

References

- Ahmad, M., Fergus, L., & Stothard, P. (1988). Impact of Diagnosis-Related Groups ' prospective payment on utilization of medical intensive care. *Chest*, *93*, 176-179.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout and job dissatisfaction. *Journal of the American Medical Association*, *288*, 1987-1993.
- Amaravadi, R. K., Dimick, J. B., Pronovost, P. J., & Lipsett, P. A. (2000). ICU nurse-to-patient ratio is associated with complications and resource use after esophagectomy. *Intensive Care Medicine*, *26*, 1857-1862.
- American Society for Parenteral and Enteral Nutrition. (1995). Standards for nutrition support: Hospitalized patients. *Nutrition in Clinical Practice*, *10*, 208-219.
- Anderson, C. F., & Wochos, D. N. (1982). The utility of serum albumin values in the nutrition assessment of hospitalized patients. *Mayo Clinical Proceedings*, *57*, 181-184.
- Arabi, Y., Venkatesh, S., Haddad, S., Al Shimemeri, A., & Al Malik, S. (2002). A prospective study of prolonged stay in the intensive care unit: Predictors and impact on resource utilization. *International Journal for Quality in Health Care*, *14*, 403-410.
- Archibald, L. K., Manning, M. L., Bell, L. M., Banerjee, S., & Jarvis, W. R. (1997). Patient density, nurse to patient ratio and nosocomial infection risk in a pediatric cardiac intensive care unit. *The Pediatric Infectious Disease Journal*, *16*, 1045-1048.

- Asia Pacific Health Economic Network (APHEN). (2001). The universal coverage policy of Thailand: An introduction. Retrieved July 25, 2004, from http://www.unescap.org/aphen/thailand_universal_coverage.htm
- Bams, J., & Miranda, D. R. (1985). Outcome and costs of intensive care. A follow-up study on 238 ICU patients. *Intensive Care Medicine*, *11*, 234-241.
- Barkell, N. P., Killinger, K. A., & Schultz, S. D. (2002). The relationship between nurse staffing models and patient outcomes: A descriptive study. *Outcomes Management*, *6*, 27-33.
- Barnett, M. J., Kaboli, P. J., Sirio, C. A., & Rosenthal, G. E. (2002). Day of the week of intensive care admission and patient outcomes: A multi-site regional evaluation. *Medical Care*, *40*, 530-539.
- Barr, J., Hecht, M., Flavin, K. E., Khorana, A., & Gould, M. K. (2004). Outcomes in critically ill patients before and after the implementation of an evidence-based nutritional management protocol. *Chest*, *125*, 1446-1457.
- Beckmann, U., Baldwin, I., Hart, G. K., & Runciman, W. B. (1996). The Australian incident monitoring study in intensive care (AIMS-ICU): An analysis of the first year of reporting. *Anaesthesia and Intensive Care*, *24*, 320-329.
- Behner, K. G., Fogg, L. F., Fournier, L. C., Frankenbach, J., & Robertson, S. B. (1990). Nursing resource management: Analyzing the relationship between costs and quality in staffing decisions. *Health Care Management Review*, *15*, 63-71.
- Bell, C. M., & Redelmeier, D. A. (2001). Mortality among patients admitted to hospitals on weekends as compared with weekdays. *The New England Journal of Medicine*, *345*, 663-668.

- Berki, S. E., Ashcraft, M. L., & Newbrander, W. C. (1984). Length-of-stay variations within ICDA-8 diagnosis-related groups. *Medical Care, 22*, 126-142.
- Bertolini, G., Confalonieri, M., Rossi, C., Rossi, G., Simini, B., Gorini, M., et al. (2005). Cost of COPD: Differences between intensive care unit and respiratory intermediate care unit. *Respiratory Medicine, 99*, 894-900.
- Binnekade, J. M., Tepaske, R., Bruynzeel, P., Mathus-Vliegen, E. M., & de Hann, R. J. (2005). Daily enteral feeding practice on the ICU: Attainment of goals and interfering factors. *Critical Care Medicine, 9*, 218-225.
- Blegen, M. A., Goode, C. J., & Reed, L. (1998). Nurse staffing and patient outcomes. *Nursing Research, 47*, 43-50.
- Bloom, J. R., Alexander, J. A., & Nuchols, B. A. (1997). Nurse staffing patterns and hospital efficiency in the United States. *Social Science and Medicine, 44*, 145-155.
- Bone, R. C. (1984). Critical care medicine. The past and changes in the future. *Journal of the American Medical Association, 252*, 2060-2061.
- Bonvissuto, C. A. (1994). Avoiding unnecessary critical care costs. *Healthcare Financial Management, 48*, 47-8, 50, 52-56.
- Bower, R. H. (1990). Nutritional and metabolic support of critically ill patients. *Journal of Parenteral and Enteral Nutrition, 14*, 257S-259S.
- Braunschweig, C., Gomez, S., & Sheean, P. M. (2000). Impact of declines in nutritional status on outcomes in adult patients hospitalized for more than 7 days. *Journal of the American Dietetic Association, 100*, 1316-22, quiz 1323-1324.

