

39e CONGRÈS ANNUEL DE L'ADARPEF



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MONTPELLIER
Le Corum

Rôle de l'Anesthésiste-Réanimateur en Réanimation Pédiatrique et Néonatale

Fabrice MICHEL

Marseille – CHU Timone 2

Hôpitaux Universitaires de Marseille | ap hm

ADES | UMR 7268

Aix*Marseille université

Historique

Year	Institution/Location	Medical Director(s)	Director(s) Specialty [b]
1955	Children's Hospital, Goöteborg, Sweden	G. Haglund	Ped Anesth.
1961	St. Goran's Children's Hospital, Stockholm, Sweden	H Feychting	Ped Anesth.
1961	Great Ormond Street Children's Hospital, London, England	W. Glover	Ped Anesth.
1963	Hospital St. Vincent de Paul, Paris, France	J.B. Joly G. Huault	Neonatology Neonatology
1963	Royal Children's Hospital, Melbourne, Australia	I.H. McDonald J. Stocks	Ped Anesth. Ped Anesth.
1963	Adelaide Children's Hospital, Adelaide, Australia	T. Allen I. Stevens	Ped Anesth. Ped Anesth.
1964	Alden Hey Children's Hospital Liverpool, England	G.J. Rees	Ped Anesth.
1967	Children's Hospital of Philadelphia, Philadelphia, Pennsylvania	J.J. Downes	Ped Anesth.
1967	Children's Memorial Hospital, Chicago, Illinois	D. Allen F. Seleny J. Cox	Ped Anesth. Ped Anesth. Ped Anesth.
1968 [c]	Children's Hospital District of Columbia, Washington, DC [d]	C. Berlin	Ped.
1968	Children's Hospital Calvo Mackenna, Santiago de Chile	E. Bancalari	Ped.
1969	Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania	S. Kampschulte	Ped Anesth.
1969	Yale–New Haven Medical Center, New Haven, Connecticut	J. Gilman N. Talner	Ped Anesth. Ped Cardiol.
1970 [e]	Hospital for Sick Children, Toronto, Canada	A. Conn	Ped Anesth.

Pharmacologie des agents anesthésiques
Sédation
Gestion des voies aériennes
Ventilation mécanique
Hémodynamique ACR
Douleur
Accès veineux
Perfusion

