Éthique en réanimation : quels enjeux en 2020 ?

Pr Alexandre Boyer

Médecine Intensive Réanimation

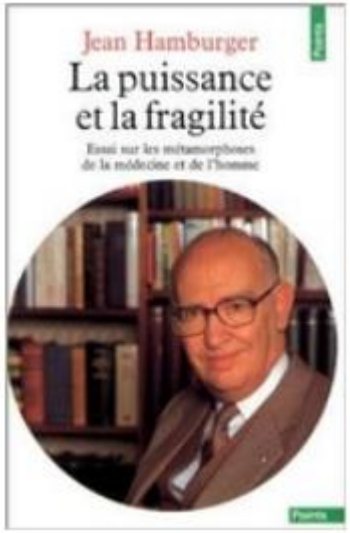
alexandre.boyer@chu-bordeaux.fr

Déclaration de conflits d'intérêt

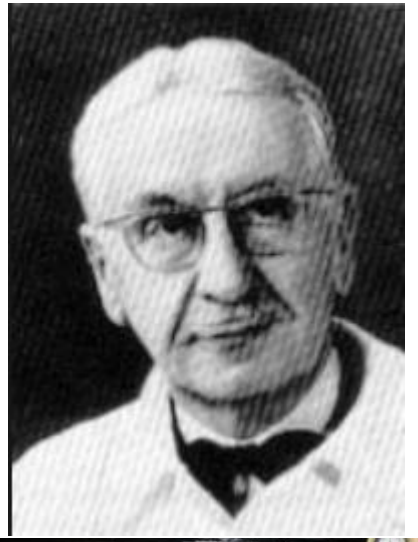
2016 Gilead (ECCMID)
2017 Basilea (Modération)
2018 /
2019 /
2020 /

1953

Pr Hamburger et Richet, néphrologues

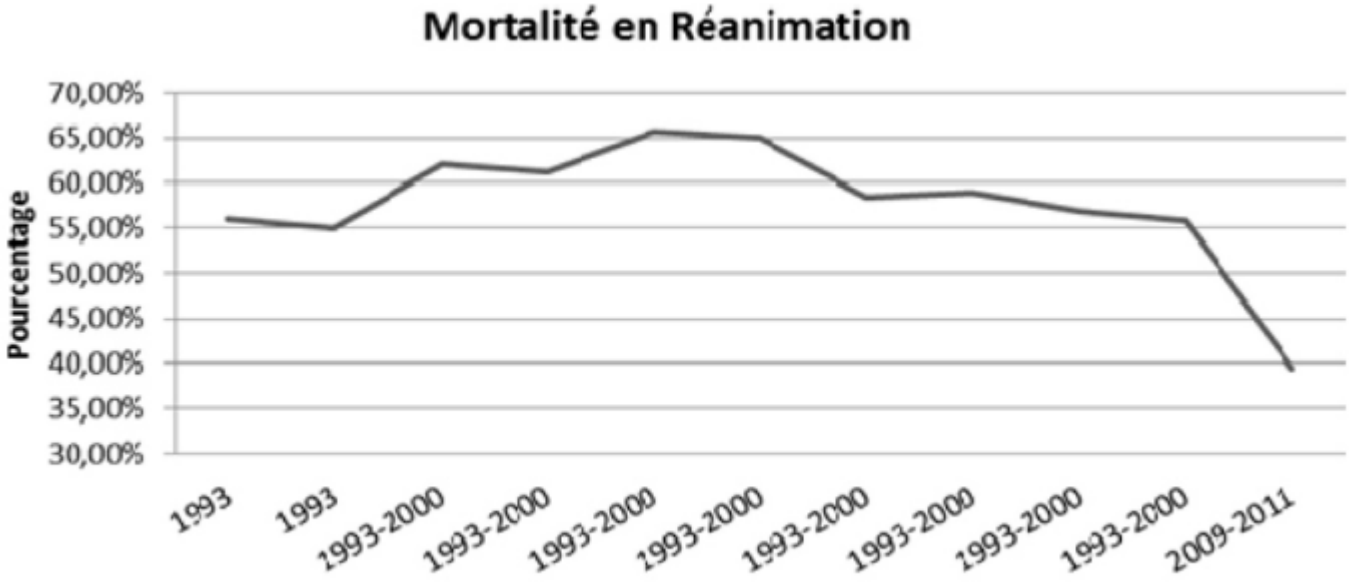


Pr Mollaret, neurologue



Jusqu'aux années 2000

Progrès technique
(ventilation, hémodynamique, défaillance d'organe…)



Choc septique, Quenot et al. Réanimation 2015

Questions éthiques reléguées au second plan

Quelle position éthique du réanimateur ?

Celle de tout médecin
Articuler le scientifique et l'humain

Acquis « humains » de la réanimation

Occasional Essay

The Hand

Ognjen Gajic[1]

[1]Mayo Clinic, Rochester, Minnesota

"What's it all about?" As a critical care physician and researcher, I thought I knew. I thought my knowledge gave me deep insight into the treatment and outcome of patients who suffer a life-threatening illness or injury. But that was before I had my own brush with death.

srlf
SOCIÉTÉ
DE RÉANIMATION
DE LANGUE FRANÇAISE

SFAR
Société Française d'Anesthésie et de Réanimation

« Mieux vivre la Réanimation » 6ème Conférence de consensus SRLF-SFAR : 2009

Question 1 : Quelles sont les barrières au « mieux vivre » en réanimation ?

Question 2 : Comment améliorer l'environnement ?

Question 3 : quels sont les soins qui permettent le « mieux vivre » en réanimation ?

Question 4 : quelles stratégies de communication ?

Question 5 : Comment personnaliser un processus décisionnel

Améliorer l'environnement du patient

Contribution of the Intensive Care Unit Environment to Sleep Disruption in Mechanically Ventilated Patients and Healthy Subjects

Jonathan Y. Gabor, Andrew B. Cooper, Shelley A. Crombach, Bert Lee, Nisha Kadikar, Harald E. Bettger, and Patrick J. Hanly

Department of Medicine, St. Michael's Hospital; Departm
Centre, University of Toronto, Toronto, Ontario, Canada

