

# Attitudes of rehabilitation medicine doctors toward medical ethics in Malaysia

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## ABSTRACT

**Introduction:** Medical ethics issues encountered in rehabilitation medicine differ from those in an acute care setting due to the complex relationships among the parties involved in rehabilitative care. The study examined the attitudes of Malaysian rehabilitation doctors toward medical ethics issues commonly encountered during patient care.

**Methods:** We surveyed 74 rehabilitation physicians and residents in Malaysia using a self-administered descriptive questionnaire. The questions covered medical ethics issues on allocation of resources, patient confidentiality, discharge planning, goal-setting, reimbursement documentation, decision-making capacity and withdrawal of life support.

**Results:** The overall response rate was 69 percent. More than 80 percent of respondents would disclose confidential information to their team members if it would affect the rehabilitation process. More than two-thirds of respondents would not allocate scarce rehabilitation resources if the functional outcome is marginally positive. Issues involving patients' autonomy in decision-making, both in life-threatening and non-life-threatening situations, showed mix responses. The least common response was on the issue of discharge planning, where 51 percent of respondents would send a patient back to a nursing home with suboptimal care if there were no other alternatives.

**Conclusion:** The attitude of Malaysian rehabilitation doctors toward ethical issues is reflective of the level of maturity of rehabilitation medicine in Malaysia. Issues on allocation of resources, discharge planning and decision-making capacity are significantly influenced by limited rehabilitation facilities in parts of the country. The lack of influence from external

factors, such as a developed health insurance system, contributes to the difference in attitude between rehabilitation doctors in Malaysia and those in developed countries.

**Keywords:** attitude of health personnel, autonomy, bioethics, medical ethics, rehabilitation

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## INTRODUCTION

Doctors today are confronted with increasingly complex ethical issues in patient care. Ethical dilemmas are encountered not only in an acute medical setting but also in the fields of chronic care, including those inherent to rehabilitation.<sup>(1-3)</sup> Unique ethical challenges are encountered in rehabilitation patients due to the different types of patient diagnostic categories with commonly irreversible dysfunctions, interdisciplinary team involvement and extended hospital stay.<sup>(4-6)</sup> As a result, rehabilitation doctors are frequently faced with chronic care dilemmas and moral distress, such as institutional ethics, professional practice and clinical decision-making issues.<sup>(7)</sup> These issues have been highlighted in previous studies, where rehabilitation clinicians faced problems with healthcare reimbursement, conflicts around goal-setting, discharge planning and difficulties in assessing decision-making capacity.<sup>(7,8)</sup>

Rehabilitation doctors in Malaysia are part of a small group, and the field of rehabilitation medicine in Malaysia is still in its infancy. Currently, there are only 34 certified rehabilitation physicians nationwide; a ratio of one per 910,000 population. Three physicians are practising at private hospitals, while 31 physicians are practising at 11 public hospitals throughout the country. Among the public hospitals, only one teaching hospital, University Malaya Medical Centre (UMMC), is offering a residency programme in rehabilitation medicine. Given the stage of development in the specialty, the primary focus for rehabilitation doctors to date has mainly been on building capability as well as improving access to rehabilitative care around the country. Thus far, medical ethics was not a major issue during patient

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care for rehabilitation medicine, and as such, the issue of medical ethics in rehabilitative care has not been adequately highlighted in the past.

However, general awareness of medical ethics issues has been on the rise, and especially for rehabilitation doctors, there is an increasingly broader regulation favouring the disabled. For example, persons with disabilities who are registered with the Social Welfare Department in Malaysia are exempted from paying for third-class wards, specialist bills and medication. Rehabilitation patients nowadays are also more likely to want greater involvement in their medical care and to participate in the decision-making process. However, in a country with diverse cultural and religious backgrounds such as Malaysia, autonomy is practised differently; it is common for patients to forego their autonomy to allow family members to make important health-related decisions for them.<sup>(9)</sup> It is thus important for clinicians to be aware of the various cultural and religious issues, since they have an important influence on clinical outcomes and the satisfaction of patients and their families.<sup>(10,11)</sup>

