

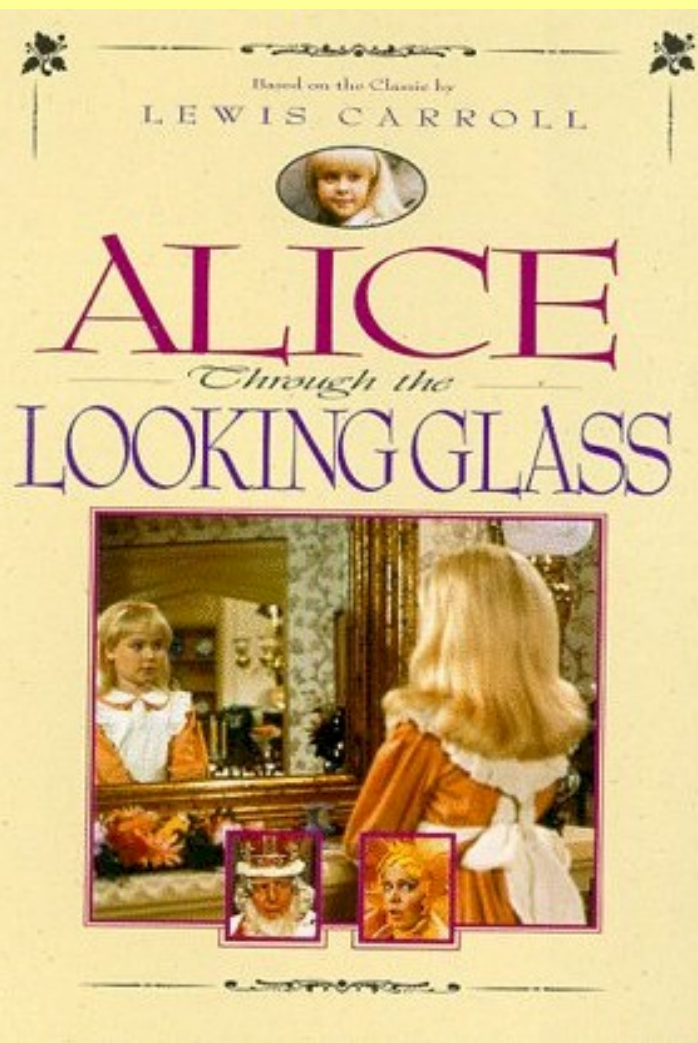
# **Intermediate care: the good, bad and ugly – lessons from clinical research**

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'When I use a word,' Humpty Dumpty said, in a rather scornful tone, 'it means just what I choose it to mean, neither more nor less.'

Lewis Carroll

**Transitional Care**

**OR**

**Intermediate Care**

# **John Young:**

## **Overview of presentation**

- **Basis for intermediate care in England**
- **Definition of intermediate care in England**
- **Evidence base for intermediate care**
- **Sharing our mistakes (How we could  
have done better!)**

