

General Practitioner Residents and Patients End-of Life: Involvement and Consequences

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Abstract

The ageing of the population and the increased number of chronic diseases are associated with an increased frequency of end of life care in hospital settings. Residents rotating in hospital wards play a major part in their care, regardless of their specialty. General practitioner (GP) residents are confronted to such activities in hospital settings during their training.

Our aim was to know how they feel about this kind of work, very different from the one they are training to do.

Method

We surveyed all GP trainees of "Ile de France". The survey was made of 41 questions regarding advanced directives divided in 7 sections about patients' care, communication, mentoring and repercussion on personal life. The survey was done one time, during two pre-specified days.

Results:

525 residents (53.8%) accepted to fulfill the survey. 74.1% of the residents thought that palliative care could have been better. Possible ways of improvements were unreasonable obstinacy (59.6%), patient's (210 answers, 40%) relative's communication (199 answers 37.9%). Residents also reported a lack of knowledge regarding end-of-life care specific treatments (411 answers, 79.3%) and 298 (47.2%) wished for better mentoring. Those difficulties were associated with repercussion on their private life (353 answers, 67.2%), particularly with their close relatives (55.4%). Finally, 56.2% of trainees thought that a systematic psychological follow up should be instituted for those working in "at risk" hospital settings.

Conclusion:

Self-perception management of dying patients by MG resident emphasize their lack of training and supervision. The feeling of suboptimal care is associated with consequences on personal life.

Background

The aging of the population and scientific improvement have led to the increase of chronic conditions (1, 2) and with them the risk of death due to these progressive physiological alterations (3). In the US, 70% of death are due to chronic illness(4). In France, two third of deaths are due to chronic illness and "could require end-of-life care" (5).

Most death, in particular those of patients who have chronic illnesses or require end-of-life care, take place in hospital settings (6–8). In most case, end of life care is provided in department that are not specialized in palliative care (9).

In this situation, care is not limited to pharmaceutical prescription but also includes delivering bad news such as a serious disease or a bad prognosis, and managing relatives before and after death. This kind of care, because of the exposition to physical and psychological distress, in particular in serious situations, is associated with a risk of psychological complications amongst caregivers (10) but also senior physicians (11–14). Having to take part in decisions of therapeutics' withdrawal or withholding is associated with a greater risk (15–17).

In a vast number of department, prescriptions are made by residents and controlled by senior physicians. Although youth and inexperience are known factors for psychological distress (14), most of the work looking at psychological

complications of the care for in hospital dying patients has been done with experienced physician in department often confronted to end of life care such as in oncology, hospice and trauma departments (14).

The aim of our work is to evaluate the psychological impact of end of life care in the GP residents' population who is young and who is training for family medicine rather than the care of dying patients.

Methods

Survey

The survey was designed by the REQUIEM group members and built according to professional guidelines (18,19). It was made of 41 questions divided in two major sections (additional file 1: survey): knowledge regarding the French law on end of life care ((2016-87- February 2nd, 2016; Claeys-Leonetti's law) and end of life care management during their last rotation (6 months). The second section was divided in seven subsections looking at : participation in therapeutic withdrawal decisions, implementation of palliative care decision by the whole medical team, management of patients' end of life care by the resident, repercussions of end-of-life care on the residents' personal life, quality of resident's supervision for end-of-life care patients, resident's training regarding end-of-life care and professional goals.

The survey was anonymous. Participation to the survey was orally offered to all general practitioners (GP) residents ("internes de médecine générale") during a mandatory interview between March 29th and April 5th 2016. The survey was filled out on a voluntary basis. Residents who did not want to participate to the study only needed to give back the survey unfilled to the investigator (VH).

Population

In France medical training is separated in two periods: six years of general formation ("externat") followed by 3 to 6 years of residency depending on the specialty ("internat"). For general practitioners, residency last 3 years. In those three years GP residents complete six 6-month rotations either in hospital wards or in GP's practice.

We surveyed all GP residents training in Paris and its suburbs (Ile de France). The survey was looking at their last rotation, in any hospital ward. They were all met during a specific and mandatory gathering (administrative meeting to choose their next rotation) by the first author (VH).

Ethics

The questionnaire was anonymous and filled out on a voluntary basis. Residents who declined to answer had to make it clear by handing out a blank survey to the investigator (VH). Empty surveys were collected to determine the number of participants involved.

According to French legislation this survey was a non-interventional study and therefore did not require submission to an ethics committee per say. The survey was however approved by our hospital ethics board (*Groupe Ethique & Recherche Medicale*, IRB n° 00012157) who did not request any change and gave us their agreement. We did not need to obtain formal consent from the respondents. A filled-out survey was considered as non-opposition to the study. Participants were informed that the data obtained would be anonymously analyzed and published in a scientific journal.

Statistical analysis

Data were expressed as mean and standard deviations or, if appropriate, median and confidence intervals as a function of response disparity.

Comparison of variables was analyzed by an exact Fisher test or Chi2. Differences were considered as statistically significant for a p value of less than 5 %. Statistical analysis was done on Statistica®.

Results

Population

The survey was handed out to all GP residents working in Paris and its suburbs ("Île-de-France") (n=1172). About them, 196 did not fulfilled the inclusion criteria (previous 6- months rotation in GP office and not in hospital ward). Among the remaining 976 potential responders, 525 (53.8 %) accepted to answer. The remaining residents refused to fill out the survey after being informed (n= 452) or used to work in a general practice setting during the study period (n=195).

