

End of life practice and perceptions among physicians and residents in Intensive Care Units managed by anesthesiologists: a French national survey

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Research article

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Abstract

Background In France, death after decision to withdrawal or withholding sustaining life therapies concerns about 10% of intensive care unit (ICU) patients. Clayes-Leonetti law published in 2016 intend to frame our medical exercise. The purpose of this study is to review the current practice concerning end of life (EOL) management in French ICU.

Methods Two national surveys were conduct, the first one consisted in 30 multiple choices questions about epidemiology, EOL decisions making, care organization and self-opinion sent by mail to senior physicians members of "Société Française d'Anesthésie Réanimation (SFAR)". Evaluation of practices on analgesia and sedation was conduct with two clinical cases. The second survey consisted in 24 multiples choices questions sent by mail to residents members of "SFAR jeunes".

Results Between October 2016 and October 2017, 695 physicians participated to the study. They majority work in a medico surgical unit in an University Center. Withholding and withdrawal life sustaining therapies decisions occur after collegial meeting (88%), a third doesn't report decision in medical record, 46% always include medical third in decision making and only a third of physicians collect anticipate directive. Majority of them continue support care on these patients. In half of cases they haven't sedation and analgesia protocol. Only 5% of physicians are completely satisfied of EOL care, where a better pain monitoring support is expected.

Conclusion Heterogeneity for EOL management is important between physicians, we need to improve care and set up protocols to help physicians particularly concerning analgesia and sedation. Trial registration NA

Background

End of life (EOL) management is a daily practice in intensive care units (ICU). In a recent worldwide audit of ICUs 13% of 9 524 included patients had a decision to withhold or withdraw life-sustaining treatment (1). Among 50% of death occurring in ICU, are secondary to a decision of withholding or withdrawal (WW) life support because of futility (2). Several ways to manage end of delivery sustaining therapies, have been described (3,4). EOL care practices are greatly influenced by cultural, organizational, and religious differences (5) and make it often complex, result in increased health-care economics and stress the health-care system (6). Caregivers are directly impacted by such decision and EOL is a well-known risk factor identified for burn out (7) (8,9). In France, legislation of this practice evolved during the last decade. The Leonetti law (10), published in 2005, defined for the first time the way to conduct decisions for the limitation of care. This one was enriched and intended to frame our medical exercise in 2016 (11). Deep and continuous sedation is now allowed in terminally ill patients, including patients in a vegetative state. However, the way to conduct this one is not well defined and could be a potential source of difficulties for healthcare intensivists and nurses. Moreover the end for supportive care such as hydratation, airway management or nutrition is also debated.

A recent report from the task force of World Federation of Societies of Intensive and Critical Care Medicine encourages Societies to debate about end of life cares in ICU and to take a leading role in developing guidelines in each country (12). The first step is so a real need for an undertake review of the attitudes and beliefs of healthcare and caregivers in French ICUs. The purpose of this study is to review the current practice concerning EOL management in French ICUs.

Methods

Two surveys were conducted on EOL practice in French ICUs between October 2016 and October 2017, by the way of a numeric survey file sent by mail twice during the period to anesthesiologists, intensivists, members of the "Société Française d'Anesthésie Réanimation" (SFAR), and to residents (Rdt) using mailing of the "SFAR Jeunes". The numeric survey consisted in 30 questions for the senior intensivists and 24 questions for Rdt with multiple choices divided in 4 sections: 1) epidemiology, 2) WW decision making, 3) care organization (section not present on Rdt survey) and 4) self opinion. Because of the complexity of situations, 2 case reports were submitted to participant to illustrate (Annexe). The answers were automatically online collected on Excel® software (Microsoft, Santa Rosa, CA). The results were expressed in absolute values (percentage) and mean \pm SD as appropriate.

Ethics approval and consent to participate: We stated with our local committee (Comité de Protection des Personnes Sud Méditerranée V) that this survey, needed no approval by an ethic committee.

