

Les personnes âgées et la réanimation

Maité Garrouste-Orgeas
Service de médecine intensive et de réanimation

mgarrouste@hpsj.fr



Groupe hospitalier
Paris saint Joseph

OUTCOME RÉA



Infection • Antimicrobials • Modelling • Evolution

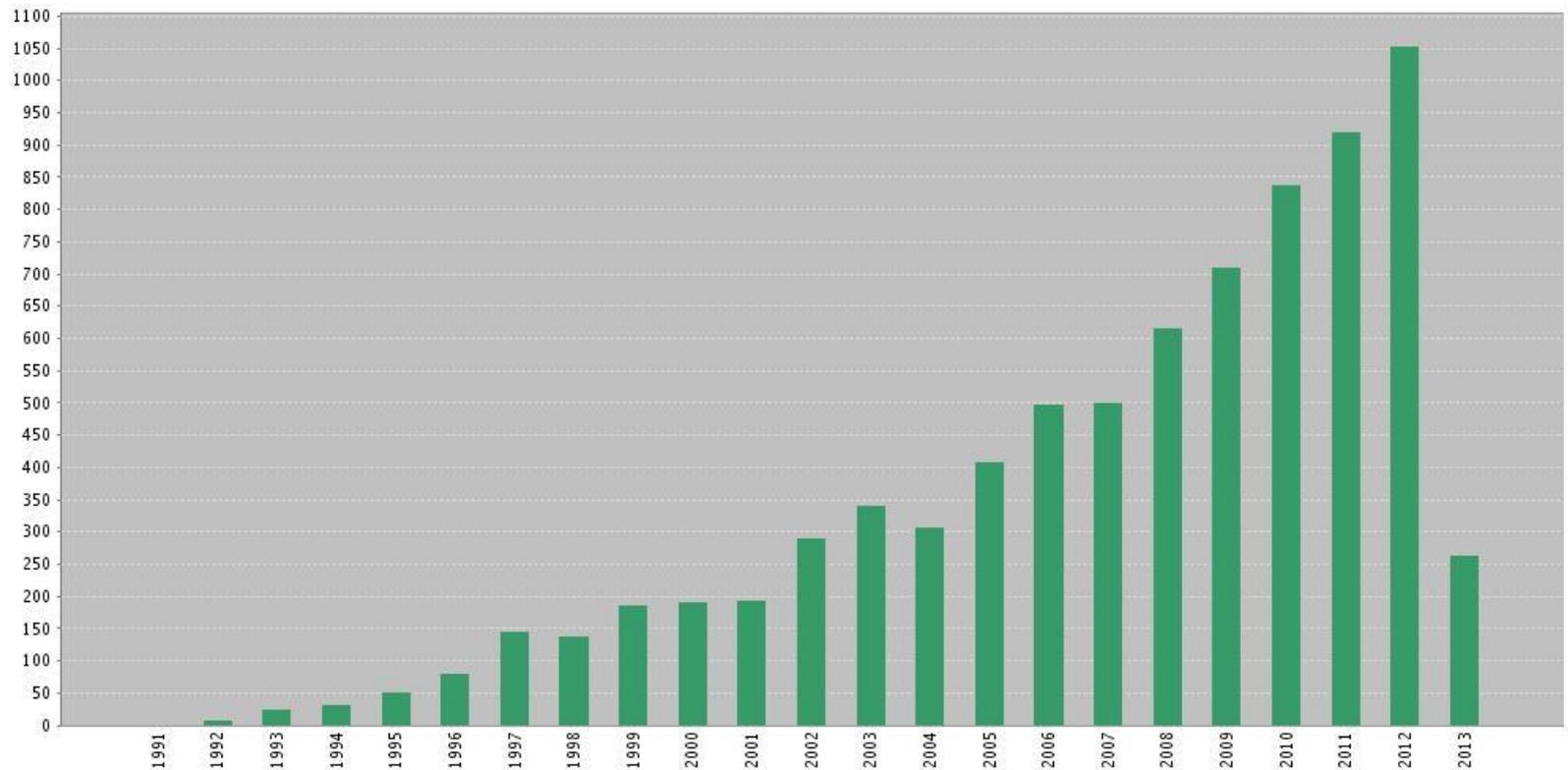
Dans les 20 prochaines minutes

- Comment améliorer la décision d'admission?
- Quel est leur avis ?
- Quels sont les résultats de la réanimation?

It is a current question

Citation Report Web of Science

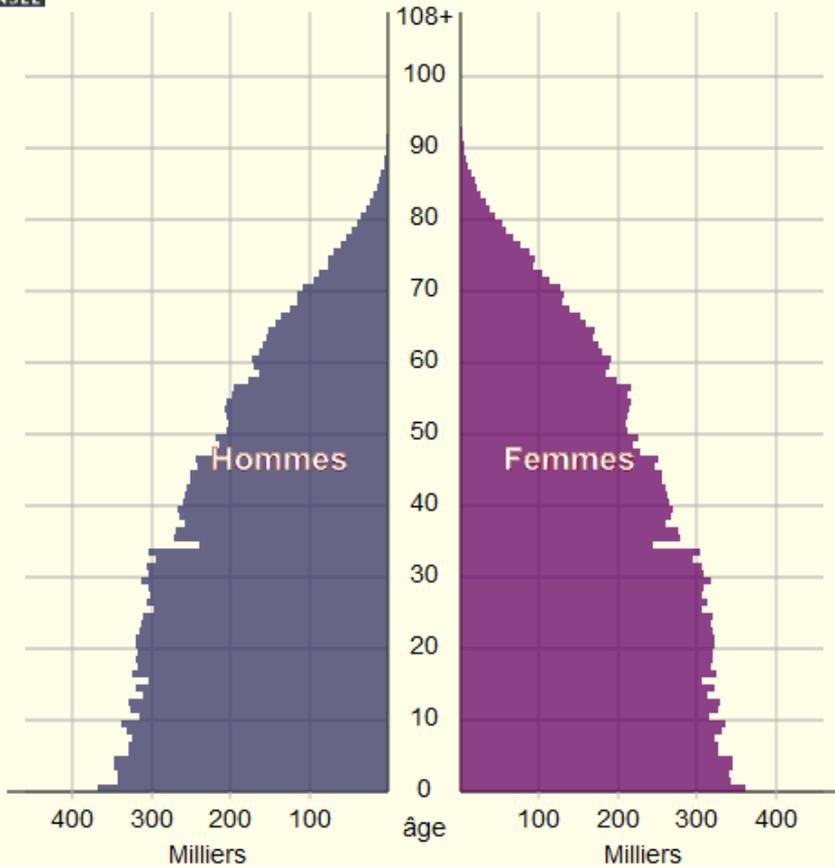
Topic=(elderly) AND Topic=(quality of life) AND Topic=(intensive care)



For a good reason



Pyramide des âges (France métropolitaine) : 1906



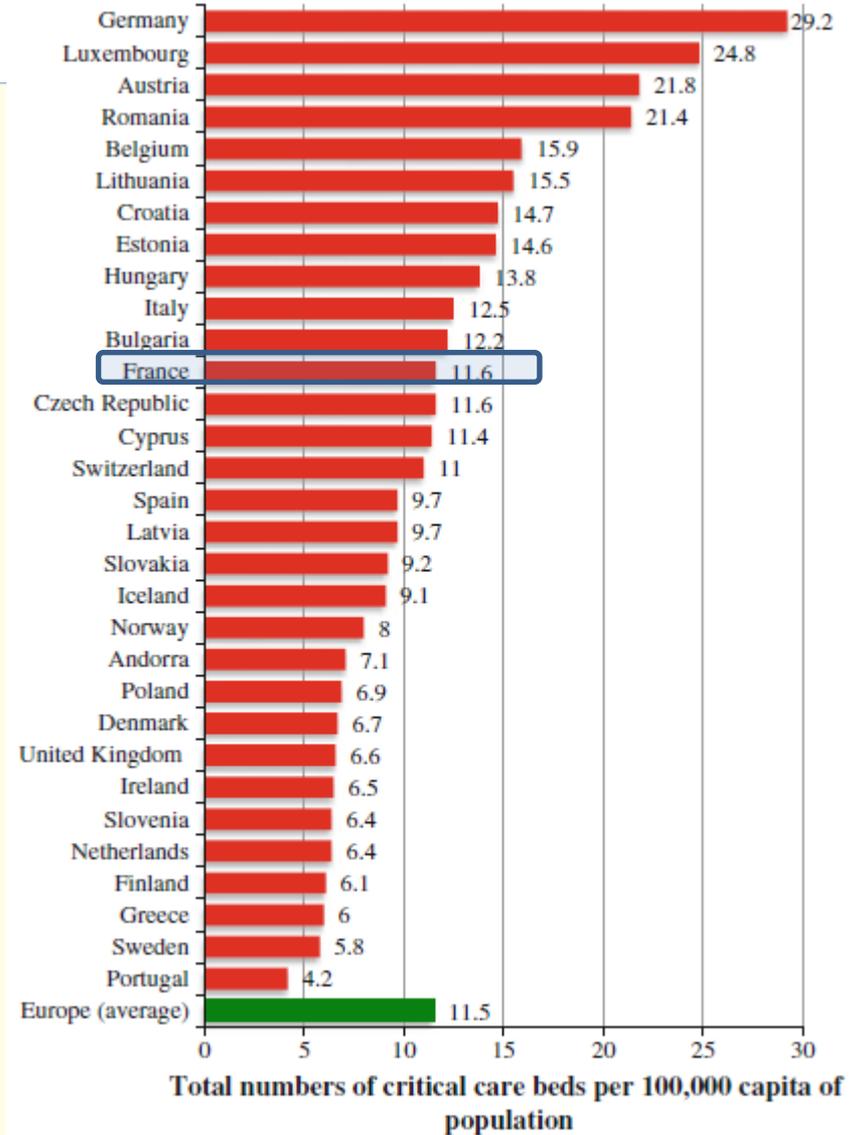
© Statistisches Bundesamt 2009, Insee 2011