Bloc opératoire

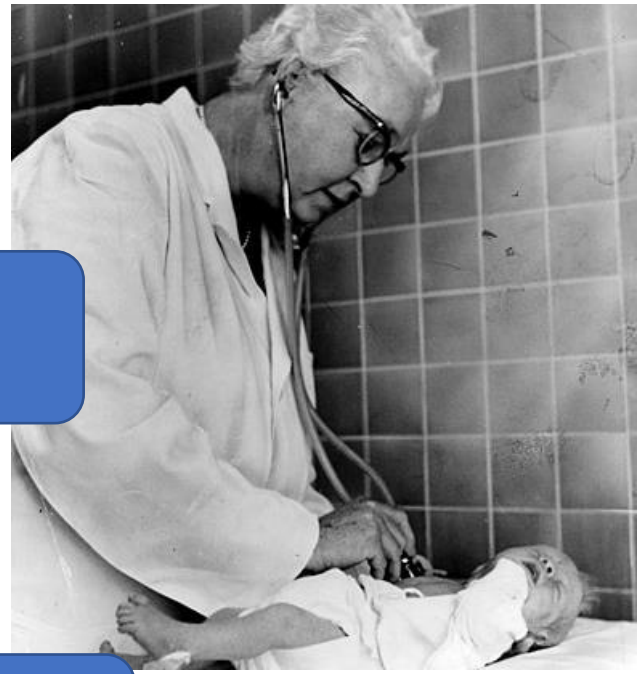
Réanimation Chirurgicale

Réanimation Néonatale

Réanimation Médicale

Réanimation Pédiatrique

Virginia Apgar

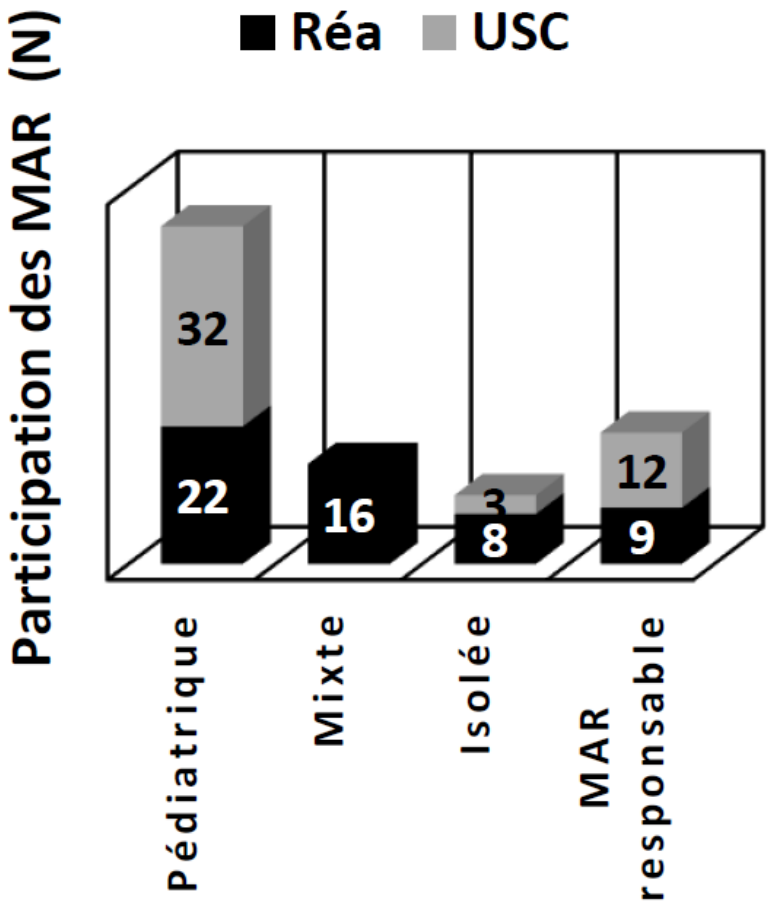


Implication des anesthésistes-réanimateurs en réanimation et surveillance continue pédiatrique.

Gilles Orliaguet[1], Claude Ecoffey[2] et Benoit Plaud[3] pour le bureau du CNEAR

[1] *Service d'Anesthésie-Réanimation pédiatrique et obstétricale (FRC) - Hôpital Necker,*
[2] *Département Anesthésie-Réanimation et Médecine Péri-Opératoire-CHU de Rennes,*
[3] *Service d'Anesthésie-Réanimation Chirurgicale-Hôpital Saint Louis.*

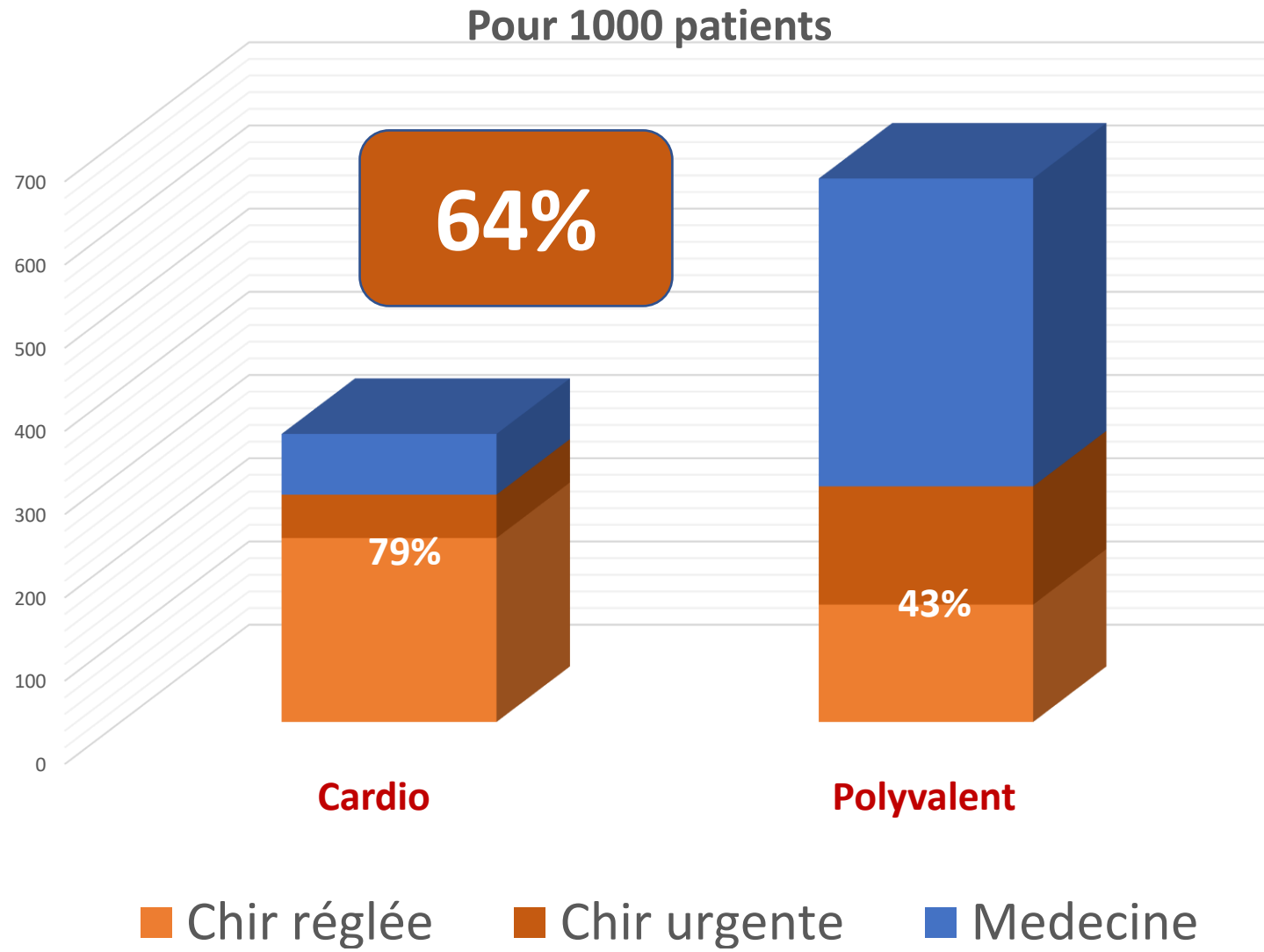
- 42 unités – Réa USC ou réa ou USC isolées
- Implication des AR dans 21 services/42
- Implication des AR dans la PDS dans 22 unités