- Brilli, R. J., Spevetz, A., Branson, R. D., Campbell, G.M., Cohen, H., Dasta, J. F., et al. (2001). Critical care delivery in the intensive care unit: Defining clinical roles and the best practice model. *Critical Care Medicine*, 29, 2007-2019.
- Brisline, R. (1970). Back translation for cross-culture research. *Journal of Cross- Cultural Psychology*, 1, 185-216.
- Brosseau, L., Philippe, P., Potvin, L., & Boulanger, Y. L. (1996). Post-stroke inpatient rehabilitation I: Predicting length of stay. *American Journal of Physical Medicine & Rehabilitation*, 75, 422-430.
- Bruun, L. I., Bosaeus, I., Bergstad, I., & Nygaard, K. (1999). Prevalence of malnutrition in surgical patients: Evaluation of nutritional support and documentation. *Clinical Nutrition*, 18, 141-147.
- Buchman, T. G., Kubos, K. L., Seidler, A. J., & Siegforth, M. J. (1994). A comparison of statistical and connectionist models for the prediction of chronicity in a surgical intensive care unit. *Critical Care Medicine*, 22, 750.
- Buckley, T. A., Short, T. G., Rowbottom, Y. M., & Oh, T. E. (1997). Critical incident reporting in the intensive care unit. *Anaesthesia*, 52, 403-409.
- Bumroongkit, C., Liwsrisakun, C., Deesomchok, A., Theerakittikul, T., & Pothirat, C. (2005). Efficacy of weaning protocol in medical intensive care unit of tertiary care center. *Journal of the Medicine Association of Thailand*, 88, 52-57.
- Bunburaphong, P., Riyagoon, W., Ramdit, W., Werawatganon, T., & Techapichetvanich, K. (2001). Length of surgical intensive care unit stay and risk factors. *Journal of the Medical Association of Thailand*, 84, 1103-1108.

- Buri, P. S., Tantiphan, C., Hathirat, S., & Srikasipun, P. (1987). Medical intensive care: Indications for admission and outcomes. *Journal of the Medical Association of Thailand, 70*, 379-385.
- Campion, E. W., Mulley, A. G., Goldstein, R. L., Barnett, G. O., & Thibault, G. E. (1981). Medical intensive care for the elderly: A study of current use, cost, and outcomes. *Journal of the American Medical Association, 246*, 2052-2056.
- Carey, M. R., Sheth, H., & Braithwaite, R. S. (2004). A prospective study of reasons for prolonged hospitalizations on a general medicine teaching service. *Journal of General Internal Medicine, 20*, 108-115.
- Castillo-Lorente, E., Rivera-Fernandez, R., & Vazquez-Mata, G. (1997). Limitation of therapeutic activity in elderly critically ill patients: Project for the epidemiological analysis of critical care patients. *Critical Care Medicine, 25*, 1643-1648.
- Chaix, C., Durand-Zaleski, I., Alberti, C., & Brun-Buisson, C. (1999). A model to compute the medical cost of patients in intensive care. *Pharmacoeconomics, 15*, 573-582.
- Chalfin, D. B., & Carlon, G. C. (1990). Age and utilization of intensive care unit resources of critically ill cancer patients. *Critical Care Medicine, 18*, 694-698.
- Charoenparij, S., Chunharas, S., Donaldson, D., Karaushaar, D., Pannorunothai, S., Pinjaroen, S., et al. (2000). *Hospital financing in Thailand: Final integrated report* (Thailand: Health Management and Financing Study Project ADB No. 2997-THA). Boston: Management Science for Health, Inc.
- Chelluri, L., Mendelsohn, A. B., Belle, S. H., Rotondi, A. J., Angus, D. C., Donahoe, M. P., et al. (2003). Hospital costs in patients receiving prolonged mechanical ventilation: Does age have an impact. *Critical Care Medicine, 31*, 1746-1751.