Patients' end-of-life care during their current rotation

354 (67.4%) residents were satisfied with the quality of end of life care during their rotation. However, 315 (60%) thought that palliative care should have been implemented earlier. Moreover 74.1% of them thought that the end-of-life care could have been improved. Possible axis for improvement were both somatic pain (64%) and anxiety (56.6%) management and psychological support for the patient and his relatives (See figure n°1)

The period of time immediately preceding death was particularly difficult since 239 residents (45.4%) considered that patients' physical suffering was inefficiently treated. Finally, 58.5% of the GP residents felt that their own psychological distress was not correctly taken care of.

Parameters associated with the perception of end-of-life care quality

Four Types of parameters are associated with resident's evaluation of end-of-life care quality: end-of-life care implementation, quality of patient's complaints' support, residents' perception of their management by senior physicians and personal difficulties regarding end-of-life care. Details are in table 1.

Difficulties met by residents while caring for dying patients

a. Perception of unreasonable obstinacy (lack of communication between physicians)

313 residents (59.6%) consider having witnessed unreasonable obstinacy in the care of their hospitalized patients. They considered it was obstinacy because of the severity of the clinical picture (65.9%) and because of the severity of the prognosis short-term (61.7%). For 15.1% of residents obstinacy was revealed by the refusal to follow a previously stated therapeutics' limitation.

b. Communication with senior physicians

Among residents who felt having witnessed unreasonable obstinacy, only 167 (53.4%) felt free to express their disagreement.

c. Communication with patients

210 (40%) participants disclosed having difficulties to talk about death with their dying patients. Likewise 199 (37.9%) residents have difficulties talking about these things with patients' relatives. Both difficulties are associated in 63.2% of cases.

As expected the wish to stop caring for dying patients in the future and communications difficulties are linked (cf. Table 2a and 2b). Conversely wishing to have an end-of-life activity in the future is associated with a lesser risk of communication difficulties. (cf. table 2a and 2b).

d. Therapeutic difficulties

Only 114 (21.7%) residents say having no difficulties using and adapting analgesic and sedative drugs used in end-of-life care. Also, 46.9% of the residents admit their fear to shorten the life of these patients because of the use of sedative and analgesic treatments. Moreover 63.4% (n=246) of them considered that this fear to shorten life may have limited the adaptation of end-of-life care treatments. In the same fashion, fear to shorten life was associated with the feeling of a lack of anxiety management for dying patients (p=0,007).

e. Need for stronger supervision

In this work, 227 (52.8%) residents were satisfied with the supervision from senior staff members for the end-of-life care.

Among residents considering that supervision could improve (n=248), 59.7% of them wished for more assistance in the therapeutic aspect of end-of-life care.

The quality of supervision is associated in our work to the perceived quality of end-of-life care. It is however not possible to determine the causality (cf. satisfaction towards end-of-life care and table 3).

Distress in end-of-life care management during the current rotation

a. Distress related to the perception of unreasonable obstinacy

Among residents who felt they were witnessing unreasonable obstinacy (n=313), 64.6% were hurt by the situation. This distress was associated with the feeling to be unable to express their disagreement on the course of treatment in 71.7% of cases. Distress was also increased when feeling that the end-of-life care was insufficient (cf table 4). Conversely, the perceived quality of supervision what associated with a lesser risk of distress.

b. Repercussion on personal life

The need to care of dying patients in the context of their hospital rotation is associated with negative impact on their personal life for 67.2% (n=353) of the surveyed residents.

Among them, 55.4% felt that their professional work impacted their relationship with their close relatives; 50.4% felt they were more anxious after these end-of-life care; 21.5% had reliving phenomenon; 20.8% suffered from insomnia after these events. The details of these elements are in figure n°2 and table 5.

Residents having felt an interaction with their personal life are more prone to wish to avoid end-of-life care in the future (30.9% versus 17.4%; p=0,001).

The number of ways of interactions with personal life differs depending on the residents (cf. figure n°3)

The proportion of residents wishing to avoid being responsible for dying patients depends on the number of personal life's settings previously touched by this situation (R^2 : 0.8247) (figure n°4)

Residents who feel their clinical duties impact their personal life often thought the end of life care of their patient was not sufficient. They also have more difficulties in their communications with their patients (details in table 5).

As expected, residents having felt an impact of end-of-life care on their personal life wished more for a systematic psychological support in at risk departments. (61.5% VS 45.3%; $p=0.0004$).

Table n°5: Clinical duties impact on residents' personal life

Impact of difficulties met: desire to avoid caring for dying patients.

Factors associated with the desire not to care for any new dying patients were: the fear to shorten life with end-of-life care treatments (analgesic and anxiolytics) ($p=0.0002$), communication difficulties with the patient and its relatives ($p = 5.32.10^{-6}$ and $p=0.0004$ respectively), impact on personal life ($p=0.001$).

Conversely, the quality of end-of-life care ($p=1.21.10^{-5}$), residents' supervision by seniors ($p=0.0002$), and desire to have an end-of-life care activity in the future ($p=0.05$) were factors associated with the absence of avoidance of end-of-life care patients. Details are in table n°6.

