L'ospedalizzazione domiciliare per l'anziano fragile. L'esperienza di Barcellona

In: Demenza, percorsi di prevenzione e cura

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President, Catalan Society of Geriatrics and Gerontology

Conflitto di interessi

Nessuno relativo a questa materia.

Per il resto, solo alcuni conflitti linguistici!

Ritorno alle origini

L'Ospedale a Domicilio (OaD) al Parc Sanitari Pere Virgili di Barcellona, parte di una strategia piú ampia

Azienda pubblica, 850 persone di staff

Specializzandi: 3 geriatria, 2 infermeria geriatrica, 4 medicina e 4 infermeria familiare e comunitaria

Ospedale

- 365 letti di cure intermedie (subacuti, riab. geriatrica, cure palliative, oncogeriatria, lungodegenza)
- Day-hospital di riabilitazione, Ambulatori demenze e geriatria

- programma di fragilità comunitario +AGIL

- 45 letti virtuali di OaD, 2 unità domiciliarie di cure palliative

Cure primarie

- 4 centri di cure primarie (Aree di Base di Salute) per circa 100.000 cittadini
- 1 pronto soccorso di cure primarie
- 1 centro di riabilitazione territoriale (generale)

- 1 unità geriatrica per RSA («medicina-geriatria di base in RSA»)
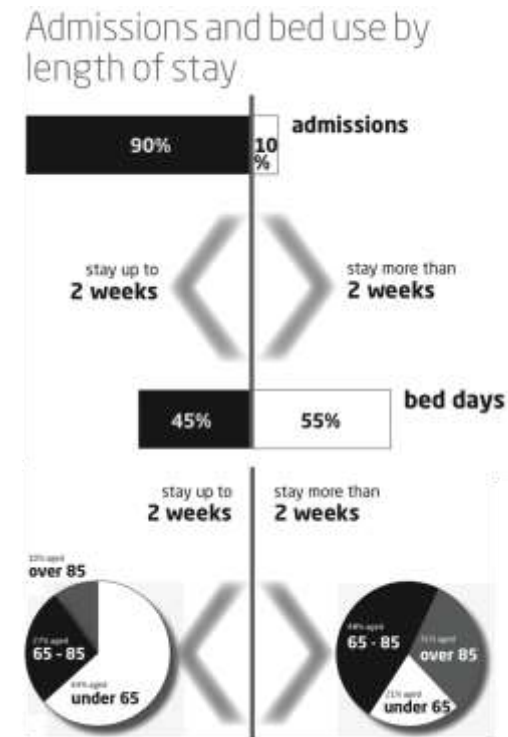
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Pere Virgili

Dove vorreste vivere quando invecchiate?

Cosa fare per il sistema sanitario?

Poteliakhoff E. The Kings Fund, 2011
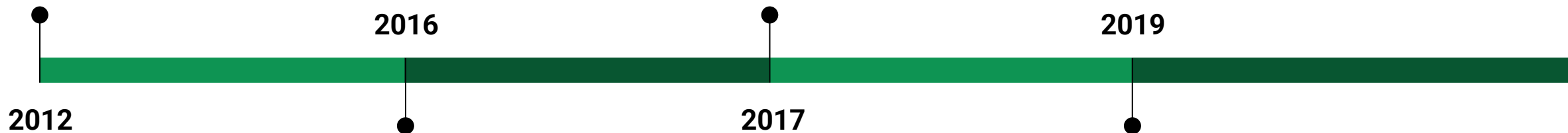
Modelli internazionali di OaD

Name	Main H@H strategy	Geriatrician-led MD teams & staff members
Hospital-at-home Torino (Italy)	• Admission avoidance dementia • Admission avoidance heart Failure • Admission avoidance COPD • Admission avoidance stroke	Yes Physician, nurse, physiotherapist, social worker, assistant, dietician
Hospital-in-the home Sydney (Australia)	• Admission avoidance from Emergency Department • Early discharge from hospital wards	Yes Physicians, nurses, physiotherapists, occupational therapists
Home hospitalization (Israel)	• Admission avoidance in medical patients	Yes Physicians, nurses, physiotherapists occupational therapists and social workers
Hospital-at-home John Hopkins University (US)	• Admission avoidance in medical patients	Yes Physicians and nurses