- Chima, C., Barco, K., Dewitt, M., Maeda, M., Teran, J., & Mullen, K. (1997). Relationship of nutrition status to length of stay, hospital costs and discharge status of patients hospitalized in the medical service. *Journal of the American Dietetic Association*, 97, 975-978.
- Christman, J. W., & McCain, R. W. (1993). A sensible approach to the nutritional support of mechanically ventilated critically ill patients. *Intensive Care Medicine*, 19, 129-136.
- Cho, S. H., Ketefian, S., Barkauskas, V. H., & Smith, D. G. (2003). The effects of nurse staffing on adverse events, morbidity, mortality, and medical costs. *Nursing Research*, 52, 71-79.
- Civetta, J. M., Hudson-Civetta, J. A., & Nelson, L. D. (1990). Evaluation of APACHE II for cost containment and quality assurance. *Surgery Annual*, 212, 266.
- Clarke, T., Mackinnon, E., England, K., Burr, G., Fowler, S., & Fairservice, L. (2000). A review of intensive care nurse staffing practices overseas: What lessons for Australia? *Intensive and Critical Care Nursing*, 16, 228-242.
- Clewer, A., & Perkin, D. (1998). *Economics for health care management*. New York: Prentice Hall.
- Coats, K., Morgan, S., Bartolucci, A., & Weinsier, R. (1993). Hospital associated malnutrition: A reevaluation 12 years later. *Journal of the American Dietetic Association*, 93, 27-33.
- Cohen, I. L., Bari, N., Strosberg, M. A., Weinberg, P. F., Wacksman, R. M., Millstein, B. H., et al. (1991). Reduction of duration and cost of mechanical ventilation in an

intensive care unit by used of a ventilatory management team. *Critical Care Medicine*, 19, 1278-1283.

Consensus Conference. (1983). Critical medicine. *Journal of the American Medical Association*, 250, 789-804.

Cook, N. (2000). *Unit cost analysis of general hospital in Thailand: A case of Prananglao Hospital*. Unpublished master's thesis, Mahidol University, Bangkok, Thailand.

Correia, M. I., & Waitzberg, D. L. (2003). The impact of malnutrition on morbidity, mortality, length of hospital stay and costs evaluated through a multivariate model analysis. *Clinical Nutrition*, 22, 235-239.

Cram, P., Hillis, S. L., Barnett, M., & Rosenthal, G. E. (2003). Effects of weekend admission and hospital teaching status on in-hospital mortality. *The American Journal of Medicine*, 117, 151-157.

Czaplinski, C., & Diers, D. (1998). The effect of staff nursing on length of stay and mortality. *Medical Care*, 36, 1626-1638.

Daly, B. J., Rudy, E. B., Thompson, K. S., & Happ, M. B. (1991). Development of a special care unit for chronically critically ill patients. *Heart Lung*, 20, 45-51.

Dang, D., Johantgen, M. E., & Jenckes, M. W. (2002). Postoperative complications: Does intensive care unit staff nursing make a difference? *Heart Lung*, 31, 219-228.

Daranond, J. (1993). *Unit cost of private ward and intensive care unit, Chonburi Hospital, ministry of public health, fiscal year 1991*. Unpublished master's thesis, Mahidol University, Bangkok, Thailand.

- Dasta, J. F., McLaughlin, T. P., Mody, S. H., & Piech, C. T. (2005). Daily cost of an intensive care unit day: The contribution of mechanical ventilation. *Critical Care Medicine, 33*, 1266-1271.
- Davis, L. L (1992). Instrument review: Getting the most from a panel of experts. *Applied Nursing Research, 5*, 194-196.
- de la Iglesia, F., Valino, P., Pita, S., Ramos, V., Pellicer, C., & Nicolas, R., et al (2002). Factors predicting a hospital stay of over 3 days in patients with the acute exacerbation of chronic obstructive pulmonary disease. *Journal of Internal Medicine, 251*, 500-507.
- Detsky, A. S., Stricker, S. C., Mulley, A. G., & Thibault, G. E. (1981). Prognosis, survival and the expenditure of hospital resources for patients in an intensive-care unit. *The New England Journal of Medicine, 12*, 667-672.
- Dickie, H., Vedio, A., Dundas, R., Treacher, D. F., & Leach, R. M. (1998). Relationship between TISS and ICU cost. *Intensive Care Medicine, 24*, 1009-1017.
- Dimick J. B., Swoboda, S. M., Pronovost, P. J., & Lipsett, P. A. (2001). Effect of nurse-to-patient ratio in the intensive care unit on pulmonary complications and resource use after hepatectomy. *The American Journal of Critical Care, 10*, 376-382
- Donabedian A. (1966). Evaluating the quality of medical care. *The Milbank Memorial Fund Quarterly, 44*, 165-230.
- Donabedian A. (1980). *Explorations in quality assessment and monitoring*. Michigan: Health Administration Press.
- Donabedian A. (1988). The quality of care: How can it be assessed? *Journal of American Medical Association, 260*, 1743-1748.

Donabedian A. (2003). *An introduction to quality assurance in health care*. New York : Oxford University Press.

Dudek, S. G. (2001). *Nutrition essentials for nursing practice (4th ed.)*. New York: Lippincott Williams & Wilins.

Durbin, C. G. Jr. (2006). Team model: Advocating for the optimal method of care delivery in the intensive care unit. *Critical Care Medicine*, 34 (Suppl. 3), S12-17.

Dutton, R. P., Cooper, C., Jones, A., Leone, S., Kramer, M. E., Scalea, T. M. (2003). Daily multidisciplinary rounds shorten length of stay for trauma patients. *The Journal of Trauma*, 55, 913–919.