Clinical ethics courses have been shown to partly influence medical professionals' attitudes toward ethical issues.<sup>(12,13)</sup> It has been suggested that moral and ethics training should be introduced during medical school and residency.<sup>(14)</sup> In Malaysia, formal medical ethics education is incorporated as courses within core programmes at medical schools. Notwithstanding, medical ethics education is currently not part of the existing residency programme in rehabilitation medicine in Malaysia. There are no specific lessons on medical ethics in rehabilitation, and residents are typically assumed to have undertaken some form of medical ethics education during medical school. However, given the heterogeneous medical backgrounds of residents in the programme, the assumption may not be valid.

To our knowledge, there is no published literature on medical ethics in rehabilitative care in the Asian region. This survey was thus designed to evaluate the attitudes of Malaysian rehabilitation doctors toward medical ethics issues commonly encountered during patient care.

## METHODS

A descriptive study was conducted using survey methodology developed based on a previous study on ethical issues that were identified by rehabilitation clinicians.<sup>(8)</sup> The final issues were selected based on informal discussions held among rehabilitation doctors in Malaysia. The three-page survey was distributed to 74 Malaysian rehabilitation doctors, which comprised 31 rehabilitation physicians practising at 11 public

hospitals and 43 residents at UMMC. The survey gathered demographic data, including age, gender, ethnicity, clinical grade (physician or resident) and years of experience in rehabilitation medicine. Respondents were also asked whether they had previously attended any medical ethics courses.

Respondents were provided with a closed-ended questionnaire comprising 12 questions pertaining to their attitudes toward allocation of resources, patient confidentiality, discharge planning, goal-setting, reimbursement documentation, decision-making capacity and withdrawal of life support. Each respondent was asked to choose between 'agree' and 'disagree' for each scenario given. They were also asked to prioritise a list of pre-determined ethics topics for future education in order of importance from 1 (most important) to 5 (least important). Options were provided on five possible ethics topics, namely decision-making capacity, allocation of limited resources, conflict resolution, withholding and withdrawal of treatment, and finally, confidentiality. The questionnaire took approximately ten minutes to complete. The surveys were distributed via mail or in person during a two-month period in 2010. They were completed by respondents in private and returned anonymously to investigators in sealed envelopes via mail or by hand. Written informed consent was obtained from the respondents.

The demographics of the respondents and their responses to the questions were summarised using descriptive statistics. The chi-square test was used to examine the association between the rehabilitation clinician's past enrolment in ethics course and their responses to the questions. Student's *t*-test was used for continuous variables. A *p*-value < 0.05 was considered to be statistically significant. Data was analysed using the Statistical Package for the Social Sciences version 15.0 (SPSS Inc, Chicago, IL, USA).

## RESULTS

The response rate for the survey was 69%, with 51 out of the 74 Malaysian rehabilitation doctors identified completing the survey. The demographic profiles of the respondents were indicative of the mix of rehabilitation doctors in Malaysia. Physicians comprised 41% of respondents, while the remaining were residents. Among the physicians, only 33% had been practising for more than five years after completion of their residency programme. There were more female (73%) than male (27%) respondents. The age range of the respondents was as follows: > 40 years (6%); 36–40 years (39%); 31–35 years (35%); and < 31 years (20%). Based on