Afficher l'excédent d'hommes/de femmes

- + Stop

Champ : France Métropolitaine, territoire courant
 Projection, Projections de population 2007-2060

Aide

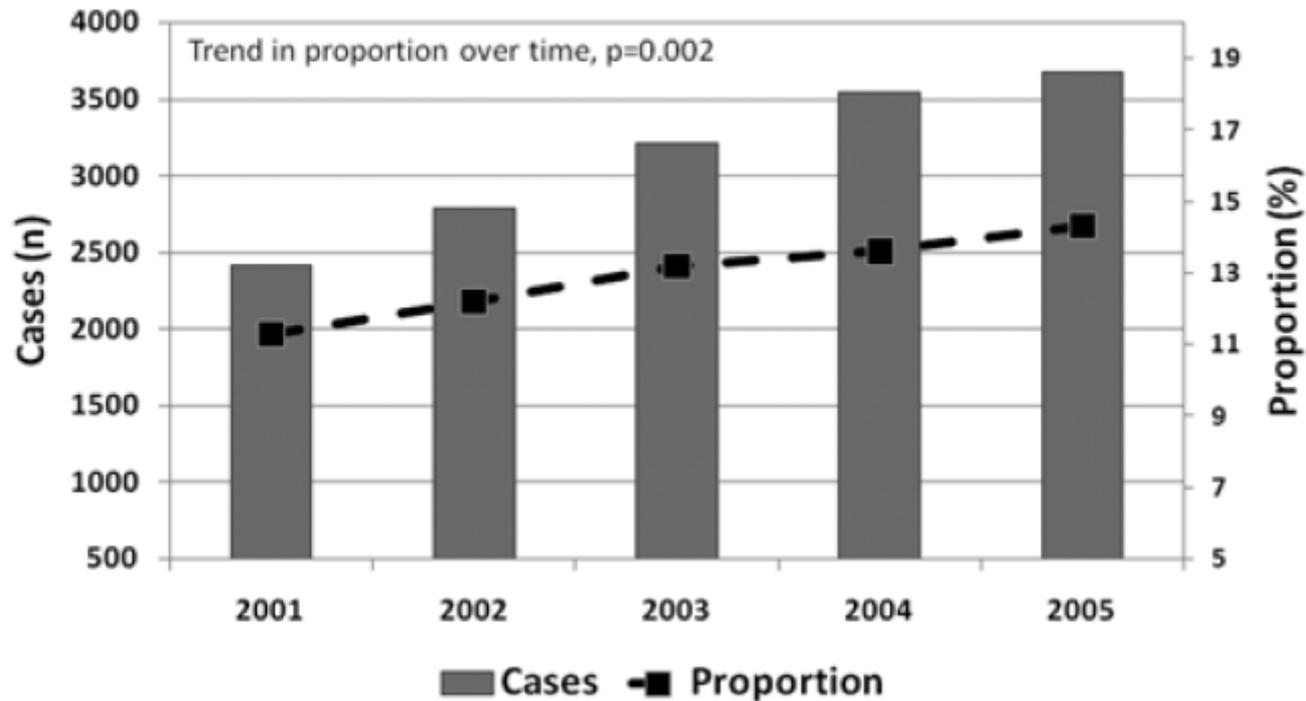


Very old patients admitted to intensive care in Australia and New Zealand: a multi-centre cohort analysis

Sean M Bagshaw^{1,2}, Steve AR Webb^{3,4}, Anthony Delaney⁵, Carol George⁶, David Pilcher⁷, Graeme K Hart¹ and Rinaldo Bellomo⁸



Increasing referrals of elderly patients to the ICU



Les personnes âgées



Les personnes dites « vigoureuses » : en bon état de santé, indépendantes et autonomes.

Les personnes dites « fragiles » : à l'état de santé intermédiaire et à risque de basculer dans la catégorie des malades.

Les personnes dites « malades » : dépendantes, en mauvais état de santé en raison d'une poly-pathologie chronique évoluée génératrice de handicaps.



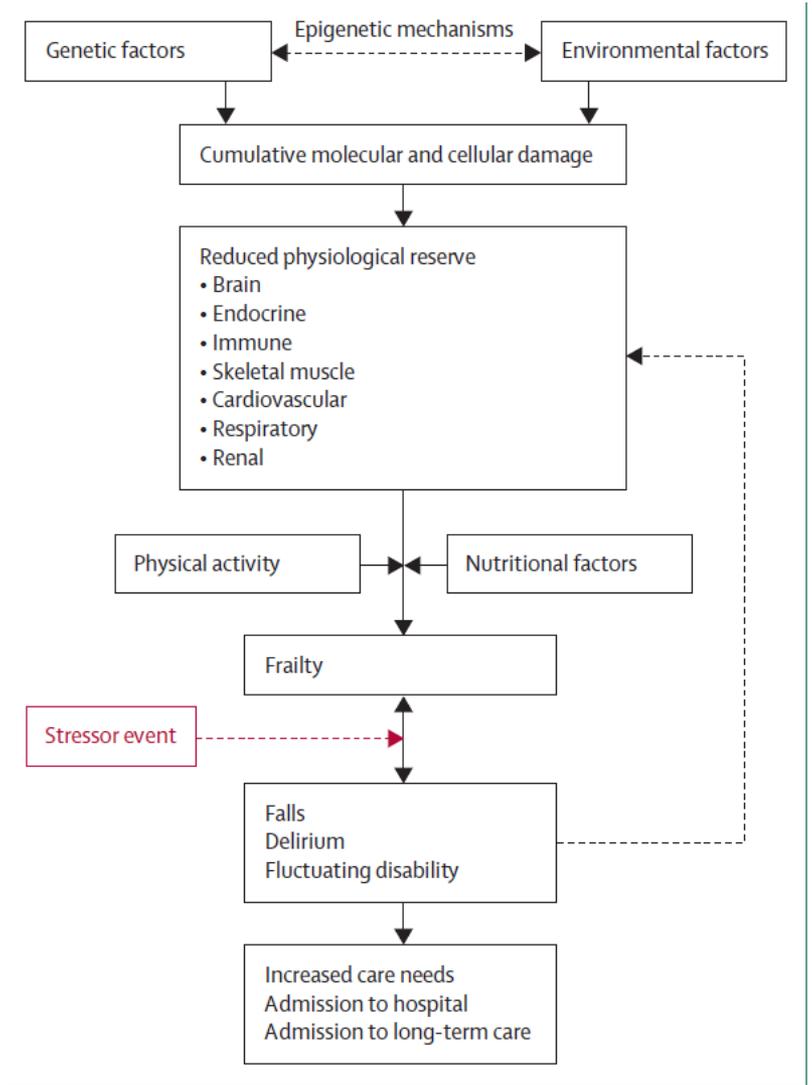
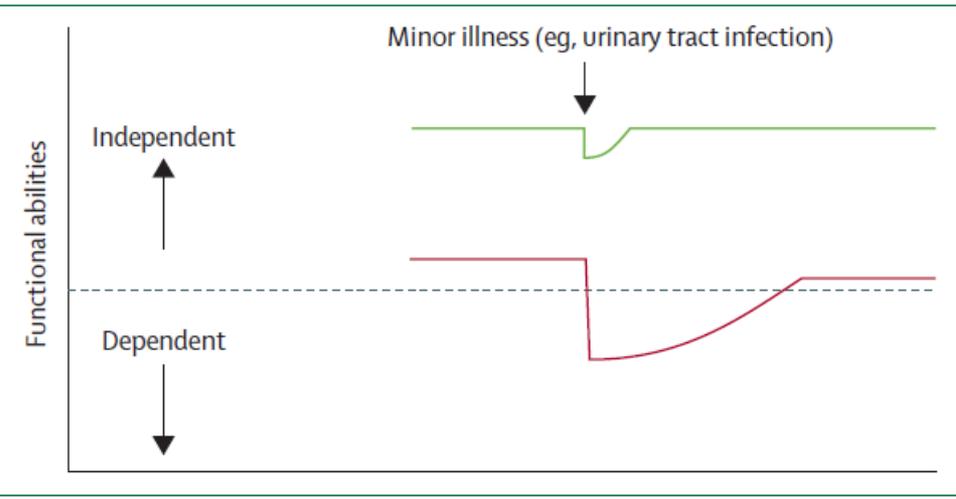
Concept de fragilité

- La fragilité peut se définir comme une diminution des capacités de réserves fonctionnelles et des capacités à faire face à un stress
- quelle qu'en soit la nature.

Frailty in elderly people

Lancet 2013; 381: 752-62

Andrew Clegg, John Young, Steve Iliffe, Marcel Olde Rikkert, Kenneth Rockwood



Phenotype model

Panel 2: The five phenotype model indicators of frailty and their associated measures

Weight loss

Self-reported weight loss of more than 4.5 kg or recorded weight loss of $\geq 5\%$ per year

Self-reported exhaustion

Self-reported exhaustion on US Center for Epidemiological Studies depression scale²³ (3–4 days per week or most of the time)

Low energy expenditure

Energy expenditure < 383 kcal/week (men) or < 270 kcal/week (women)

Slow gait speed

Standardised cutoff times to walk 4–57 m, stratified by sex and height

Weak grip strength

Grip strength, stratified by sex and body-mass index

> 3 = Fragilité

Lancet 2013; 381: 752–62

Cumulative deficit model

Clinical Frailty Scale



1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.