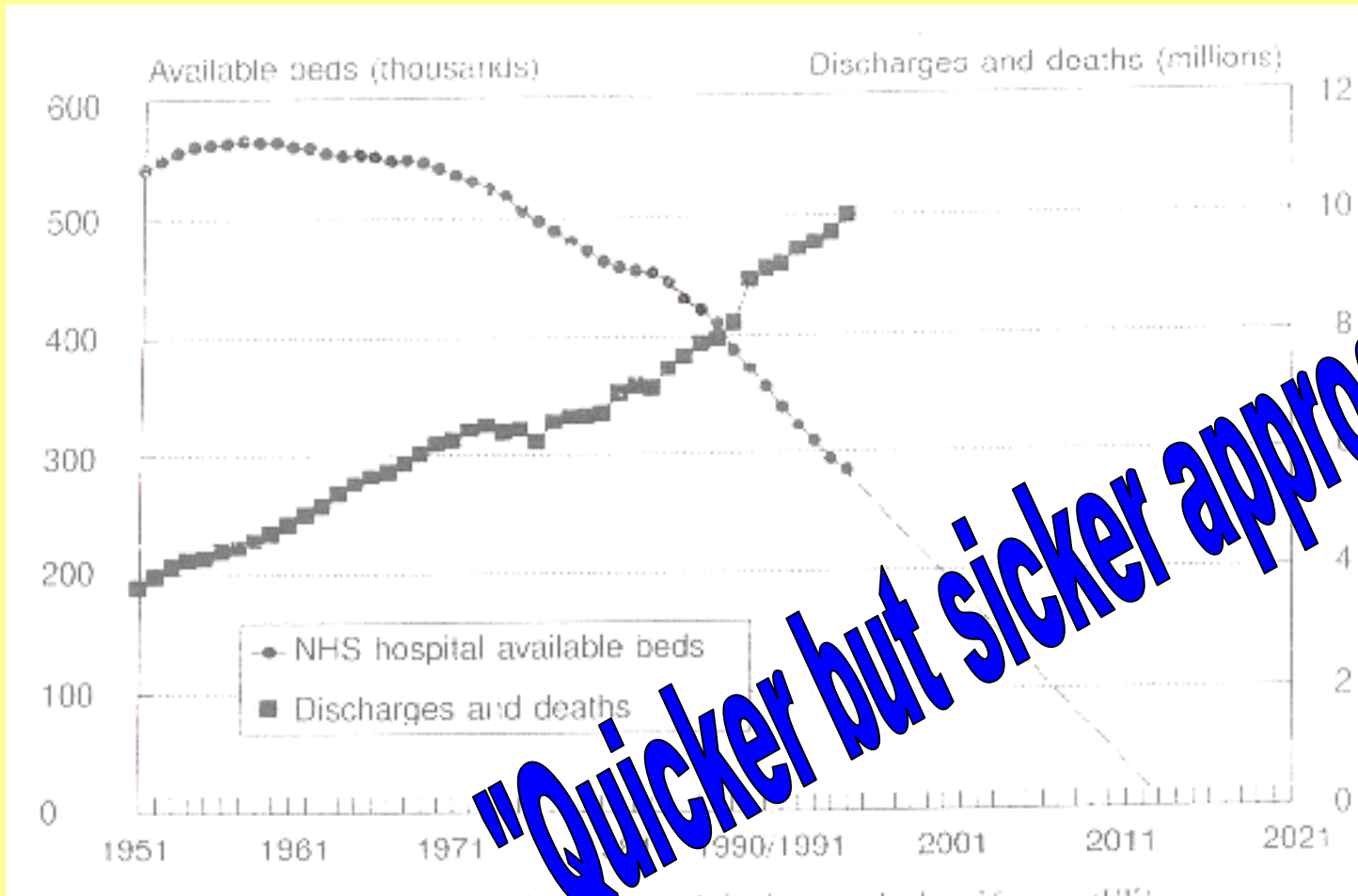
# Why intermediate care in England?

- Too many older people
- Too many older people in hospital
- Too many of the wrong sorts of older people in hospital
- Demand to contain or reduce hospital costs = reduce  
length of stay

**An opportunity to design better services for  
frail older people**

“Hospitals, Jim, but not as we know them.”

