultant Physician in Geriatric Medicine, to mark Alzheimer's Australia's national endorsement of the Cognitive Impairment Identifier as part of the *Dementia Care in Hospitals Program*.

Alzheimer's Australia supports the Cognitive Impairment Identifier (CII) being adopted as a national identifier to support better care for people with cognitive impairment and would ideally like to see an integrated program rolled-out nationally.

The program also reinforces the importance of working with carers as partners in care. The DCHP model has been implemented in 22 hospitals in Victoria and with Government funding is now being rolled out nationally, in four lead hospitals in other States and Territories:

- The Queen Elizabeth Hospital in South Australia as part of the Central Adelaide Local Health Network
- The Canberra Hospital in the Australian Capital Territory
- The Sir Charles Gairdner Hospital in Western Australia
- The Royal Hobart Hospital in Tasmania



**NATIONAL SAFETY
AND QUALITY HEALTH
SERVICE STANDARDS
VERSION 2:
CONSULTATION DRAFT
2015
FINAL 2017**

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

**National Safety and Quality
Health Service Standards
Version 2:**

Consultation draft



Trin: D15-20010

<http://www.safetyandquality.gov.au/our-work/accreditation-and-the-nsqhs-standards/current-consultations/>

The Dementia Care in Hospitals Program – 2016-2018

- Implementation Key Elements
 - Universal cognitive screening of all patients 65 and over
 - All of hospital staff (clinical and non-clinical) education program focusing on communication that assists orientation, understanding and support for families.
 - Screen positive patients are offered a bedside alert – Cognitive Impairment Identifier
 - The widest possible implementation across the hospital

Study Aim

- To implement the DCHP in four partner sites in four different jurisdictions.
- To evaluate of the program implementation feasibility
- To measure the effect of the DCHP on the rate of hospital acquired complications in patients with cognitive impairment compared to usual care.
- To investigate the impact of the DCHP and CII on:
 - Staff perception of confidence in care and satisfaction
 - Carer satisfaction
 - Patient quality of life

Cognitive Screening Measures

Tool	Acronym	Criteria for positive CI screen	Used by Site	Reference
Abbreviated Mental Test	AMT	Score ≤ 7	1	Hodkinson
Mini-Cog		Recall 1 or 2 of 3 items and abnormal Clock Drawing; or recall of 0 of 3 words.	4	Borson
Abbreviated Mental Test Score 4*	AMT4	Score of 3 or less	2 and 3	Swain
Clock Drawing Test [^]	CDT	Not all clock numbers present, spaced unevenly, or hands pointing to incorrect time.	2, 3 and 4	Scanlan

*Only used in conjunction with CDT

[^]Used in conjunction with either AMT4 or MiniCog

Outcome Measures

Hospital Acquired Complication Rate

- Combined change in the rate of four modifiable hospital acquired complications(HAC) -UTI, Delirium, Pressure Ulcer, Pneumonia.