**Table I. Medical ethics issues with sample responses.**

| Questions  | No. of responses (%) |         |          |
|--|----------------------|---------|----------|
|  | Total                | Agree   | Disagree |
| <u>Allocation of scarce hospital resources</u>   |                      |         |          |
| Q1. A spinal cord injury patient requests for another flap procedure to be done over a previous flap area. He was not compliant with the previous pressure ulcer preventive measures. I will not refer the patient for such an expensive procedure if I'm not convinced that he will be compliant with postoperative management.   | 51 (100)             | 35 (69) | 16 (31)  |
| Q2. A severe traumatic brain injury patient in vegetative state does not have an active functional goal. I will keep rehabilitation therapy to the minimum.  | 51 (100)             | 33 (65) | 18 (35)  |
| <u>Suboptimal discharge plans</u>  |                      |         |          |
| Q3. Some patients from a particular nursing home have received very bad care. It is hard to send them back there, but I still think it is an acceptable decision when there are no other alternatives.   | 51 (100)             | 26 (51) | 25 (49)  |
| Q4. A patient needs 24-hour supervision, but I know that the patient's family is unable to provide good care. The family members are not willing to hire a caretaker nor are they willing to place the patient in a nursing home. I will still discharge the patient home to his family since it is the family's decision. What happens at home is beyond my responsibilities.       | 51 (100)             | 16 (31) | 35 (69)  |
| Q5. It is unsafe for an elderly patient to go home alone, yet he still wants to, stating that he has the right to decide where he wants to live. I will not allow this and will still refer him to the medical social worker for better placement.   | 51 (100)             | 30 (59) | 21 (41)  |
| <u>Reimbursement documentation (truth-telling)</u>   |                      |         |          |
| Q6. I will 'stretch' the truth when filling applications for certain disability entitlement or when talking to insurance companies to get what is needed for a patient.  | 50 (98)              | 22 (44) | 28 (56)  |
| <u>Goal-setting</u>  |                      |         |          |
| Q7. It is very difficult to include the patient and family members when setting rehabilitation goals when they do not fully understand the disease process and have unrealistic goals, e.g. wanting a complete tetraplegic spinal cord injury patient to walk again before discharge. At this point, it is alright for the team members to decide and set the goals for the patient. | 49 (96)              | 31 (63) | 18 (37)  |
| <u>Questionable patient decision-making capacity</u>   |                      |         |          |
| Q8. A 30-year-old man with brain injury wishes for his girlfriend to visit him in the hospital, but his mother vehemently states that she wants the girlfriend restricted from visiting, as she feels that the girlfriend is a bad influence. I will execute the mother's request.   | 51 (100)             | 18 (35) | 33 (65)  |
| Q9. In the early phase of rehabilitation, patients are still adapting to the disability and thus may not be able to make rational medical decisions, e.g. deciding between continuous bladder drainage vs. intermittent self-catheterisation. It is acceptable for the rehabilitation doctors to act in the best interest of patients and override their autonomous wishes.          | 50 (98)              | 22 (44) | 28 (56)  |
| <u>Confidentiality issues</u>  |                      |         |          |
| Q10. A patient tells you invaluable personal information in confidence and wishes that you keep it a secret. As a rehabilitation doctor, I will reveal the information to the team if it affects the rehabilitation process conducted by the team members.   | 48 (94)              | 39 (81) | 9 (19)   |
| Q11. It is alright to talk about a patient in the hospital elevator if we do not mention the patient's name.   | 50 (100)             | 2 (4)   | 48 (96)  |
| <u>Withdrawing life-sustaining treatment for patients with disabilities</u>  |                      |         |          |
| Q12. During a usual outpatient consultation, a tetraplegic patient gives advanced directives that he would like to be issued a DNR (do not resuscitate) order, should he be on a life-support machine, because he feels that his quality of life would be very poor. When the time comes, I will still seek his family's decision and not issue a DNR order.                         | 47 (92)              | 20 (42) | 27 (58)  |

ethnic origin, more than two-thirds of respondents were Malay (68.6%), followed by Chinese (13.7%), Indian (9.8%) and other ethnicities (7.9%).