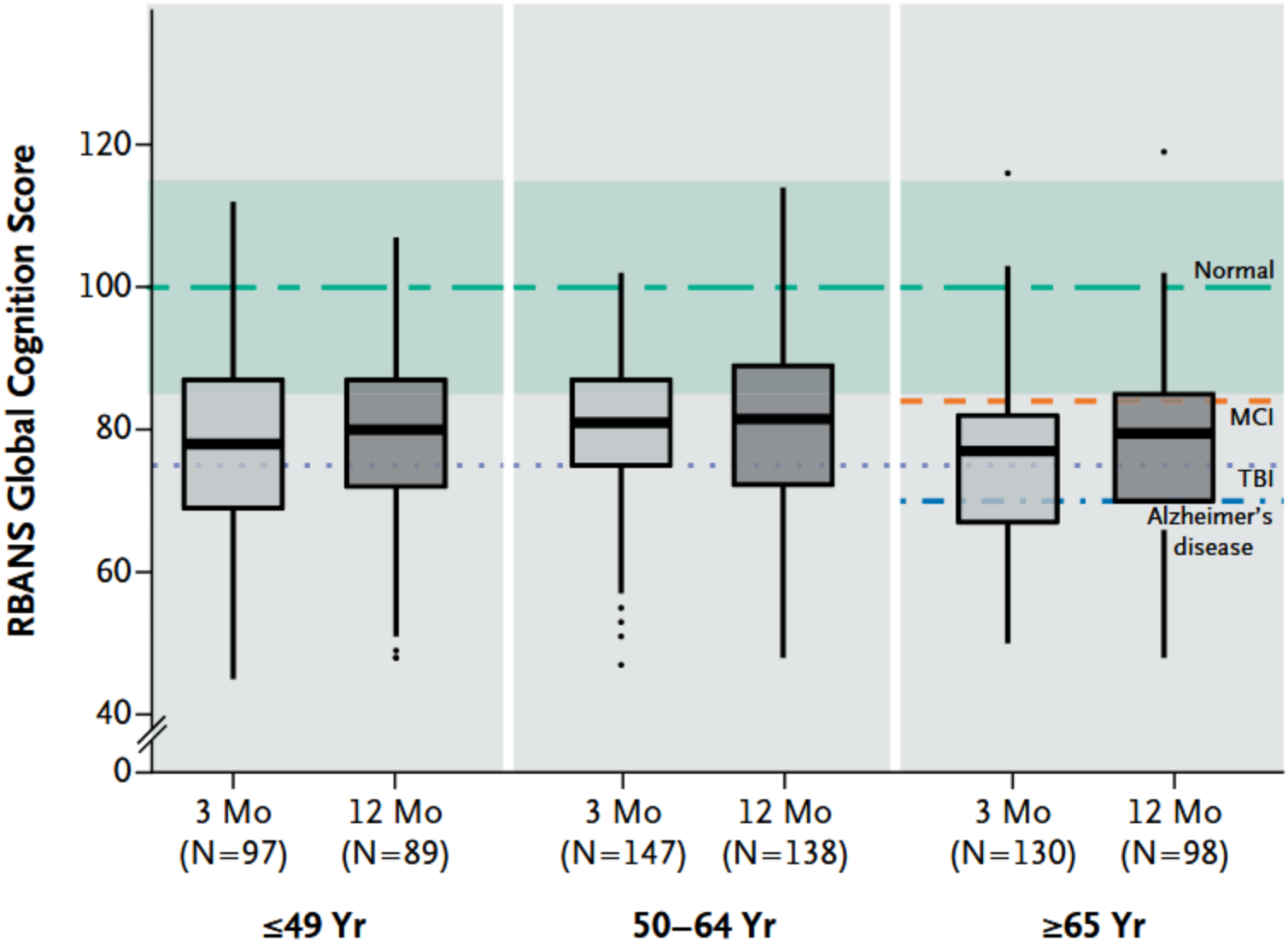
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Long-Term Cognitive Impairment after Critical Illness

P.P. Pandharipande, T.D. Girard, J.C. Jackson, A. Morandi, J.L. Thompson, B.T. Pun, N.E. Brummel, C.G. Hughes, E.E. Vasilevskis, A.K. Shintani, K.G. Moons, S.K. Geevarghese, A. Canonico, R.O. Hopkins, G.R. Bernard, R.S. Dittus, and E.W. Ely, for the BRAIN-ICU Study Investigators*

N ENGL J MED 369;14 NEJM.ORG OCTOBER 3, 2013


RBANS Global Cognition Score
120
100
80
60
40
0
Normal
MCI
TBI
Alzheimer's disease
3 Mo (N=97)
12 Mo (N=89)
3 Mo (N=147)
12 Mo (N=138)
3 Mo (N=130)
12 Mo (N=98)
≤49 Yr
50–64 Yr
≥65 Yr

PTSD

Critical Care

RESEARCH Open Access

Prevalence of post-traumatic stress disorder symptoms in adult critical care survivors: a systematic review and meta-analysis

Cássia Righy[1,2], Regis Goulart Rosa[3,4*], Rodrigo Teixeira Amancio da Silva[1,5], Renata Kochhann[4], Celina Borges Migliavaca[4,6], Caroline Cabral Robinson[4], Stefania Pigatto Teche[7,8], Cassiano Teixeira[3], Fernando Augusto Bozza[1,9] and Maicon Falavigna[4,6]

2019

1 patient sur 5

Risk of Post-traumatic Stress Symptoms in Family Members of Intensive Care Unit Patients

Elie Azoulay, Frédéric Pochard, Nancy Kentish-Barnes, Sylvie Chevret, Jérôme Aboab, Christophe Adrie, Djilali Annane, Gérard Bleichner, Pierre Edouard Bollaert, Michael Darmon, Thomas Fassier, Richard Galliot, Maité Garrouste-Orgeas, Cyril Goulenok, Dany Goldgran-Toledano, Jan Hayon, Mercé Jourdain, Michel Kaidomar, Christian Laplace, Jérôme Larché, Jérôme Liotier, Laurent Papazian, Catherine Poisson, Jean Reignier, Fayçal Saidi, and Benoît Schlemmer

Service de Réanimation Médicale, Hôpital Saint-Louis, Paris, France

2005

1 proche sur 2

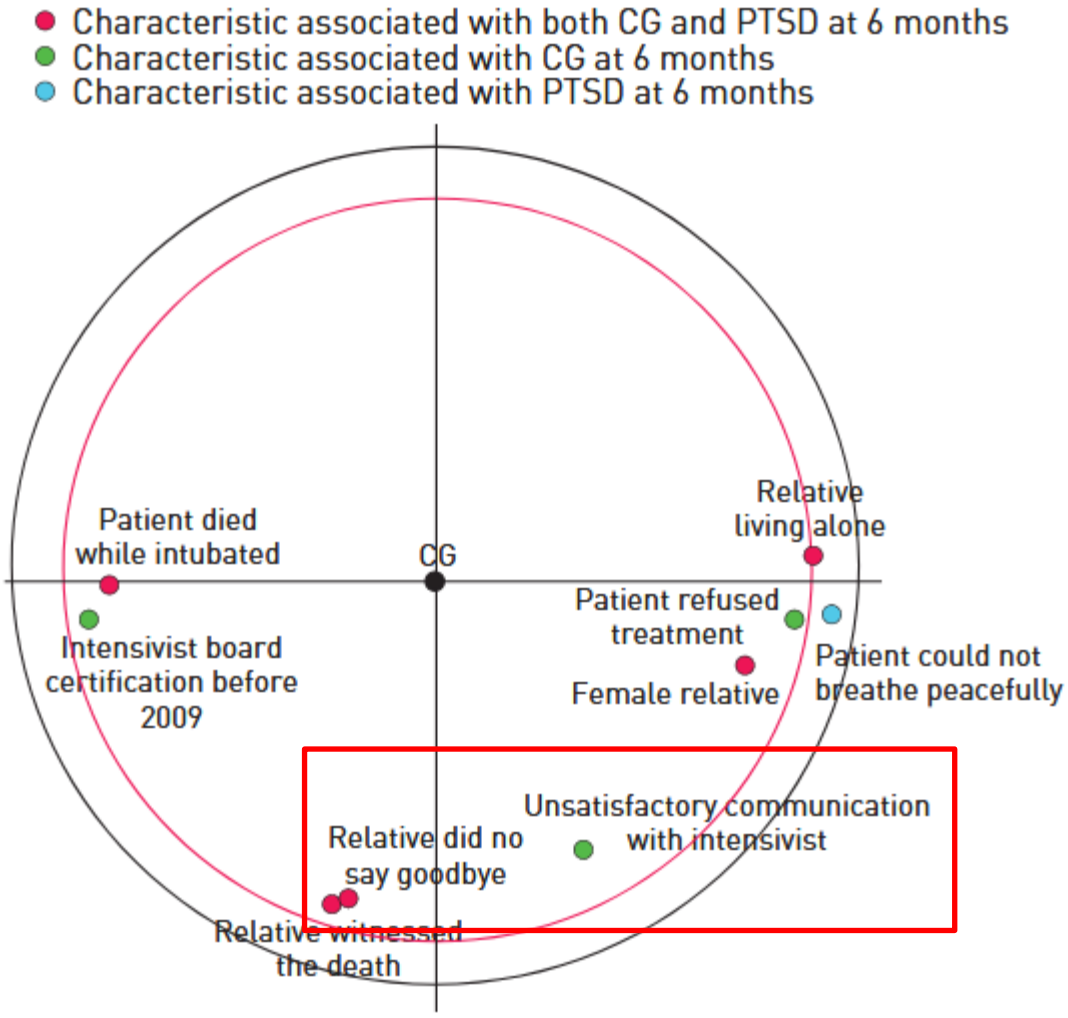
Deuil pathologique (> 6 mois)