*Vetter, 1997*



**"Quicker but sicker approach"**

SERVICES RECEIVED BY FRAIL OLDER  
PEOPLE (N=821)  
3 MONTHS POST-DISCHARGE

- CHIROPODY 47%
- COM. NURSE 21%
- GP/HOME VISIT 34%
- SOCIAL WORKER 5%
- HOME CARE 44%

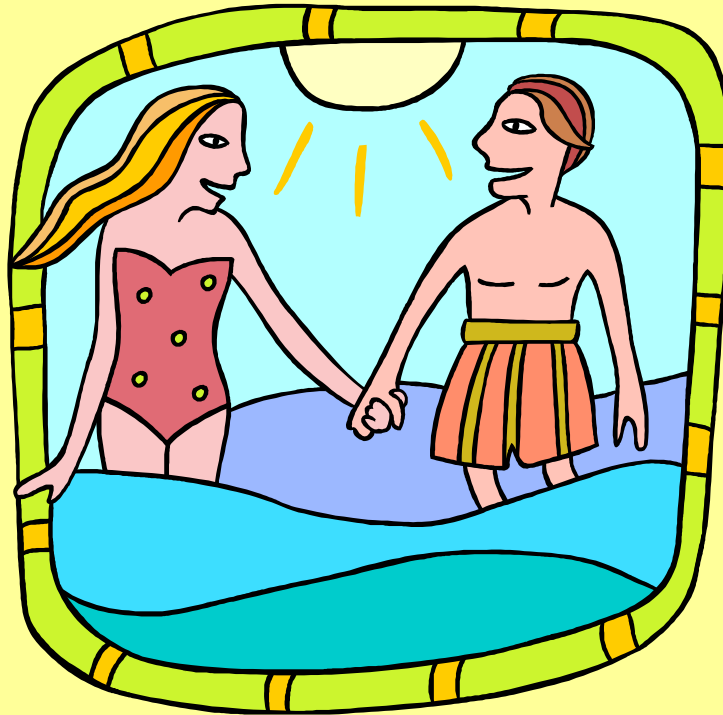
**<30% received rehab.**

**•REHAB.**

*Young et al HSCC 2005; 13: 307*


# Intermediate care as a win-win situation

Full  
hospitals



Paucity of  
community  
services

**Initial reactions to intermediate care in UK???**

A photograph of a small, fluffy tabby kitten falling from a birch branch. The kitten is upside down, with its front paws still gripping the branch. Its body is suspended in mid-air, and its hind legs are also visible. The background is a soft, out-of-focus natural setting. The text "OH, SHIT" is overlaid in white, bold, sans-serif font on the left side of the image.

**OH, SHIT**

# PROFESSIONAL RESPONSE TO INTERMEDIATE CARE



*“I’m going to keep my  
eyes tightly closed  
until this nasty  
intermediate care  
thing has blown  
over”*

**Social Services  
units**

**GP  
unit?**

**Community  
Rehabilitation  
team?**

**Early supported  
discharge?**

**Nurse-Led  
units**

**Nursing home  
beds? unit?**

**Rapid  
Response?**

**Residential home  
bed? unit?**

**Convalescent  
unit?**

**Sheltered Housing  
unit?**



**Intermediate Care**

# English Definition of Intermediate Care

“Older people will have access to a new range of IC services at home or in designated care settings, to promote their independence by providing enhanced services from the NHS and councils to prevent unnecessary hospital admission and effective rehabilitation services to enable early discharge from hospital and to prevent premature or unnecessary admission to long term residential care.”

*National Service Framework for Older People, England,  
2001*

# AIMS OF INTERMEDIATE CARE

1. Responding to, or averting, a crisis

**Admission avoidance**

2. Active rehabilitation following an acute hospital stay

**Early discharge**

3. Where long-term care is being considered

**Prevention of long term care**

*National Service Framework para 3.12*

# Mandated Service Characteristics of English Intermediate Care

- Early discharge or admission avoidance
- Actions based on comprehensive assessment
- Maximises independence
- Time limited (2 weeks)
- Multi-agency working