Step-down (dimissione precoce)
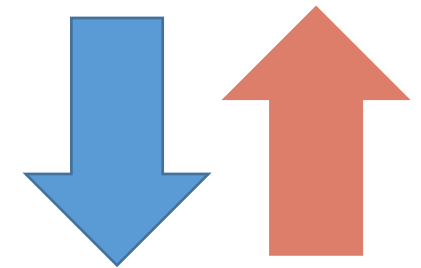
Step-up (prevenzione del ricovero)

Caplan G et al. Med J Aust 2012

Slide by MA Mas Bergas

6

Our route to HaH

2012 — 2016 — 2017 — 2019

A critical review of Early Supported Discharge for stroke patients: from evidence to implementation into practice

Mas MA, Inzitari M, Int J Stroke 2012

LETTER TO THE EDITOR

Maturitas 88 (2016) 1–5

Contents lists available at ScienceDirect

Maturitas

journal homepage: www.elsevier.com/locate/maturitas

ELSEVIER

Hospital-at-home integrated care programme for older patients with orthopaedic conditions: Early community reintegration maximising phy...

JAMDA 18 (2017) 780–784

HOME AS A PLACE FOR CARE OF THE OLDEST STROKE PATIENTS: A PILOT FROM THE CATALAN STROKE PROGRAM

Mas MA, Closa C, Gámez S, Inzitari M, Ribera A, Santaeugenia SJ, Gallofré M, JAGS 2019

JAMDA

journal homepage: www.jamda.com

ELSEVIER

Original Study

Hospital Orthope Based Ca

Age and Ageing 2017; 0: 1–7
doi 10.1093/ageing/afx099

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Conxita Cl
Marco Inzi

Hospital-at-home Integrated Care Programme for the management of disabling health crises in older patients: comparison with bed-based Intermediate Care

MIQUEL À. MAS[1,2], MARCO INZITARI[2,3], SERGI SABATÉ[4], SEBASTIÀ J. SANTAEUGÈNIA[5], RAMÓN MIRALLES[2,6]

JAMDA 39 (2018) 860–863

JAMDA

journal homepage: www.jamda.com

ELSEVIER

Original Study

Effectiveness of a Hospital-at-Home Integrated Care Program as Alternative Resource for Medical Crises Care in Older Adults With Complex Chronic Conditions

Miquel À. Mas MD [a,b,c,*], Sebastià J. Santaeugènia MD, PhD [d], Francisco J. Tarazona-Santabalbina MD, PhD [e,f], Sara Gámez RN [a], Marco Inzitari MD, PhD [b,g]

#REFiTBcn
aging research

Parc Sanitari
Pere Virgili

Annals of Internal Medicine

ORIGINAL RESEARCH

Is Comprehensive Geriatric Assessment Admission Avoidance Hospital at Home an Alternative to Hospital Admission for Older Persons?

A Randomized Trial

Sasha Shepperd, MSc, DPhil; Chris Butler, FMedSci; Andrea Cradduck-Bamford, BSc; Graham Ellis, MD; Alastair Gray, PhD; Anthony Hemsley, BMedSci, MD; Pradeep Khanna, MBBS; Peter Langhorne, PhD; Sam Mort, PGCert; Scott Ramsay, MD; Rebekah Schiff, BSc, MBBS; David J. Stott, MD; Angela Wilkinson, MD, MBChB; Ly-Mee Yu, DPhil; and John Young, MSc

Design: Multisite randomized trial. (ISRCTN registry number: ISRCTN60477865)

Setting: 9 hospital and community sites in the United Kingdom.

Patients: 1055 older persons who were medically unwell, were physiologically stable, and were referred for a hospital admission.

Intervention: Admission avoidance HAH with CGA versus hospital admission with CGA when available using 2:1 randomization.