Results

1) Epidemiology (Table 1: Demographic characteristics)

From October 2016 to October 2017, 3500 doctors and 2250 Rdt were contacted, 574 physicians (Ph.) (16%) and 121 Rdt participated in the study (5%). The population was constituted by 61,2% of men (425/695) and 38,8% of women (270/695). The experience lasted less than 5 years (including juniors), in 40,3% of cases (n = 279/692) between 5 and 15 years for 26,6% of them (184/692) and more than 15 years for 33,1% of them (229/692). The exercise was localized in medico surgical unit for 57,9% (372/636), surgical unit for 33,8% (217/636); and in a medical unit for 8,3% (53/636). University institution represents 60,5% (385/636), and 42,4% (270/637) took care over 15 beds units.

2) Withholding and withdrawal decision making (Fig. 1)

Decision for care limitation occurred one to two times monthly for 40%. Thirty four percent of responders declared to always collect anticipated directive and 29% never. The decision was initiated after a formalized collective meeting for 88% and reported in medical files using standardized sheet in 66,7%. Twelve percent never associated an external medical participant for decision making as legally proposed, 42% sometimes and 46% always. Physicians declared that family or the trusted person was associated to decision for 70%. Concerning Rdt, and their presence in EOL decisions 49,6% declare to always participate to decisions, 47,1% sometimes and 3,3% never.

3) Care organization for EOL (Fig. 2)

This field was only analyzed with senior intensivists. Fifty five percent of responders declared to discontinue ventilation support and 41% realized extubation after decision making. In case of dyspnea on conscious patients, no ventilation support was decided for 86% of responders, and deep sedation introduction reported for 97% in this case. Life support, as hydration or nutritional support was maintained differently according to the neurological state of patients. Hydration and nutritional support were continued in respectively 80% and 41% of Ph. for unconscious patients, whereas nearly 80% continued to feed patients and 90% continued to hydrate in conscious ones.

A continuous sedation support, is used for 94%, associating sedation and analgesia. A third of Ph. declare sedation and analgesic control is managed without using sedative scales as traditionally used for ICU patients and a half of Ph. declare not having sedation and analgesia protocol. The optimal sedation is monitored clinically according to nurse perception (88%) and family report (69%). Vegetative reflexes as tachycardia, or variation of blood pressure are monitored in 78%. Monitoring support as Bispectral index (BIS) is used in 6%.

4) Self-opinion and perception EOL (Fig. 3, Fig. 4)

Only 5% of Ph. responders and 7% of Rdt responders were completely satisfied with the organization of care withdrawal, particularly in analgesic monitoring during this timing. Fifty seven percent of Rdt have the feeling to precipitate patient's death, 58% of them and 50% of doctors would support the use of monitoring (BIS,...) for these patients. Only 12% of Ph. and Rdt would not change their practices according to supplementary monitoring way. Sixty-three percent of Ph. responders and 81% of Rdt didn't report a psychologist support during this period and emphasize the potential help.

Discussion

In France, the Leonetti law, first law on EOL management, was published in 2005 (13). According this legal text, medical care, whose only purpose would be the prolonged artificial maintenance of life, could be stopped to offer a dignified EOL for patients with no medical issue. Physicians could administrate treatment to relieve pain in terminal care patients even if a secondary effect of this one was to shorten life and had to inform and state in medical record on this eventuality. As for unconsciousness, decision had to be taken after collegial meeting, associating all care givers (Ph., nurse) and if available an external opinion. The Leonetti law introduced also trusted persons concept who was named by the patient, and the notion of advances directives. This law was, recently, enriched and intended to frame our medical exercise accurately concerning the way to relieve patients. In February 2016, the Claeys-Leonetti law was published authorizing deep and continue sedation with analgesia until death after collegial briefing (14). This new law reinforced also the important part of advances directives, and the place of trusted person, if the patient is unconscious. It clearly mentioned the possibility to stop artificial feeding and hydration in case of deep sedation. The French Ethic National Committee auditioned SFAR, about WW life sustaining therapy in France in April 2018 and they recommended to evaluate the Claeys-Leonetti law impact

because of a large practical heterogeneity between Ph. (15). Our study is the first step in this way, owing to have an evaluation of EOL in our French ICU. The need for this approach has been already realized in other countries.