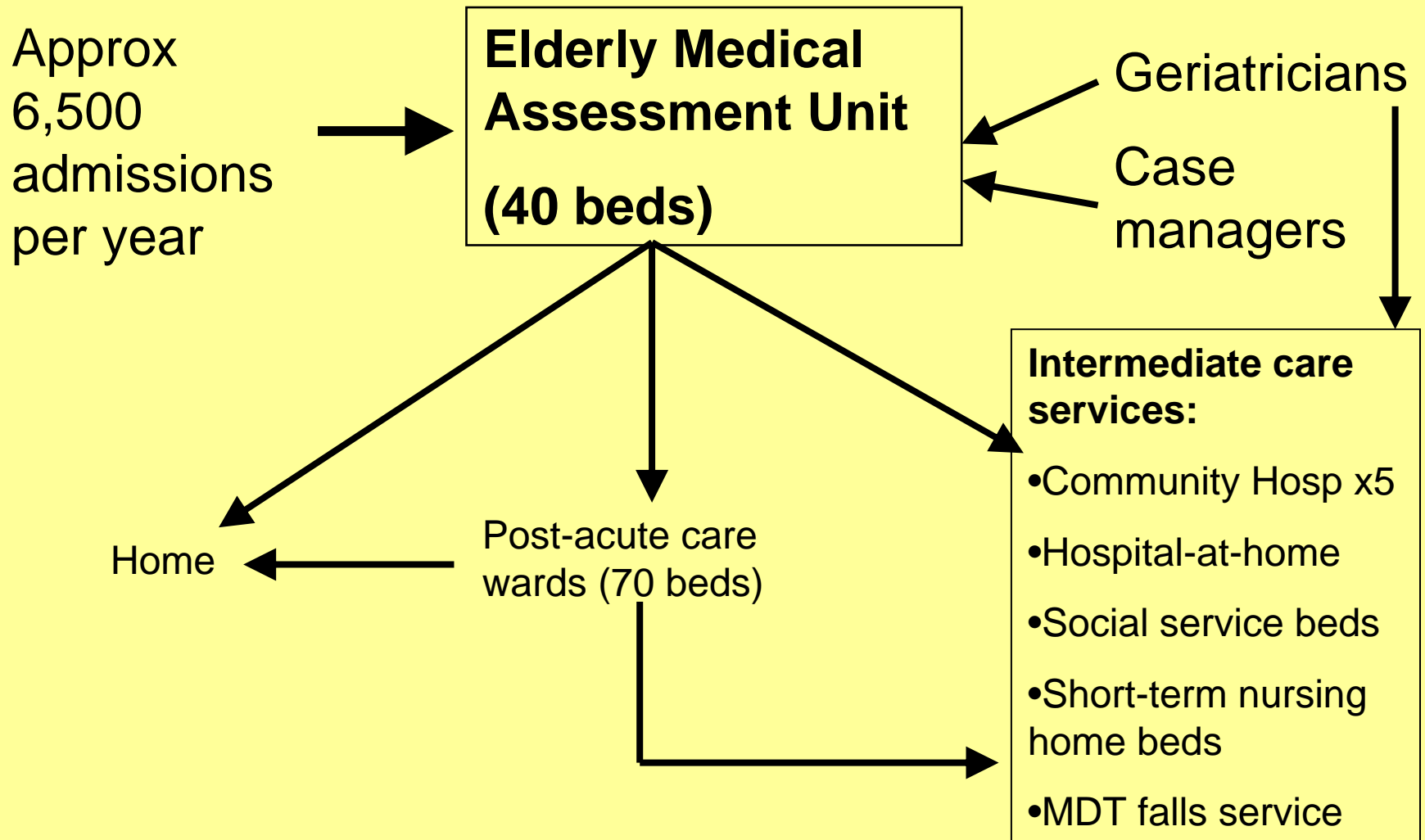
Not pick & mix! **All** components needed

**Dept of Health Circular 2001**

# Development of Intermediate Care

	<u>1999</u>	<u>2004</u>
Intermediate care beds	4,442	8,697
People receiving intermediate care	132,000	331,721
Intermediate care places	7,149	17,339

# Intermediate care in Bradford, UK (Pop. 400,000)



**“How much intermediate care do I need ?”**



**“As little as possible!”**

**"The answer to life,  
the universe and  
everything....."**

45%

# Intermediate care capacity estimate

Needs assessment survey in Kent (pop=372,000)

Census of pts in DGH+CHs+DH+rehab centre+IC services

N=871 pts.... of whom 395 (**45%**) in need of an IC service

# **A RATHER SCARY BUSINESS**

45% is a very big number!

DEATH.....to “schemes” “units” “let’s have a bit of intermediate care”

Much greater strategic thinking around provision of intermediate care

# ANOTHER RESPONSE TO INTERMEDIATE CARE

*In God we trust,  
All others need data.*

*W. Edwards Deming*

# Summary of RCT Evidence for Intermediate Care Service Models (\*Cochrane Reviews)

•Nurse-led Units*	10 trials (n=1,896)	? Increase mortality Increase overall LOS
•Day hospital*	12 trials (n=2,867)	Effective but expensive
•Care homes	1 trial (n=165)	Shift costs to social care
•Community Hosp	1 trial (n=490)	Cost effective
•Hosp-at-home*	>20 trials	3 separate Cochrane reviews

# Hospital-at-Home: definition.....

Hospital care but delivered in the person's own home !!!

**HaH** = “....a service that provides **active treatment** by health care professionals, in the **patient's home**, of a condition that would **otherwise require** acute hospital in-patient care, always for a **limited period**.”