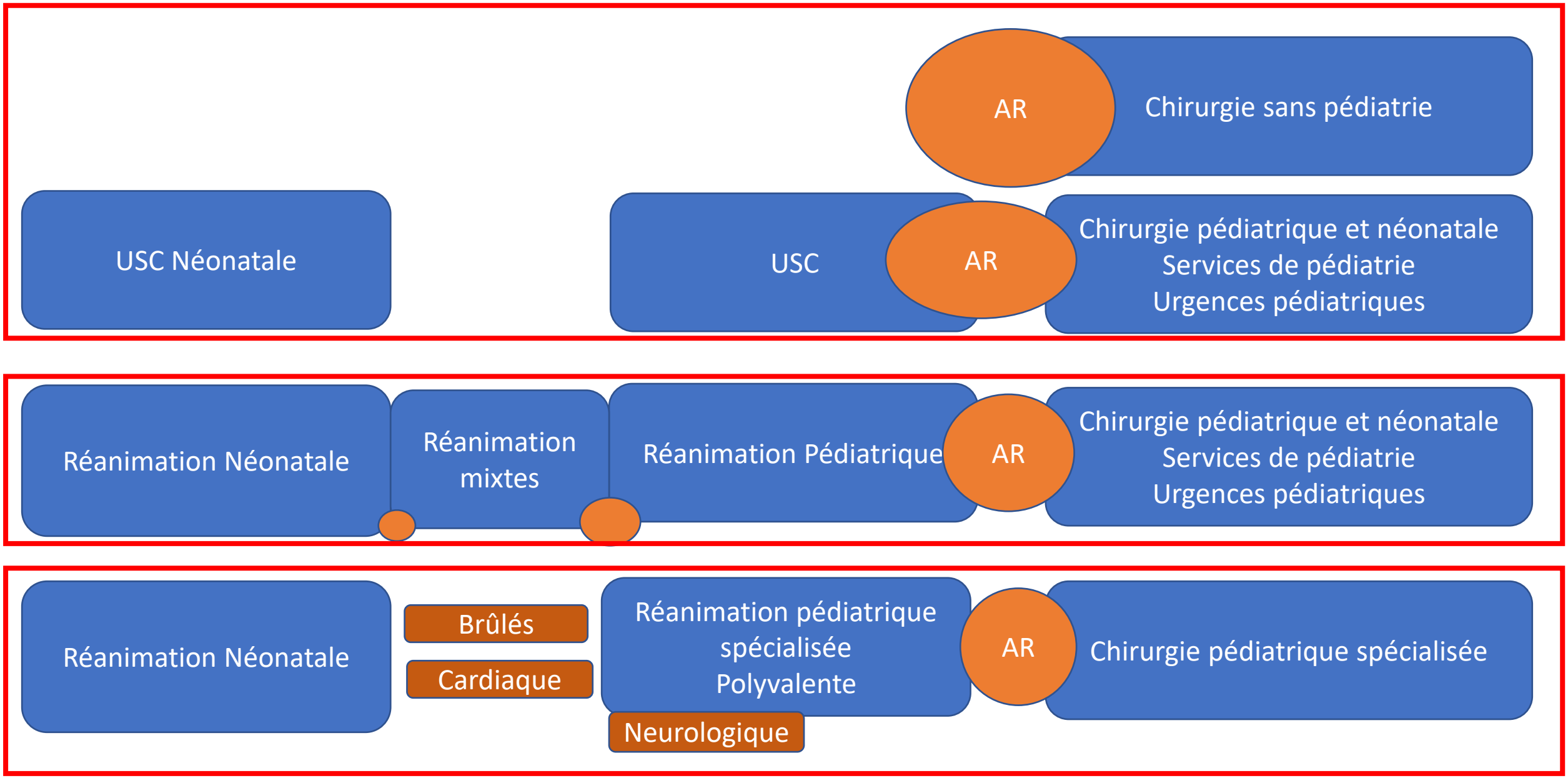


Activité 2019

- Chirurgie cardiaque

- Neurochirurgie
- Cranio-faciale
- Orthopédique
- ORL
- Chir néonatale
- Traumatologie
- Transplantations
- Brûlure
- Chirurgie thoracique
- Chir carcinologique