For example in 2017, a German study was published about clinical practices, limits and opinions about EOL decisions (16). The survey consisted in 59 questions to German anesthesiologists, the goal was to analyze points how to improve EOL management. Seventeen thousand forty four anesthesiologists were contacted, 821 anesthesiologists (4,8% participation rate) participated to this survey, 541 results were analyzed and showed that many points could be improved: encourage writing of advances directives, organize more ethics meetings into the ICU and highlights absence of nurses education to EOL care, absence of support to families and mostly absence of standard procedures for EOL management. Other survey also evaluate the practice in Italian ICUs (17). The survey consisted in 29 questions for Italian intensivists. Physicians declared that WW life sustaining treatments decisions result from consensus only in 58% of them against 81% reported in our study. Compared to our data, the lack for sedation protocol and management for life support (hydratation and nutritional stop) was also quite important respectively 20% and 4%. We reported, the first French survey conducted on EOL management which took into account a large number of medical caregivers. Indeed, the rate of responder is significantly higher than the two previous European studies (16%), moreover it probably underestimates the real number of intensivists really involved in the problem because the survey was sent to all the French anesthesiologists even if they didn't conduct any intensive care activity.

We expressed a large number of practices concerning every field of EOL care: decisions making, advance directive, presence of psychologist support for families or caregivers, comfort care such as pursuit of feeding, hydratation or mechanical ventilation, terminal sedation, service protocol use and monitoring. The mean result for all procedures is the large practical heterogeneity between French caregivers in front of EOL. Caregivers are not globally satisfied with the way to conduct EOL. Explanation could be by the lack of protocol for management. Half of Rdt feel they precipitate death; fifty percent of Ph. declare the need to supplementary monitoring way for helping management. This displeasure on EOL management is essential to understand because it can have a negative impact, it could be a source of conflict between caregivers or between medical and paramedical teams and could improve burn out risks. Rdt feels mostly uncomfortable with EOL management, so several measures can be taken to improve their practices: they should be systematically associated with seniors during meeting decisions, information to family and could benefit of training with simulation cases to improve their attitude towards families, sedation management and comfort care. This situation deserves to be teaching such as any other intensive care situations. We could then expect the homogenization of practice, according to guidelines support, could be potentially beneficial in this way. The instauration of standardize protocol for EOL care including sedation protocol, airway management, hydratation and feeding pursuit may improve patient's care, team satisfaction and could also facilitate family information. Moreover, 63% of Ph. declare not having daily psychologist presence to help them, paramedical team or family in case of needed situation. This psychologist support, associated to free access to ICU and implication of family members in EOL care

such as comfort care could improve acceptance of EOL process, caregivers feeling and relationship between caregivers and family.

Our study was conducted from October 2016 to October 2017, only a few months after the publication of the Claeys-Leonetti law. However only 88% of Ph. reported a stop in life sustaining therapy after collective meeting. Moreover only 66% noticed decision in medical sheet and only 34% of them tried to collect advance directive whereas these measures were proposed since 2006. This non accordance with the law could be explained probably by different ways however the cultural negative vision of death for caregivers could be a potential explanation. Forty two percent always associate medical third in discussion as legally which means that majority of intensivists never do or not systematically. Legally medical third is a doctor outside the unit who does not know the patient. During collective meeting patient medical history is exposed to this one to give an objective opinion concerning EOL decision. Medical third opinion is an important point in EOL decision but as reported, his presence is not systematic probably secondary to organization difficulties.

As all surveys, our study get some limitations. Firstly, it's a declarative study, some data are lacking because of incomplete data, 71% of Ph. answer the entire survey. Even with a large number of answers, we could expect that only care givers concerned by this problem answered the survey and it could be a potential bias for analysis. We conducted this survey only during a few months after the new law publication, and we could not have an idea on the knowledge and practice of participant for this one. It would also be interesting to conduct a new practical evaluation several months after law publication. Endly, we reported in this study the medical doctor vision of EOL, but it will be of interest to have the opinion of other care givers particularly nurse particularly who are directly impacted by this care.

Conclusion

Heterogeneity for EOL management is important, the present survey underlines need for improving EOL care in French ICU in several fields: psychologist support, professional training, decisions making, sedation protocol and monitoring. The lack of guidelines is associated with a discomfort for EOL management in caregivers. Our French intensive societies have an important role to help caregivers to improve management in this particular setting of EOL.