2 Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.



3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.



4 Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day.



5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.



6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.



7 Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).



8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9 Terminally Ill – Approaching the end of life. This category applies to people with a life expectancy < 6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

≥ 5 = Frailty

CMAJ, February 4, 2014, 186(2)

Association between frailty and short- and long-term outcomes among critically ill patients: a multicentre prospective cohort study

CMAJ

Sean M. Bagshaw MD, H. Thomas Stelfox MD, Robert C. McDermid MD, Darryl B. Rolfson MD, Ross T. Tsuyuki PharmD, Nadia Baig BSc, Barbara Artiuch MD, Quazi Ibrahim MSc, Daniel E. Stollery MD, Ella Rokosh MD, Sumit R. Majumdar MD

Age > 50 years

32,8% score ≥ 5

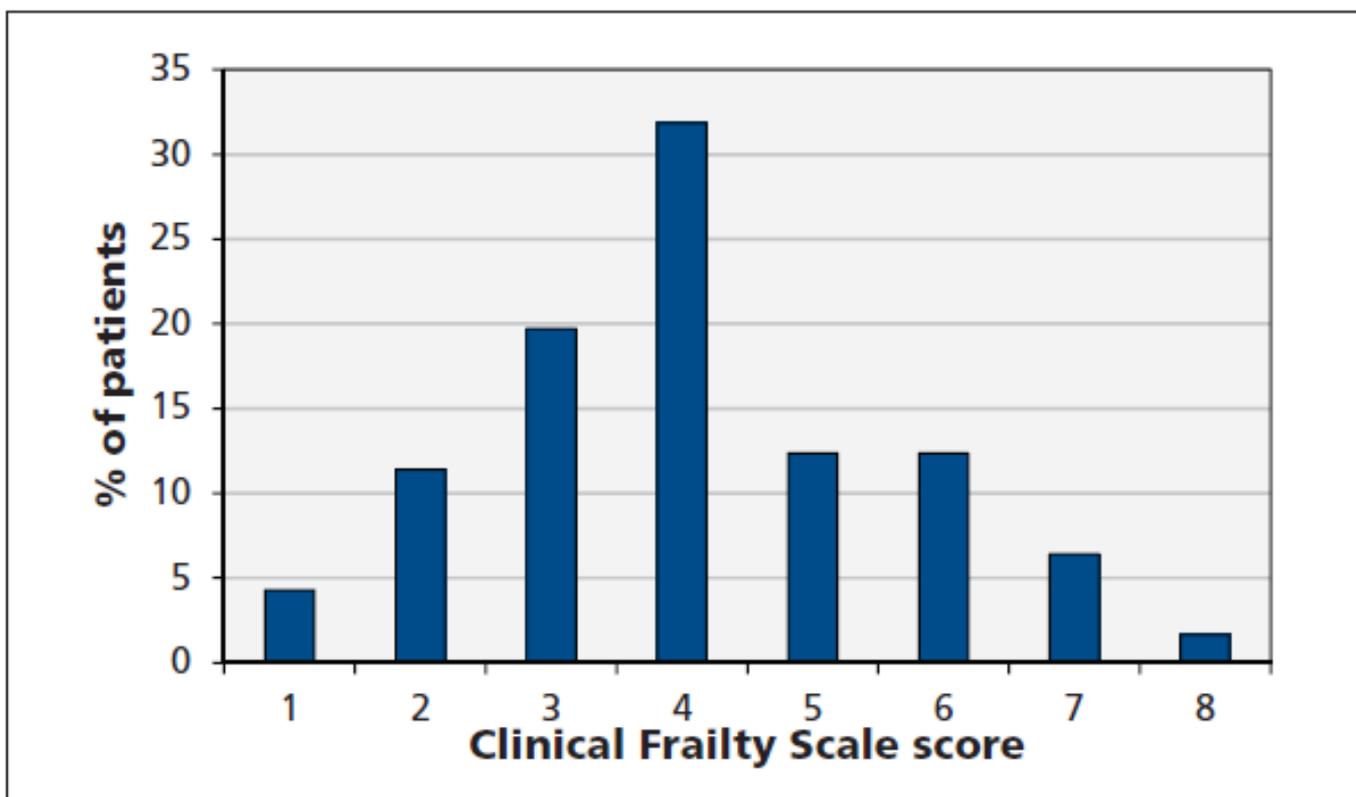


Figure 2: Distribution of Clinical Frailty Scale scores and prevalence of frailty (score > 4) among the participants.

Association between frailty and short- and long-term outcomes among critically ill patients: a multicentre prospective cohort study

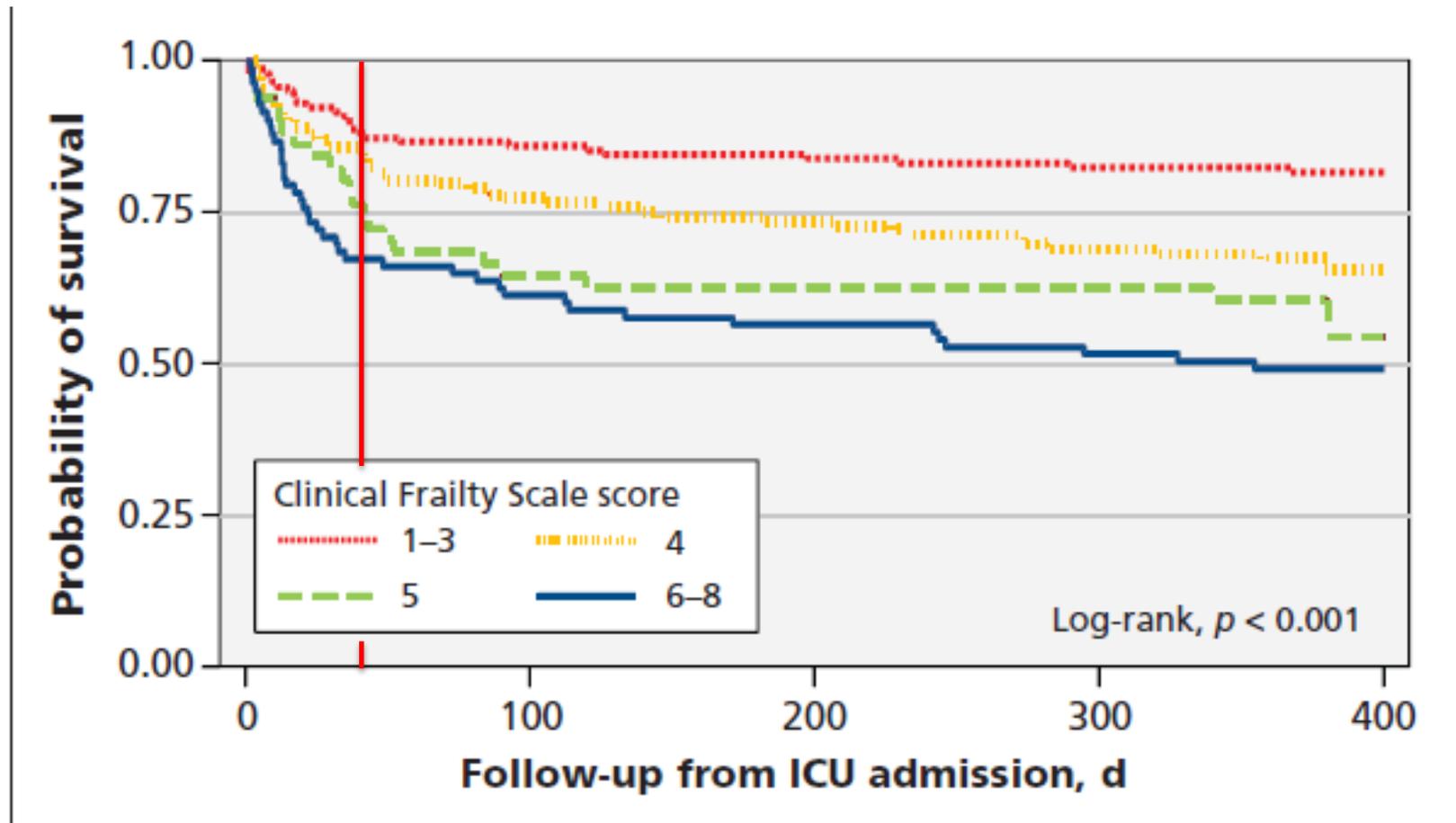
Sean M. Bagshaw MD, H. Thomas Stelfox MD, Robert C. McDermid MD, Darryl B. Rolfson MD, Ross T. Tsuyuki PharmD, Nadia Baig BSc, Barbara Artiuch MD, Quazi Ibrahim MSc, Daniel E. Stollery MD, Ella Rokosh MD, Sumit R. Majumdar MD

Table 2: Treatment intensity and use of resources associated with admission to intensive care unit, by frailty status

Variable	Group; no. (%) of patients		<i>p</i> value*
	Frail <i>n</i> = 138	Not frail <i>n</i> = 283	
Mechanical ventilation	122 (88.4)	240 (84.8)	0.3
Re-intubation	17 (12.3)	30 (10.6)	0.6
Tracheostomy	18 (13.0)	35 (12.4)	0.9
Vasoactive medications	83 (60.1)	146 (51.6)	0.1
Renal replacement therapy	14 (10.1)	33 (11.7)	0.6
Blood transfusion	57 (41.3)	113 (39.9)	0.8
Surgical procedure or re-operation	26 (18.8)	63 (22.3)	0.4