Measurements: The primary outcome of living at home was measured at 6 months. Secondary outcomes were new admission to long-term residential care, death, health status, delirium, and patient satisfaction.

Table 2. Unadjusted and Adjusted Relative Risks for the Primary and Secondary Outcomes

Outcome	CGA HAH (n = 687), n (%)	Hospital (n = 345), n (%)	Unadjusted Relative Risk (95% CI)	P Value	Adjusted Relative Risk (95% CI)	P Value
Primary outcome						
Living at home at 6 mo*	528 (78.6)	247 (75.3)	1.04 (0.94–1.16)	0.44	1.05 (0.95–1.15)	0.36
Missing	15	17				
Secondary outcomes						
Living at home at 12 mo*	443 (66.1)	219 (67.4)	0.98 (0.88–1.10)	0.72	0.99 (0.89–1.10)	0.80
Missing	17	20				
Death at 6 mo†	114 (16.9)	58 (17.7)	0.98 (0.65–1.49)	0.94	0.98 (0.65–1.47)	0.92
Missing	15	17				
Death at 12 mo†	188 (28.1)	82 (25.2)	1.14 (0.80–1.63)	0.47	1.14 (0.80–1.62)	0.47
Missing	17	20				
Long-term residential care at 6 mo†	37 (5.7)	27 (8.7)	0.54 (0.43–0.69)	<0.001	0.58 (0.45–0.76)	<0.001
Missing	41	34				
Long-term residential care at 12 mo†	39 (6.0)	27 (8.7)	0.57 (0.45–0.73)	<0.001	0.61 (0.46–0.82)	<0.001
Missing	41	34				
Readmission or transfer to hospital at 1 mo†	173 (25.7)	64 (19.4)	1.33 (1.07–1.65)	0.011	1.32 (1.06–1.64)	0.012
Missing	15	15				
Readmission or transfer to hospital at 6 mo†	343 (54.4)	171 (56.6)	0.96 (0.86–1.08)	0.49	0.95 (0.86–1.06)	0.40
Missing	56	43				

CGA = Comprehensive Geriatric Assessment; HAH = hospital at home; IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly.

Table 3. Presence of Delirium* Measured by CAM at 3 Days, 5 Days, and 1 Month

Presence of Delirium (CAM)	CGA HAH (n = 687), n (%)	Hospital (n = 345), n (%)	Adjusted Relative Risk† (95% CI)	P Value
Baseline	46 (6.7)	24 (7.0)	–	–
Missing	1	2		
3 d	25 (3.9)	11 (3.5)	1.12 (0.54–2.29)	0.76
Missing	42	33		
5 d	17 (2.7)	9 (3.0)	0.93 (0.34–2.47)	0.87
Missing	49	37		
1 mo	10 (1.7)	13 (4.4)	0.38 (0.19–0.76)	0.006
Missing	85	48		

CAM = Confusion Assessment Method; CGA = Comprehensive Geriatric Assessment; HAH = hospital at home; IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly.
* Log-Poisson generalized linear mixed-effects model with robust SEs and site as random effect was fitted separately for each time point. Baseline covariates (sex and IQCODE score) were not fitted to the model because of a small number of events.
† 16 participants were diagnosed with delirium from the CAM at both baseline and 3 d (CGA HAH = 9; hospital = 7), 12 participants at both 3 d and 5 d (CGA HAH = 8; hospital = 4), and 3 participants at both 5 d and 1 mo (CGA HAH = 2; hospital = 1).

	Dimissione precoce **Step-down**	Prevenzione del ricovero **Step-up**
Vs ricovero	**Risultati simili o migliorati: tassi di mortalità e riammissioni, degenza ospedaliera più breve e alti livelli di soddisfazione del paziente**	
Mortalità	Simile	Simile o minore
Riammissione	Simile	Simile o minore
Eventi avversi	Pochi dati	Minori rispetto a step-down
Degenza totale	Simile	Minore rispetto a step-down
Costo beneficio	Dati non concludenti	Superiore a step-down

Quing Leon M, et al. BMJ Open 2021

PSPV H@H model *(vertical sidebar text)*

OaD a PSPV

Attiva da dicembre 2017

Obiettivo

Implementare un'alternativa alle cure intermedie convenzionali e alla riabilitazione geriatrica a domicilio.