Table I shows the responses to the 12 questions on medical ethics issues. Six out of the 12 questions presented did not generate 100% responses. These

questions were either left unanswered or were given as 'agree' and 'disagree' simultaneously. The question that most respondents left unanswered was regarding the withdrawal of life treatment in patient with severe disability (question 12), with four respondents leaving the answer blank. Questions on confidentiality issues

**Table II. Attitudes of rehabilitation doctors toward ethical issues presented.**

|  | No. of respondents (%)       |                                  | p-value |
|--|------------------------------|----------------------------------|---------|
|  | Have attended ethical course | Have not attended ethical course |         |
| <u>Allocation of scarce hospital resources</u>       |                              |                                  |         |
| Q1 Agree   | 14 (61)                      | 20 (74)                          | 0.318   |
| Disagree   | 9 (39)                       | 7 (26)                           |         |
| Q2 Agree   | 14 (61)                      | 18 (67)                          | 0.670   |
| Disagree   | 9 (39)                       | 9 (33)                           |         |
| <u>Suboptimal discharge planning</u>                 |                              |                                  |         |
| Q3 Agree   | 11 (48)                      | 15 (65)                          | 0.586   |
| Disagree   | 12 (52)                      | 12 (44)                          |         |
| Q4 Agree   | 9 (39)                       | 7 (26)                           | 0.318   |
| Disagree   | 14 (61)                      | 20 (74)                          |         |
| Q5 Agree   | 15 (56)                      | 15 (56)                          | 0.487   |
| Disagree   | 8 (35)                       | 12 (44)                          |         |
| <u>Reimbursement documentation</u>                   |                              |                                  |         |
| Q6 Agree   | 10 (43)                      | 12 (44)                          | 0.944   |
| Disagree   | 12 (52)                      | 15 (56)                          |         |
| <u>Goal-setting</u>                                  |                              |                                  |         |
| Q7 Agree   | 15 (65)                      | 15 (56)                          | 0.454   |
| Disagree   | 7 (30)                       | 11 (41)                          |         |
| <u>Questionable patient decision-making capacity</u> |                              |                                  |         |
| Q8 Agree   | 12 (52)                      | 5 (19)                           | 0.012*  |
| Disagree   | 11 (48)                      | 22 (81)                          |         |
| Q9 Agree   | 7 (30)                       | 15 (56)                          | 0.097   |
| Disagree   | 15 (65)                      | 12 (44)                          |         |
| <u>Confidentiality issues</u>                        |                              |                                  |         |
| Q10 Agree  | 17 (74)                      | 21 (78)                          | 0.987   |
| Disagree   | 4 (17)                       | 5 (19)                           |         |
| Q11 Agree  | 2 (9)                        | 0 (0)                            | 0.110   |
| Disagree   | 20 (87)                      | 27 (100)                         |         |
| <u>Withdrawing life-sustaining treatment</u>         |                              |                                  |         |
| Q12 Agree  | 9 (39)                       | 10 (37)                          | 0.655   |
| Disagree   | 11 (48)                      | 16 (59)                          |         |

\* Statistically significant

had the most common answers from respondents. 96% of respondents believed that it was wrong to discuss a patient in the hospital elevator even if the patient's name is not mentioned (question 11), and 81% would reveal confidential information to rehabilitation team members if it would affect the rehabilitation process (question 10). Respondents had the least common answers and were almost evenly split regarding the question on discharge planning (question 3); 51% agreed to send a patient back to a nursing home with suboptimal care if there were no other alternatives. More than two-thirds of respondents agreed not to allocate scarce hospital resources if the functional outcome is marginally positive (questions 1 and 2).

Out of the 51 respondents, 23 (46%) had previously attended a medical ethics course. They were mostly either female (30%) or relatively junior rehabilitation

doctors, which comprised residents (26%) and physicians with less than five years experience after completion of residency programme (31%). Attendance at an ethics course did not have any significant association with the attitudes of rehabilitation doctors toward ethics issues in all scenarios, except for the scenario of discussing a brain injured patient's decision-making capacity (Table II).