Association between frailty and short- and long-term outcomes among critically ill patients: a multicentre prospective cohort study

Sean M. Bagshaw MD, H. Thomas Stelfox MD, Robert C. McDermid MD, Darryl B. Rolfson MD, Ross T. Tsuyuki PharmD, Nadia Baig BSc, Barbara Artiuch MD, Quazi Ibrahim MSc, Daniel E. Stollery MD, Ella Rokosh MD, Sumit R. Majumdar MD



Pascale Le Maguet
Antoine Roquilly
Sigismond Lasocki
Karim Asehnoune
Elsa Carise
Marjorie Saint Martin
Olivier Mimoz
Grégoire Le Gac
Dominique Somme
Catherine Cattenoz
Fanny Feuillet
Yannick Malledant
Philippe Seguin

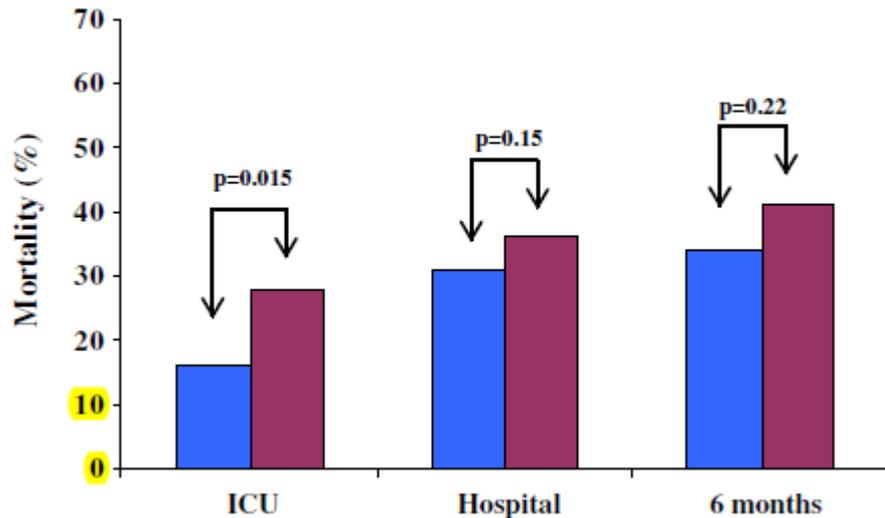
Prevalence and impact of frailty on mortality in elderly ICU patients: a prospective, multicenter, observational study

Intensive Care Med (2014) 40:674–682

Age > 65 years

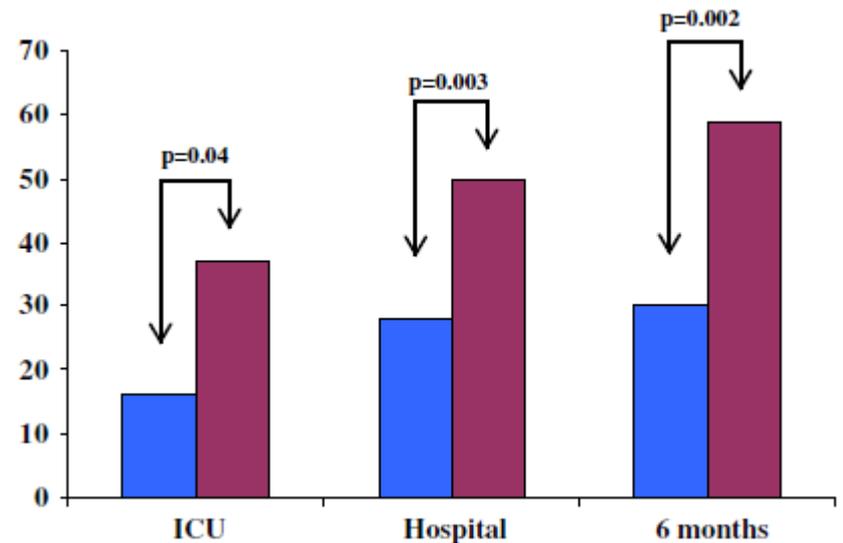
Frailty phenotype

41%



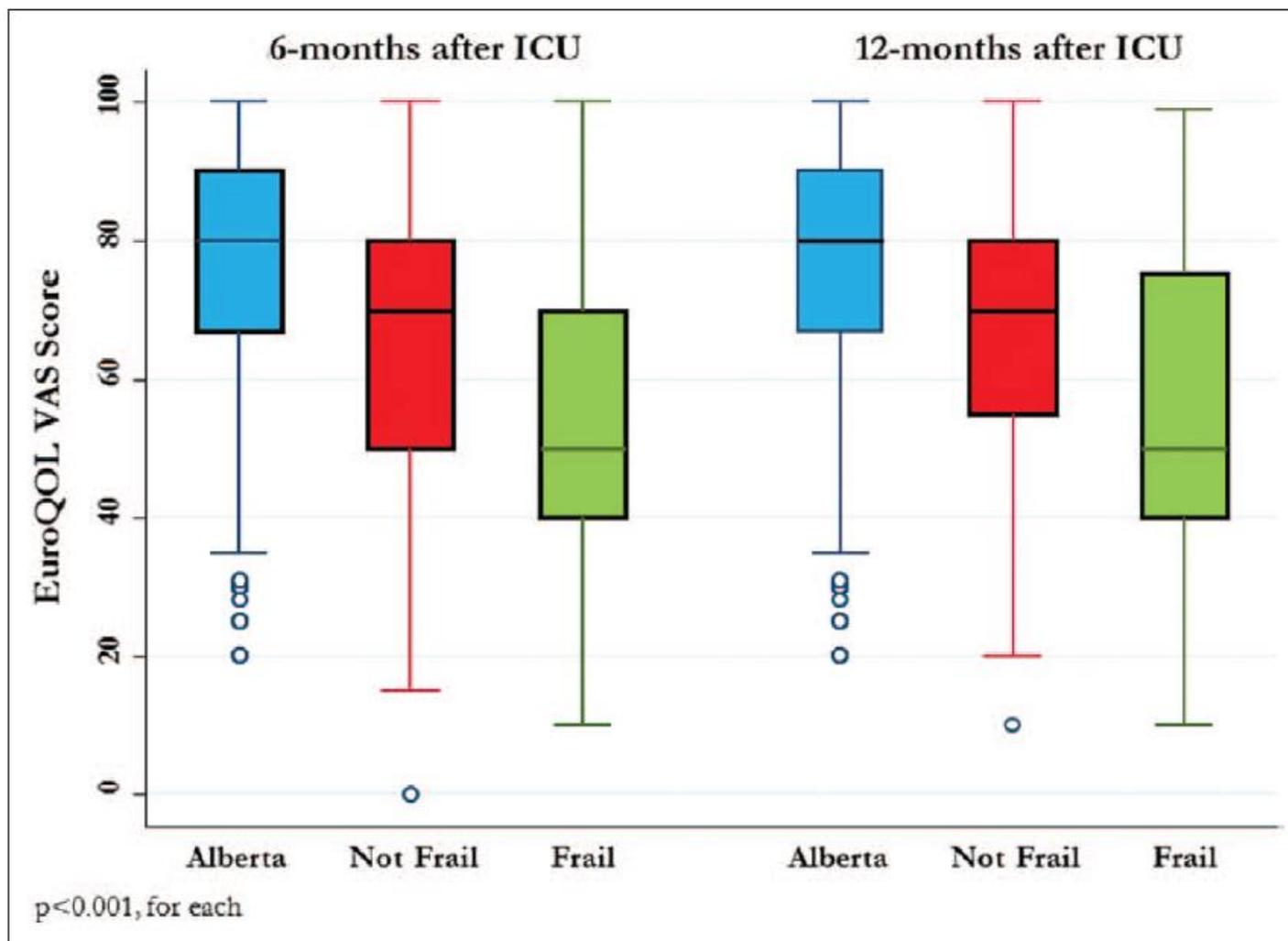
Clinical frailty score

23%



Long-Term Association Between Frailty and Health-Related Quality of Life Among Survivors of Critical Illness: A Prospective Multicenter Cohort Study*

Sean M. Bagshaw, MD, MSc¹; H. Thomas Stelfox, MD, PhD²; Jeffrey A. Johnson, PhD³;
Robert C. McDermid, MD⁴; Darryl B. Rolfson, MD⁴; Ross T. Tsuyuki, PharmD, MSc^{5,6};
Quazi Ibrahim, MSc⁶; Sumit R. Majumdar, MD, MPH⁵