Eagle, K. A., Mulley, A. G., Skates, S. J., Reder, V. A., Nicholson, B. W., Sexton J. O., et al (1990). Length of stay in the intensive care unit: Effect of practice guidelines and feedback. *Journal of American Medical Association*, 264, 992-997.

Earnest, A., Chen, M., & Seow, E. (2006). Exploring if day and time of admission is associated with average length of stay among inpatients from a tertiary hospital in Singapore: An analytic study based on routine admission data. *BMC Health Service Research [electronic resource]*, 6, 1-8.

Eastaugh, S., & Regan-Donovan, M. (1990). Nurse extenders offer a way to trim staff expenses. *Healthcare Financial Management*, 44, 58-62.

Edbrooke, D. L., Stevens, V. G., Hibbert, C. L., Mann, A. J., & Wilson, A. J. (1997). A new method of accurately identifying costs of individual patients in intensive care: The initial results. *Intensive Care Medicine*, 23, 645-650.

- Ely, E. W., Evans, G. W., & Haponik, E. F. (1999). Mechanical ventilation in a cohort of elderly patients admitted to an intensive care unit. *Annals of Internal Medicine, 131*, 96-104.
- Emori, T. G., Banerjee, S. N., Culver, D. H., Gaynes, R. P., Horan, T. C., Edwards, J. R., et al. (1991). The national nosocomial infections surveillance system: Nosocomial infections in elderly patients in the United States. *The American Journal of Medicine, 91*, 289S-293S.
- Ensminger, A. S., Morales, I. J., Peters, S. G., Keegan, M. T., Finkielman, J. D., Lymp, J. F., et al. (2004). The hospital mortality of patients admitted to the ICU weekends. *Chest, 126*, 1292-1298.
- Epstein, A. M., Read, J. L., & Hofer, M. (1987). The relation of body weight to length of stay and charges for hospital services for patients undergoing elective surgery: A study of two procedures. *American Journal of Public Health, 77*, 993-997.
- Esteban, A., Anzueto, A., Frutos, F., Alia, I., Brochard, L., Stewart, T. E., et al. (2002). Characteristics and outcomes in adult patients receiving mechanical ventilation: A 28-day international study. *Journal of the American Medical Association, 287*, 1850-1857.
- Faculty of Medicine (2001). *Manual for teaching workload and evaluation*. Chiang Mai: Faculty of Medicine, Chiang Mai University.
- Fedullo, A. J., & Swinburne, A. J. (1983). Relationship of patient age to cost and survival in a medical ICU. *Care Critical Medicine, 11*, 155-159.
- Ferketich, S. (1990). Focus on psychometrics internal consistency estimates of reliability. *Research in Nursing and Health, 13*, 437-440.

- Ferreira, F. L., Bota, D. P., Bross, A., Melot, C., & Vincent, J. (2001). Serial evaluation of the SOFA score to predict outcome in critically ill patients. *Journal of the American Medical Association, 286*, 1754-1758.
- Finkler, S. A., & Kovner, C. T. (1993). *Financial management for nurse managers and executives*. Philadelphia: W.B. Saunders
- Flood, S., & Diers, D. (1988). Nurse staffing, patient outcome and cost. *Nursing Management, 19*, 34-43.
- Gilbertson, A. A., Smith, J. M., & Mostafa, S. M. (1991). The cost of an intensive care unit: A prospective study. *Intensive Care Medicine, 17*, 204-208.
- Gilio, A., Stape, A., Pereira, C. R., Cardoso, M., Silva, C., & Troster, E. (2000). Risk factors for nosocomial infections in a critically ill pediatric population: A 25-month prospective cohort study. *Infection Control and Hospital Epidemiology, 21*, 340-342.
- Giner, M., Laviano, A., Meguid, M. M., & Gleason, J. R. (1996). In 1995 a correlation between malnutrition and poor outcome in critically ill patients still exists. *Nutrition, 12*, 23-29.
- Green, M. L., & Harry, J. (1987). *Nutrition in contemporary nursing practice (2nd ed.)*. New York: A Wiley Medical Publication.
- Halpern, N. A., Bettes, L., & Greenstein, R. (1994). Federal and nationwide intensive care units and healthcare costs: 1986-1992. *Critical Care Medicine, 22*, 2001-2007
- Hamm Vida, D. (1990). Cost of non nursing tasks. *Nursing management, 21*, 23-34.
- Hanrahan, T. F. (1991). New approaches to caregiving. *The Healthcare Forum Journal, 34*, 32-35, 37-38.