2015

Complicated grief after death of a relative in the intensive care unit

Nancy Kentish-Barnes, Marine Chaize, Valérie Seegers, Stéphane Legriel, Alain Cariou, Samir Jaber, Jean-Yves Lefrant, Bernard Floccard, Anne Renault, Isabelle Vinatier, Armelle Mathonnet, Danielle Reuter, Olivier Guisset, Zoé Cohen-Solal, Christophe Cracco, Amélie Seguin, Jacques Durand-Gasselin, Béatrice Éon, Marina Thirion, Jean-Philippe Rigaud, Bénédicte Philippon-Jouve, Laurent Argaud, Renaud Chouquer, Mélanie Adda, Céline Dedrie, Hugues Georges, Eddy Lebas, Nathalie Rolin, Pierre-Edouard Bollaert, Lucien Lecuyer, Gérard Viquesnel, Marc Léone, Ludivine Chalumeau-Lemoine, Maïté Garrouste, Benoit Schlemmer, Sylvie Chevret, Bruno Falissard and Élie Azoulay

1 proche sur 2 idem à 1 an


Characteristic associated with both CG and PTSD at 6 months
Characteristic associated with CG at 6 months
Characteristic associated with PTSD at 6 months
Patient died while intubated
CG
Relative living alone
Patient refused treatment
Intensivist board certification before 2009
Female relative
Patient could not breathe peacefully
Unsatisfactory communication with intensivist
Relative did no say goodbye
Relative witnessed the death

Le livret d'accueil

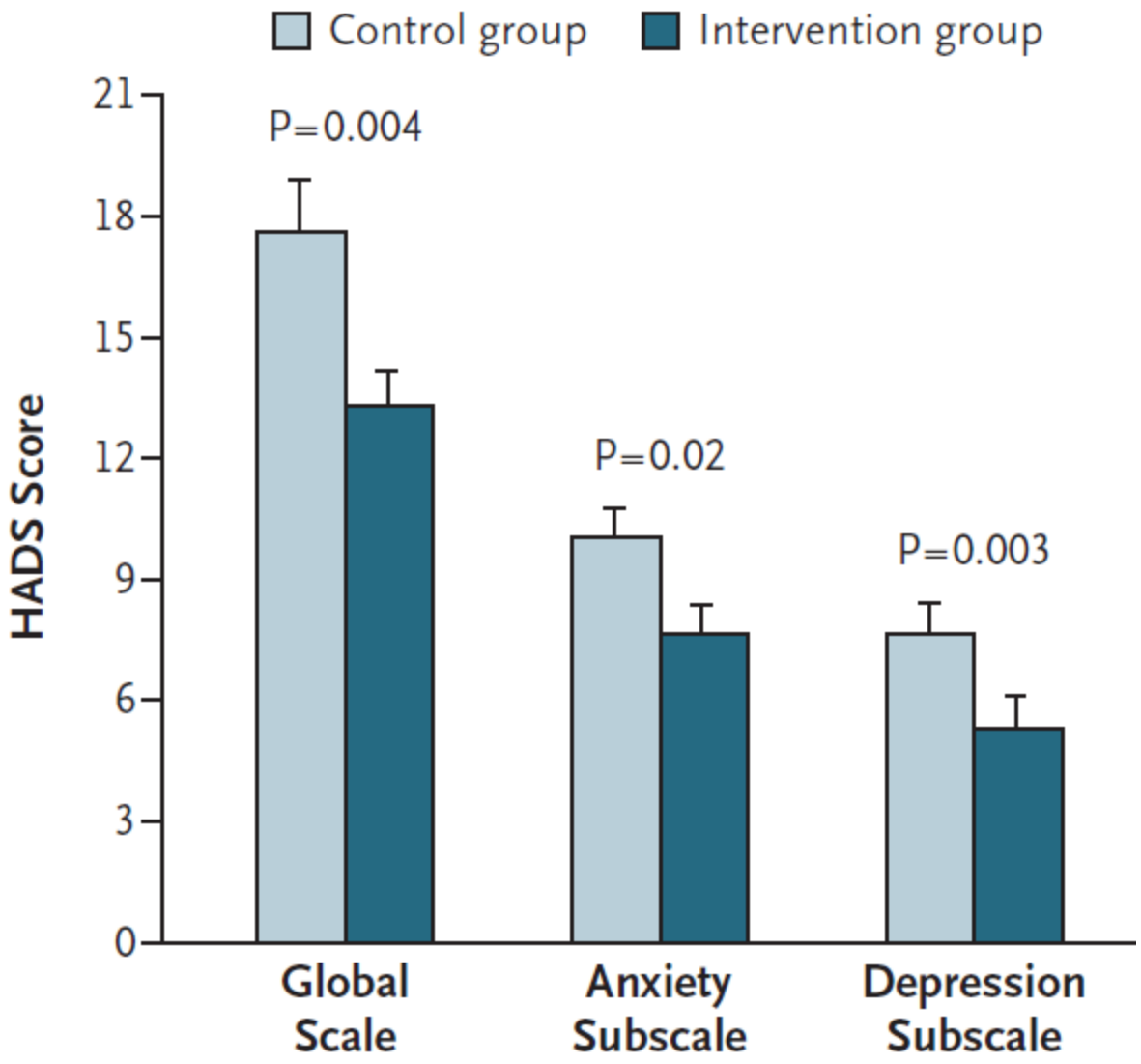
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

2012

A Communication Strategy and Brochure for Relatives of Patients Dying in the ICU

Alexandre Lautrette, M.D., Michael Darmon, M.D., Bruno Megarbane, M.D., Ph.D., Luc Marie Joly, M.D., Sylvie Chevret, M.D., Ph.D., Christophe Adrie, M.D., Ph.D., Didier Barnoud, M.D., Gérard Bleichner, M.D., Cédric Bruel, M.D., Gérald Choukroun, M.D., J. Randall Curtis, M.D., M.P.H., Fabienne Fieux, M.D., Richard Galliot, M.D., Maité Garrouste-Orgeas, M.D., Hugues Georges, M.D., Dany Goldgran-Toledano, M.D., Mercé Jourdain, M.D., Ph.D., Georges Loubert, M.D., Jean Reignier, M.D., Fayçal Saidi, M.D., Bertrand Souweine, M.D., Ph.D., François Vincent, M.D., Nancy Kentish Barnes, Ph.D., Frédéric Pochard, M.D., Ph.D., Benoit Schlemmer, M.D., and Elie Azoulay, M.D., Ph.D.