Other factors such as gender, ethnic group and seniority of the rehabilitation physicians did not show any significant association with the responses toward the ethics issues presented. However, clinical grade showed a significant association to one ethics issue (question 5); significantly more residents than physicians disagreed concerning the issue of fulfilling an elderly patient's wish to return home alone, and the former would still refer the patient to the medical social worker for better placement. When respondents were asked to prioritise a

**Table III. Preferred topics for future ethics education.**

| Ethics topic                          | % Most important | % Least important |
|---------------------------------------|------------------|-------------------|
| Decision-making capacity              | 54               | 8                 |
| Allocation of limited resources       | 15               | 51                |
| Conflict resolution                   | 12               | 10                |
| Withholding and withdrawing treatment | 12               | 10                |
| Confidentiality                       | 7                | 21                |

pre-determined list of ethics topics for future education, 54% ranked the role of patient's decision-making capacity as the most important topic, while 51% of respondents ranked allocation of limited resources as the least important topic (Table III).

## DISCUSSION

Although medical ethics has been discussed in the literature since 1960s, ethics issues relating to rehabilitation medicine have only been explored from the late 1980s when the Hastings Centre published an article outlining ethics themes identified by a group of rehabilitation professionals.<sup>(15)</sup> Some of the concerns highlighted then were clinical management issues such as decision-making capacity, the roles of families in rehabilitation and goal-setting. However, later studies demonstrated additional concerns regarding healthcare environment and the changing models of care, which were likely to be influenced by the significant changes occurring in health insurance and healthcare models.<sup>(7,8)</sup> Given the relative infancy of rehabilitation medicine and the limited health insurance system in Malaysia, we believe that ethical dilemmas faced by rehabilitation doctors in Malaysia are almost similar to the earlier themes noted by the Hastings Centre. Thus, they are the focus of the ethical issues in this study.

Healthcare institutions today are frequently faced with stretched and limited resources as well as inappropriate utilisation, which affects the delivery of health services.<sup>(16,17)</sup> This is also true in Malaysia, where access to rehabilitation facilities is limited. In some parts of the country, it is highly challenging to ensure the continuity of rehabilitation care from acute and subacute settings to community re-entry. It is, thus, not surprising that most respondents agreed that scarce hospital resources should not be allocated if the functional outcome is marginally positive. Allocation of limited resources was perceived to be the least important ethics topic (from the pre-determined list) for future education by 51% respondents. This is a marked difference compared to the finding by Kirschner et al,

where only 6% of respondents indicated low interest in topics related to allocation of limited resources for future education.<sup>(8)</sup> The difference in attitude among rehabilitation doctors in Malaysia may be a reflection of the difficulties faced in obtaining resources at the hospitals in which they were practicing, as compared to their counterparts in developed countries. There are only four hospitals in Malaysia offering dedicated wards for rehabilitation patients. In the other seven hospitals, rehabilitation patients are managed in acute wards and resources are shared with acute medical or surgical disciplines. When alternatives for resources are not available, respondents tend to shift their priority to other pertinent clinical issues.

The respondents' attitudes, given the limited resources, were also evident in two different scenarios involving suboptimal discharge planning. When faced with no other resource alternatives, respondents agreed to discharge a patient to suboptimal destinations; 51% agreed it was acceptable to discharge a disabled patient back to a nursing home with previous history of poor care, and 31% agreed it was acceptable to discharge a disabled patient back to the patient's home despite failure of family members to conform to recommended standard of care. Nonetheless, fewer respondents agreed to send a patient home versus sending a patient to a nursing home. This was due to the perception that nursing homes in Malaysia are generally better staffed to ensure safety and immediate care, as well as better equipped with facilities such as hospital beds, mobility equipment and transportation services.

In more developed countries, (e.g. the United States), the discharge planning process is greatly influenced by health insurance programmes such as Medicare. Issues with reimbursements and incentives to shorten hospital stay associated with the payment system may influence clinicians' practices regarding resources and discharge planning.<sup>(18-20)</sup> There is a limited health insurance system in Malaysia, and given that all the hospitals in which the rehabilitation doctors surveyed were practising are publicly funded, external factors such as third-party payers and health insurance issues are less likely to influence their attitudes.