Organisational Impact Measures

Staff Satisfaction – survey
Length of Stay
Cost of care and training

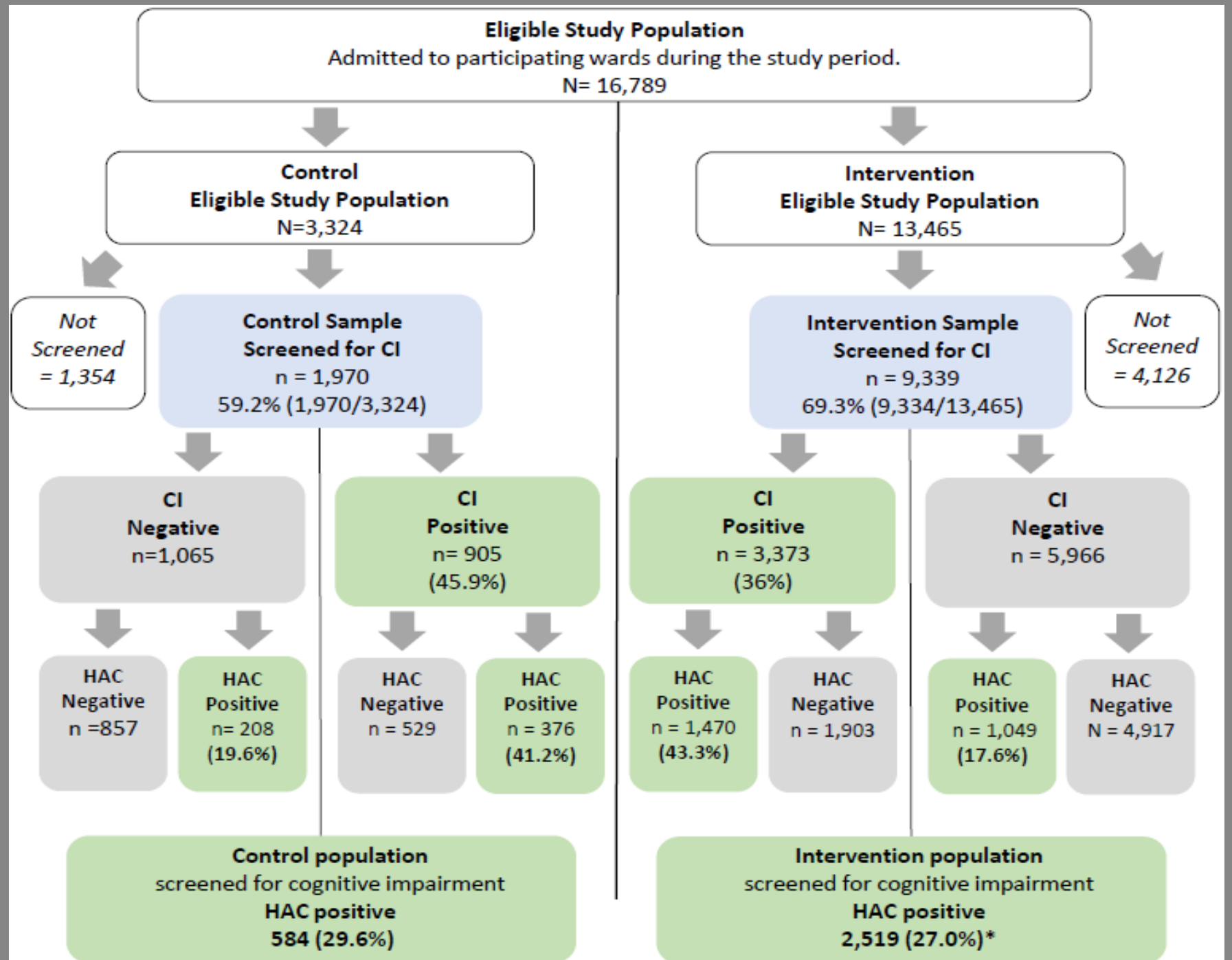
Patient/Carer Specific Measures

Carer satisfaction - survey
Patient QoL – survey using the DemQoL
CII acceptance – record of rejections

Implementation Measure

- Screening rates – the proportion of the target population screened (100%)
- CII usage rates – the proportion of the screen positive who had a CII used (80%)
- Staff Training rates – the proportion of staff on target wards trained (80%)
- Penetration -the eligible population (the number of older patients in participating wards) as a % of older patients in the hospital

COMBINED
CHANGE IN
THE RATE
OF FOUR
MODIFIABLE
HOSPITAL
ACQUIRED.



Staff Training -Pooled

Work Category	Medical	Nursing	Allied Health	Non-Clinical	Other	Total
Number of staff	411	1261	302	555	58	2587
Number of staff trained	247	916	211	323	51	1748
Average staff trained	60.10%	72.64%	69.87%	58.20%	87.93%	67.57%
Range of staff trained	50.40% - 100.00%	57.53% - 82.96%	19.44% - 100.00%	40.38% - 98.36%	82.93- 100.00%	61.26% - 74.19%

Staff Satisfaction

		Group	N	Mean	Std. Dev	Std.Error Mean	Mean Difference
Q2	Confidence	Control	954	3.15	.791	.026	.37**
		Intervention	418	3.52	.787	.038	
Q3	Comfort	Control	953	3.18	.820	.027	.35**
		Intervention	417	3.53	.809	.040	
Q4	Organisational Support	Control	943	2.80	.853	.028	.40**
		Intervention	417	3.20	.913	.045	
Q5	Job Satisfaction	Control	936	2.88	.790	.026	.23**
		Intervention	415	3.11	.818	.040	
Q6	Hospital Environment	Control	938	2.60	.858	.028	.14*
		Intervention	414	2.74	.901	.044	