AR
Chirurgie sans pédiatrie
USC Néonatale
USC
AR
Chirurgie pédiatrique et néonatale
Services de pédiatrie
Urgences pédiatriques
Réanimation Néonatale
Réanimation mixtes
Réanimation Pédiatrique
AR
Chirurgie pédiatrique et néonatale
Services de pédiatrie
Urgences pédiatriques
Réanimation Néonatale
Brûlés
Cardiaque
Réanimation pédiatrique spécialisée
Polyvalente
Neurologique
AR
Chirurgie pédiatrique spécialisée

How did we get here? Is this situation salvageable, or are we like the woolly mammoth, on the road to, or already at the point of, extinction? And more significantly for the specialty, why is this concern important?



Anesthesiology began offering subspecial
5 fields: pediatrics; critical care; pain; sleep
palliative medicine. Pediatric critical care
a subspecialty of pediatric anesthesia, w
adult counterparts, from the practice of
the 1970s.[1,2] Initially modeled as an extensi
erative recovery room, early pediatric int
like adult surgical intensive care units,
anesthesiologists for surgical patients, an
to support patients with failing ventilatio
continuous vital sign monitoring.[2,3] The rc
ogists was logical and practical: they ran t
care units and were the recognized expert
intubation, airway management, and me
tion. Over time, these first pediatric int
increasingly cared for medical as well as
Consequently, the background and numb
staffing these units dramatically shifted. P
care unit attending physicians and leaders
atric critical care medicine became domi
certified pediatricians and pediatric subsp
today, as described in the current issue,[4] A
critical care anesthesiologists are an end
ing species, overshadowed in pediatric in
by pediatric subspecialists (cardiologists
How did we get here? Is this situation sa
we like the woolly mammoth, on the roac

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Reprints will not be available from the authors.

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investigative endeavors in medicine, biology, physiology, pharmacology, and quality and safety science. And yet, in our current paradigm of postgraduate medical education,

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LINARY CRITICAL CARE

ies of pediatric anesthesia, neonatology, pediatric general surgery have been and should continue collaborators with pediatric critical care medicine next century. Continuing interdisciplinary dia- tion, as well as clinical and research collaboration, the effectiveness of each of these subspecialties in hildren.[5]

adult intensive care units (ICUs) are staffed with heterogeneous residency backgrounds. ining, for example, is available to residents ackgrounds in anesthesiology, emergency logical surgery, obstetrics and gynecology, ery, otolaryngology, plastic surgery, surgery, vascular surgery, or urology.[4] Medical ICUs rast, usually house a more homogenous inten- ysicians with residency training in internal llowship training in pulmonary critical care ptions granted by respective program direc- ce with Accreditation Council for Graduate ion [ACGME].[5] In the United States, PICUs concurrent pediatric surgical and MICUs and homogenous mix of physicians with back- ral pediatrics, analogous to adult MICUs.

RITICAL CARE MEDICINE

gists were the first to transfer principles of infant hysiology and pharmacology from the operating l and the first to care for critically ill infants and the operating room.[6]

ns of Pediatric Critical Care Medicine articularly because the spectrum of pediat- lable varies greatly among institutions. For are approximately 422 PICUs in the United hat there are >5564 hospitals in the United ospitals have a PICU.[7] Thus, in the majority n are either cared for in adult units or trans- nstitutions that do house PICUs, branches are variably separated, including neonatal ediatric cardiac critical care, pediatric medi- and pediatric surgical critical care. With this variability in mind, our working definition of PCCM is an area of the hospital that specializes in the care of critically ill