- Hartshorn, J. C., Sole, M. L., & Lamborn, M. L. (1997). *Introduction to critical care nursing* (2nd ed.). Philadelphia: W.B. Saunders Company.
- Hayne, A. N., & Bailey, Z. W. (1982). *Nursing administration of critical care* (pp. 47-62, 159-162). London: An Aspen Publication.
- Heinz, D. (2004). Hospital nurse staffing and patient outcomes: A review of current literature. *Dimensions of Critical Care Nursing*, 23, 44-50.
- Henneman, E., Dracup, K., Ganz, T., Molayeme, O., & Cooper, C. (2001). Effect of a collaborative weaning plan on patient outcome in the critical care setting. *Critical Care Medicine*, 29, 297-303.
- Hesterly, S. C., & Robinson, M. (1990). Alternative caregivers: Cost-effective utilization of R.N.S. *Nursing Administration Quarterly*, 14, 18-23.
- Higgins, T. L., McGee, W. T., Steingrub, J. S., Rapoport, J., Lemeshow, S., & Teres, D. (2003). Early indicators of prolonged intensive care unit stay: Impact of illness severity, physician staffing and pre-intensive care unit length of stay. *Critical Care Medicine*, 31, 45-51.
- Hillson, S. D., Rich, E. C., Dowd, B., & Luxenberg, M. G. (1992). Call nights and patient care: Effects on inpatients at one teaching hospital. *Journal of General Internal Medicine*, 7, 405-410.
- Horn, J. (1997). Intensive care and the elderly. *Archives of Gerontology and Geriatrics*, 25, 101-110.
- Huang, Y., Yen, C., Cheng, C., Jih, K., & Kan, M. (2000). Nutrition status of mechanically ventilated critically ill patients: Comparison of different types of nutrition support. *Clinical Nutrition*, 19, 101-107.

- Iezzoni, L. I. (Ed) (1994). *Risk adjustment for measuring health care outcomes*. Michigan: Health Administration Press.
- Jacobs, P., Assiff, L., Bachynsky, J., Baladi, J., Botz, C., Cohen, M., et al (2000). *A national list of provincial costs for health care: Canada, 1997/8*. Alberta: Institution of Health Economics.
- Jacobs, P., Edbrooke, D., Hibbert, C., Fassbender, K., & Corcoran, M. (2001). Descriptive patient data as an explanation for the variation in average daily costs in intensive care. *Anaesthesia*, 56, 643-647.
- Janssens, U., Graf, C., Graf, J., Radke, P. W., Konigs, B., Koch, K. C., et al. (2000). Evaluation of the SOFA score: A single-center experience of a medical intensive care unit in 303 consecutive patients with predominantly cardiovascular disorder. Sequential Organ Failure Assessment. *Intensive Care Medicine*, 26, 1037-1045.
- Junker, C., Zimmerman, J. E., Alzola, C., Draper, E. A., & Wagner, D. P. (2002). A multicenter description of intermediate-care patients: Comparison with ICU low-risk monitor patients. *Chest*, 121, 1253-1261.
- Kaboli, P.J., Barnett, M. J., & Rosenthal, G. E. (2001). Associations with reduced length of stay and costs on an academic hospital service. *The American Journal of Managed Care*, 10, 561-568.
- Keenan, S. P., Dodek, P., Chan, K., Hogg, R. S., Craib, K. J., Anis, A. H., et al. (2003). Length of ICU stay for chronic obstructive pulmonary disease varies among large community hospitals. *Intensive Care Medicine*, 29, 590-595.
- Knaus, W. A., Draper, E. A., Wagner, D. P., & Zimmerman, J. E. (1985). APACHE II: A severity of disease classification system. *Critical Care Medicine*, 13, 818-829.

- Knaus, W. A., Wangner, P. D., & Zimmerman, E. J. (1993). Variations in mortality and length of stay in intensive care units. *Annals of Internal Medicine*, 118, 753-761.
- Kongsayreepong, S., Wongwisate, T., & Sodapuk, C. (2006). Prolonged general surgical intensive care unit stays: Incidence, clinical characteristic and outcomes. *Journal of the Medical Association of Thailand*, 89, 993-998.
- Kovner, C., Jones, C., Zhan, C., Gergen, P.J., & Basu, J. (2002). Nurse staffing and post surgical adverse events: An analysis of administrative data from a sample of U.S. hospitals, 1990-1996. *Health Services Research*, 37, 611-629.
- Kreitzer, S. L., Loebner, E. S., & Roveti, G. C. (1982). Severity of illness: The DRGs' missing link? *Quality Review Bulletin*, 8, 21-34.
- Kress, J. P., Pohlman, A. S., O'Connor, M. F., & Hall, J. B. (2000). Daily interruption of sedative infusion in critically ill patients undergoing mechanical ventilation. *The New England Journal of Medicine*, 342, 1471-1477.
- Krishnan, J. A., Moore, D., Robeson, C., Rand, C. S., & Fessler, H. E. (2004). A prospective, controlled trial of a protocol-based strategy to discontinue mechanical ventilation. *American Journal of Respiratory and Critical Care Medicine*, 169, 673-678.
- Krishnan, J.A., Parce, P.B., Martinez, A., Diette, G.B., & Brower, R.G. (2003) Caloric intake in medical ICU patients: Consistency of care with guidelines and relationship to clinical outcomes. *Chest*, 124, 297-305.
- Kuonen, J. (1996). The new hands-off nursing. *Time*, 148, 56-57.