Impact of the Dementia Care in Hospitals Program on acute hospital staff satisfaction Murray et al. BMC Health Services Research <https://doi.org/10.1186/s12913-019-4489-z> (2019) 19:680

IMPLEMENTATION OUTCOMES FROM THE NATIONAL ROLLOUT OF THE DCHP

Intervention strategy	Site A	Site B	Site C	Site D
Screening for CI by site	57%	77%	54%	82%
Staff Training	69%	62%	59%	43%
CII usage as a % of CI positive	48.3%	Incomplete*	35%	47.5%
Penetration	56.3%	50.5%	20.7%	30.1%
Change in HAC rate in those with CI	-13.4%	+6.9%	+12.4	-7%

- *The CII use as verbally reported by the project officer was low
- Penetration - **the eligible population** (the number of older patients in participating wards) as a % of older patients in the hospital

IMPLEMENTATION IN OTHER JURISDICTIONS AND HOSPITAL SYSTEMS

- Northern Territory Health
 - Cognitive Impairment and Delirium Support Program
 - Adopted across all NT Health
 - Adaption for indigenous patients
- Queensland – Redcliffe Hospital *
 - No difference in HAC rate
 - Significant improvement in staff satisfaction
- WA Southern Metropolitan Health Service : Fiona Stanley, Freemantle Hospital Group
- SA Country Health
- SA – Northern Adelaide Local Health Network

KEY INGREDIENTS FOR CHANGE

- Valuing the change
 - Implementing evidenced based change that benefits patients and staff
 - Change that has consumer support
- Having the opportunity to influence the change and its implementation.
 - Change that is practical in the context it is to be implemented
- Being prepared for the change
 - Organisational and individual readiness to change
 - Ensuring there is time allowed to adjust to change

KEY DRIVERS FOR CHANGE – CONTEXTUAL FACTORS

- Contextual Factors – the factors that surround but are not part of an intervention
 - Leadership
 - Organisational Characteristics
 - Organisational culture
 - Individual skills /capabilities
 - Organisational capacity and capability
 - Data and technical infrastructure
 - Readiness for change
 - Change Agents
 - Championship
 - Multi-disciplinary teams
 - relationships

The influence of contextual factors on healthcare quality improvement initiatives: a realist review Coles et al. Systematic Reviews (2020) 9:94 <https://doi.org/10.1186/s13643-020-01344-3>

KEY DRIVERS FOR CHANGE- PERFORMANCE LEVRS

Coercive – penalties for HACs

Normative – Hospital standards

Mimetic – benchmarking against peers

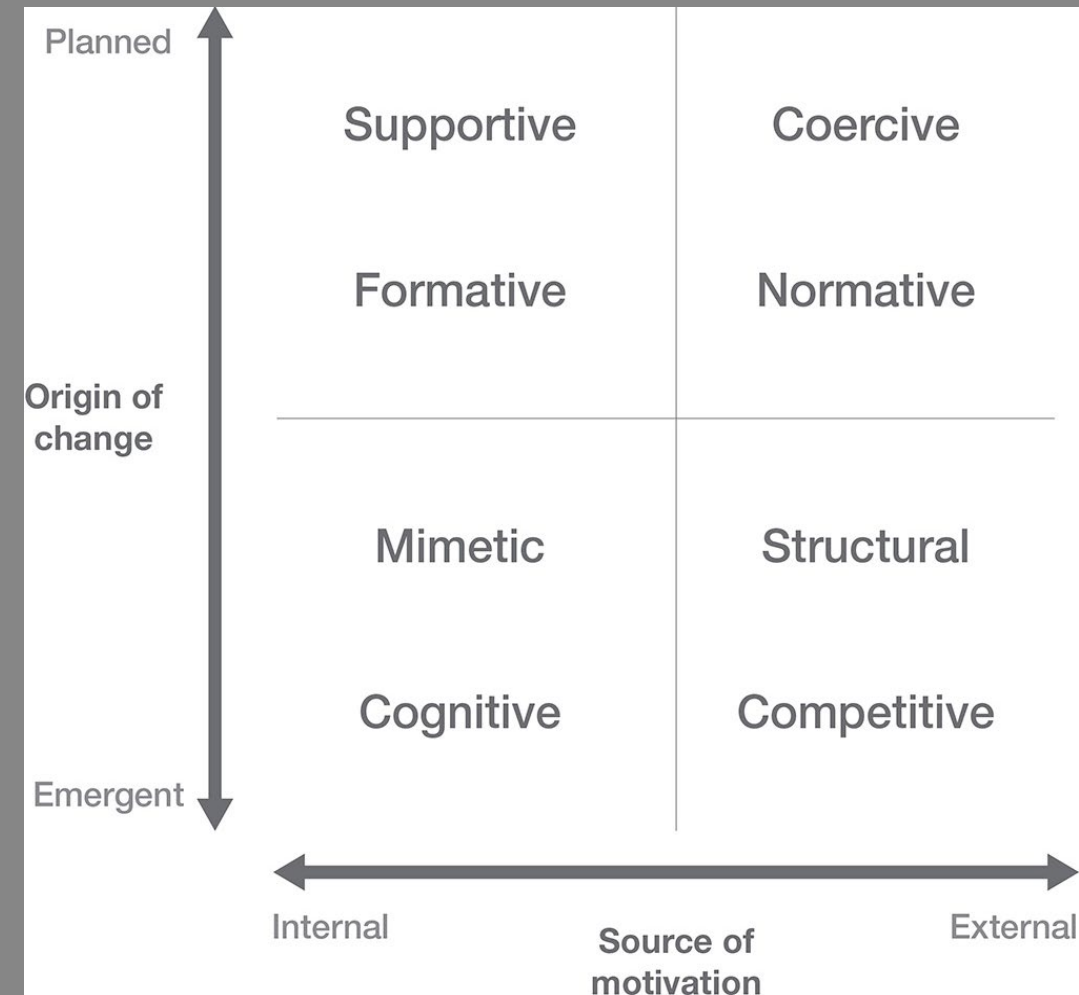
Cognitive – peer review, root cause analysis