Abbreviations

EOL
End of life
ICU
intensive care unit
WW
withholding or withdrawal
Rdt

residents
Ph.
physicians
BIS
Bispectral index

Declarations

Ethics approval and consent to participate

We stated with our local committee (Comité de Protection des Personnes Sud Méditerranée V) that this survey needed no approval by ethic committee and no written consent by participants.

Consent for publication

Not applicable

Competing interests

No competing interests to declare

Funding

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Authors' contributions

GJ conducted the study, HQ concepted and conducted the survey, analyzed the results and wrote the manuscript, CI read and correct the manuscript. All authors have read and approved the manuscript

Availability of data and materials

Not applicable

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References

1. Lobo SM, De Simoni FHB, Jakob SM, Estella A, Vadi S, Bluethgen A, et al. Decision-Making on Withholding or Withdrawing Life Support in the ICU: A Worldwide Perspective. *Chest*. 2017;152(2):321-9.

2. Orban J-C, Walrave Y, Mongardon N, Allaouchiche B, Argaud L, Aubrun F, et al. Causes and Characteristics of Death in Intensive Care Units: A Prospective Multicenter Study. *Anesthesiology*. 2017;126(5):882-9.
3. Coombs MA, Addington-Hall J, Long-Suthehall T. Challenges in transition from intervention to end of life care in intensive care: a qualitative study. *Int J Nurs Stud*. mai 2012;49(5):519-27.
4. Wunsch H, Harrison DA, Harvey S, Rowan K. End-of-life decisions: a cohort study of the withdrawal of all active treatment in intensive care units in the United Kingdom. *Intensive Care Med*. juin 2005;31(6):823-31.
5. Wong W-T, Phua J, Joynt GM. Worldwide end-of-life practice for patients in ICUs: *Curr Opin Anaesthesiol*. janv 2018;1.
6. Hartog CS, Reinhart K. Staff and family response to end-of-life care in the ICU. *Curr Opin Anaesthesiol*. avr 2018;31(2):195-200.
7. Embriaco N, Papazian L, Kentish-Barnes N, Pochard F, Azoulay E. Burnout syndrome among critical care healthcare workers: *Curr Opin Crit Care*. oct 2007;13(5):482-8.
8. Moss M, Good VS, Gozal D, Kleinpell R, Sessler CN. An Official Critical Care Societies Collaborative Statement-Burnout Syndrome in Critical Care Health-care Professionals: A Call for Action. *Chest*. 2016;150(1):17-26.
9. Poncet MC, Toullic P, Papazian L, Kentish-Barnes N, Timsit J-F, Pochard F, et al. Burnout syndrome in critical care nursing staff. *Am J Respir Crit Care Med*. 1 avr 2007;175(7):698-704.

10. Malaquin-Pavan E. [Leonetti Law, care and end of life. Rights, liberties and end of life]. Soins Rev Ref Infirm. sept 2006;(708):27.
11. Rousset G. [End of life, the recommendations of the Claeys-Leonetti report]. Soins Rev Ref Infirm. févr 2015;(792):5.
12. Myburgh J, Abillama F, Chiumello D, Dobb G, Jacobe S, Kleinpell R, et al. End-of-life care in the intensive care unit: Report from the Task Force of World Federation of Societies of Intensive and Critical Care Medicine. J Crit Care. août 2016;34:125-30.
13. LOI n° 2005-370 du 22 avril 2005 relative aux droits des malades et à la fin de vie
14. LOI n° 2016-87 du 2 février 2016 créant de nouveaux droits en faveur des malades et des personnes en fin de vie. 2016-87 févr 2, 2016.
15. Avis du Comité Ethique - La SFAR. Société Française d'Anesthésie et de Réanimation.
16. Weiss M, Michalsen A, Toenjes A, Porzsolt F, Bein T, Theisen M, et al. End-of-life perceptions among physicians in intensive care units managed by anesthesiologists in Germany: a survey about structure, current implementation and deficits. BMC Anesthesiol. 11 2017;17(1):93.
17. Cortegiani A, Russotto V, Raineri SM, Gregoretti C, Giarratano A, Mercadante S. Attitudes towards end-of-life issues in intensive care unit among Italian anesthesiologists: a nation-wide survey. Support Care Cancer Off J Multinatl Assoc Support Care Cancer. juin 2018;26(6):1773-80.