- Lassnigg, A., Hiesmayr, M. J., Bauer, P., & Haisjackl, M. (2002). Effect of centre-, patient- and procedure-related factors on intensive care resource utilization after cardiac surgery. *Intensive Care Medicine*, 28, 1453-1461.
- Leape, L. L., Cullen, D. J., Clapp, M. D., Burdick, E., Demonaco, H. J., Erickson, J. I., et al. (1999). Pharmacist participation on physician rounds and adverse drug events in the intensive care unit. *Journal of the American Medical Association*, 282, 267-270.
- Lee, T. Y., Yeh, M. L., Chen, H. H., & Lien, G. H. (1999). The skill mix practice model for nursing: Measuring outcome. *Journal of Advanced Nursing*, 51, 406-413.
- Lefton, R. B., & Lefton, R. M. (1998). Expanding weekend and holiday clinical services: A financial perspective. *Healthcare Financial Management*, 52, 37-40.
- Le Gall, J. R., Lemeshow, S., & Saulnier, F. (1993). A new Simplified Acute Physiology Score (SAPS II) based on a European/ North American multicenter study. *Journal of American Medical Association*, 270, 2957-2963.
- Lipschik, G. Y., & Kelley, M. A. (2001). Models of critical care delivery: Physician staffing in the ICU. *Seminars in Respiratory and Critical Care Medicine*, 22, 95-100.
- Ljungqvist, O., Nygren, J., & Thorell, A. (2000). Insulin resistance and elective surgery. *Surgery*, 128, 757-60.
- Loes, O., Smith-Erichsen, N., & Lind, B. (1987). Intensive care: Cost and benefit. *Acta Anaesthesiologica Scandinavica*, 31, 3-19.
- Mackinnon, E., Clarke, T., England, K., Burr, G., Fowler, S., & Fairservice, L. (1998). Intensive care nurse staffing review. *Intensive and Critical Care Nursing*, 14, 228-242.

Madoff, R. D., Sharpe, S. M., Fath, J. J., Simmons, R. L., & Cerra, F. B. (1985). Prolonged surgical intensive care: A useful allocation of medical resources. *Archives of Surgery, 120*, 698.

Maharaj Nakorn Chiang Mai. (2004-2005). *Annual report for fidcal year 2004*. Chiang Mai: Maharaj Nakorn Chiang Mai Hospital, Faculty of Medicine, Chiang Mai University.

Manning, E., & Shenkin, A. (1995). Nutritional assessment in the critically ill. *Critical Care Clinics, 11*, 603-634.

Marik, P. E., & Hedman, L. (2000). What is a day? determining intensive care unit length of stay. *Critical Care Medicine, 28*, 2090-2093.

Mark, B. A., Harless, D. W., McCue, M., & Xu, Y. (2004). A longitudinal examination of hospital registered nurse staffing and quality of care. *Health Services Research, 39*, 279-300.

Martin, C. M., Hill, A. D., Burns, K., & Chen, L. M. (2005). Characteristics and outcomes for critically ill patients with prolonged intensive care unit stay. *Critical Care Medicine, 33*, 1922-1927.

McClave, S.A., Sexton, L.K., Spain, D.A., Adams, J.L., Owens, N.A., Sullins, M.B., et al. (1999). Enteral tube feeding in the intensive care unit: Factors impeding adequate delivery. *Critical Care Medicine, 27*, 1252-1256.

McCue, M., Mark, B. A., & Harless, D. (2003). Nurse staffing, quality, and financial performance. *Journal of Health Care Finance, 29*, 54-76.

McGillis, Hall. L., Doran, D., & Pink, G. H. (2004). Nurse staffing models, nursing hours, and patient safety outcomes. *Journal of Nursing Administration, 34*, 41-45.