Potential interest of a psychological support for residents

Among residents who filled out the survey, 56.2% thought that a systematic psychologic support should be implemented in at risk departments to decrease the risk of extraprofessional impact of the care of severe patients. Departments that were considered at risk were oncology, hematology, critical care or geriatrics. Factors associated with the demand for a psychological follow up are: distress related to the perception of unreasonable obstinacy ($p=0,028$), interaction of those care with the resident's personal life ($p=0.00004$), and the desire to avoid new end-of-life care ($p=0.0007$). Conversely residents who were satisfied with their supervision did not feel as strongly the need for a psychological support ($p=0.005$).

Discussion

Our work has pointed out that GP residents having finished at least one rotation in a hospital ward have many difficulties regarding the end-of-life care. The first obstacle standing is the implementation of comfort care itself because of a lack of mastery in the use of pain and anxiety medicine in the specific context of end-of-life care. The difficulty they have in communicating about death also plays an important role in the trauma felt by our population. Also, the feeling of giving insufficient care because of those difficulties has a negative impact on the residents' personal life. All of these factors lead the most affected residents to avoid future contact with palliative care.

End of life care is an important part of medical training. Although family medicine is usually about caring for patients with less severe pathology, family doctors often have to care for patients wishing to die at home (20). A specific training during medical school has been implemented and strengthened in the last decades but our results underline the persistent difficulties met by physicians. Our study blends in the current work about young physicians' preoccupations regarding end-of-life care (9), even though the population is younger and working in a different place than the one they are training to work in the future. Despite those differences, results are similar (9), which underlines

that difficulties in apprehending end-of-life care depends very little on the professional orientation of young physicians.

The quality of end-of-life care is the main preoccupation of GP residents. Imperfections experienced by our population were associated with a lack of ease of sedatives and anxiolytic treatments use as well as communicating with the patient and its relatives. Such feeling of unreadiness toward those situations has been widely reported and may concern as far as 80% of young physicians (21).. The lack of theoretical training, in particular regarding pharmacological end of life care therapeutics, is often reported (21–26). Some work from the beginning of the year 2000 pointed out this lack of training amongst general practitioners (27). Although the medical training has been widely modified since, it seems to still be true.

Patients with fatal disease often ask for the possibility to discuss end of life care with their physician (28). However young physicians (9, 29, 30) as well as residents (29) are faced with difficulties in communicating in this situation. In the same fashion, residents find it difficult to determine the right time for implementing palliative care as well as the practical management of patients' complaints. These difficulties have also been reported by internal medicine residents (22) who are more used to these end-of-life care situations, including during their critical care rotations (23).

Relations with relatives may need particular attention. Indeed, the severity of the illness or disagreements regarding the orientation and intensity of care may be cause for tensions between relatives and physicians and might be difficult to accept in the particular context of end of life care (31). Also, satisfaction of grieving families depends on the quality of medical attention both in end of life care decisions and organization as well as in the post death support (32).

Lack of practice seems to be the main cause for communication difficulties. The absence of specific training in end of life communication is associated with physician discomfort and unease feelings (33–35). In consequence it is also a risk factor for burn-out (14). Bedside training is often offered but associated with a poor psychological tolerance (26). High fidelity scenarios as well as seminars, while confronting residents to pragmatic situation without the psychological burden, might improve residents' future competence (22, 36). Distance training has also proven to be efficient to improve young physicians' communication skills (30). This improvement of end of life care management's skills is associated with a diminution of anxiety in these situations (37). Conversely lack of trust in ones skills and communication, in particular in breaking bad news, are at the center of health care worker's psychological distress (11, 14).

In our work, all of these elements are associated with a psychological burden on more than two third of replying GP residents. Similar results were obtained in different populations of young and inexperienced physicians, also leading to psychological distress, similar to post-traumatic disorders (9). Patient's loss may lead to psychological distress because of a sense of guilt, or even burn-out. (38). This distress is mostly due to death events (39, 40) and uncertainty around end-of-life care (37). Death is often accountable for guilt feelings and sometimes even sense of failure in physicians populations (26). However most of the publications about the effects of end-of-life care or care in severe situations are looking at experienced physicians in specialized departments (14).

As expected, supervision plays an import role in GP residents' mental health and satisfaction during end-of-life care (25, 41, 42). Lack of involvement, management and discussions lead to a situation of discomfort when faced to end-of-life care (25, 43). In our work, help from senior physicians is associated with perceived good quality of care by the resident and with a lower risk of personal burden related to end-of-life care. This confirms previous observations in

different populations (39). Senior management remains however sometimes insufficient for young physicians (24, 25, 43, 44).

Supervision and adequate management during prescription and decision-making process, must however not lead to the exclusion of residents during this care. Their exclusion could alter their training during residency (25) as experience depends on seniors' observation (45).

On a broader perspective, training is essential to prevent psychological consequences of medical activities. The quality of end-of-care training is correlated to patient's end of life quality (46).

Our work has some limitations. Since the survey was filled out on a voluntary basis, the answers are not reflecting the mind of all residents. However, since the survey was offered to all residents orally, the absence of answer was not due to a lack of solicitation. Absence of participation was always due to participation's refusal. Observed results confirm that participants were the most interested in end-of-life care (18% of replier wish to keep an end-of-life care activity in the future). Although they wish to care for end-of-life patients, perception of a lack of skills and psychological burden of this care on personal life are often reported, thus confirming their importance. Also, we only surveyed "Île-de-France" residents rather than all French residents. Residents from "Île-de-France" however represent almost a third of all French residents and are from all regions of France which allows an important representativeness of all residents. Finally, since answers were declarative, we cannot have any certainty about the reality of difficulties met and psychological impact. However, this limitation is common in this kind of work and links between psychological distress and perceived difficulties have been previously reported in similar situations with different physicians populations.