***Cochrane definition, 2005***

Combination of personal support & rehabilitation

# Hospital-at-Home v In-patient Care (RCTs)

Reduction in hospital stay (days) for elderly medical patients

<b>Early Discharge Services</b>			<b>Control</b>	<b>HaH</b>	<b>Diff</b>
Bristol, UK	n=241	3mth	50	39	-11(-22%)
Gloucester, UK	n=60	6mth	11	5	-6 (-55%)
Oxford, UK	n=96	3mth	13.2	12.8	-0.4 (-3%)
London, UK	n=54	12mth	35	14	-21(-60%)
Nottingham, UK	n=370	12mth	21	12	-9 (-43%)

**But can HaH save money??**

# Hospital-at-Home v In-patient Care (RCTs)

## Cost Estimates for Elderly Medical Patients

<b>Early Discharge Services</b>			<b>Control</b>	<b>HaH</b>	<b>Diff</b>
Nottingham, UK	n=370	12mth	10,088	8,361	£-1,727
Bristol, UK	n=241	3mth	3,292	2,516	£ -750
California, USA	n=419	12mth	4,245	3,000	\$-1,245
Oxford, UK	n=96	3mth	1,388	1,705	£ +317

## **Admission Avoidance Services**

Leicester, UK	n=199	3mth	2881	2569	£ -305
Sydney, Aus.	n=100	6mth	3,614	1,764	\$-1,850

# Hospital-at-Home Intermediate Care:

Three conclusions.....

1. Limited RCT evidence base

2. Flexible type of service:

- Different patients groups
- Early discharge and admission avoidance

3. Can reduce hospital bed use, reduce whole system costs

***BUT.... not always.....***

# The reality of a HaH Service:

“Before” & “After” study (n=1,648)

Frail patients: acute admissions with “geriatric giants”

29% pts received I.C. over 12 months

**Lack of service integration**

<u>NEADL</u> score changes	<u>I.C. pts</u> (n=246)	<u>Control</u> (n=246)
3months:	-2.44	-1.39
6months:	-2.63	-1.92
12months:	-3.26	-2.79

Beds days used over 12 months = +8 days for I.C. group



**BRADFORD  
COMMUNITY  
HOSPITAL  
(18 beds)**

“Geriatricians in Bradford so poor – forced to share a bicycle to go to work”

# Multi-centre RCT of Post-Acute Care in Community Hospitals

**5 GHs; 7 CHs; n = 490**

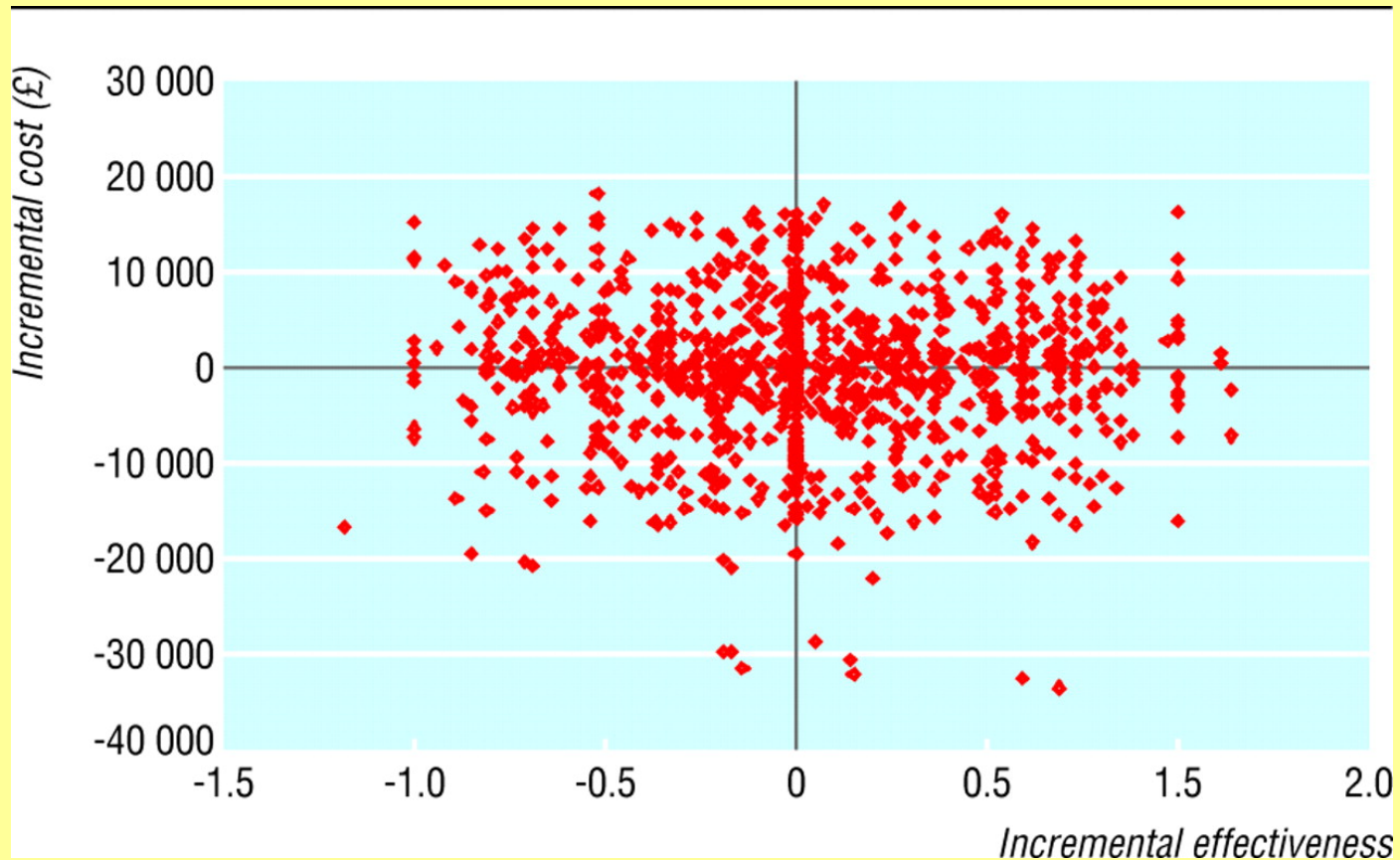
## Results:

- Equivalent/better outcomes? **Yes, better EADL**
- Shorten hospital length of stay? **No**
- Cost–effectiveness? **Yes, £17,000 per QALY**

*Young et al. JAGS 2007; 55: 1995*

*O'Reilly et al Age Ageing 2008; 37: 513*

# Representation of cost effectiveness plane on basis of bootstrap simulation (based on 1000 replications)



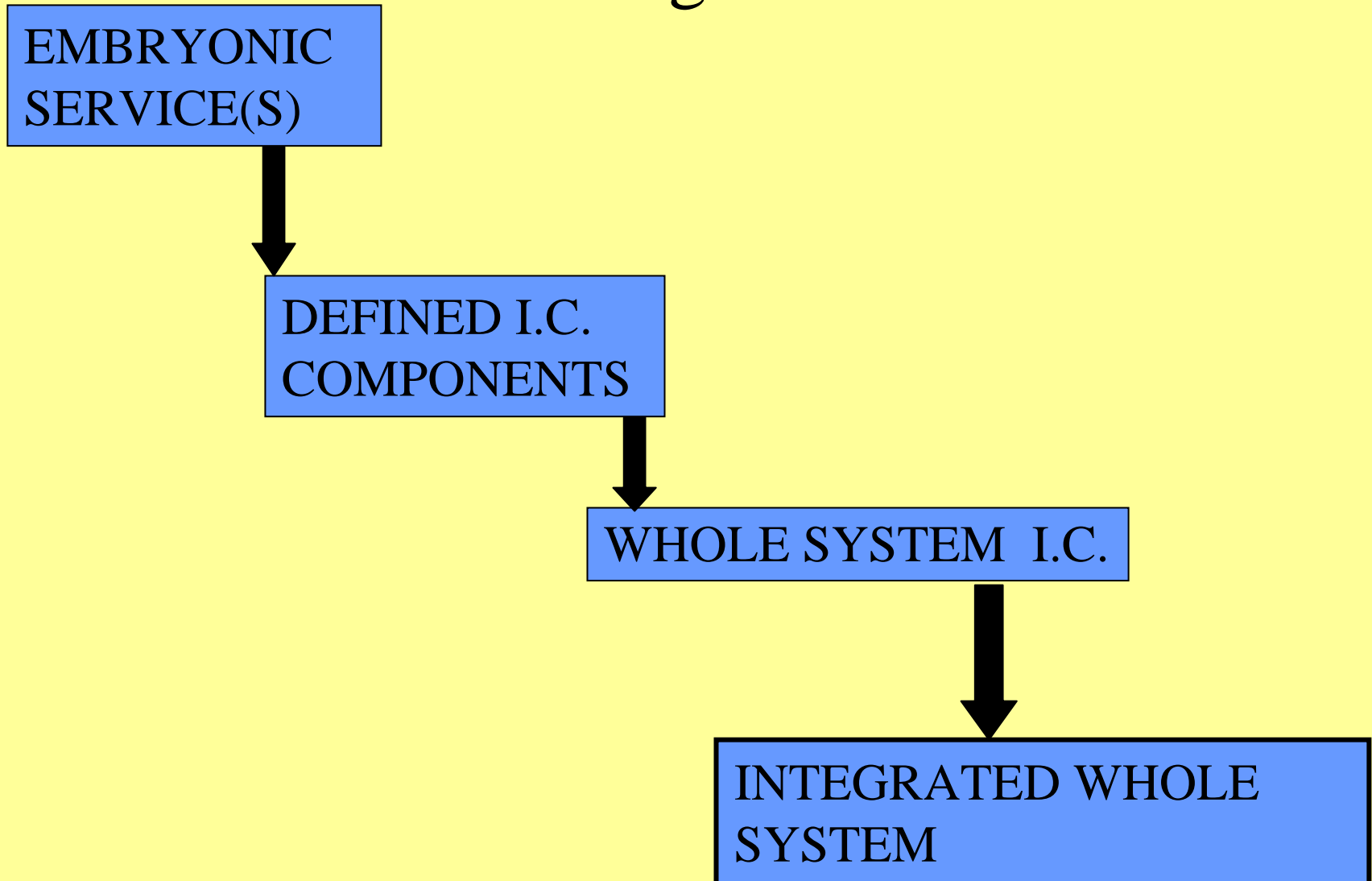
**O'Reilly, J. et al. BMJ 2006;333:228**