Facteurs influençant la décision d'admission

Age > 65 ans

Age > 85 ans

Diagnostic d'admission

Autonomie

Cancer métastatique

Espérance de vie < 1 an

Fragilité

Heure

Centre

Nombre de lits

Proposition par téléphone

Age, expérience, spécialité,

religion du réanimateur

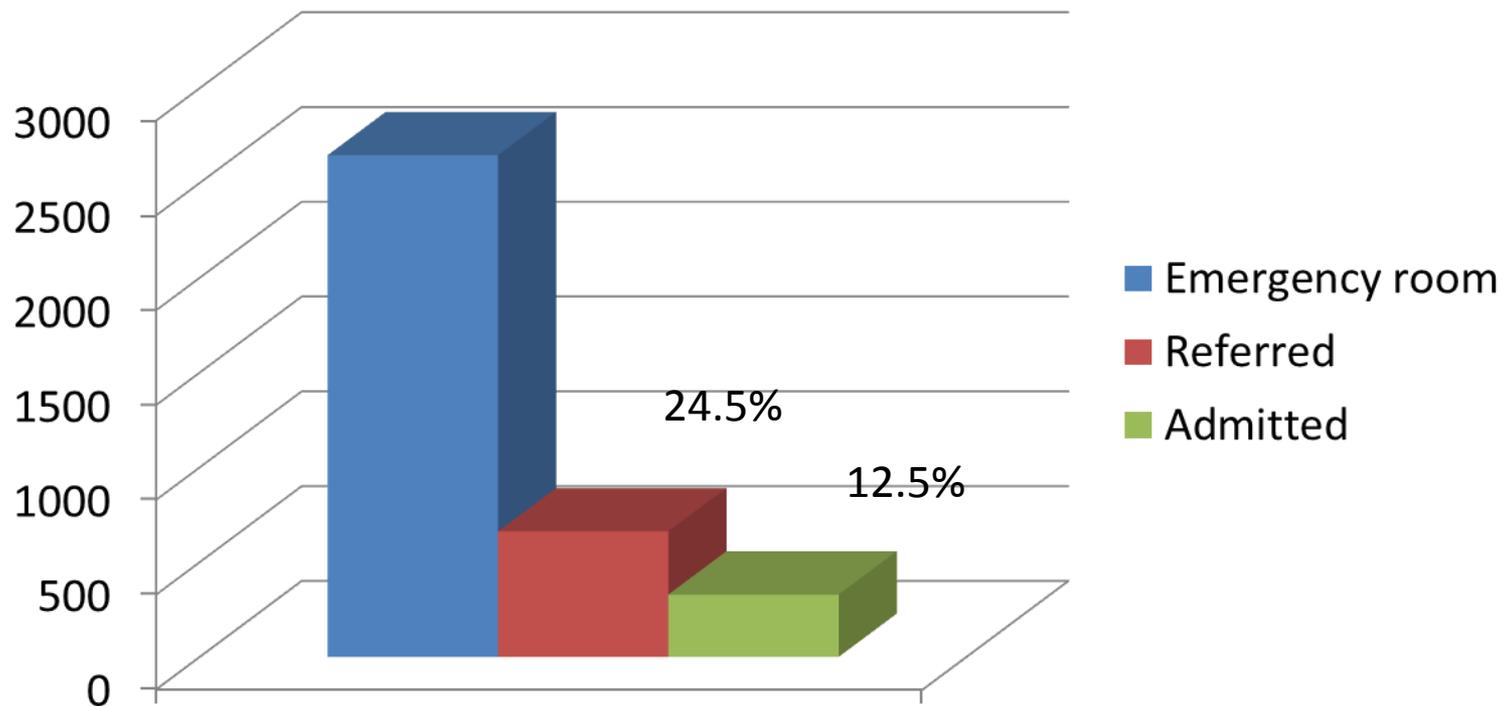
Sprung Crit Care Med 1999, Joynt Intensive Care Med 2001, Azoulay Crit Care Med 2001, Mohammedi Presse Med 03, Augier R West Indian Med J 2005

Garrouste-Orgeas Intensive Care Medicine 2003, Crit Care Med 2005, Intensive Care Medicine 2006, Crit Care Med 2014

Selection of intensive care unit admission criteria for patients aged 80 years and over and compliance of emergency and intensive care unit physicians with the selected criteria: An observational, multicenter, prospective study*

Maité Garrouste-Orgeas, MD; Ariane Boumendil, PhD; Dominique Pateron, MD; Philippe Aegerter, MD, PhD; Dominique Somme, MD; Tabassome Simon, MD, PhD; Bertrand Guidet, MD; on behalf of the ICE-CUB Group

ICECUB study



Intensive Care Med (2013) 39:1574–1583

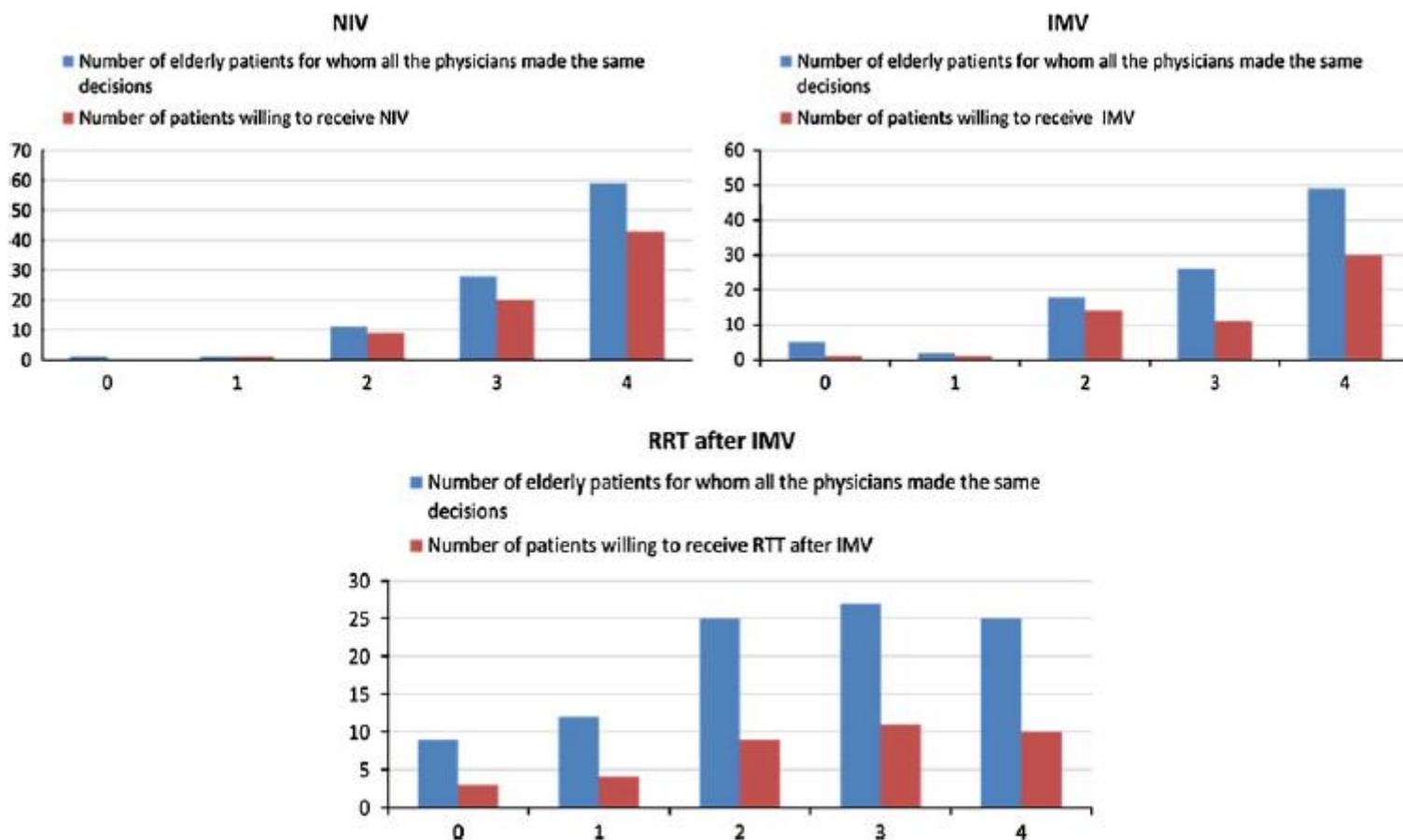
Change in physician decisions (%)	NIV	IMV	RRT
Patient preferences*	39,9	56,8	57
One more bed	38,6	13,6	NA

***the change was a switch from using to not using the life sustaining treatment in order to complain to patient preferences in 60% (NIV), 84% (IMV) and 88,9% (RRT).**

M. Garrouste-Orgeas
 A. Tabah
 A. Vesin
 F. Philippart
 A. Kpodji
 C. Bruel
 C. Grégoire
 A. Max
 J. F. Timsit
 B. Misset

The ETHICA study (part II): simulation study of determinants and variability of ICU physician decisions in patients aged 80 or over