Our work allows a broad evaluation of the difficulties and consequences met by GP residents when they have to care for end-of-life patients in hospital settings. It also underlines the necessity to continue and strengthen their management during their hospital rotations.

Conclusion

End-of-life care is often provided during hospital rotations. Although many improvements in the medical formation have been made, residents often report insufficient COMPETANCE regarding specific end-of-life care therapeutics and in patients and relatives' communication. These gaps in their training is associated with a negative impact on residents' personal life. It may lead to the desire to avoid end-of-life care in the future.

Abbreviations

- GP
- General practitioner

Declarations

Ethics approval and consent to participate:

According to French legislation this survey was a non-interventional study and therefore did not require submission to an ethics committee per say. The survey was however approved by our hospital ethics board (*Groupe Ethique & Recherche Medicale*, IRB n° 00012157) who did not request any change and gave us their agreement. We did not need to obtain formal consent from the respondents. A filled-out survey was considered as non-opposition to the

study. Participants were informed that the data obtained would be anonymously analyzed and published in a scientific journal.

Consent for publication:

Participants were informed that the data obtained would be anonymously analyzed and published in a scientific journal.

Availability of data and material:

Data are available on demand to the corresponding author

Competing interests: none

Funding: none

Authors' contributions:

Conception (VH, FP), collection of the data (VH), data analysis (VH, MT, CB), paper writing (AC, FP)

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References

1. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med.* nov 2006;3(11):e442.
2. Gomes B, Calanzani N, Gysels M, Hall S, Higginson IJ. Heterogeneity and changes in preferences for dying at home: a systematic review. *BMC Palliat Care.* 15 févr 2013;12:7.
3. Sharp T, Moran E, Kuhn I, Barclay S. Do the elderly have a voice? Advance care planning discussions with frail and older individuals: a systematic literature review and narrative synthesis. *Br J Gen Pract.* oct 2013;63(615):e657-668.
4. Teitelbaum HS, Travis LD, Heilig DL, Neslund SE, Menze AK, Baker CD, et al. The epidemiology of hospice and palliative care. *Dis Mon.* sept 2013;59(9):309-24.
5. Observatoire national de la fin de vie, éditeur. Observatoire national de la fin de vie. Rapport 2011: Fin de vie: un premier état des lieux. [Internet]. 2011. Disponible sur: <http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/124000093.pdf>
6. Poulalhon C, Rotelli-Bihet L, Moine S, Fagot-Campagna A, Aubry R, Tuppin P. Use of hospital palliative care according to the place of death and disease one year before death in 2013: a French national observational study. *BMC Palliat Care.* 16 mai 2018;17(1):75.
7. Higginson IJ, Daveson BA, Morrison RS, Yi D, Meier D, Smith M, et al. Social and clinical determinants of preferences and their achievement at the end of life: prospective cohort study of older adults receiving palliative care in three countries. *BMC Geriatr.* 23 2017;17(1):271.
8. Pivodic L, Pardon K, Morin L, Addington-Hall J, Miccinesi G, Cardenas-Turanzas M, et al. Place of death in the population dying from diseases indicative of palliative care need: a cross-national population-level study in 14 countries. *J Epidemiol Community Health.* janv 2016;70(1):17-24.