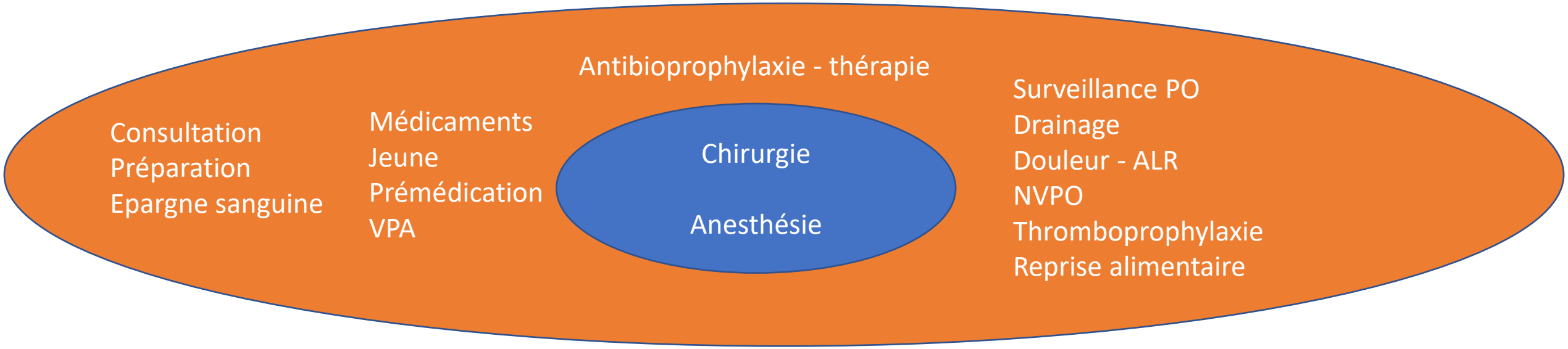
Que peuvent apporter les anesthésistes-réanimateurs aux soins critiques pédiatriques





25 mars 2022…

Anesthésie et médecine péri-opératoire



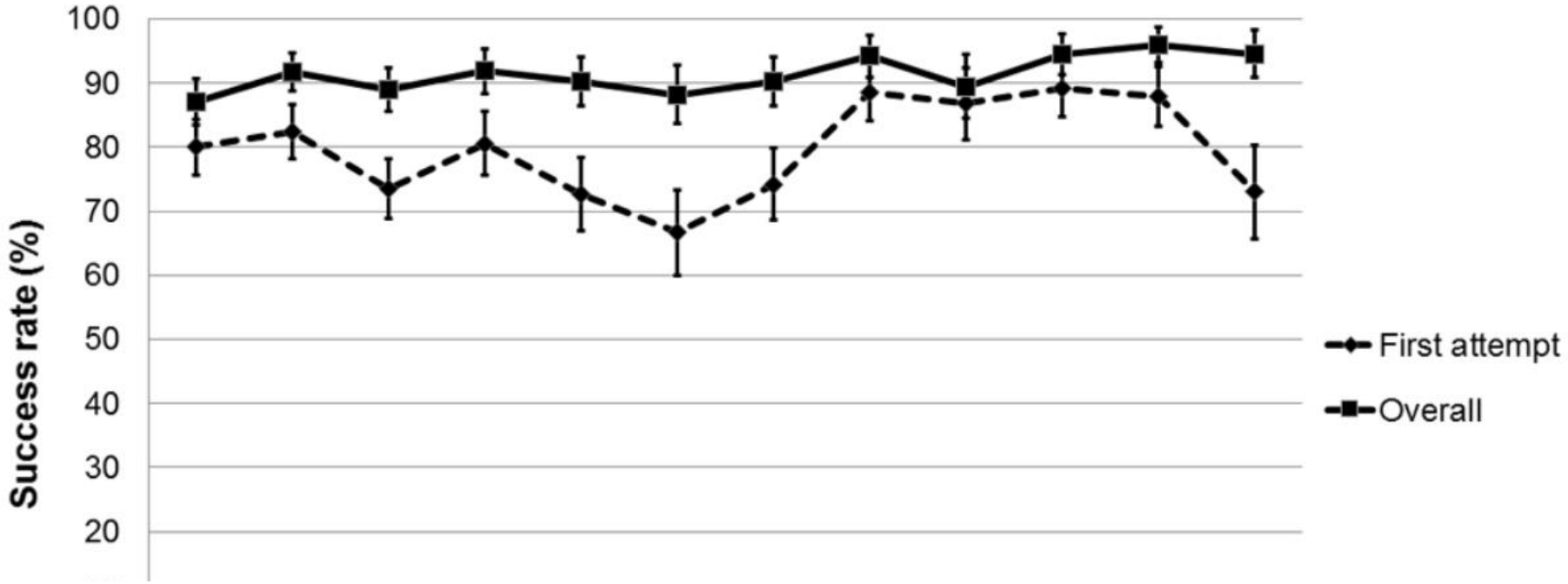
Formation DES AR

- Formation en réanimation adulte



- Sepsis
- Détresse respiratoire
- Ventilation
- Traumatologie
- Neuroréanimation
- Technique: intubation – accès veineux - drainage

Expertise gestion des voies aériennes



overall success after the median of 26 (range 19–54) courses. All 4 fellows (A, B, C and D) who completed 3-year fellowship during the study period had median of 42 TI courses (range 39–60) outside the Operating Suites, and achieved acceptable failure rate for 90% overall success after the median of 22 (range 19–40) courses.