Intensive Care Med (2013) 39:1574–1583

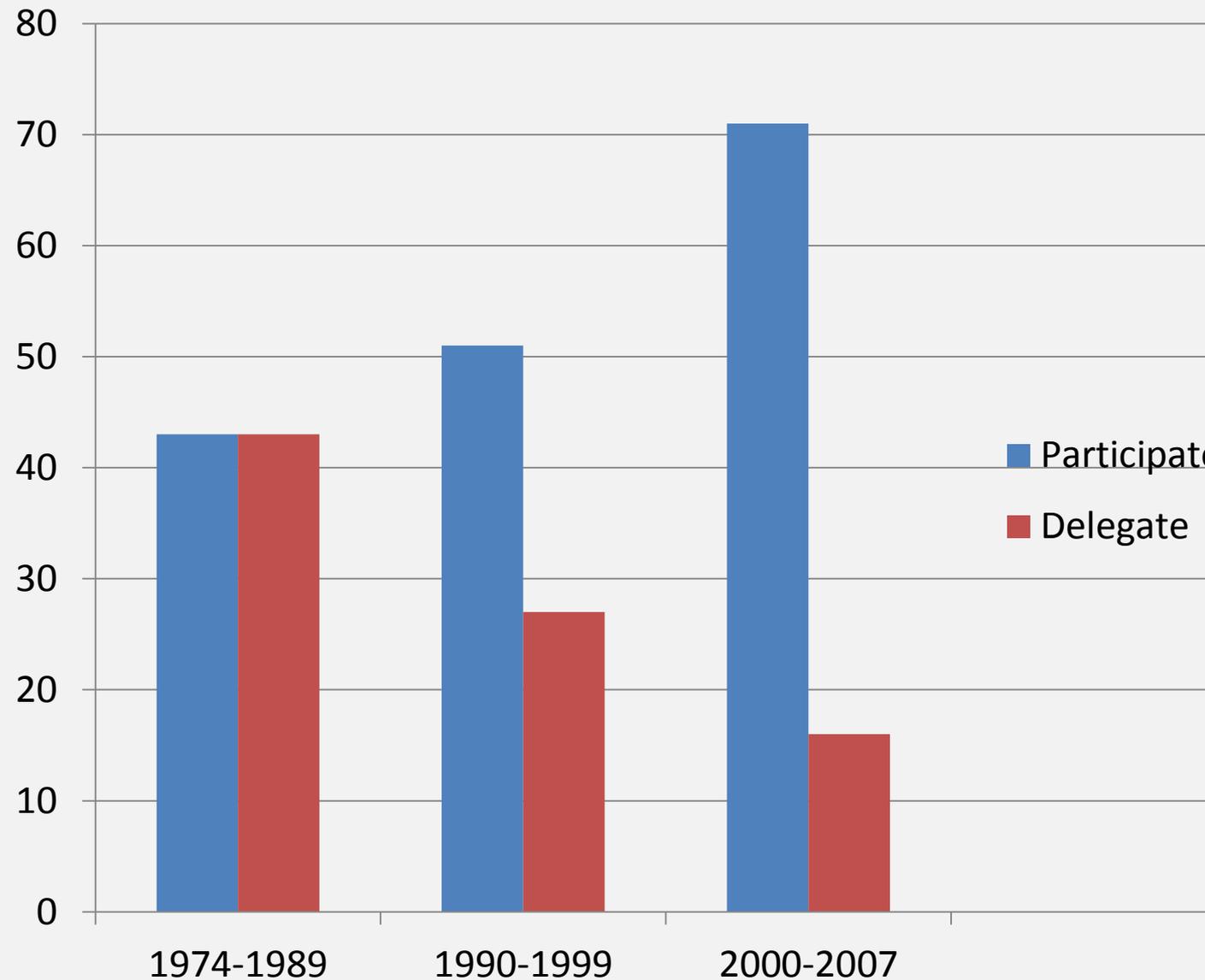


Dans les 20 prochaines minutes

- Comment améliorer la décision d'admission?
- **Quel est leur avis ?**
- Quels sont les résultats de la réanimation?

Patient preferences for shared decisions: A systematic review

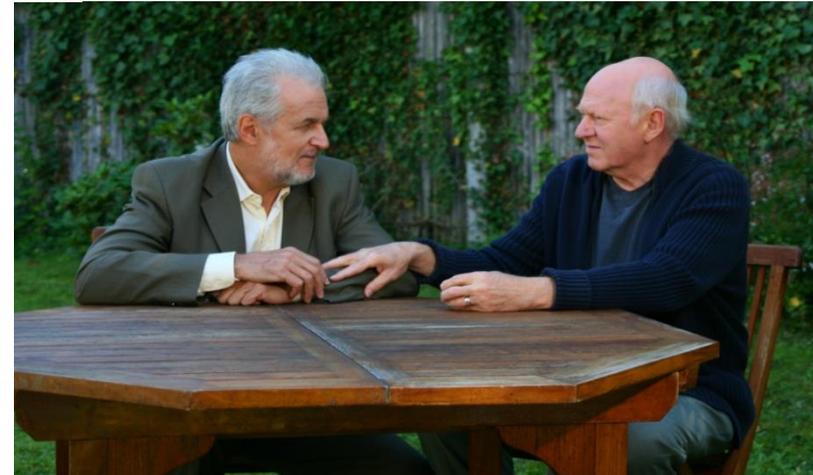
Betty Chewning^{a,*}, Carma L. Bylund^b, Bupendra Shah^c, Neeraj K. Arora^d,



The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments

Intensive Care Med
DOI 10.1007/s00134-013-2976-y

- Court métrage durée 12 mns
- 3 Situations traitées :
 - VNI: OAP
 - VM: Pneumonie bactérienne
 - EER: prolongation de l'hospitalisation
- Validation du scénario (15 personnes)
- Validation du film (50 octogénaires)



The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments

Intensive Care Med
DOI 10.1007/s00134-013-2976-y

- **Sélection**

- listes de consultation

Cardiologie, Pneumologie, Chirurgie digestive, Réanimation

- Foyer logements Paris XIV^e

- EHPAD: Paris et banlieue

- **Entretien à domicile avec un médecin**

70% domicile privé
30% foyer logement et EHPAD

2/semaine en 2010

Critères d'inclusion

- PA de 80 ans ou plus

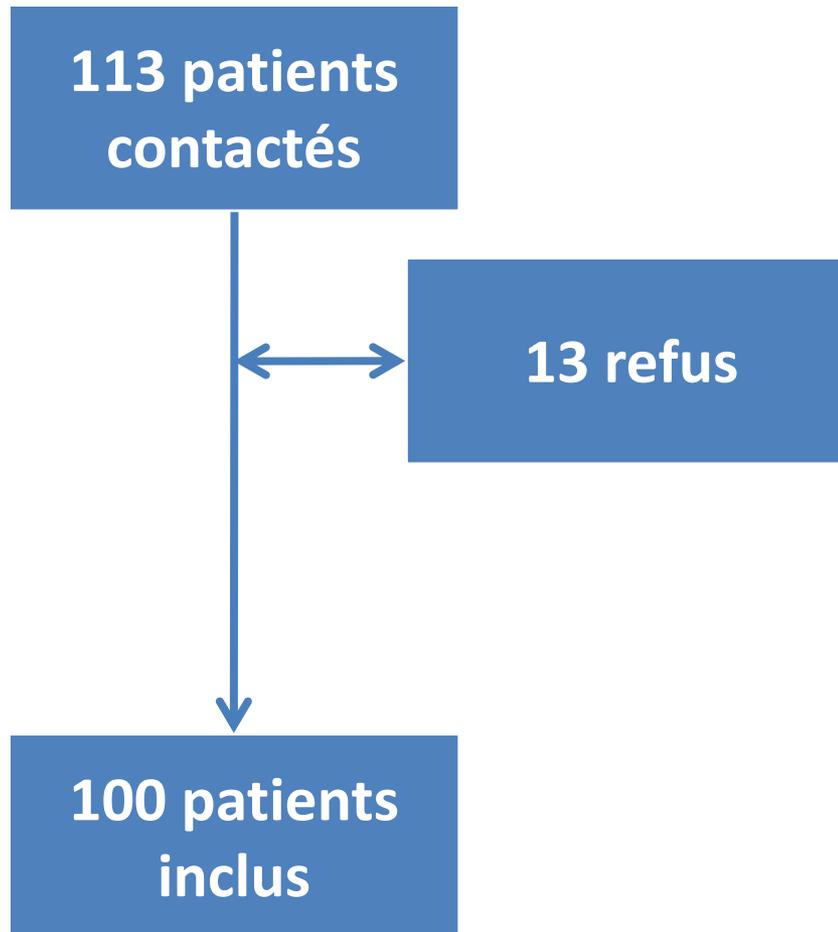
- Absence d'altération cognitive noté sur leurs dossiers

The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments

Intensive Care Med
DOI 10.1007/s00134-013-2976-y

- Caractéristiques:
 - Démographiques et cliniques
 - Désignation d'une personne de confiance
 - Qualité de vie (randomisation de l'ordre de passage):
 - ADL, IADL
 - WHO-QOL BREFet OLD
 - Score de dépression gériatrique
- Présentation du court métrage (randomisation VNI/VM)
- 4 réponses possibles: oui/non/NSP/laisse le médecin décider

Résultats: les personnes âgées



The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments

Intensive Care Med
DOI 10.1007/s00134-013-2976-y

Variables	Valeurs
Age, années, moy \pm ET	84.8 \pm 3.5
Sexe féminin, n	68
Lieu de résidence, n	
- Domicile privée	65
Religion, n	
- Catholique	88
Statut marital, n	
- Célibataire	24
- Veuf (ve)	27
Chute dans les derniers 6 mois, n	23
H. antérieure en réanimation, n	20