9. Bharmal A, Morgan T, Kuhn I, Wee B, Barclay S. Palliative and end-of-life care and junior doctors': a systematic review and narrative synthesis. *BMJ Support Palliat Care*. 13 nov 2019;
10. Piers RD, Azoulay E, Ricou B, Dekeyser Ganz F, Decruyenaere J, Max A, et al. Perceptions of appropriateness of care among European and Israeli intensive care unit nurses and physicians. *JAMA*. 28 déc 2011;306(24):2694-703.
11. Pereira SM, Fonseca AM, Carvalho AS. Burnout in palliative care: a systematic review. *Nurs Ethics*. mai 2011;18(3):317-26.
12. Philip J, Gold M, Schwarz M, Komesaroff P. Anger in palliative care: a clinical approach. *Intern Med J*. janv 2007;37(1):49-55.
13. Ramirez AJ, Graham J, Richards MA, Cull A, Gregory WM. Mental health of hospital consultants: the effects of stress and satisfaction at work. *Lancet*. 16 mars 1996;347(9003):724-8.
14. Kearney MK, Weininger RB, Vachon MLS, Harrison RL, Mount BM. Self-care of physicians caring for patients at the end of life: « Being connected... a key to my survival ». *JAMA*. 18 mars 2009;301(11):1155-64, E1.
15. Aubry R. Etat des lieux du développement des soins palliatifs en France en 2010. Rapport à M. le président de la république et M. le premier ministre. [Internet]. Disponible sur: http://social-sante.gouv.fr/IMG/pdf/Rapport_Etat_des_lieux_du_developpement_des_soins_palliatifs_en_France_en_2010.pdf
16. ANAES, SFAP. L'accompagnement des personnes en fin de vie et de leurs proches. Conférence de consensus [Internet]. 2004. Disponible sur: http://www.has-sante.fr/portail/upload/docs/application/pdf/Accompagnement_court.pdf
17. ANESM : Agence nationale de l'évaluation et de la qualité des établissements et services sociaux et médico-sociaux. Lettre de cadrage. Recommandations de bonnes pratiques professionnelles : Accompagner la fin de vie des personnes âgées au domicile ou en établissement médico-social. 2015.
18. Singly F de. Le questionnaire - 4e éd. 4e édition. Paris: Armand Colin; 2016. 132 p.
19. Gerard MFJ. Conduite d'enquête par questionnaire. 1^{re} éd. Editions du robot furieux - Frederic Gerard; 2015. 122 p.
20. Kjellstadli C, Allore H, Husebo BS, Flo E, Sandvik H, Hunskaar S. General practitioners' provision of end-of-life care and associations with dying at home: a registry-based longitudinal study. *Fam Pract*. 29 janv 2020;
21. Weil J, Gold M, McIver S, Rotstein L, Philip J. Australian resident doctors want more palliative medicine education: a survey of attitudes and perceived needs. *Intern Med J*. juill 2012;42(7):828-30.
22. Kawaguchi S, Mirza R, Nissim R, Ridley J. Internal Medicine Residents' Beliefs, Attitudes, and Experiences Relating to Palliative Care: A Qualitative Study. *Am J Hosp Palliat Care*. mai 2017;34(4):366-72.
23. Centofanti J, Swinton M, Dionne J, Barefah A, Boyle A, Woods A, et al. Resident reflections on end-of-life education: a mixed-methods study of the 3 Wishes Project. *BMJ Open*. 31 mars 2016;6(3):e010626.
24. Bowden J, Dempsey K, Boyd K, Fallon M, Murray SA. Are newly qualified doctors prepared to provide supportive and end-of-life care? A survey of Foundation Year 1 doctors and consultants. *J R Coll Physicians Edinb*. 2013;43(1):24-8.
25. Gibbins J, McCoubrie R, Forbes K. Why are newly qualified doctors unprepared to care for patients at the end of life? *Med Educ*. avr 2011;45(4):389-99.
26. Schroder C, Heyland D, Jiang X, Rocker G, Dodek P, Canadian Researchers at the End of Life Network. Educating medical residents in end-of-life care: insights from a multicenter survey. *J Palliat Med*. mai 2009;12(5):459-70.

27. Barclay S, Wyatt P, Shore S, Finlay I, Grande G, Todd C. Caring for the dying: how well prepared are general practitioners? A questionnaire study in Wales. *Palliat Med.* janv 2003;17(1):27-39.
28. Steinhäuser KE, Christakis NA, Clipp EC, McNeilly M, McIntyre L, Tulsky JA. Factors considered important at the end of life by patients, family, physicians, and other care providers. *JAMA.* 15 nov 2000;284(19):2476-82.
29. Tait GR, Hodges BD. Residents learning from a narrative experience with dying patients: a qualitative study. *Adv Health Sci Educ Theory Pract.* oct 2013;18(4):727-43.
30. Clayton JM, Butow PN, Waters A, Laidsaar-Powell RC, O'Brien A, Boyle F, et al. Evaluation of a novel individualised communication-skills training intervention to improve doctors' confidence and skills in end-of-life communication. *Palliat Med.* mars 2013;27(3):236-43.
31. Cook D, Ricker G. Dying with dignity in the intensive care unit. *N Engl J Med.* 26 juin 2014;370(26):2506-14.
32. Hinkle LJ, Bosslet GT, Torke AM. Factors associated with family satisfaction with end-of-life care in the ICU: a systematic review. *Chest.* janv 2015;147(1):82-93.
33. Ury WA, Berkman CS, Weber CM, Pignotti MG, Leipzig RM. Assessing medical students' training in end-of-life communication: a survey of interns at one urban teaching hospital. *Acad Med.* mai 2003;78(5):530-7.
34. Dunn A, Littrivis E. Aligning patient preferences and patient care at the end of life. *J Gen Intern Med.* juill 2011;26(7):681-2.
35. Herzler M, Franze T, Dietze F, Asadullah K. Dealing with the issue « care of the dying » in medical education - results of a survey of 592 European physicians. *Med Educ.* févr 2000;34(2):146-7.
36. Downar J, Knickle K, Granton JT, Hawryluck L. Using standardized family members to teach communication skills and ethical principles to critical care trainees. *Crit Care Med.* juin 2012;40(6):1814-9.
37. Brennan N, Corrigan O, Allard J, Archer J, Barnes R, Bleakley A, et al. The transition from medical student to junior doctor: today's experiences of Tomorrow's Doctors. *Med Educ.* mai 2010;44(5):449-58.
38. St Ledger U, Begley A, Reid J, Prior L, McAuley D, Blackwood B. Moral distress in end-of-life care in the intensive care unit. *J Adv Nurs.* août 2013;69(8):1869-80.
39. Paice E, Rutter H, Wetherell M, Winder B, McManus IC. Stressful incidents, stress and coping strategies in the pre-registration house officer year. *Med Educ.* janv 2002;36(1):56-65.
40. Moores TS, Castle KL, Shaw KL, Stockton MR, Bennett MI. « Memorable patient deaths »: reactions of hospital doctors and their need for support. *Med Educ.* oct 2007;41(10):942-6.
41. Harrington AW, Oliveira KD, Lui FY, Maerz LL. Resident Education in End-of-Life Communication and Management: Assessing Comfort Level to Enhance Competence and Confidence. *J Surg Educ.* avr 2020;77(2):300-8.
42. Smith-Han K, Martyn H, Barrett A, Nicholson H. "That's not what you expect to do as a doctor, you know, you don't expect your patients to die." Death as a learning experience for undergraduate medical students. *BMC Med Educ.* 14 avr 2016;16:108.
43. Linklater GT. Educational needs of foundation doctors caring for dying patients. *J R Coll Physicians Edinb.* mars 2010;40(1):13-8.
44. Vivekananda-Schmidt P, Vernon B. FY1 doctors' ethicolegal challenges in their first year of clinical practice: an interview study. *J Med Ethics.* avr 2014;40(4):277-81.
45. Wheatley-Price P, Massey C, Panzarella T, Shepherd FA, Mikhael J. Resident preparedness in discussing prognosis in patients with advanced lung cancer. *Support Care Cancer.* avr 2010;18(4):491-7.