Sédation - Anesthésie







- Au bloc opératoire
- Pour Imagerie
- En chambre de réanimation
- Pour l’accès veineux central

Réanimation en chirurgie spécialisée

- Chirurgie cardiaque
- Neurochirurgie
- Brûlure
- Chirurgie néonatale

Agents inhalés

Pediatric Anesthesia

Pediatric Anesthesia 2010 **20**: 712–719 doi:10.1111/j.1460-9592.2010.03334.x

Sevoflurane for central catheter placement in neonatal intensive care: a randomized trial

FABRICE MICHEL MD*†, RENAUD VIALET MD†, SOPHIE HASSID MD†, C
LAURENT TH
PIERRE LAGI
*Faculté de Médecine d
pédiatrique et néonatal

Pediatric Anesthesia 2007 **17**: 1053–1058 doi:10.1111/j.1460-9592.2007.02214.x

Randomized controlled trial of sevoflurane for intubation in neonates

SOPHIE HASSID MD, CLAIRE NICAISE MD, FABRICE MICHEL MD, RENAUD VIALET MD, LAURENT THOMACHOT MD, PIERRE LAGIER MD AND CLAUDE MARTIN MD

Département d'Anesthésie Réanimation, unité de Réanimation pédiatrique et néonatale CHU Nord, Chemin des Bourrely, Marseille, France

British Journal of Anaesthesia **111** (6): 967–70 (2013)
Advance Access publication 24 July 2013 · doi:10.1093/bja/aet257

BJA

PAEDIATRICS

Sevoflurane therapy for life-threatening asthma in children

D. Schutte[1*], A. M. Zwitserloot[2], R. Houmes[3], M. de Hoog[3], J. M. Draaisma[2] and J. Lemson[1]

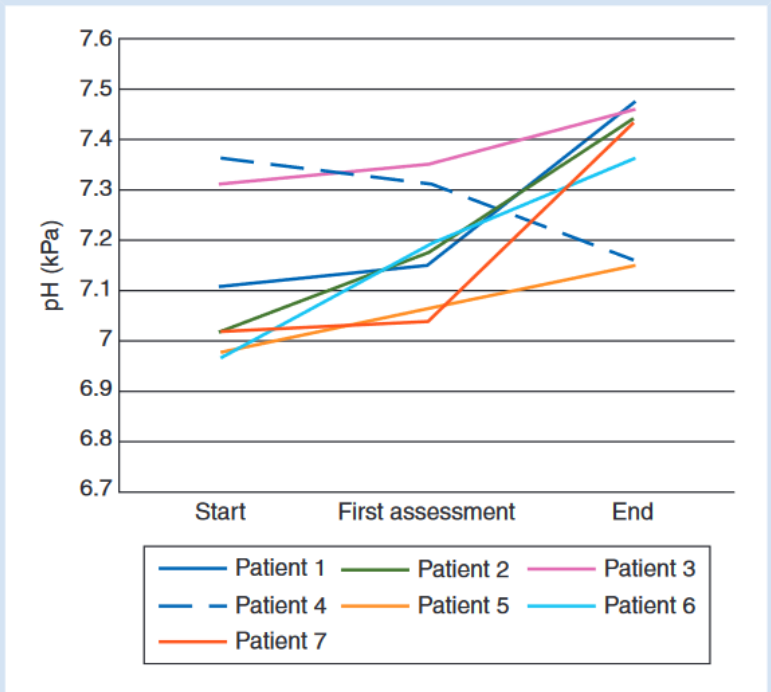


Fig 1 pH values per patient before, after a first assessment, and at the end of treatment with sevoflurane. The dashed line shows the patient who did not respond to sevoflurane therapy.