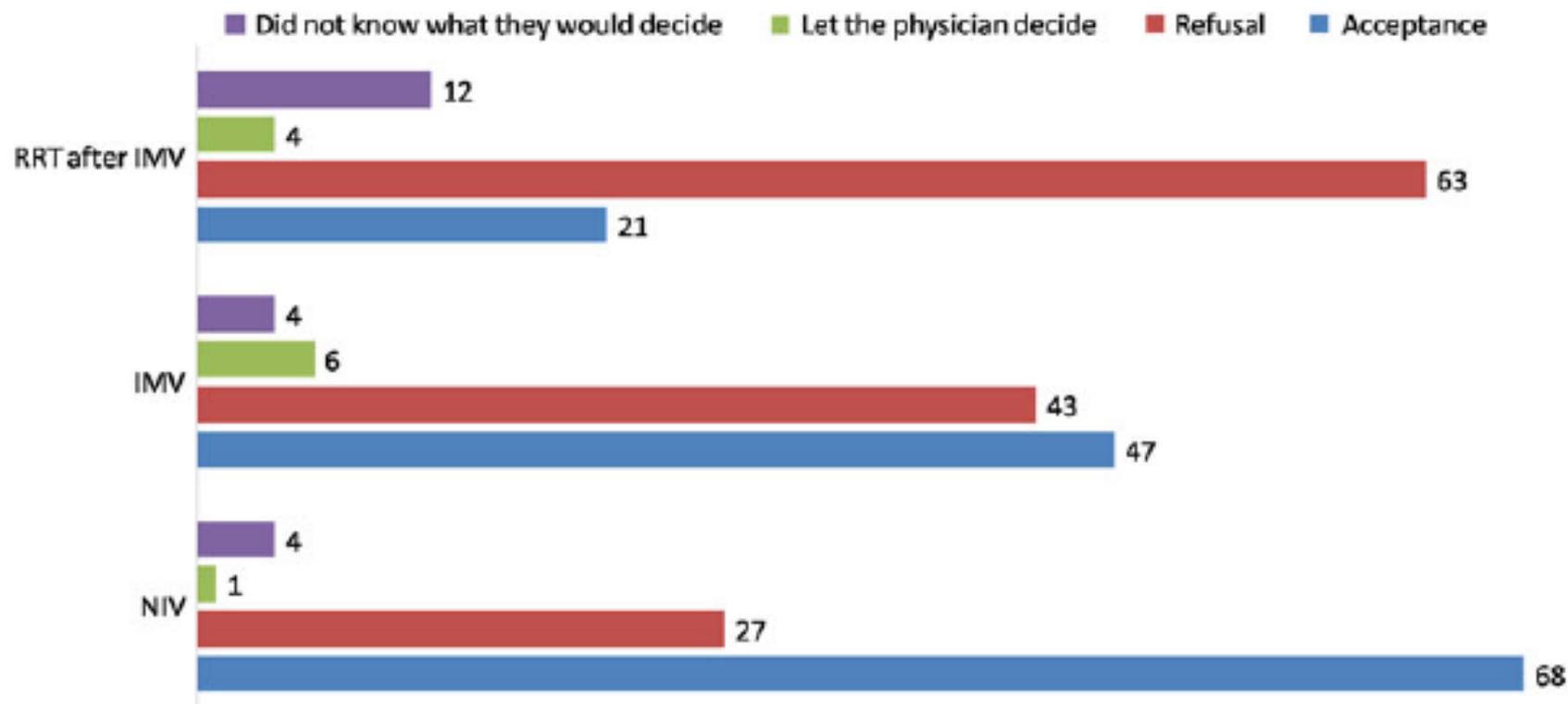
The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments

Intensive Care Med
DOI 10.1007/s00134-013-2976-y

IADL score = 0 (activités restreintes), n	81
ADL score = 6	76
Score de dépression gériatrique, n 0-9 (pas de dépression)	70
WHOQOL-BREF, médiane (25 th -75 th)	
• Santé physique	66 (47-75)
• Santé psychologique	63 (54-71)
• Relations sociales	67 (54-75)
• Environnement	75 (66-81)
WHOQOL-OLD, médiane (25 th -75 th)	
• Capacités sensorielles	75 (56.3-87.5)
• Autonomie	62.5 (56.3-75)
• Activités passées, présentes et futures	65.6 (56.3-75)
• Participation sociale	68.8 (50-75)
• Mort et mourir	78.1 (62.5-87.5)
• Intimité	75 (59.4-75)

The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments

Intensive Care Med
DOI 10.1007/s00134-013-2976-y



Facteurs associés au refus

Variables	Odds ratio pour le refus	95% IC	P value
Ventilation non invasive			
Marié(e)	3.6	1.2-10.7	0.025
WHO-QOL OLD, Capacités sensorielles score ≤ 75	4.0	1.3-12.7	0.018
WHO-QOL OLD Activités passées, présentes et futures score ≤ 65	3.3	1.2-9.2	0.020
Ventilation mécanique			
Sexe féminin	3.1	1.2-8.0	0.02
WHO-QOL BREF Environnement score ≤ 75	2.6	1.1-6.3	0.039
Epuration extra rénale			
Sexe féminin	4.2	1.6-11.3	0.005
Absence d'hospitalisation antérieure en réanimation	4.4	1.3-15.2	0.019
IADL avec un score ≥ 1	6.5	1.2-34.5	0.028
WHO-QOL BREF Environnement score ≤ 75	4.7	1.7-13.0	0.003

Dans les 20 prochaines minutes

- Comment améliorer la décision d'admission?
- Quel est leur avis ?
- **Quels sont les résultats de la réanimation?**

Treatment Intensity and Outcome of Patients Aged 80 and Older in Intensive Care Units: A Multicenter Matched-Cohort Study

Ariane Boumendil, MSc,* Philippe Aegerter, PhD, MD,*† Bertrand Guidet, MD,*‡
and the CUB-Rea Network

JAGS 53:88–93, 2005

Table 1. Matching of Oldest-Old (80) and Young-Old Patients (65–79)

Matching Criteria	Young Old (n = 3,175)	Oldest Old (n = 3,175)	P-value*
Female, n (%)	1,662 (52.3)	1,662 (52.3)	—
Surgical status, n (%)	207 (6.5)	207 (6.5)	—
Charlson Comorbidity Index, n (%)			—
No chronic illness	2,186 (68.9)	2,186 (68.9)	
Minor comorbidity	752 (23.7)	752 (23.7)	
Severe comorbidity	237 (7.5)	237 (7.5)	
Corrected Simplified Acute Physiology Score II [‡] , mean ± standard deviation (range)	23.2 ± 14 (2–135)	23.3 ± 14 (4–135)	.27

Table 3. Age-Related Differences in Hospital Care with and Without Adjustment for Matching Criteria

Support and Outcome	Risk Ratio (Miettinen 95% CI)	P-value*	Adjusted Odds Ratio (95% CI)	P-value [†]
Circulatory support	1.04 (0.98–1.1)	.19	1.08 (0.96–1.21)	.19
Mechanical ventilation	0.85 (0.81–0.90)	<.001	0.69 (0.61–0.78)	<.001
Renal support	0.57 (0.47–0.7)	<.001	0.52 (0.41–0.66)	<.001
Tracheostomy	0.41 (0.31–0.53)	<.001	0.37 (0.28–0.50)	<.001
ICU mortality	1.19 (1.08–1.31)	<.001	1.32 (1.13–1.54)	<.001
Hospital mortality	1.27 (1.17–1.38)	<.001	1.52 (1.31–1.76)	<.001

Increased intensity of treatment and decreased mortality in elderly patients in an intensive care unit over a decade*

Nicolas Lerolle, MD, PhD; Ludovic Trinquart, MSc; Caroline Bornstain, MD; Jean-Marc Tadié, MD; Audrey Imbert, MD; Jean-Luc Diehl, MD; Jean-Yves Fagon, MD, PhD; Emmanuel Guérot, MD

Crit Care Med 2010; 38:59–64

Table 1. Patient characteristics at intensive care unit admission

	1992–1995 n = 348	2001–2004 n = 373	<i>p</i>
Age, yrs, median	84	83	.80
95% confidence interval	81–87	81–87	
Sex, male (%)	137 (39)	182 (48)	.01
Knaus classification, n (%)			<.0001
A–No functional limitation	23 (7)	79 (21)	
B–Slight functional limitation	198 (57)	168 (45)	
C–Severe functional limitation	114 (33)	119 (32)	
D–Bed-ridden	13 (4)	7 (2)	
Provenance of patients, n (%)			.003
Another hospital ward	82 (24)	135 (36)	
Another hospital	19 (5)	15 (4)	
Emergency department	156 (45)	144 (38)	
Home	91 (26)	79 (21)	
Intensive care unit admission cause, n (%)			<.0001
Respiratory	166 (48)	175 (47)	
Neurology	43 (12)	36 (10)	
Circulatory	62 (18)	135 (36)	
Metabolic	77 (22)	27 (7)	
Simplified Acute Physiology Score II, median	37	49	<.0001
95% confidence interval	(32–35)	(39–68)	

Increased intensity of treatment and decreased mortality in elderly patients in an intensive care unit over a decade*

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Crit Care Med 2010; 38:59–64

Comparison of the probability of receiving treatment between the two periods adjusted on age, sex, Knauss classification and ICU admission cause.

Table 5. Univariate and multivariate logistic regression models for intensive care unit death

	Univariate Analysis		Multivariate Analysis	
	Odds Ratio (95% Confidence Interval)	<i>p</i>	Odds Ratio (95% Confidence Interval)	<i>p</i>
Age, 5-yr increase above 80 yrs	1.08 (0.89–1.30)	.44	0.99 (0.77–1.25)	.90
Sex, for male vs. female	1.02 (0.75–1.38)	.92	1.03 (0.70–1.51)	.90
Knaus, A vs. others	1.00 (0.64–1.55)	.99	1.05 (0.57–1.90)	.89
Simplified Acute Physiology Score II, 15-point increase	2.78 (2.35–3.29)	<.0001	3.21 (2.67–3.87)	<.0001
Period, 1992–1995 vs. 2001–2004	0.96 (0.71–1.31)	.80	2.93 (1.92–4.47)	<.0001