Teoria del cambiamento

Cambiamento nel modello di cure che prevede un'assistenza step-down+step-up a casa.

Benefici per:

- il paziente: più comfort, più contestualizzazione della riabilitazione, meno complicanze ospedaliere
- il sistema: aumento della capacità di cura, riduzione dei costi

Pazienti

- Anziani con processo acuto ben diagnosticato o scompenso di patologia cronica
- + perdita funzionale secondaria

- Stabilità emodinamica
- Presenza di un caregiver valido al domicilio

- Dimesso dall'ospedale (step-down)
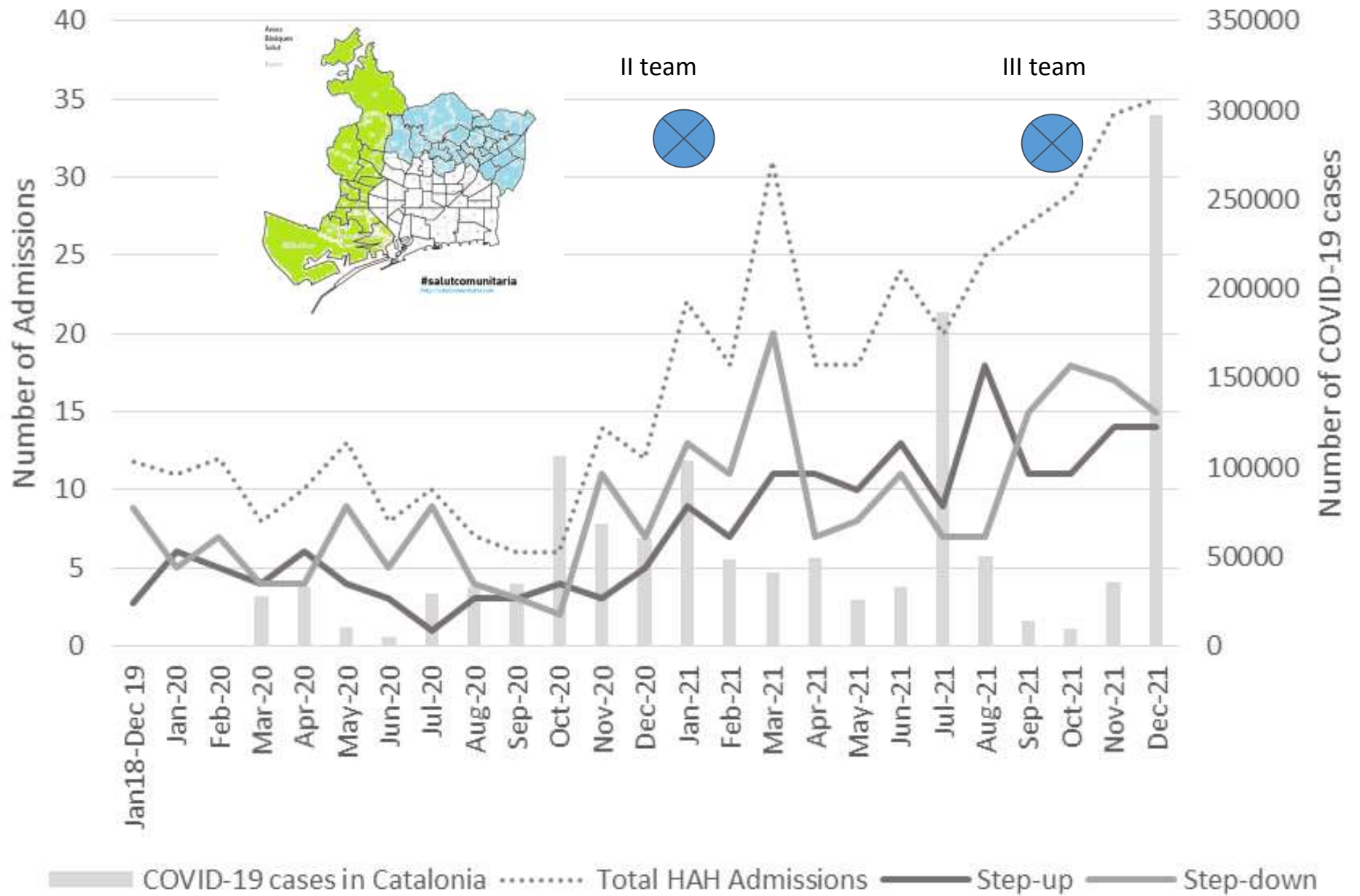- Ricoverato da casa (o DEA) (step-up)