- McKee, M., & Black, N. (1992). Does the current use of junior doctors in the United Kingdom affect the quality of medical care? *Social Science and Medicine*, 34, 549-558.
- Metnitz, P., & Lenz, K. (1995). Patient data management system in intensive care-the situation in Europe. *Intensive Care Medicine*, 11, 703-715.
- Ministry of Public Health (MOPH) (2004). *Thailand health profile: Administrative system of the ministry of public health*. Retrieved June 5, 2005, from http://www.moph.go.th/ops/health_48/CHAP7.PDF.
- Miranda, D. R., de Rijk, A., & Schaufeli, W. (1996). Simplified Therapeutic Intervention Scoring System: The TISS-28 items-results from a multicenter study. *Critical Care Medicine*, 24, 64-73.
- Moerer, O., Schmid, A., Hofmann, M., Herklotz, A., Reinhart, K., Werdan, K., et al. (2002). Direct costs of severe sepsis in three German intensive care units based on retrospective electronic patient record analysis of resource use. *Intensive Care Medicine*, 28, 1440-1446.
- Mogyorosy, Z., & Smith, P. (2005). *The main methodological issue in costing health care services: A literature review* (United Kingdoms: A comparative EU project CHE research paper 7). Retrieved June 15, 2005, from <http://www.york.ac.uk/inst/che/pubs>.
- Morales, I. J., Peters, S. G., & Afessa, B. (2003). Hospital mortality rate and length of stay in patients admitted at night to the intensive care unit. *Critical Care Medicine*, 31, 858-863.

- Moreno, R., & Morais, P. (1997). Validation of the simplified therapeutic intervention scoring system on an independent database. *Intensive Care Medicine*, 23, 640-644.
- Munoz, E., Josephson, J., Tenenbaum, N., Goldstein, J., Shears, A. M., et al. (1989). Diagnosis-related groups, cost, and outcome for patients in the intensive care unit. *Heart Lung*, 18, 627-633.
- Murray, M. J., Marsh, H. M., Wochos, D. N., Moxness, K. E., Offord, K. P., & Callaway, C. W. (1988). Nutrition assessment of intensive care unit patients. *Mayo Clinic Proceedings*, 63, 1106-1115.
- Nakajima, K., Kurata, Y., & Takeda, H. (2005). A web-based incident reporting system and multidisciplinary collaborative projects for patient safety in a Japanese hospital. *Quality and Safety in Health Care*, 14, 123-129.
- Needleman, J., Buerhaus, P., Mattke, S., Stewart, M., & Zelevinsky, K. (2002). Nurse staffing levels and the quality of care in hospitals. *The New England Journal of Medicine*, 346, 1715-1722.
- Needleman, J., Buerhaus, P., Mattke, S., Stewart, M., & Zelevinsky, K. (2003). Measuring hospital quality: Can Medicare data substitute for all-payer data? *Health Services Research*, 38, 1487-1508.
- Newhouse, R. P., Johantgen, M., Pronovost, P. J., & Johnson, E. (2006). Perioperative nurses and patient outcomes- mortality, complications, and length of stay. *AORN Journal*, 81, 508-528.
- Norris, C., Jacobs, P., Rapoport, J., & Hamilton, S. (1995). ICU and non-ICU cost per day. *Canadian Journal of Anaesthesia*, 42, 192-196.

- Norrish, B.R., & Rundall, T.G. (2001). Hospital restructuring and the work of registered nurses. *The Milbank Quarterly*, 79, 55-79.
- Noseworthy, T. W., Konopad, E., Shustack, A., Johnston, R., & Grace, M. (1996). Cost accounting of adult intensive care: Method and human and capital inputs. *Care Critical Medicine*, 24, 1168-1172.
- Office of Statewide Health Planning and Development (OSHPD). (1998). *Hospital annual financial data: Selected data file documentation*. Sacramento, CA: State of California Office of Statewide Health Planning and Development.
- O'Leary-Kelley, C. M., Puntillo, K. A., Barr, J., Stotts, N., & Douglas, M. K. (2005). Nutrition adequacy in patient receiving mechanical ventilation who are fed enterally. *American Journal of Critical Care*, 14, 222-231.
- Pannarunothai, S. (2002). *Diagnosis related group (DRGs) development in Thailand*. Nonthaburi: Health System Research Institution.
- Parviainen, I., Herranen, A., Holm, A., Uusaro, A., & Ruokonen, E. (2004). Results and costs of intensive care in a tertiary university hospital from 1996-2000. *Acta Anaesthesiologica Scandinavica*, 48, 55-60.
- Polit, D. F. (1996). *Data analysis & statistics for nursing research*. London: Prentice-Hall International (UK).
- Popovich, J. Jr. (1991). Intermediate care unit: Graded care options. *Chest*, 99, 4-5.
- Pronovost, P. J., Jenckes, M. W., Dorman, T., Garrett, E., Breslow, M. J., Rosenfeld, B. A., et al. (1999). Organizational characteristics of intensive care units related to outcomes of abdominal aortic surgery. *Journal of the American Medical Association*, 281, 1310-1317.