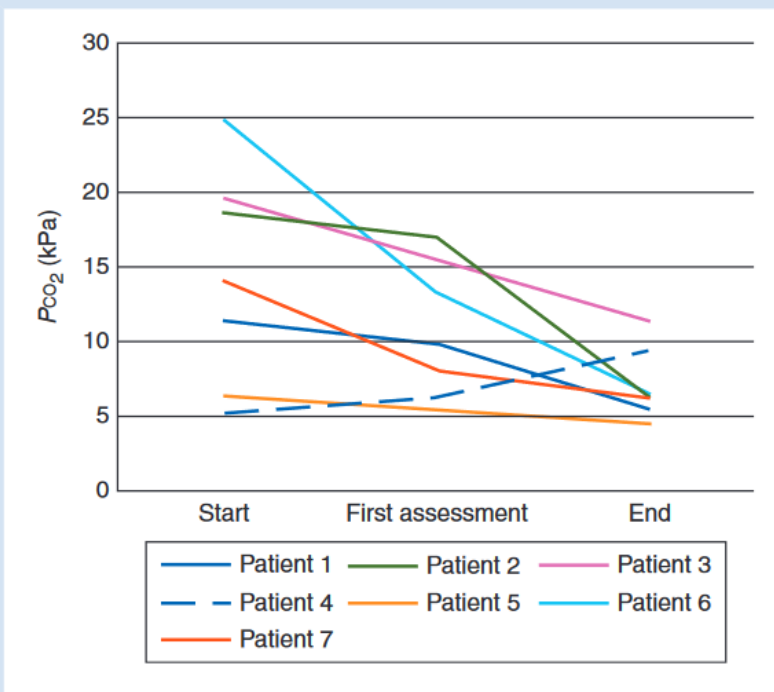
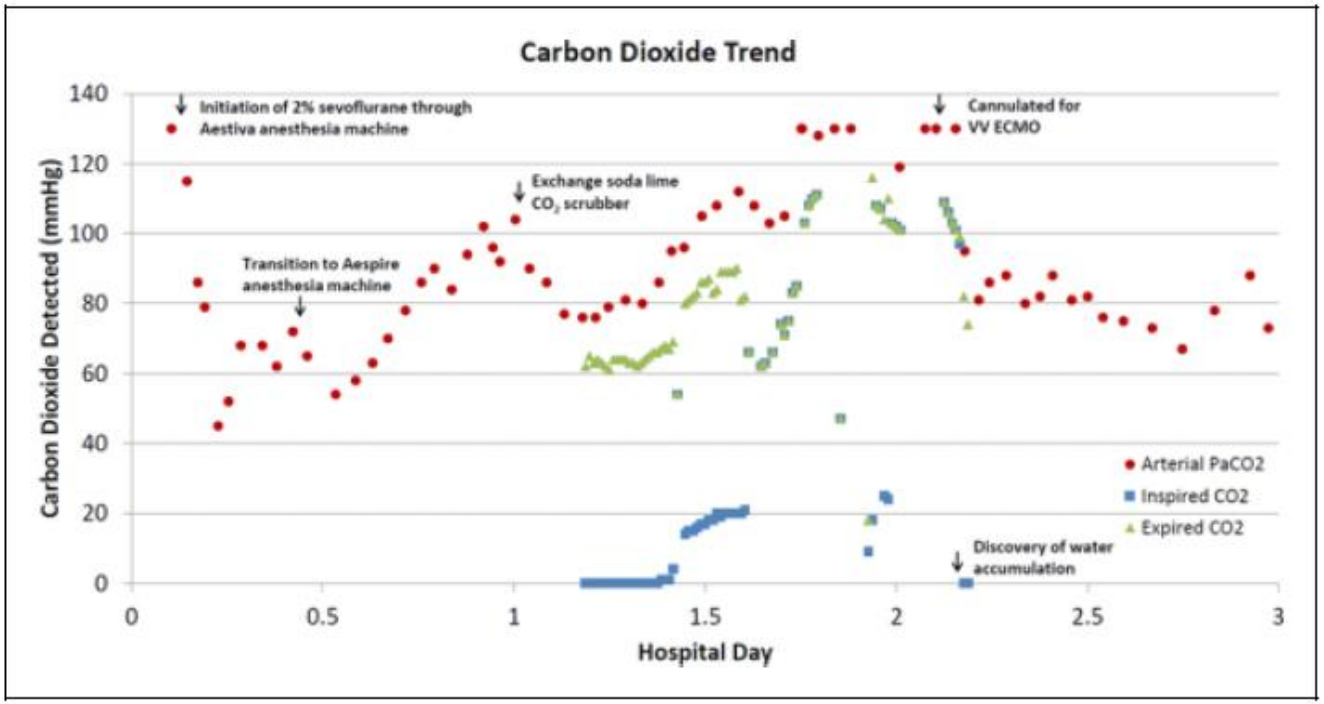


Fig 2 P_{CO_2} values per patient before, after a first assessment, and at the end of treatment with sevoflurane. The dashed line shows the patient who did not respond to sevoflurane therapy.

An Unusual Complication With the Administration of a Volatile Anesthetic Agent for Status Asthmaticus in the Pediatric Intensive Care Unit: Case Report and Review of the Literature

Journal of Intensive Care Medicine
2017, Vol. 32(6) 400-404
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SAGE

Brittany Shutes, MD[1]