Approccio polivalente

Intervento

Functioning

Interdisciplinario

- 1/15 "letti": Geriatra, Infermeria Geriatrica, Fisioterapista, T. Occupazionale, Ass. Sociale

- Logopedista e farmacista (remoto)

- Formazione internazionale

VGI e piano di cure individualizzato

Risorse

- trattamenti e.v., prove laboratorio, ECG, RX (in ospedale), ecografia portatile

- Prima visita 24-48h post-ricovero (visita pre-dimissione prima della pandemia)

- Copertura 7*24: A domicilio, 13h/giorno (8-21); Remota, notte, telefono della guardia in ospedale + emergenze

Evolution of H@H activity

Parc Sanitari Pere Virgili

II team

III team

#salutcomunitaria

Number of Admissions

Number of COVID-19 cases

COVID-19 cases in Catalonia .... Total HAH Admissions ──── Step-up ──── Step-down

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L'impatto della pandemia sulle cure acute e croniche

Stroke

ORIGINAL CONTRIBUTION

Acute Stroke Care Is at Risk in the Era of COVID-19

Experience at a Comprehensive Stroke Center in Barcelona

Salvatore Rudilosso, MD, PhD*; Carlos Laredo, MSc*; Víctor Vera, MD; Martha Vargas, PhD; Arturo Renú, MD, PhD; Laura Llull, MD, PhD; Víctor Obach, MD; Sergio Amaro, MD, PhD; Xabier Urra, MD, PhD; Ferrán Torres, MD, PhD; Francesc Xavier Jiménez-Fàbrega, MD; Ángel Chamorro, MD, PhD

Review

International Journal of Stroke WSO

Stroke network performance during the first COVID-19 pandemic stage: A meta-analysis based on stroke network models

Michele Romoli[1,2,3], Paolo Eusebi[4], Stefano Forlivesi[1], Mauro Gentile[1], Fabrizio Giammello[5], Laura Piccolo[1],

International Journal of Stroke
0(0) 1–13
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DOI: 10.1177/17474930211041202
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SAGE

Il nostro OaD ha continuato a funzionare ininterrottamente e progressivamente é stato potenziato.

Obiettivo:
Valutare e studiare se l'OaD fosse un servizio adattabile alla pandemia

COVID-19: maintaining essential rehabilitation services across the care continuum

Janet Prvu Bettger[1,2], Andrea Thoumi[2], Victoria Marquevich[3], Wouter De Groote[4], Linamara Rizzo Battistella[5], Marta Imamura[5], Vinicius Delgado Ramos[6], Ninie Wang[7], Karsten E Dreinhoefer[8], Anane Mangar[9], Dorcas B C Ghandi[10], Yee Sien Ng[11], Kheng Hock Lee[12], John Tan Wei Ming[13], Yong Hao Pua[13], Marco Inzitari[14], Blandina T Mmbaga[15], Mathew J Shayo[16], Darren A Brown[17], Marissa Carvalho[18], Mooyeon Oh-Park[19], Joel Stein[20]