The respondents' attitude toward patient autonomy in decision-making for a life-threatening situation reflects their tendency to practise medical paternalism rather than acknowledge the patient's autonomy. 58% would override a patient's earlier directive to withdraw any life-sustaining treatment in such circumstances. A similar response was observed in another survey involving Malaysian doctors, where intervention without

consent was considered to be justified in life-saving interventions despite earlier refusal by the patient.<sup>(21)</sup> In such cases, a doctor's awareness of a patient's right does not fully reflect his clinical decisions.

On the same note, respondents generally believed that it was acceptable for them to make decisions on behalf of patients in non-life-threatening situations as well. This attitude is apparent when patients show unrealistic expectations of their functional outcome and safety, as evidenced when patients are asked to set rehabilitation goals during early stages of care (question 7) and when a patient opts for a suboptimal destination after discharge (question 5). Thus, the respondents' attitude is not surprising. Macciocchi and Stringer reported that in certain scenarios, rehabilitation professionals tend to provide therapies and make treatment recommendations based on presumed beneficence.<sup>(22)</sup> In relation to this survey, presumed beneficence may conflict with the need to respect patient autonomy and could act as a constraining factor in facilitating a patient's autonomy during rehabilitation.<sup>(23)</sup>

Slightly more than half of the respondents (54%) had not previously attended any medical ethics courses. Based on the survey, ethics education is not associated with the respondents' attitudes toward most of the ethical issues presented, although previous studies have reported its influence on the knowledge, confidence and clinical decision of medical professionals.<sup>(12,13,24)</sup> Given the lack of emphasis on formal medical ethics education at the postgraduate level in Malaysia, our respondents' limited knowledge of medical ethics may explain the difference between our finding and that of other studies. Furthermore, the lack of relevance between our respondents' previous general medical ethics education and their current specialty may further support the above observation.

The limitation of this study includes a small sample size, which reduces the statistical strength of the data. Another limitation is the use of a closed-ended questionnaire, thus preventing further exploration of the respondent's answers. The survey can be improved with an open-ended questionnaire that is supplemented by focus group interviews. Half of the questions did not generate a full response even though the highest non-response rate was 8%. The design of the questionnaire can be improved for future studies by providing an additional 'neutral' or 'neither agree nor disagree' answer so that respondents would have an option to refrain from definitive answers.

In conclusion, the attitude of Malaysian rehabilitation doctors toward ethical issues is reflective of the level of

maturity of rehabilitation medicine in Malaysia. The medical ethics issues found are almost similar to those noted by the Hastings Centre in its earlier findings. Issues regarding allocation of resources, discharge planning and decision-making capacity are significantly influenced by the limited rehabilitation facilities in most parts of the country. Minimal influence from external factors, such as a developed health insurance system, also contributes to the difference in attitudes among Malaysian rehabilitation doctors compared to those in developed countries at their current state of rehabilitative care. The attitudes presented in this survey may provide a baseline from which we can regularly evaluate the maturity level of the rehabilitation medicine specialty. Thus, a timely survey is recommended in order to evaluate the attitudes of Malaysian rehabilitation doctors as improvements are made in the standard of medical ethics education in rehabilitation medicine.