Control group
Intervention group
HADS Score
21
18
15
12
9
6
3
0
P=0.004
P=0.02
P=0.003
Global Scale
Anxiety Subscale
Depression Subscale

Ouvrir le service aux visites

Garrouste-Orgeas *et al. Ann. Intensive Care (2016) 6:82*
DOI 10.1186/s13613-016-0185-x

2016

Annals of Intensive Care

RESEARCH Open Access

Reappraisal of visiting policies and procedures of patient's family information in 188 French ICUs: a report of the Outcomerea Research Group

Maité Garrouste-Orgeas[1,2,8*], Isabelle Vinatier[3], Alexis Tabah[4,5], Benoit Misset[6] and Jean-François Timsit[1,2,7]

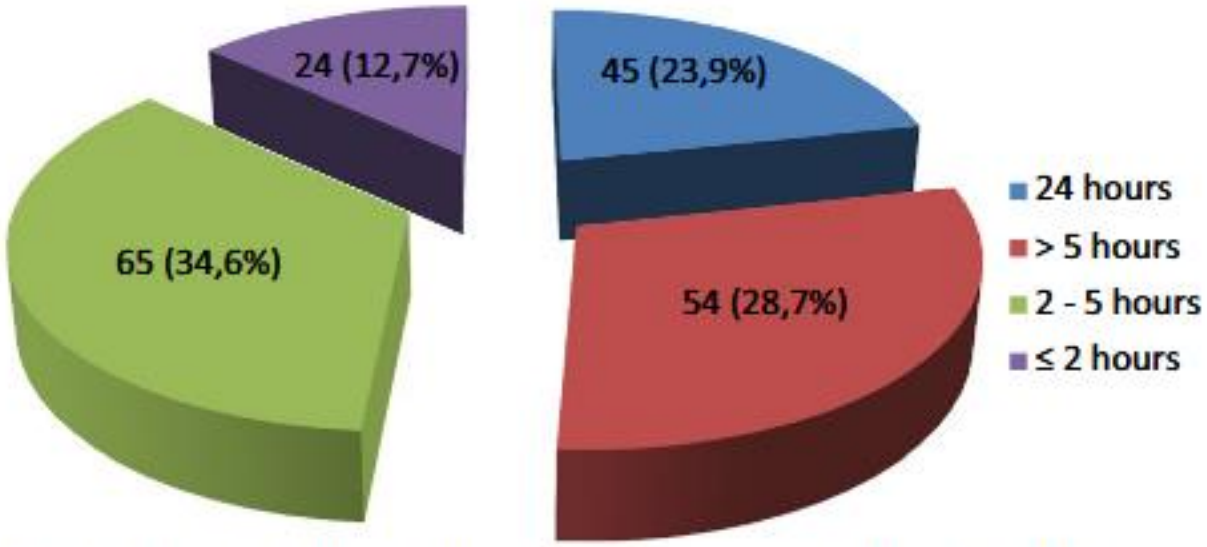


Fig. 2 Number of hours offered to presence of relatives in 188 French ICUs

Le journal de bord

OPEN ACCESS Freely available online

PLOS ONE

Writing In and Reading ICU Diaries: Qualitative Study of Families' Experience in the ICU

Maité Garrouste-Orgeas[1,2*], Antoine Périer[3,4], Philippe Mouricou[5], Charles Grégoire[1], Cédric Bruel[1], Sandie Brochon[1], François Philippart[1], Adeline Max[1], Benoit Misset[1,6]

STUDY PROTOCOL Op

2015

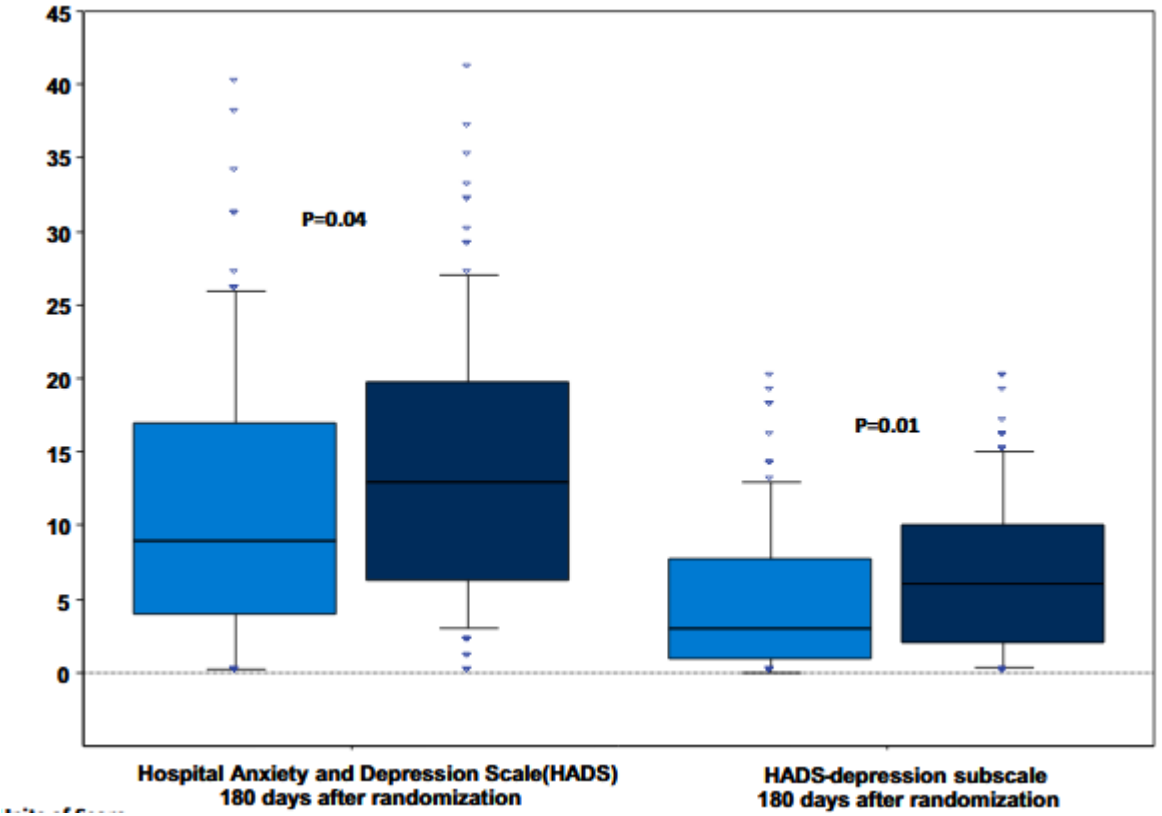
The ICU-Diary study: prospective, multicenter comparative study of the impact of an ICU diary on the wellbeing of patients and families in French ICUs