Supportive – clinical collaboratives, change champions

Formative – CPD, feedback re change

Structural – organisation constraints

Competitive – gaining funding, loosing funding



Levesque J-F, Sutherland K. What role does performance information play in securing improvement in healthcare? a conceptual framework for levers of change. *BMJ Open* 2017;7:e014825. doi:10.1136/bmjopen-2016-014825

LEARNINGS FOR THE EVALUATION OF HEALTH SYSTEM CHANGE

- Language
 - Intervention – a clinical practice or process
 - Strategy – refers to all the implementation support activities
 - Efficacy – that the intervention is doing what it was planned to do
 - Effectiveness – that the intervention achieves the planned outcome in the context it is being implemented
- Effectiveness-implementation hybrid studies/design
 - The reality of all evaluations of change in complex systems
 - Three Design Types
 - Type 1 – traditional effectiveness plus “process evaluation” - limited effectiveness data
 - Type 2 – dual focus on effectiveness and implementation with explicit implementation outcomes
 - Type 3 – predominately studies testing different implementations strategies where the effectiveness is established

Sara J. Landes, Sacha A. McBain, Geoffrey M. Curran, Reprint of: An introduction to effectiveness-implementation hybrid designs, *Psychiatry Research*, Volume 283, 2020, 112630, ISSN 0165-1781, <https://doi.org/10.1016/j.psychres.2019.112630>.

Curran GM, Landes SJ, McBain SA, Pyne JM, Smith JD, Fernandez ME, Chambers DA and Mittman BS (2022) Reflections on 10 years of effectiveness-implementation hybrid studies. *Front. Health Serv.* 2:1053496. doi: 10.3389/frhs.2022.1053496

CONCLUSIONS

- 36% of hospital patients 65 and over who are screened will be found to have Cognitive Impairment (CI).
- Patients 65 and over with CI have a three times increased risk of hospital-acquired complications compared to those with no CI.
- Screening for CI in older inpatients is an effective method to identify a hospital population at high risk of hospital acquired complications.
- The DCHP's good staff and patient/carer acceptance will assist sustain hospital wide screening for CI at low cost.
- The pooled result did not demonstrate that the DCHP produced any reduction in HACs in patients with CI
- There was considerable variability in the implementation outcomes across hospital sites

For more information about the DCHP
<https://www.bhs.org.au/services-and-clinics/dementia-care-in-hospitals-program/>



.....THANK YOU

Episode Cost, Program Delivery Costs and Length of Stay

- Median cost per episode across control and intervention was \$8,555.
- Median costs fell by nearly \$400 in intervention for patients who screened positive for CI. They had a lower median cost in intervention compared to control (\$10,236 compared to \$9,862).
- The training cost per patient who screened positive for CI was \$19.40.
- Median LOS for screened negative group = 6 days (*no change from control to intervention*)
- Median LOS for screened positive group = 8 days (*Increased from 7 days in control to 8 in intervention*)