Correspondence to Dr Janet Prvu Bettger: janet.bettger@duke.edu

BMJ Innovations
Special Supplement

Caratteristiche dei pazienti, evoluzione nel tempo

Results: pazienti dimessi

2018-19

	Total, n= 688	Pre-Pandemic, n=307	Pandemic 2020, n=159	Pandemic 2021, n=222	p-value
Age, mean (SD)	**82.5 (9.6)**	82.0 (8.8)	81.9 (10.2)	83.5 (10.2)	0.012
Women, % (n)	**58.6** (391)	55.7 (171)	56.6 (90)	58.6 (130)	0.517
Living situation, % (n) **Living with family** Living with a caregiver Nursing home	**85.5 (588)** 10.6 (73) 3.9 (27)	85.0 (261) 10.8 (33) 4.2 (13)	88.7 (141) 8.2 (13) 3.1 (5)	83.8 (186) 12.2 (27) 4.1 (9)	0.664
Formal caregiver, % (n)	**31.5 (216)**	31.2 (95)	27.2 (43)	35.1 (78)	0.386
Source of referral, % (n) Primary care teams Intermediate Care Acute Hospitals	**36.6** (252) 14.1 (97) **49.3 (339)**	**26.1(80)** 14.0 (43) **59.9 (184)**	**40.9 (65)** 15.7 (25) **43.4 (69)**	**48.2 (107)** 13.1 (29) **38.7 (86)**	**<0.001**
Charlson I., mean (SD)	2.2 (1.8)	2.0 (1.7)	2.5 (2.1)	2.2 (1.8)	0.068
Barthel I. pre-admission, mean (SD)	76.4 (24.9)	77.4 (23.4)	77.1 (25.9)	74.6 (26.2)	0.532
Barthel I. (admission), mean (SD)	53.2 (23.5)	52.7 (22.0)	54.8 (24.7)	52.8 (24.7)	0.788

Caratteristiche dei pazienti, evoluzione nel tempo

	Total, n= 688	Pre-Pandemic, n=307	Pandemic 2020, n=159	Pandemic 2021, n=222	p-value
Most Prevalent Geriatric syndromes, % (n)					
Dementia	28.2 (194)	29.6 (91)	25.8 (41)	**27.9 (62)**	**0.624**
Delirium (acute episode)	14.5 (100)	21.5 (66)	9.4 (15)	**8.5 (19)**	**<0.001**
Walking impairment	39.7 (273)	21.2 (65)	54.7 (87)	**54.5 (121)**	**<0.001**
Falls (past 6 months)	55.8 (363)	65.3 (186)	46.4 (71)	**49.8 (106)**	**<0.001**
Polypharmacy	62.4 (429)	65.8 (202)	61.0 (97)	58.6 (130)	0.085
Sensory deficits	46.7 (321)	49.8 (153)	46.5 (74)	42.3 (94)	0.089
Urinary incontinence	50.4 (347)	50.8 (156)	42.8 (68)	55.4 (123)	0.386
Diagnosis at admission, % (n)					
Post-surgery	1.7 (12)	3.6 (11)	0.6 (1)	1. (0)	**0.001**
Orthogeriatric	33.4 (230)	41.3 (127)	28.9 (46)	**25.7 (57)**	**<0.001**
Medical event	50.4 (347)	47.6 (146)	57.2 (91)	49.6 (110)	0.546
Stroke	6.0 (41)	2.9 (9)	6.9 (11)	**9.5 (21)**	**0.002**
Skin ulcers	5.5 (38)	4.6 (14)	3.8 (6)	8.1 (18)	0.095
COVID-19	2.9 (20)	0.0 (0)	2.5 (4)	7.2 (16)	**<0.001**
Lenght of stay, mean (SD)	36.1 (21.7)	33.0(19.3)	36.3(24.3)	38.9(21.5)	**0.018**
Readmission to acute hospital, % (n)	13.7 (94)	15.0(46)	10.1(16)	14.4(32)	0.760

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Confronto Step-up Vs Step-down