10 20 30 40 50 60 70 80 90 100 110

SAPSII score

10 20 30 40 50 60 70 80 90 100 110

SAPSII score

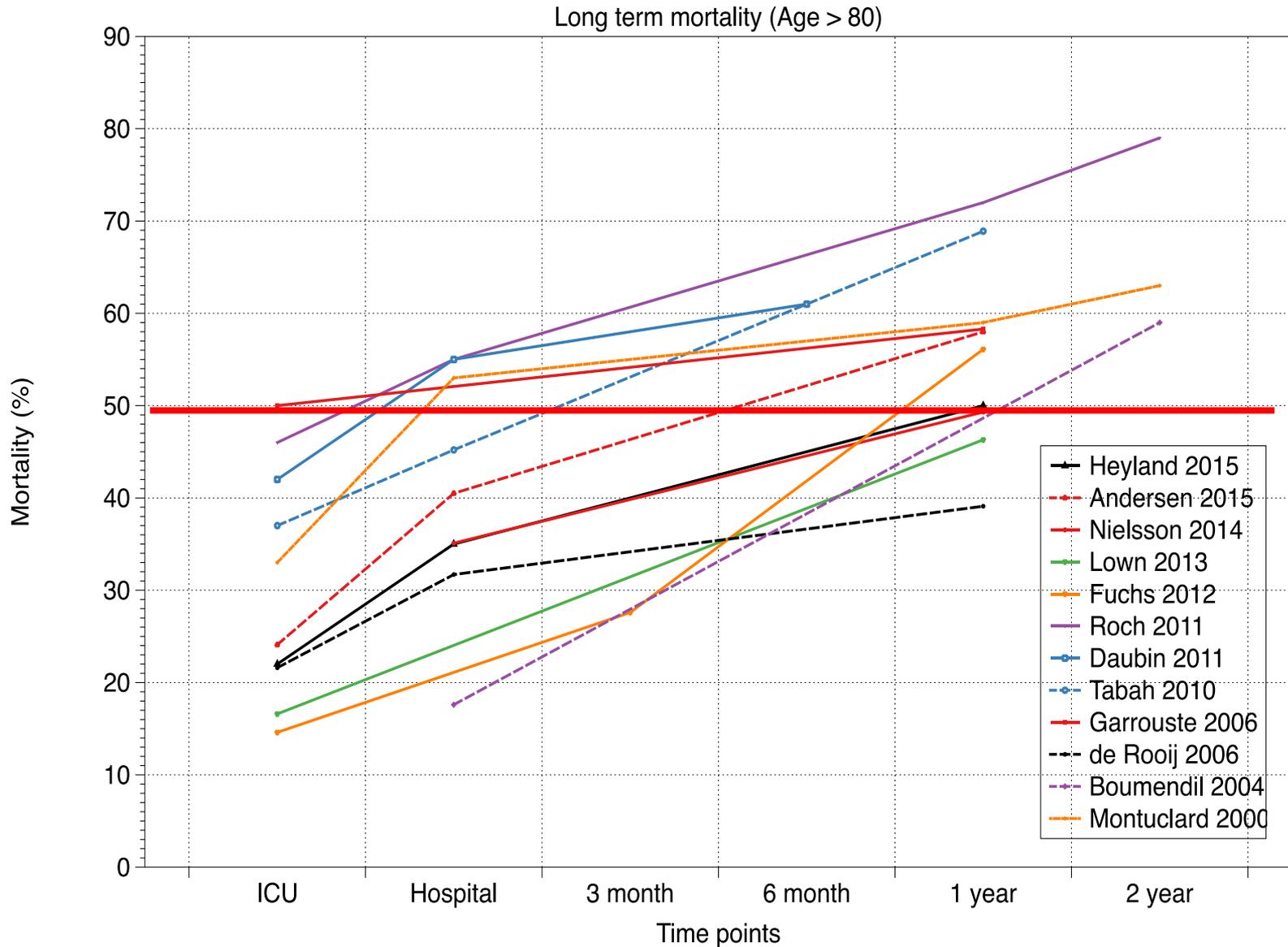
Outcome of selected nonagenarians admitted in ICUs: a multicenter study of the Outcomerea research group

Maité Garrouste-Orgeas, MD^{1,2}, Stéphane Ruckly MCs³, Charles Grégoire, MD¹, Anne-Sylvie Dumesnil, MD⁴, Cécile Pommier MCs³, Samir Jamali, MD⁵, Dany Golgran-Toledano, MD⁶, Carole Schwebel, MD, PhD⁷, Christophe C'lech, MD, PhD⁸, Lilia Soufir, MD¹, Muriel Fartoukh, MD, PhD⁹, Guillaume Marcotte, MD¹⁰, Laurent Argaud, MD¹¹, Bruno Verdiaire, MD¹², Michael Darmon, MD, PhD¹³, Elie Azoulay, MD, PhD¹⁴, Jean-François Timsit, MD, PhD^{2,3,15}

Variables	80-90 years old N=176	>90 years old N=176	p-value
Pre-ICU hospital stay, days, Median (IQR)	1 (0-6)	0 (0-3)	0.02
Length of ICU stay, days, Median (IQR)	6 (3-12)	4 (2-7.5)	<.01
Length of hospital stay, days Median (IQR)^c	21 (13-37.5)	16 (8-26)	<.01
Decision to forgo life sustaining treatments within 48 hours of admission, n (%)			
Advance withholding ^d	18 (10.2)	16 (9.1)	0.86
Withholding	3 (1.7)	6 (3.4)	0.51
Withdrawing	4 (2.3)	3 (1.7)	1.00
ICU mortality, n (%)	36 (20.5)	44 (25)	0.34
Hospital mortality, n (%)	64 (36.4)	70 (39.8)	0.54
Renal replacement therapy			
Urinary catheter	14 (8)	5 (2.8)	0.05
	137 (77.8)	151 (85.8)	0.05

The very old ICU patient - a never ending story.

Hans Flaatten, Maité Garrouste-Orgeas Intensive Care Medicine 2015





Daren K. Heyland
 Allan Garland
 Sean M. Bagshaw
 Deborah Cook
 Kenneth Rockwood
 Henry T. Stelfox

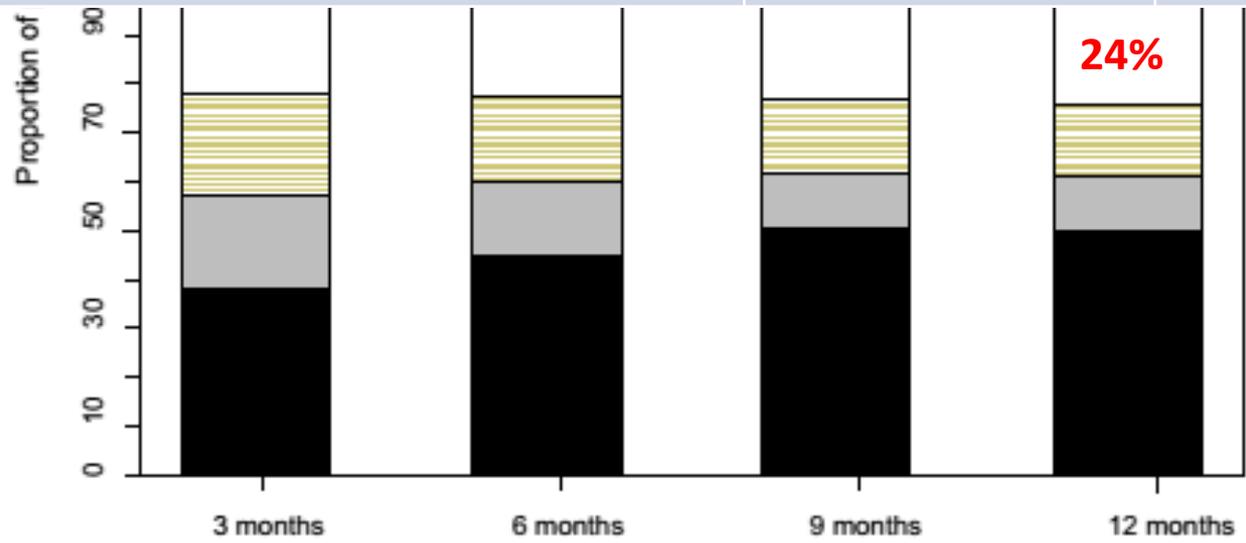


Recovery after critical illness in patients aged 80 years or older: a multi-center prospective observational cohort study

Intensive Care Med 2015

22 ICUs, 610 Patients > 80 years old with stay > 24 hours

Variables	OR (95% CI)	P-value
Age (per 5 years)	0,73 (0,57-0,93)	0,01
CABG valve/vascular surgery	4,21 (1,96-9,03)	<0,0001
Baseline PF score (per 50 points)	0,32 (0,19-0,56)	<0,0001
Charlson comorbidity index (per 2 units)	0,76 (0,59-0,98)	0,03
Frailty index (per 0,2 points)	0,32 (0,19-0,56)	<0,0001





HAUTE AUTORITÉ DE SANTÉ

Conclusion



PLAN PERSONNALISE DE SANTE (PPS) POUR LES PERSONNES À RISQUE DE PERTE D'AUTONOMIE (PAERPA)

Les dix points clés de la réalisation d'un PPS :

- Désigner un référent du PPS¹
- Identifier les situations à problème sur la base d'une évaluation globale de la situation médicale, psychologique et sociale de la personne
- Prioriser les situations où une intervention est à la fois nécessaire et possible
- Recueillir les préférences et attentes du patient, et en tenir compte
- Négocier des objectifs communs avec le patient
- Planifier des interventions pour atteindre ces objectifs
- Désigner des effecteurs chargés de la réalisation de ces interventions
- Déterminer des critères permettant d'évaluer les processus et les résultats
- Fixer des dates de révision des interventions²
- Organiser des procédures d'alerte en cas de problème intercurrent ou de difficultés dans l'exécution du PPS³

De la réanimation du sujet âgé à la création de filières réa-gériatriques

Lifelines of Intensive Care Medicine in Elderly Patients

H. Vallet · J. Cohen-Bittan · J. Boddaert

Filière VILLE-HOPITAL

(réseaux ville, SAMU, Urgentistes, Réanimateurs, Gériatres, Rééducateurs.....)

Evaluation de la fragilité

Recueil des directives anticipées

Admission rapide en réanimation

Réflexion sur une prise en charge adaptée (sédation)

Admission en gériatrie aigue

Partenariat avec les SSR

Merci de votre attention