## REFERENCES

1. Haas JF. Ethics in rehabilitation medicine. *Arch Phys Med Rehabil* 1986; 67:270-1.
2. Callahan D. Allocating health care resources. The vexing case of rehabilitation. *Am J Phys Med Rehabil* 1993; 72:101-5. Comment on: *Am J Phys Med Rehabil* 1993; 72:331-2.
3. Redman BK, Fry ST. Ethical conflicts reported by certified registered rehabilitation nurses. *Rehabil Nurs* 1998; 23:179-84.
4. Mukherjee D, McDonough C. Clinician perspectives on decision-making capacity after acquired brain injury. *Top Stroke Rehabil* 2006; 13:75-83.
5. Komer M. Interprofessional teamwork in medical rehabilitation: a comparison of multidisciplinary and interdisciplinary team approach. *Clin Rehabil* 2010; 24:745-55.
6. Saxena SK, Koh GC, Ng TP, Fong NP, Yong D. Determinants of length of stay during post-stroke rehabilitation in community hospitals. *Singapore Med J* 2007; 48:400-7.
7. Mukherjee D, Brashler R, Savage TA, Kirschner KL. Moral distress in rehabilitation professionals: results from a hospital ethics survey. *PMR* 2009; 1:450-8.
8. Kirschner KL, Stocking C, Wagner LB, Foye SJ, Siegler M. Ethical issues identified by rehabilitation clinicians. *Arch Phys Med Rehabil* 2001; 82(suppl 2):S2-8.
9. Blackhall LJ, Murphy ST, Frank G, Michel V, Azen S. Ethnicity and attitudes toward patient autonomy. *JAMA* 1995; 274:820-5.
10. Barker JC. Cultural diversity--changing the context of medical practice. *West J Med* 1992; 157:248-54.
11. Pachter LM. Culture and clinical care. Folk illness beliefs and behaviours and their implications for health care delivery. *JAMA* 1994; 271:690-4.
12. Sulmasy DP, Geller G, Levine DM, Faden RR. A randomised trial of ethics education for medical house officers. *J Med Ethics* 1993; 19:157-63.
13. Elger BS, Harding TW. Terminally ill patients and Jehovah's witnesses: teaching acceptance of patients' refusals of vital treatments. *Med Educ* 2002; 36:479-88.
14. McKneally MF, Singer PA. Bioethics for clinicians: 25. Teaching bioethics in the clinical setting. *CMAJ* 2001; 164:1163-7.
15. Caplan AL, Callahan D, Haas J. Ethical and policy issues in rehabilitation medicine. *Hastings Cent Rep* 1987; 17:S1-19.

16. Zilberberg MD, Shorr AF. Prolonged acute mechanical ventilation and hospital bed utilisation in 2020 in the United States: implications for budgets, plant and personnel planning. *BMC Health Serv Res* 2008; 8:242.
17. Cameron KA, Song J, Manheim LM, Dunlop DD. Gender disparities in health and healthcare use among older adults. *J Womens Health (Larchmt)* 2010; 19:1643-50.
18. Hoffman JM, Doctor JN, Chan L, et al. Potential impact of the new medicare prospective payment system on reimbursement for traumatic brain injury inpatient rehabilitation. *Arch Phys Med Rehabil* 2003; 84:1165-72.
19. Gillen R, Tennen H, McKee T. The impact of the inpatient rehabilitation facility prospective payment system on stroke program outcomes. *Am J Phys Med Rehabil* 2007; 86:356-63.
20. Rinere O'Brien S. Trends in inpatient rehabilitation stroke outcomes before and after advent of the prospective payment system: a systematic review. *J Neurol Phys Ther* 2010; 34:17-23.
21. Yousuf RM, Fauzi AR, How SH, Rasool AG, Rehana K. Awareness, knowledge and attitude towards informed consent among doctors in two different cultures in Asia: a cross-sectional comparative study in Malaysia and Kashmir, India. *Singapore Med J* 2007; 48:559-65.
22. Macciocchi SN, Stringer AY. Assessing risk and harm: the convergence of ethical and empirical considerations. *Arch Phys Med Rehabil* 2001; 82:S15-S19.
23. Proot IM, Abu-Saad HH, de Esch-Janssen WP, Crebolder HF, ter Meulen RH. Patient autonomy during rehabilitation: the experiences of stroke patients in nursing homes. *Int J Nurs Stud* 2000; 37:267-76.
24. Grady C, Danis M, Soeken KL, et al. Does ethics education influence the moral action of practicing nurses and social workers? *Am J Bioeth* 2008; 8:4-11.



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