Maïté Garrouste-Orgeas[1,2,3*], Cécile Flahault[4], Léonor Fasse[5], Stéphane Ruckly[1,2], Nora Amdjar-Badidi[6],

ICM 2017

Effect of a condolence letter on grief symptoms among relatives of patients who died in the ICU: a randomized clinical trial

Nancy Kentish-Barnes[1], Sylvie Chevret[2], Benoît Champigneulle[3], Marina Thirion[4], Virginie Souppart[1],



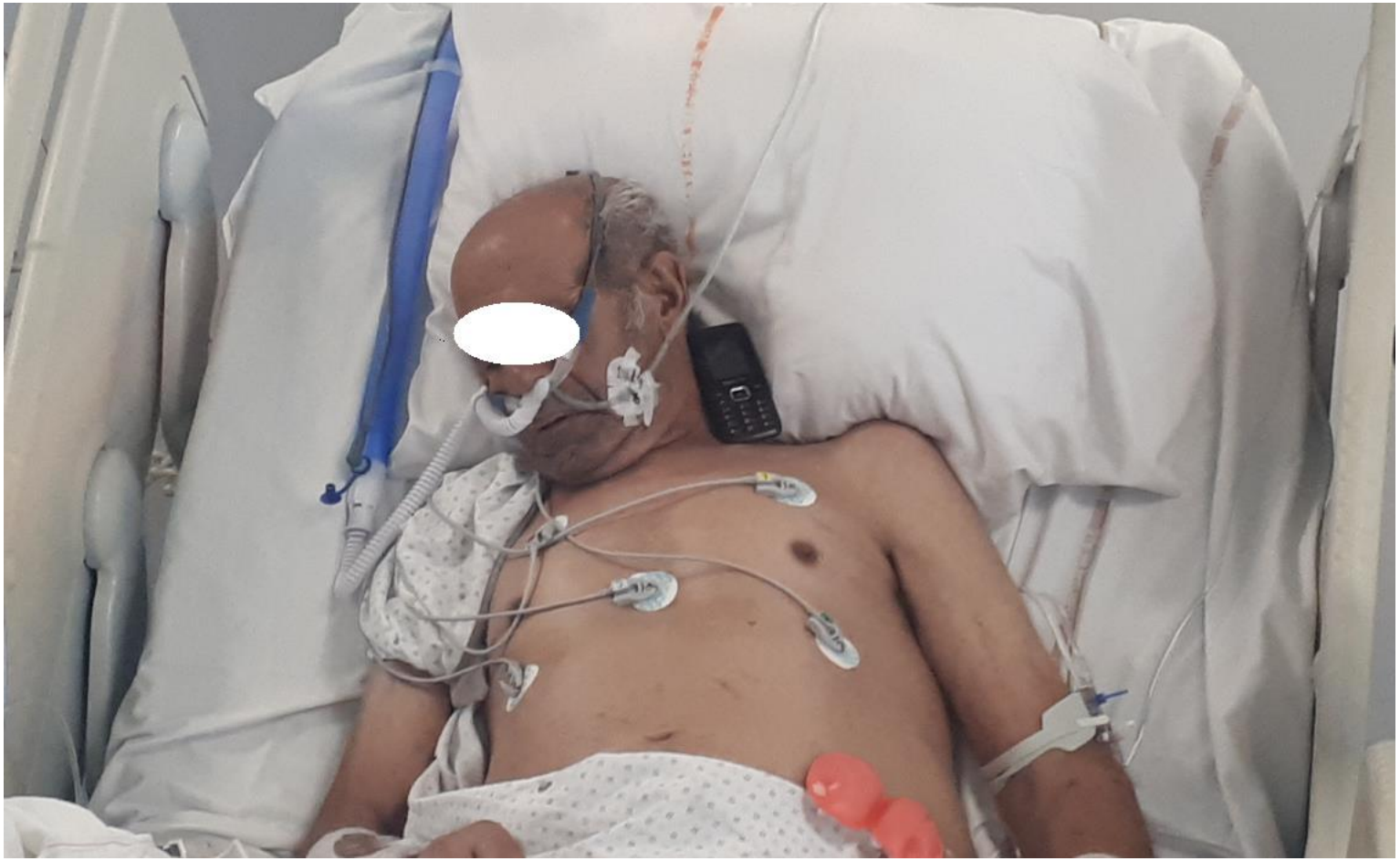
Effect of Palliative Care–Led Meetings for Families of Patients With Chronic Critical Illness
A Randomized Clinical Trial

JAMA®

2016

Shannon S. Carson, MD; Christopher E. Cox, MD, MPH; Sylvan Wallenstein, PhD; Laura C. Hanson, MD, MPH; Marion Danis, MD; James A Tulsky, MD; Emily Chai, MD; Judith E. Nelson, MD, JD

Remise en cause par la crise COVID



Le Monde

AVRIL 2020

« Le retour des proches auprès des patients hospitalisés est aujourd'hui envisageable »

Tribune

Alors que l'épidémie décroît, un collectif de praticiens hospitaliers estime, dans une tribune au « Monde », que supprimer toute visite d'un proche à un patient hospitalisé ne pourra pas rester la règle, tant pour son bien que pour celui des familles et des équipes soignantes.

Publié le 26 avril 2020 à 00h34 - Mis à jour le 26 avril 2020 à 07h02 Temps de Lecture 4 min.

La question des visites en Ehpad *[établissements d'hébergement pour personnes âgées dépendantes]* est débattue en ce moment et une première ouverture vient d'être décidée par le gouvernement. De notre poste d'observation hospitalier, nous posons donc la question du retour, dans des conditions matérielles et humaines adaptées et réfléchies, mais urgentes, d'une visite des familles et des proches dans tous les lieux de soin.

Les signataires de cette tribune sont tous professeurs des universités et praticiens hospitaliers : Elie Azoulay (hôpital Saint-Louis, à Paris), Alexandre Boyer (CHU de Bordeaux), Didier Gruson (CHU de Bordeaux), Denis Malvy (CHU de Bordeaux), Jean Reignier (CHU de Nantes), René Robert (CHU de Poitiers) et Guillaume Thiery (CHU de Saint-Etienne).

Nov 2020

MINISTÈRE
DES SOLIDARITÉS
ET DE LA SANTÉ
Liberté
Égalité
Fraternité

Coronavirus (COVID-19)

FICHE ANNEXE N°2 : CONSIDERATIONS ETHIQUES EN LIEN AVEC LE REBOND EPIDEMIQUE

Documents de référence :

- Azoulay E, Beloucif S, Vivien, Guidet B, Pateron D, Le Dorze M. Décision d'admission des patients en unités de réanimation et unités de soins critiques dans un contexte d'épidémie à Covid-19.[1]
- Priorisation des traitements de réanimation pour les patients en état critique en situation d'épidémie de Covid-19 avec capacités limitées. Société Française d'Anesthésie Réanimation, Service de Santé des Armées.[2]
- René Robert, Nancy Kentish-Barnes, Alexandre Boyer, Alexandra Laurent, Elie Azoulay, Jean Reignier. Ethical dilemmas due to the Covid-19 pandemic. Ann Intensive Care 2020: 10;84.[3]
- COVID-19 : Contribution du comité consultatif national d'éthique du 13 mars 2020 : enjeux éthiques face à une pandémie, réponse à la saisine du ministre en charge de la santé et de la solidarité[4]

2. Conditions d'accueil des proches des patients hospitalisés :

La pandémie induit des difficultés spécifiques d'accueil de visiteurs au sein des établissements de santé pour des raisons multiples. Celles-ci peuvent en particulier correspondre au risque infectieux pour les visiteurs, au risque infectieux pour les soignants au contact de visiteurs potentiellement suspects de Covid, à la consommation d'équipement de protection individuel par les visiteurs. En situation de confinement de l'ensemble de la population se pose la question du caractère essentiel de la visite à un proche hospitalisé par rapport à d'autres activités dérogatoires au confinement. Les établissements doivent veiller à maintenir, voire renforcer en l'absence de visites, le lien téléphonique et/ou numérique avec les proches et, le cas échéant, avec la personne de confiance identifiée par le patient. Pour les patients dont le pronostic vital est engagé à court terme, une décision partagée à l'échelle de l'établissement de soins sur la réponse à apporter à ces contraintes est nécessaire, incluant une réflexion spécifique favorisant les visites des proches dans ce contexte particulier.