Table

Due to technical limitations, table 1 is only available as a download in the supplemental files section.

Figures

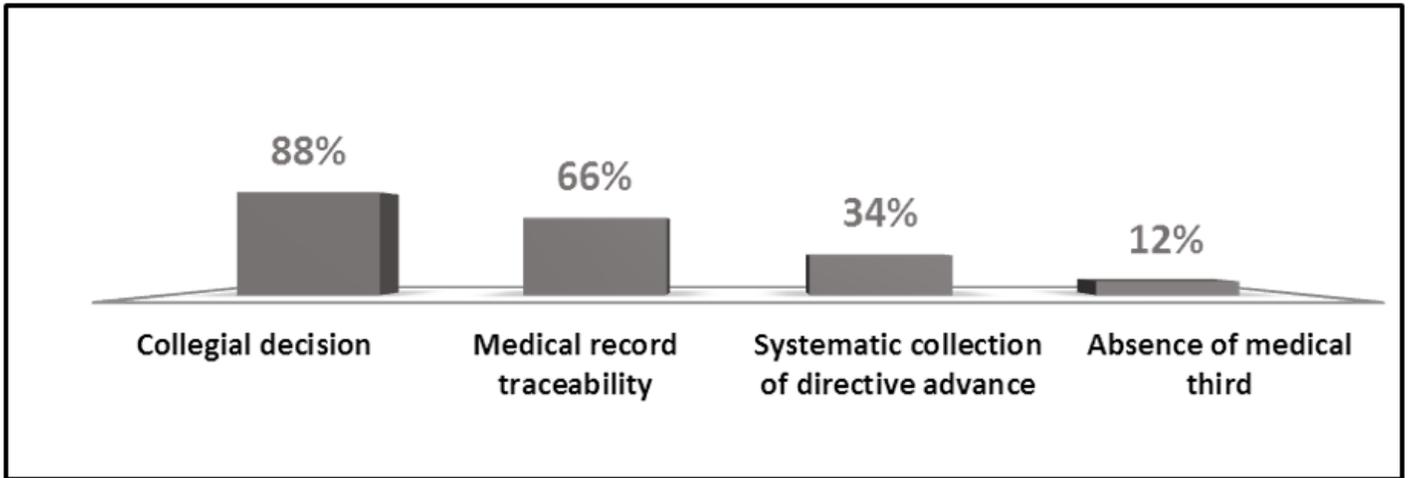


Figure 1

Withholding and withdrawal decision making.