46. Gillan PC, van der Riet PJ, Jeong S. End of life care education, past and present: a review of the literature. Nurse Educ Today. mars 2014;34(3):331-42.

Tables

Table n°1: parameters associated with resident satisfaction about quality of patients' end-of-life care

Satisfaction about quality of patients' end-of-life care			
	Yes (n=354)	No (n=171)	p
Delay in implementation of palliative care			
Palliative care should have been implemented earlier	50,3 %	80,1 %	6,2.10⁻¹¹
Perception of an unreasonable obstinacy	57,3 %	64,3 %	0,12
The patient took part in therapeutic intensity	61 %	57,9 %	0,49
Quality of palliative care could have been improved	65,3 %	92,4 %	2,9.10⁻¹¹
Management of patients complaints			
Perception of an insufficient consideration of patient pain	40,7 %	55,6 %	0,001
Perception of an insufficient consideration of patient psychological frailty	56,8 %	62 %	0,25
Perception of quality of supervision form senior staff members			
Satisfied by the quality of their supervision	64,7 %	28,1 %	3,37.10⁻¹⁵
Perception of an ability to express their disagreement on the course of treatment	46,7 %	55,9 %	0,52
Distress in end-of-life care management			
Hurt by a perception of unreasonable obstinacy	60,9 %	70,9 %	0,077
No difficulties using and adapting analgesic and sedative drugs	23,2 %	18,7 %	0,24
Difficulties /avoiding talking about death with patient	40,1 %	52 %	0,009
Difficulties /avoiding talking about death with patient's relatives	33,9 %	46,2 %	0,006
Desire to avoid caring for dying patients	20,6 %	38,6 %	1,21.10⁻⁵
Clinical duties impact their personal life	65,3 %	71,3 %	0,16
Wish to have a professional orientation in palliative care management	20,6 %	14 %	0,068

Table n°2 : Factors associated with difficulties /avoiding talking about death

Table 2a : Factors associated with difficulties /avoiding talking about death with patient

Difficulties /avoiding talking about death with their patients			
	Oui (n=231)	Non (n=294)	p
Wish to have a professional orientation in palliative care management	13,4 %	22,4 %	0,008
Resident satisfied with the quality of end of life care during their rotation	61,5 %	72,1 %	0,009
No difficulties using and adapting analgesic and sedative drugs	19,5 %	17,9 %	0,64
Difficulties /avoiding talking about death with patient's relatives	63,2 %	18 %	3,3.10⁻²⁶
Desire to avoid caring for dying patients	36,4 %	18,7 %	5,32.10⁻⁶

Table 2b : Factors associated with difficulties /avoiding talking about death with patient's relatives

Difficulties /avoiding talking about death with patient's relatives			
	Oui (n=199)	Non (n=326)	p
Wish to have a professional orientation in palliative care management	12,1 %	22,1 %	0,004
Resident satisfied with the quality of end of life care during their rotation	60,3 %	71,8 %	0,006
No difficulties using and adapting analgesic and sedative drugs	20,6 %	22,4 %	0,63
Difficulties /avoiding talking about death with their patients	73,4 %	18 %	3,3.10⁻²⁶
Desire to avoid caring for dying patients	35,2 %	21,2 %	0,0004

Table n°3 : Perception of the quality of their supervision by senior staff members

Perception of the quality of their supervision by senior staff members			
	Oui (n=354)	Non (n=171)	p
Satisfied by the quality of their supervision	64,7 %	28,1 %	3,37.10⁻¹⁵
Felt free to express their disagreement	46,7 %	55,9 %	0,52