Ainsi, la visite des proches, encadrée par le personnel soignant, est une possibilité à envisager pour les patients les plus critiques.

Quelle position scientifique ?

La confiance dans la science

-10 points au mois d'avril

85 → 75%

enquête Ipsos-Cevipof conduite sur les attitudes des citoyens face au Covid-19

Rigueur pour déceler le vrai progrès du faux

Intégrité pour avoir confiance dans la science

Transparence pour espérer garder une indépendance

Rigueur

En un tweet, Raoult remet en cause la légitimité morale et éthique des essais cliniques auprès d'une audience de plus de 250 000 abonnés[1]. Dans sa tribune, il affirme que faire des groupes de contrôle, c'est **« dire au malade qu'on va lui donner au hasard soit le médicament dont on sait qu'il marche, soit le médicament dont on ne sait pas s'il marche »**.

Le concept d' « équipoise clinique »
Benjamin Freedman, 1987, « Equipoise and the ethics of clinical research », *New England Journal of Medicine,* 317: 141–145.

Mais nous sommes
tous des Raoult
en puissance !

Rigueur

27 avril 2020

L'AP-HP a publié ce lundi un communiqué qui proclame que *« le tocilizumab améliore significativement le pronostic des patients avec pneumonie Covid moyenne ou sévère »*.

30 avril 2020

Coronavirus : les essais sur le tocilizumab menés par l'AP-HP sèment la discorde

Le comité de surveillance de l'essai sur ce médicament a remis sa démission la semaine dernière après la publication de premiers résultats.

20 oct 2020

JAMA Internal Medicine | Original Investigation

Effect of Tocilizumab vs Usual Care in Adults Hospitalized With COVID-19 and Moderate or Severe Pneumonia

A Randomized Clinical Trial

Olivier Hermine, MD, PhD; Xavier Mariette, MD, PhD; Pierre-Louis Tharaux, MD, PhD; Matthieu Resche-Rigon, MD, PhD; Raphaël Porcher, PhD; Philippe Ravaud, MD, PhD; for the CORIMUNO-19 Collaborative Group

CONCLUSIONS AND RELEVANCE In this randomized clinical trial of patients with COVID-19 and pneumonia requiring oxygen support but not admitted to the intensive care unit, TCZ did not reduce WHO-CPS scores lower than 5 at day 4 but might have reduced the risk of NIV, MV, or death by day 14. No difference on day 28 mortality was found. Further studies are necessary for confirming these preliminary results.

Intégrité

Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis

Mandeep R Mehra, Sapan S Desai, Frank Ruschitzka, Amit N Patel

Summary

Background Hydroxychloroquine or chloroquine, often in combination with a second-generation m[illegible]ide, are b[illegible] widely used for treatment of COVID-19, despite no conclusive evidence of their benefit. Althoug[illegible]nerall[illegible]e whe[illegible] used for approved indications such as autoimmune disease or malaria, the safety and bene[illegible]f th[illegible]treatment regimens are poorly evaluated in COVID-19.

Methods We did a multinational registry analysis of the use of hydroxychloroquine [illegible]oquine with[illegible]thout a macrolide for treatment of COVID-19. The registry comprised data from 671 hosp[illegible]s in s[illegible]ntinents. We included patients hospitalised between Dec 20, 2019, and April 14, 2020, with a positive laboratory [illegible]g for SARS-CoV-2. Patients who received one of the treatments of interest within 48 h of diagno[illegible]e included in [illegible]f four treatment groups (chloroquine alone, chloroquine with a macrolide, hydroxychlor[illegible]ine alone, or hydroxychloroquine with a macrolide), and patients who received none of these treatments formed [illegible] control gr[illegible]. Patients for whom one of the treatments of interest was initiated more than 48 h after diagnosis or [illegible]ile they we[illegible]on mechanical ventilation, as well as patients who received remdesivir, were excluded. The main outco[illegible]of int[illegible]t were in-hospital mortality and the occurrence of de-novo ventricular arrhythmias ([illegible]tained or [illegible]ed ventricular tachycardia or ventricular fibrillation).

Findings 96 032 patients (mean age 53·8 years, 46·3% women) [illegible]OVID-19 were hospitalised during the study period and met the inclusion criteria. Of the[illegible] patie[illegible]were in the treatment groups (1868 received chloroquine, 3783 received chloroquine with[illegible]macro[illegible]e, 3016 [illegible]eived hydroxychloroquine, and 6221 received hydroxychloroquine with a macrolide) and [illegible] pati[illegible]in the control group. 10 698 (11·1%) patients died in hospital. After controlling for multiple c[illegible]fou[illegible]ctors ([illegible] sex, race or ethnicity, body-mass index, underlying cardiovascular disease and its risk fac[illegible]diabetes[illegible]derlying lung disease, smoking, immunosuppressed condition, and baseline disease severity), w[illegible]mpared wi[illegible]ortality in the control group (9·3%), hydroxychloroquine (18·0%; hazard ratio 1·335, 95%[illegible]1·22[illegible]457), hydro[illegible]ychloroquine with a macrolide (23·8%; 1·447, 1·368–1·531), chloroquine (16·4%; 1·365, [illegible]318–1·531), [illegible]chloroquine with a macrolide (22·2%; 1·368, 1·273–1·469) were each independently associated [illegible]h an increased [illegible]f in-hospital mortality. Compared with the control group (0·3%), hydroxychloroquine (6[illegible]; 2·36[illegible]·935–2·900), hydroxychloroquine with a macrolide (8·1%; 5·106, 4·106–5·983), chloroquine (4·3%; [illegible]51, 2[illegible]8–4·596), and chloroquine with a macrolide (6·5%; 4·011, 3·344–4·812) were independently associate[illegible]an inc[illegible]ed risk of de-novo ventricular arrhythmia during hospitalisation.

Interpretati[illegible] We w[illegible]unabl[illegible]nfirm a benefit of hydroxychloroquine or chloroquine, when used alone or with a macro[illegible]on in[illegible]spital outcomes for COVID-19. Each of these drug regimens was associated with decreased in-hospita[illegible]reased frequency of ventricular arrhythmias when used for treatment of COVID-19.

Funding William[illegible]ey Distinguished Chair in Advanced Cardiovascular Medicine at Brigham and Women's Hospital.