Accepted: 17 June 2018

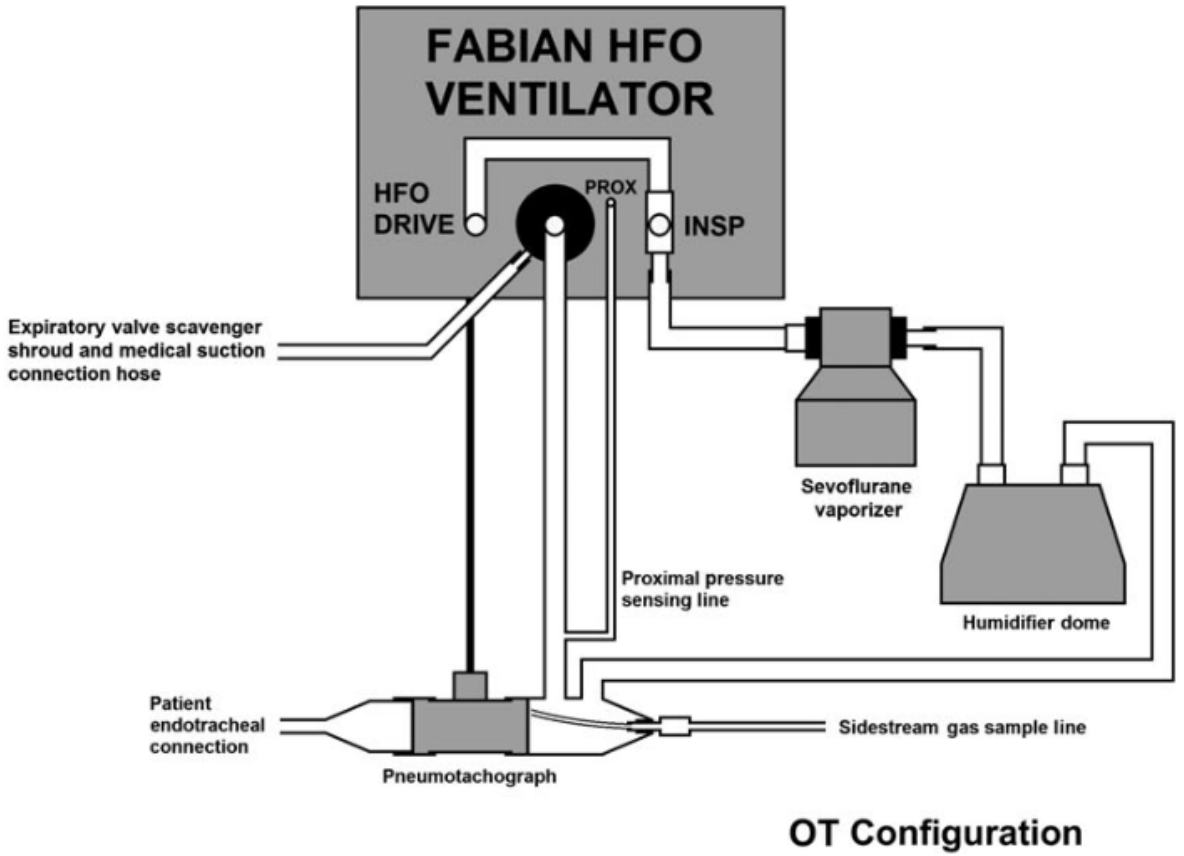
DOI: 10.1111/pan.13447

RESEARCH REPORT

WILEY Pediatric Anesthesia

Delivery of sevoflurane using a neonatal ventilator

Richard J Burstal | Steven J Threlfo



OT Configuration

EDITORIAL

WILEY Pediatr

MacGyver or Machiavellian approaches to delivery of sevoflurane in neonates

Lien avec le chirurgien

- Consultation d’anesthésie
- Préparation opératoire
- Mesure du risque
- Gestion des complications
- Information de la famille
- Implication dans les décisions



Ethique

- Décision péri-opératoires difficiles
    - Handicap
    - Chirurgie cardiaque néonatale
    - Oncologie
    - …

Transport préhospitalier

- Difficulté d’organisation
- Parfois rattachés aux réanimation
- Médecins polyvalents
- Permanence des soins

- **Une place pour les médecins anesthésistes**



Que peux apporter la réanimation pédiatrique à l'anesthésiste réanimateur?

Compétences en pédiatrie

Formation en réanimation pédiatrique – lien avec les pédiatres

- Maladies rares - génétique
- Alimentation – Nutrition
- Connaissance du devenir en réanimation
- Vision longitudinale de l’impact des décisions – qualité des soins
- Développer le lien avec les patients et les parents

Retrouver du sens

Technicien



Médecin

Travail d’équipe

Qualité de vie au travail

Satisfaction médecins patients

Propositions

- Stage de réanimation pédiatrique obligatoire pour les internes de pédiatrie
    - Permettre de découvrir le versant pédiatrique
- Accès à l'anesthésie pour les pédiatres qui s'orientent vers la réanimation – Et pourquoi pas après? Double DES?

Nouvelle donne de la formation initiale

- Phase socle
- Phase d'approfondissement
- Phase de consolidation

- Docteur junior

Anesthésie Réanimation

- **Option réanimation**
- **5 ans**

Pédiatrie

- **Option réanimation**
- **5+1 an**



Conclusion

- Activité chirurgicale importante
- Complexité des patients
- Compétences adaptées à la réanimation

- Amélioration de la prise en charge des patients
  - En réanimation
  - Au bloc opératoire

- ARMPO en pédiatrie aussi!