KEY INGREDIENTS AND DRIVERS FOR CHANGE

ACHIEVING CHANGE AND DRIVING SPREAD

INDUSTRY PARTNERSHIPS

- 2005 – Victorian Public Health Care Awards
- 2006 – DoH funding to work with 7 health services to adopt and evaluate the DCHP
 - Austin Health
 - Barwon Health
 - Broadmeadows Health Services
 - Northeast Health Wangaratta
 - Peninsula Health
 - Royal Melbourne Health
 - St Vincent's Health
- 2008 DoH roll-out
 - Wodonga Regional Health Service
 - Mount Alexander Health Service
 - Werribee Private Hospital
 - Maryborough District Health Service
 - Eastern Health
 - Western District Health Service
 - Swan Hill District Health Service
- Private Sector roll-out 2012
 - Cabrini Health Malvern
 - Cabrini Brighton
 - SJOG Bendigo

2004-2016: GROWING NATIONAL DEMENTIA AWARENESS

2003 – Present Ministers Dementia Advisory Group

2005 – AA National Consumer Communique

2012 – Dementia the 9th National Health Priority Area

2013 – AA National – report supporting the DCHP and CII

2013 – Thinking Ahead – House of Representatives
Standing Committee Inquiry into Dementia: Early
Diagnosis and Intervention

DCHP National Roll-out

- 2014-2017 – National Rollout and re-evaluation of the DCHP.
- \$2.3M grant from the DoH.
- 4 hospitals 4 States
 - The Queen Elizabeth Hospital (SA)
 - The Canberra Hospital (ACT)
 - Sir Charles Gairdner Hospital (WA)
 - The Royal Hobart Hospital (TAS)
- National Evaluator
 - Deakin University

PATIENT SPECIFIC MEASURES

- Carer Satisfaction –
 - 177 carer surveys collected.
 - No change with intervention.
- Patient Quality of Life – Dementia Quality of Life Scale
 - 506 DEMQOLs completed across four partner sites
 - No reduction in QoL
- CII acceptance-
 - Less than 1% rejection rate

“Noted the identifier was above dad’s bed and noted that staff then took their time to explain procedures.” – Carer comment

HOSPITAL ACQUIRED COMPLICATION RATES - POOLED

- For each year of age the risk of at least one HAC increased by 4%.
- Those with CI are 3 times more likely to develop at least one of the four target complications while in hospital (RR 0.33; 95%CI: 0.305; 0.364).
- 43% of people who screen positive for CI had a least one of 4 HACs, compared to 28% of the population who screened negative for CI.
- Screen positive patients with one HAC had on average 1.3HACs

Limitations



- Real world interventions limit standardisation
- Analysis is not complete and is part of a PhD
 - Not fully investigated the impact of the DCHP of HACs
 - Not investigated variation in site coding
 - Not yet investigated the impact of variation in program uptake



KEY FINDINGS



- 38% of patients 65 and over who are screened will be found to have Cognitive Impairment (CI).
- Patients 65 and over with CI have a three times increased risk of hospital-acquired complications compared to those with no CI.
- Implementation of the Dementia Care in Hospitals Program (DCHP) resulted in a significant increase in staff confidence and comfort when supporting patients with dementia, delirium or memory and thinking difficulties.
- Implementation and recurrent costs of the DCHP are insignificant
- Carer satisfaction with the impact of the DCHP on hospital care is high.
- The bedside alert, the Cognitive Impairment Identifier (CII), was welcomed by the overwhelming majority of patients and families.
- Screening can be embedded as part of normal practice and screening rates maintained if they are linked to a program of care whereby staff can see the value of screening.



Conclusions



- Screening for CI in older inpatients is an effective method to identify a hospital population at high risk of hospital acquired complications.
- These results support the requirement, in the NSQHS Standards (2nd Edition), for universal screening of patients 65 and over for cognitive impairment
- The DCHP's high staff and patient/carer acceptance will assist sustain hospital wide screening for CI at low cost.
- The DCHP evaluation has a large data base of hospital patients with cognitive impairment for further research.



LEARNINGS FOR EFFECTIVENESS-IMPLEMENTATION STUDIES