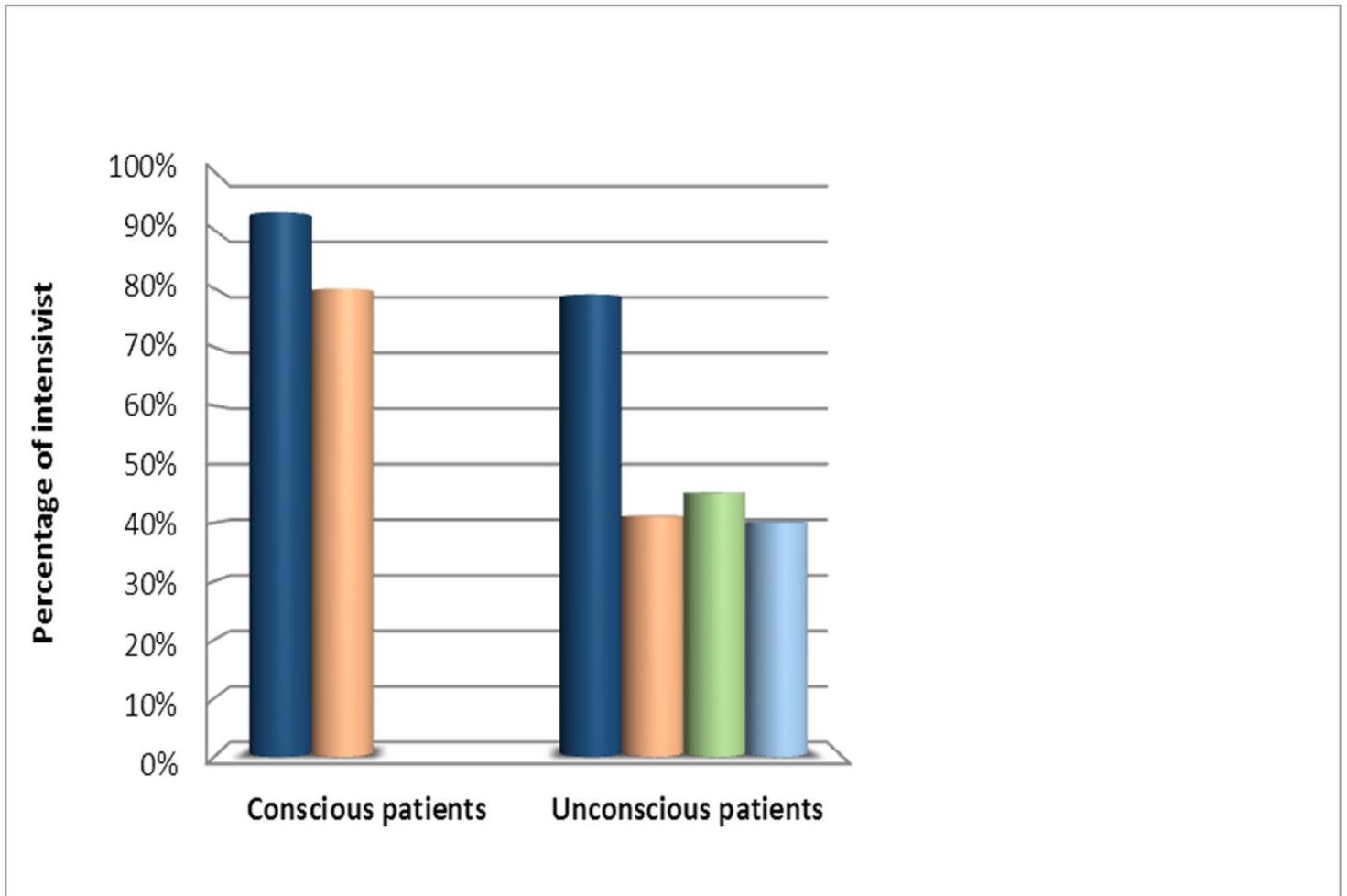


Figure 2

Withholding and withdrawal care practice (Dark blue column: hydration support; pink column: feeding support; green column: ventilatory support; light blue column: extubation)