Table n°4 : Suffering due to a Perception of unreasonable obstinacy

Suffering due to a Perception of unreasonable obstinacy			
	Oui (n=201)	Non (n=111)	p
Resident satisfied with the quality of end of life care during their rotation	61 %	71,2 %	0,072
Palliative care should have been implemented earlier	75,1 %	55 %	0,0002
Perception of an insufficient consideration of patient pain	51,7 %	36 %	0,007
Perception of an insufficient consideration of patient psychological frailty	59,7 %	55 %	0,41
Felt free to express their disagreement about a perceived unreasonable obstinacy	48,3 %	62,7 %	0,01
No difficulties using and adapting analgesic and sedative drugs	23.4 %	26.1 %	0.59
Difficulties /avoiding talking about death with their patients	68.5 %	40.4 %	0.21
Difficulties /avoiding talking about death with patient's relatives	39.6 %	32.6 %	0.27
Clinical duties impact their personal life	77,1 %	57,7 %	0,0003
Desire to avoid caring for dying patients	29,4 %	19,8 %	0,065
Satisfied by the quality of their supervision	42,3 %	63,1 %	0,0004
Wish to have a professional orientation in palliative care management	21,4 %	13,5 %	0,08

Table n°5 : Clinical duties impact on residents' personal life

	Oui (n=353)	Non (n=172)	p
Resident satisfied with the quality of end of life care during their rotation	65,4	71,5	0,16
Hurt by the perception of unreasonable obstinacy	70,8	49,5	0,0003
No difficulties using and adapting analgesic and sedative drugs	21,2	22,7	0,71
fear to shorten life by adaptation of end-of-life care treatments	47	46,5	0,91
Difficulties /avoiding talking about death with patient	47,3	37,2	0,02
Difficulties /avoiding talking about death with patient's relatives	39,1	35,5	0,42
Satisfied by the quality of their supervision	48,2	62,2	0,002
Desire to avoid caring for dying patients	30,9	17,4	0,001
Wish to have a professional orientation in palliative care management	19,3	16,9	0,50
Would like a systematic psychological support in at risk departments	61,5	45,3	0,0004

Table n°6 : factors associated with the desire to avoid caring for dying patients

	Oui (n=139)	Non (n=386)	p
Quality of palliative care could have been improved	78,4	72,5	0,17
Perception of unreasonable obstinacy	58	60,2	0,65
Hurt by the perception of unreasonable obstinacy	72,8	61,5	0,065
Resident satisfied with the quality of end of life care during their rotation	52,5	72,8	1,21.10⁻⁵
The patient took part in therapeutic intensity	62,6	59,1	0,46
No difficulties using and adapting analgesic and sedative drugs	20,1	22,3	0,60
fear to shorten life by adaptation of end-of-life care treatments	60,4	42	0,0002
Difficulties /avoiding talking about death with patient	60,4	38,1	5,32.10⁻⁶
Difficulties /avoiding talking about death with patient's relatives	50,4	33,4	0,0004
Clinical duties impact their personal life	78,4	63,2	0,001
Satisfied by the quality of their supervision	39,6	57,5	0,0002
Wish to have a professional orientation in palliative care management	12,9	20,5	0,05
Would like a of a systematic psychological support in at risk departments	68,3	51,8	0,0007