P[illegible]d Online
[illegible]22, 2020
https://doi.org/10.1016/S0140-6736(20)31180-6

This online publication has been corrected. The corrected version first appeared at thelancet.com on May 29, 2020

See Online/Comment
https://doi.org/10.1016/S0140-6736(20)31174-0

Brigham and Women's Hospital Heart and Vascular Center and Harvard Medical School, Boston, MA, USA (Prof M R Mehra MD); Surgisphere Corporation, Chicago, IL, USA (S S Desai MD); University Heart Center, University Hospital Zurich, Zurich, Switzerland (Prof F Ruschitzka MD); Department of Biomedical Engineering, University of Utah, Salt Lake City, UT, USA (A N Patel MD); and HCA Research Institute, Nashville, TN, USA (A N Patel)

Correspondence to:
Prof Mandeep R Mehra, Brigham and Women's Hospital Heart and Vascular Center and Harvard Medical School, Boston, MA 02115, USA
mmehra@bwh.harvard.edu

Intégrité

CMAJ NEWS

Lancet retracts 12-year-old article linking autism to MMR vaccines

Published at www.cmaj.ca on Feb. 4

Twelve years after publishing a landmark study that turned tens of thousands of parents around the world against the measles, mumps and rubella (MMR) vaccine because of an implied link between vaccinations and autism, *The Lancet* has retracted the paper.

In a statement published on Feb. 2, the British medical journal said that it is now clear that "several elements" of a 1998 paper it published by Dr. Andrew Wakefield and his colleagues (*Lancet* 1998;351[9103]:637-41) "are incorrect, contrary to the findings of an earlier investigation."

Dr. Richard Horton, editor of *The Lancet*, declined through a spokesper-

ters/Luke MacGregor

Transparence

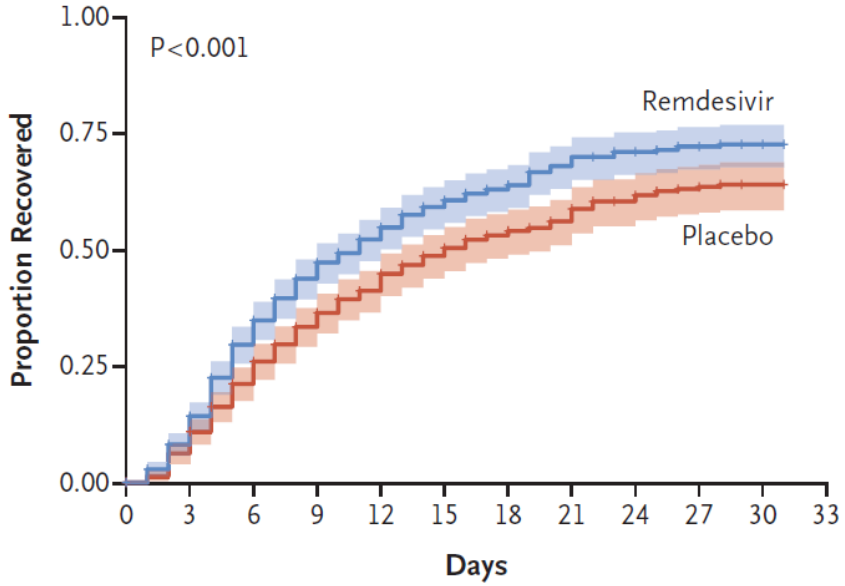
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Remdesivir for the Treatment of Covid-19 — Preliminary Report

J.H. Beigel, K.M. Tomashek, L.E. Dodd, A.K. Mehta, B.S. Zingman, A.C. Kalil,

A Overall



No. at Risk

Remdesivir	538	481	363	274	183	142	121	98	78	65	3	0
Placebo	521	481	392	307	224	180	149	115	91	78	2	0

Transparence

COMMERCIAL INFLUENCE IN HEALTH: FROM TRANSPARENCY TO INDEPENDENCE

Commercial influence and covid-19

Greater independence from commercial interests is more important than ever

Ray Moynihan, [1] Helen Macdonald, [2] Lisa Bero, [3] Fiona Godlee[2]

These results were subsequently made public; the treating physician could request to be made aware of the treatment assignment of patients who had not completed day 29 if clinically indicated (e.g., because of worsening clinical status), and patients originally in the placebo group could be given remdesivir.

The content of this publication does not necessarily reflect the views or policies of the Department of Health and Human Services, the Uniformed Services University of the Health Sciences, the Henry M. Jackson Foundation for the Advancement of Military Medicine, the Departments of the Army, Navy, or Air Force, the Department of Defense, or the Department of Veterans Affairs, nor does any mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. Gilead Sciences provided remdesivir for use in this trial but did not provide any financial support. Employees of Gilead Sciences participated in discussions about protocol development and in weekly protocol team calls. The NIAID ultimately made all decisions regarding trial design and implementation.

A data sharing statement provided by the authors is available with the full text of this article at NEJM.org.

Le risque d'une médecine hors sol

- Surspécialisation et découpage du parcours du patient
- Aspiration numérique
- Bureaucratie de la mesure et des objectifs

Une présence clinique globale

Aspiration innovatrice

(quoi qu'il en coûte)

Un juste soin au moindre coût

Simplifier

Ce qui gagne du temps de soin

Et respecte la justice distributive

En même temps que le progrès technique un courant simplificateur a toujours prévalu


Ne pas Ventiler trop fort, AJRCCM 1987

Ne pas intuber les BPCO

The New England
Journal of Medicine

Volume 333 SEPTEMBER 28, 1995 Number 13

NONINVASIVE VENTILATION FOR ACUTE EXACERBATIONS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

LAURENT BROCHARD, M.D., JORDI MANCEBO, M.D., MARC WYSOCKI, M.D., FRÉDÉRIC LOFASO, M.D., GIORGIO CONTI, M.D., ALAIN RAUSS, M.D., GÉRALD SIMONNEAU, M.D., SALVADOR BENITO, M.D., ALESSANDRO GASPARETTO, M.D., FRANÇOIS LEMAIRE, M.D., DANIEL ISABEY, PH.D., AND ALAIN HARF, M.D.

Ne pas prescrire trop d'antibiotiques

CARING FOR THE
CRITICALLY ILL PATIENT

Comparison of 8 vs 15 Days of Antibiotic Therapy for Ventilator-Associated Pneumonia in Adults

A Randomized Trial

Jean Chastre, MD
Michel Wolff, MD
Jean-Yves Fagon, MD

Context The optimal duration of antimicrobial treatment for ventilator-associated pneumonia (VAP) is unknown. Shortening the length of treatment may help to contain the emergence of multiresistant bacteria in the intensive care unit (ICU).