	Total, n= 688	Step-up, n=307	Step-down, n=351	p-value
Age, mean (SD)	82.7 (9.2)	**85.0 (8.3)**	81.0 (10.0)	**<0.001**
Female, % (n)	56.5(372)	58.7 (148)	55.7 (243)	0.445
Diagnosis at admission, % (n)				
Post-surgery	1.8 (12)	0.8 (2)	2.3 (10)	0.148
Orthogeriatric	32.2 (212)	13.5 (34)	45.0 (196)	<0.001
Medical event	51.5 (339)	70.6 (178)	38.8 (169)	<0.001
Stroke	6.1 (40)	4.4 (11)	6.9 (30)	0.179
Pressure/vascular ulcers	5.5 (36)	9.9 (25)	3.0 (13)	<0.001
COVID-19/ post-COVID-19	2.9 (19)	0.8 (2)	4.1 (18)	0.012
Charlson Index, mean (SD)	2.2 (1.8)	2.2 (1.6)	2.2 (1.9)	0.985
Demencia or MCI	28.4 (187)	34.5 (86)	24.8 (108)	0.009
Cardiovascular disease	83.9 (552)	88.1 (222)	81.4 (355)	0.022
COPD	19.9 (131)	24.6 (62)	16.3 (71)	0.008
Barthel I. pre-admission	76.4 (24.9)	67.7 (27.8)	81.3 (21.6)	<0.001
Barthel I. (admission)	53.2 (23.5)	51.7 (25.9)	54.0 (21.9)	0.230
Most prevalent geriatric syndroms				
Falls (past 6 months)	55.8 (363)	41.5 (95)	63.5 (268)	<0.001
Sensory deficits	46.7 (321)	54.0 (136)	42.4 (185)	0.003
Urinary incontinence	50.4 (347)	57.1 (144)	46.6 (203)	0.007

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Risultati alla dimissione, comparando i due "pathways"

Absolute gain in Barthel index in the whole sample: 11.1 – 9.6 – 9.9.
No differences in functional improvement or mortality across waves (adjusted models)

When comparing step-up and step-down models:

	Barthel improvement			Death		
REGRESSION MODELS	Linear regression			Logistic regression		
	ß	95% C.I.	p-value	OR	95% C.I.	p-value
Adjusted						
Step-up Step-down	ref 4.12	 1.44 , 6.82	 **0.003**	ref 0.46	 0.18 ; 1.15	 0.098
Age	-0.05	-0.19 ; 0.08	0.452	1.07	1.00 ; 1.13	**0.036**
Female	2.99	0.54 ; 5.43	**0.017**	0.99	0.42 ; 2.34	0.987
Formal caregiver	-1.67	-4.37 ; 1.04	0.226	0.88	0.38 ; 2.04	0.759
Cardiovascular disease	-1.52	-4.68 ; 1.63	0.343	1.53	0.33 ; 7.11	0.585
Dementia or Cognitive impairment	1.84	-4.59 ; 0.91	0.189	0.80	0.32 ; 1.98	0.625

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Elementi di supporto: il sistema d'informazione e la connessione col territorio

Facilitators

Conclusioni

✓ OaD geriatrico **sembra un modello efficace** per trattare i pazienti più anziani **con condizioni croniche o acute che causano una compromissione funzionale**.

✓ Questa risorsa sembra altamente **adattabile** a una situazione avversa come la pandemia, per la sua capacità di **combinare diverse modalità** (step-down + step-up) e **competenze**.

✓ I pazienti ricoverati attraverso il percorso di **step-up erano più complessi** e hanno ottenuto un miglioramento funzionale ridotto, mentre non si sono riscontrate differenze nella mortalità.

✓ Se inserito in un contesto piú ampio di cure integrate, l'OaD può diventare una risorsa utile anche per le **persone affette da demenza nella comunità.**

Parc Sanitari
Pere Virgili

C'è evidenza ma anche il problema della "adoption" e "scale-up"

Direzioni future:

- Valutazione / ricerca (inclusi costi)
  → Disseminazione dei risultati
- Componente tecnologica
- OaD nelle cure integrate (salute e sociale)
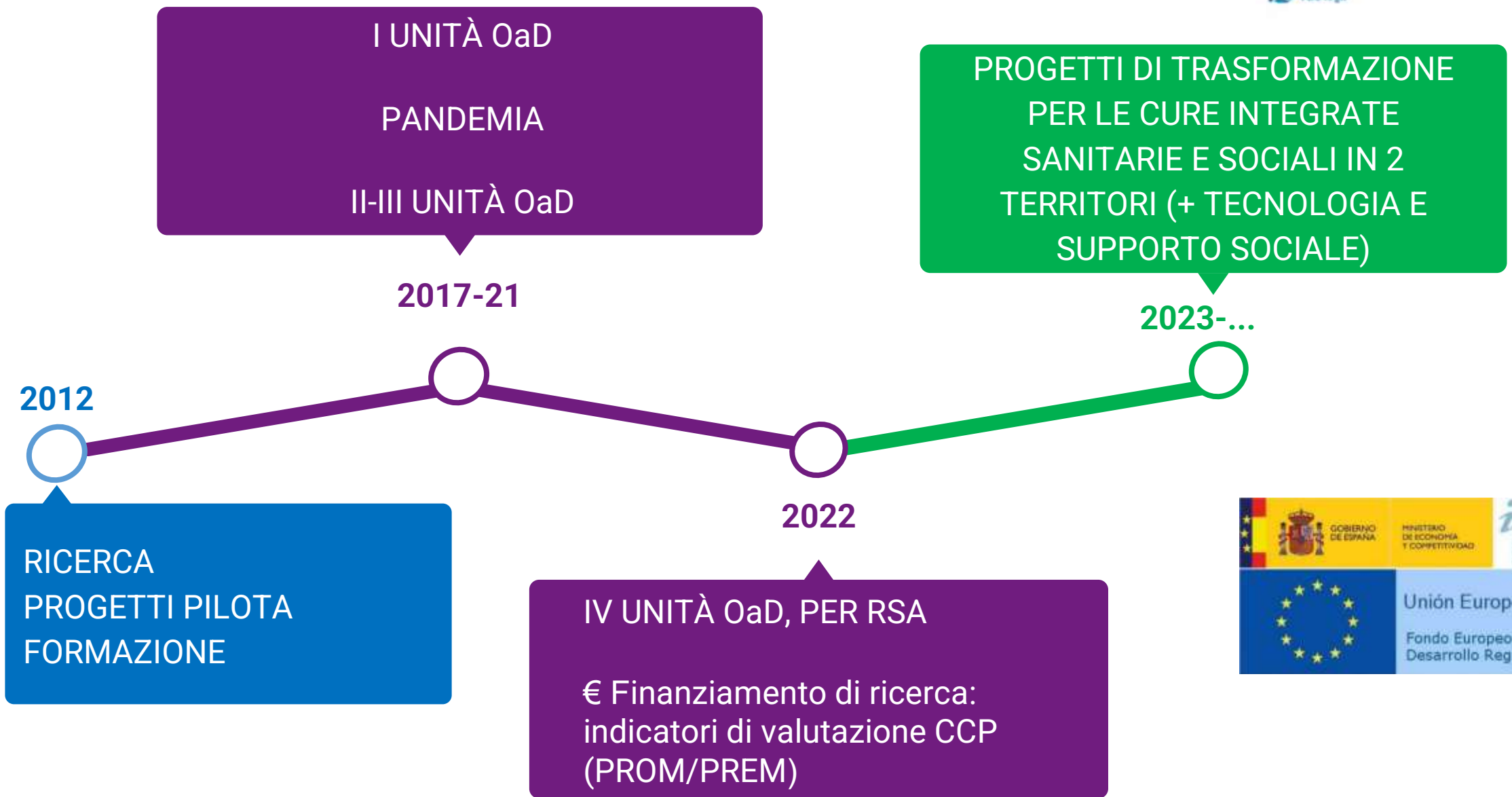
Thank you!

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Recerca en Envelliment, Fragilitat i Transicions a Barcelona

PRESENTACIÓ | EQUIP | LÍNIES DE RECERCA | NOTÍCIES | PROJECTES

Dr. Marco Inzitari
Cap de grup

Fitxa personal

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