Figures

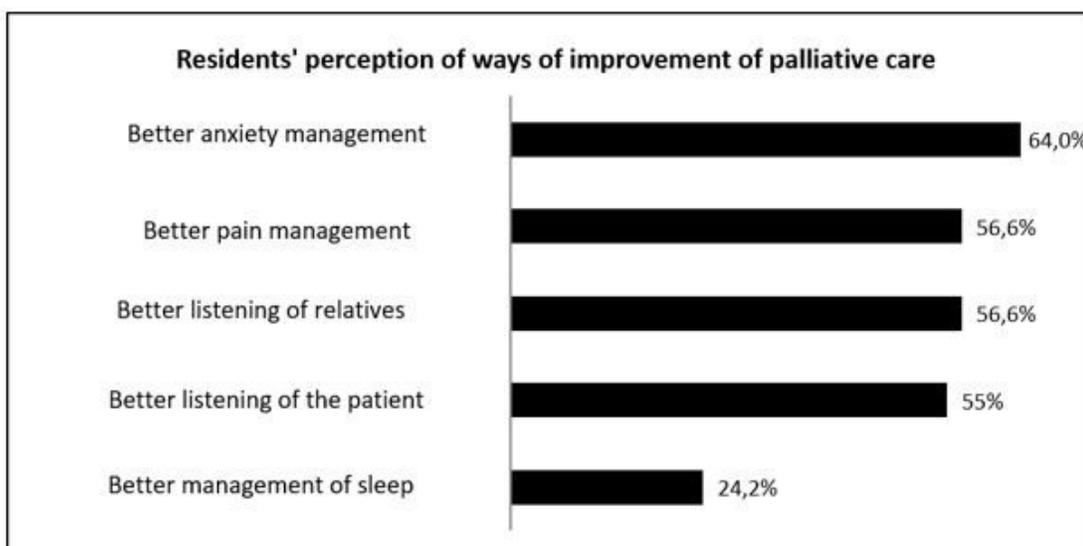


Figure 1

Residents' perception of ways of improvement of palliative care

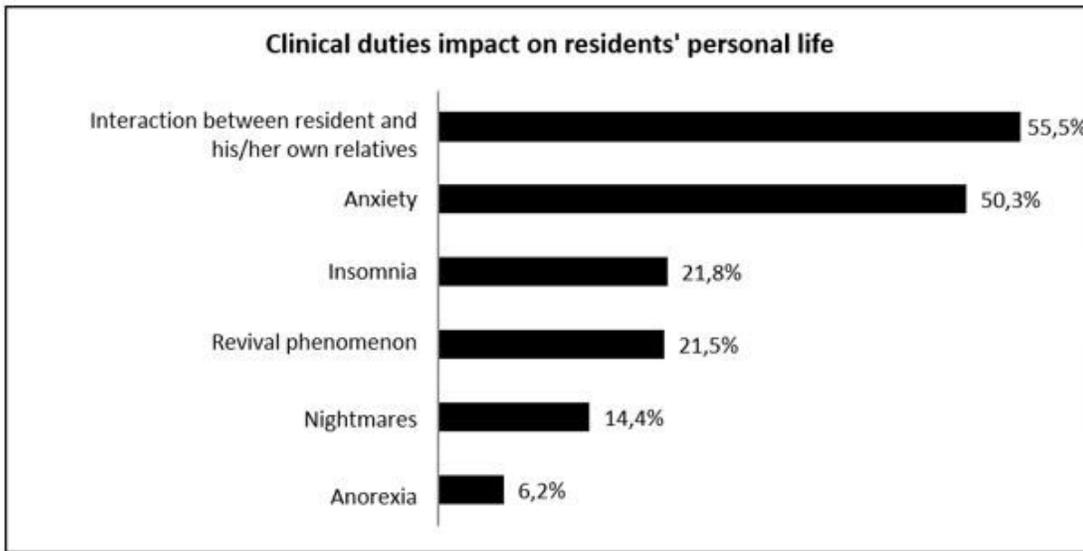


Figure 2

Parameters associated with Clinical duties impact on residents' personal life

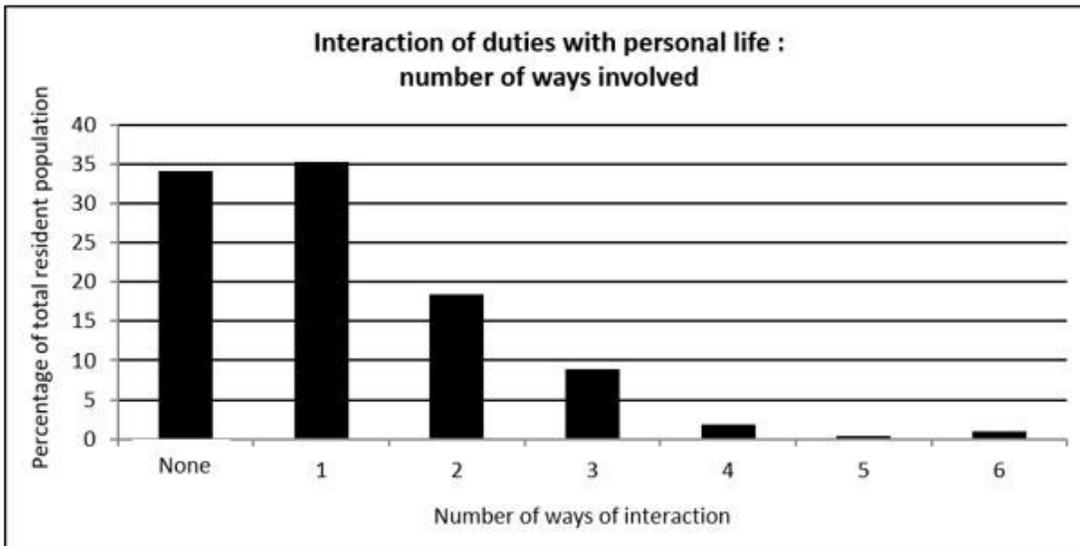


Figure 3

Number of ways of interactions with personal life

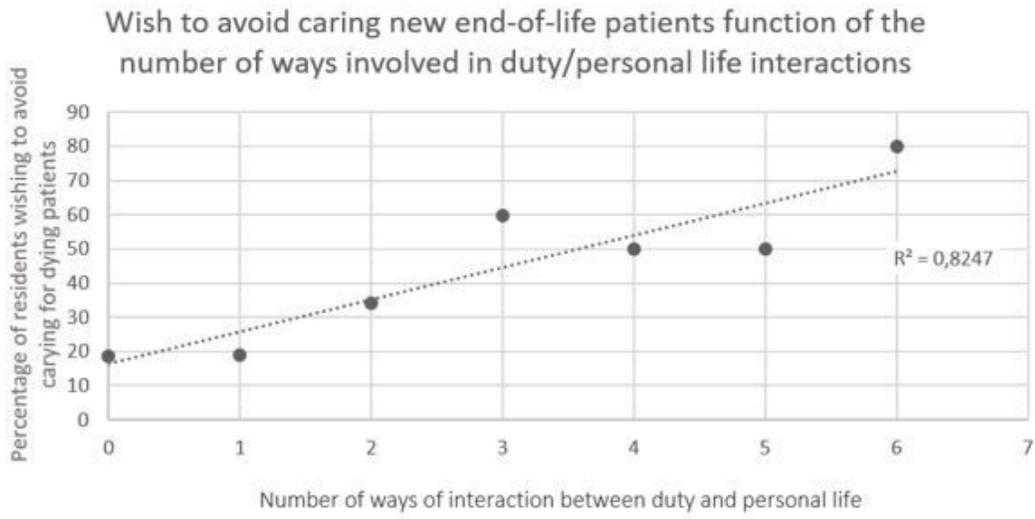


Figure 4

Correlation between the Wish to avoid caring new end-of-life patients and the number of ways involved in duty/personal life interactions