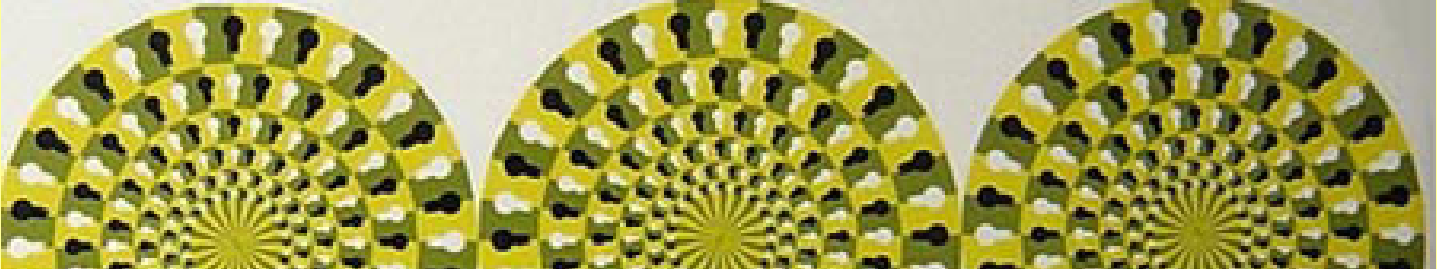
# REHABILITATION GOOD PRACTICE PRINCIPLES

- Comprehensive, multi-disciplinary assessment
- Appropriate skills, training & attitudes
- Prevention of complications (esp. loss of independence)
- Promotion of independence
- Person-centred care

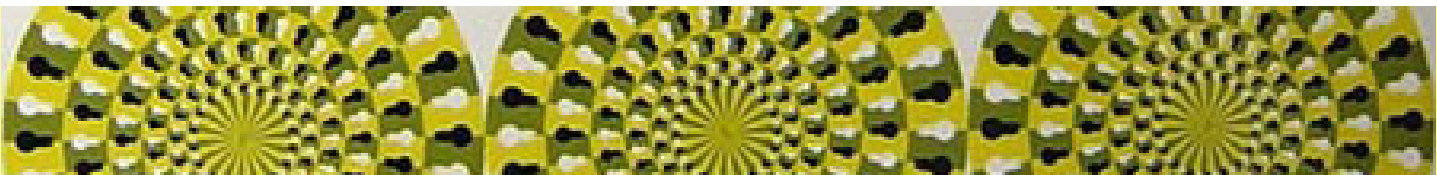
*Can these good practices be transferred to the community?*

# The Evolution of Intermediate Care in England





**Development of Geriatric Med in 1950s became a paradigm shift in care for older people**



**Development of intermediate care represents a similar paradigm shift in care for older people**