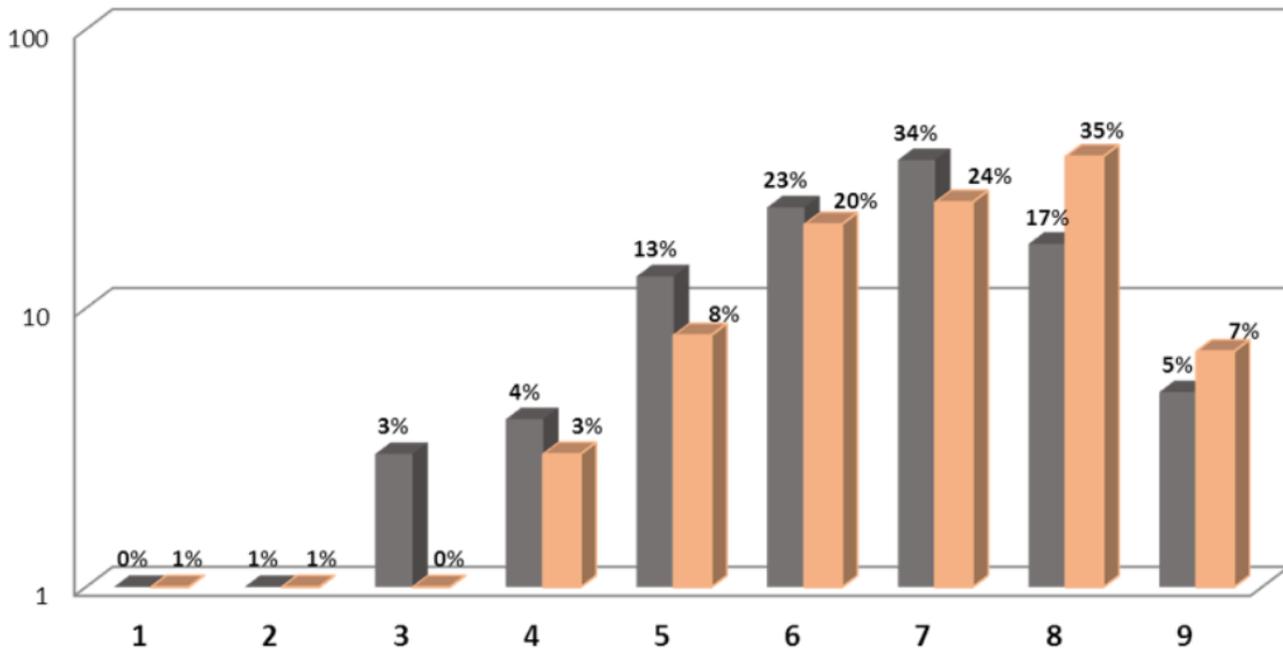


Figure 3

Evaluation of self-satisfaction scale about comfort care management in EOL care from 1: “totally unsatisfied” to 9: “totally satisfied” (Grey column: physician, pink column: resident)

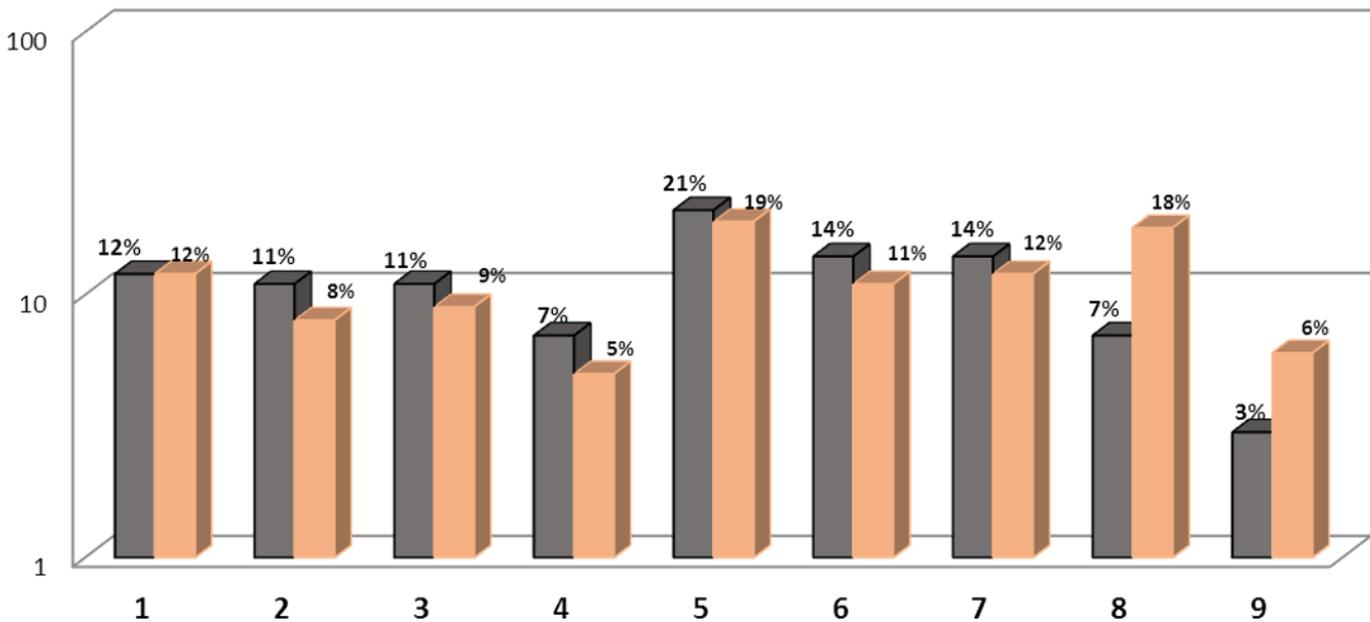


Figure 4

Scale of practices modifications according to supplementary monitoring way from 1: “no modification at all” to 9 “total modification” (Grey column: physician, pink column: resident)

Supplementary Files

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- [Table1.ppt](#)
- [Supplementarydata.doc](#)