Ne pas dialyser trop tôt

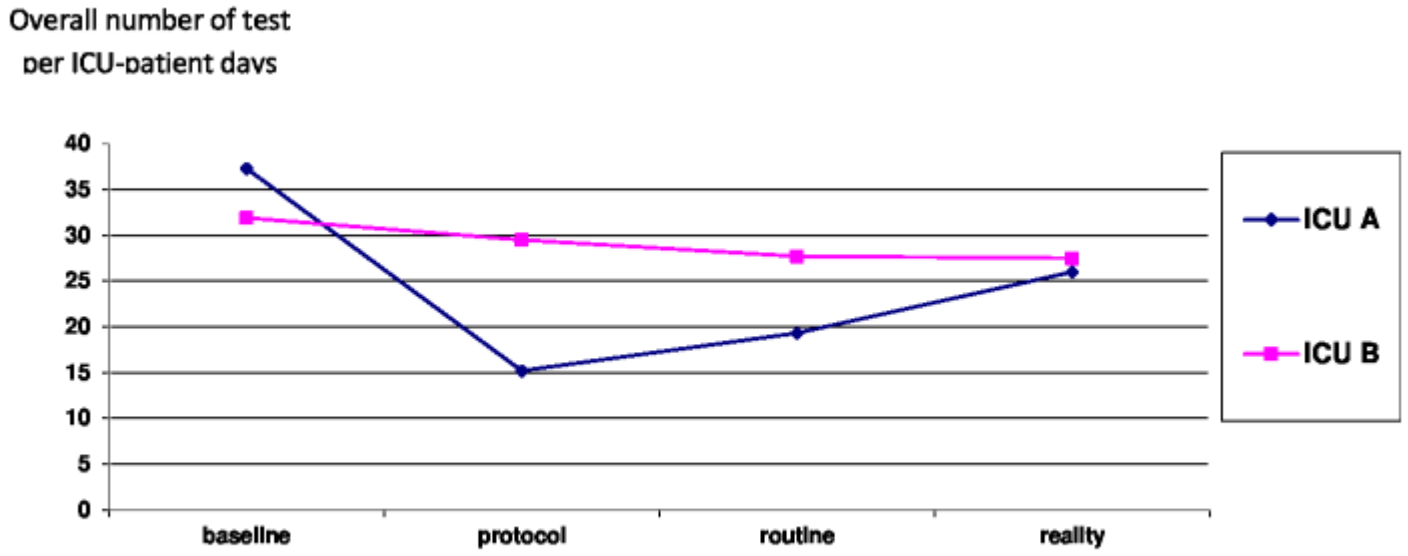
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Initiation Strategies for Renal-Replacement Therapy in the Intensive Care Unit

Stéphane Gaudry, M.D., David Hajage, M.D., Fréderique Schortgen, M.D., Laurent Martin-Lefevre, M.D., Bertrand Pons, M.D., Eric Boulet, M.D., Alexandre Boyer, M.D., Guillaume Chevrel, M.D., Nicolas Lerolle, M.D., Ph.D., Dorothée Carpentier, M.D., Nicolas de Prost, M.D., Ph.D., Alexandre Lautrette, M.D., Anne Bretagnol, M.D., Julien Mayaux, M.D., Saad Nseir, M.D., Ph.D., Bruno Megarbane, M.D., Ph.D., Marina Thirion, M.D., Jean-Marie Forel, M.D., Julien Maizel, M.D., Ph.D., Hodane Yonis, M.D., Philippe Markowicz, M.D., Guillaume Thiery, M.D., Florence Tubach, M.D., Ph.D., Jean-Damien Ricard, M.D., Ph.D., and Didier Dreyfuss, M.D., for the AKIKI Study Group*

Ne pas réaliser trop d'examens (biologique ou autre..)
etc…



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PERSPECTIVE

LESS IS MORE

Don't Just Do Something, Stand There!

Pranay Sinha, MD
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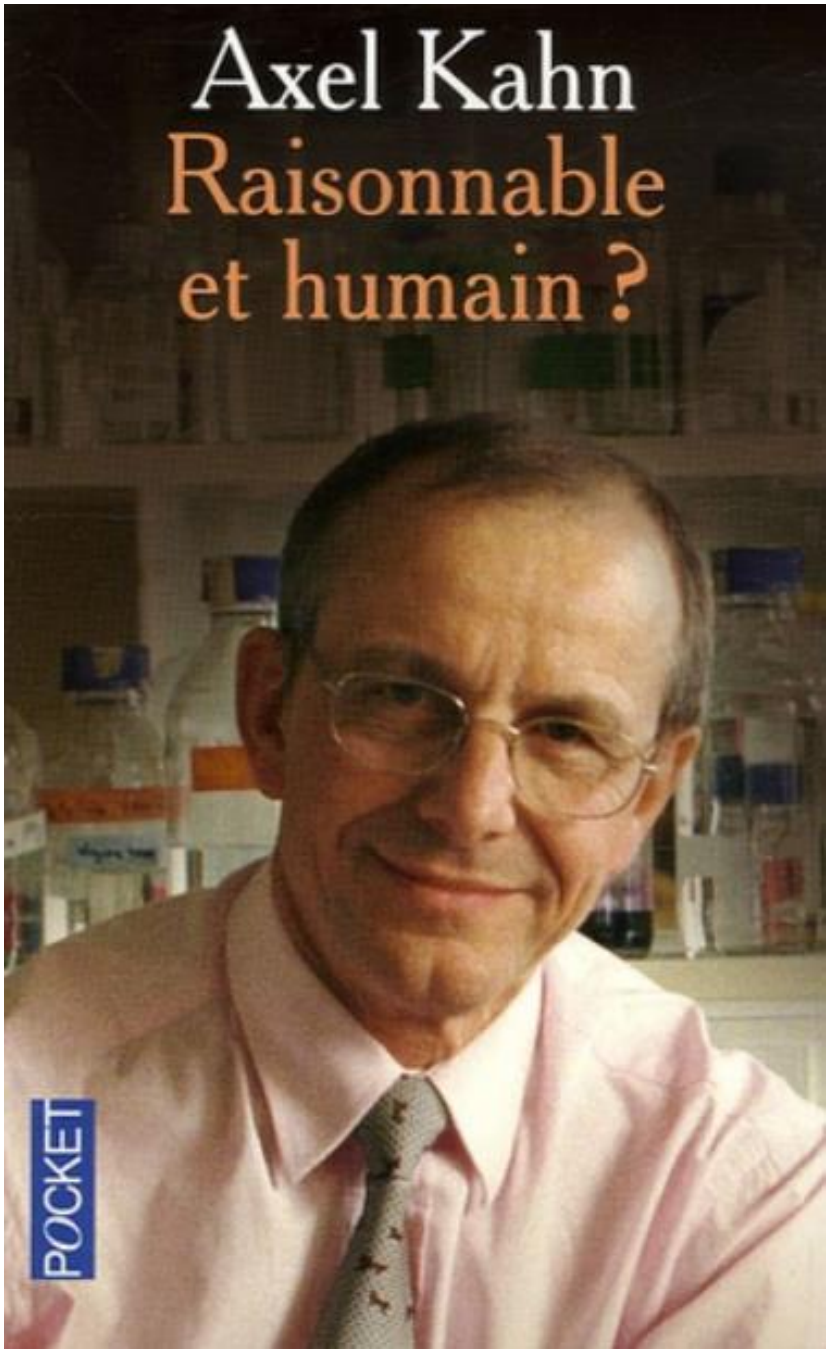
Penalty kicks in soccer can make fans crumple with anguish or weep with elation. The kicker sends the ball rocketing toward the goal and goalkeepers lunge acrobatically to stop it. Often the fate of the match hangs in the balance. Analyses suggest that goalkeepers may block

quently lunge in the wrong direction. Approximately 50% of positive blood culture results end up being false positives. This pattern of low yield and frequent false-positive test results is common across the United States. Misjudged dives often prove costly. Spurious cultures



Merci de votre attention