- Ramachandran, V., Grap, M. J., & Sessler, C. N. (2005). Protocol-directed weaning: A process of continuous performance improvement. *Critical Care*, 9, 138-140.
- Ranistha, R., Thanakitiwirun, M., Vilaichone, W., Thongyoo, S., & Permpikul, C. (2005). Prediction of mortality by using the standard scoring systems in a medical intensive care unit in Thailand. *Journal of the Medical Association of Thailand*, 88, 949-955.
- Rapoport, J., Teres, D., Lemeshow, S., Avrunin, J. S., & Haber, R. (1990). Explaining variability of cost using a severity of illness measure for ICU patients. *Medical Care*, 28, 338-348.
- Rapoport, J., Teres, D., Zhao, Y., & Lemeshow, S. (2003). Length of stay data as a guide to hospital economic performance for ICU patients. *Medical Care*, 41, 386-397.
- Reilly, H., Martineau, J., Moran, A., & Kennedy, H. (1995). Nutrition screening-evaluation and implementation of a simple nutrition risk score. *Clinical Nutrition*, 14, 269-273.
- Ridley, S., Biggam, M., & Stone, P. (1991). Cost of intensive therapy: A description of methodology and initial results. *Anaesthesia*, 46, 523-530.
- Ritsri, W. (2002). Subjective Global Assessment of nutritional status of medical inpatients at Ramathibodi Hospital. Unpublished master's thesis, Mahidol University, Bangkok, Thailand.
- Rocandio Pablo, A. M., Arroyo Izaga, M., & Ansotegui Alday, L. (2003). Assessment of nutritional status on hospital admission: Nutritional scores. *European Journal of Clinical Nutrition*, 57, 824-831.
- Rochester, D. F., & Esau, S. A. (1984). Malnutrition and the respiratory system. *Chest*, 85, 411-415.

- Rogers, A. E., Hwang, W. T., Scott, L. D., Aiken, L. H., & Dinges, D. F. (2004). The working hours of hospital staff nurses and patient safety. *Health Affairs, 23*, 202-212.
- Royal College of Physicians. (2002). *Nutrition and Patients: A doctor's responsibility*. London: RCP.
- Rubinson, L., Diette, G.B., Song, X., Brower, R., & Krishnan, J.A. (2004) Low caloric intake is associated with nosocomial bloodstream infections in patients in the medical intensive care unit. *Critical Care Medicine, 32*, 350–357.
- Rudy, E. B., Daly, B. J., Douglas, S., Montenegro, H. D., Song, R., & Dyer, M. A. (1995). Patient outcomes for the chronically critically ill: Special care unit versus intensive care unit. *Nursing Research, 44*, 324-331.
- Ruiz-Bailen, M., Aguayo de Hoyos, E., Ramos-Cuadra, J. A., Diaz-Castellanos, M. A., Issa-Khozouz, Z., Reina-Toral, A., et al. (2002). Group Influence of age on clinical course, management and mortality of acute myocardial infarction in the Spanish population. *International Journal of Cardiology, 85*, 285-296
- Sasichay-Akkadechanunt, T., Scalzi, C., & Jawad, A. (2003). The relationship between nurse staffing and patient outcomes. *Journal of Nursing Administration, 33*, 478-485.
- Saviteer, S. M., Samsa, G. P., & Rutala, W. A. (1988). Nosocomial infections in the elderly: Increased risk per hospital day. *The American Journal of Medicine, 84*, 661-666.
- Schmidt, W. P., Taeger, D., Buecker-Nott, H. J., & Berger, K. (2003). The impact of the day of week and month of admission on the length of hospital stay in stroke patients. *Cardiovascular Disease, 16*, 247-252.

Schultz, M. A., Van Servellen, G., Chang, B. L., McNesse-Smith, D., & Waxenberg, E.

(1998). The relationship of hospital structural and financial characteristics to mortality and length of stay in acute myocardial infarction patients. *Outcomes Management for Nursing Practice*, 2, 130-136.

Shaw-Stiffel, T. A., Zarny, L. A., Pleban, W. E., Rosman, D. D., Rudolph, R. A., &

Bernstein, L. H. (1992). Effect of nutrition status and other factors on length of hospital stay after major gastrointestinal surgery. *Nutrition*, 9, 140-145.

Sheng, A., Ellrodt, A. G., Agocs, L., Tankel, N., & Weingarten, S. (1993). Is cardiac test

availability a significant factor in weekend delays in discharge for chest pain patients? *Journal of General Internal Medicine*, 8, 573-575.

Shiell, A. M., Griffiths, R. D., Short, A. I., & Spiby, J. (1990). An evaluation of the costs

and outcome of adult intensive care in two units in the UK. *Clinical Intensive Care*, 1, 256-62.

Shorr, A. F. (2002). An update on cost-effectiveness analysis in critical care. *Current*

Opinion in Critical Care, 8, 337-343.

Smith, P. W. (1989). Nosocomial infections in the elderly. *Infectious Disease Clinics of*

North America, 3, 763-777.

Somme, D., Maillet, J. M., Gisselbrecht, M., Novara, A., Ract, C., & Fagon, J. Y. (2003).

Critically ill old and the oldest-old patients in intensive care: Short- and long-term outcomes. *Intensive Care Medicine*, 29, 2137-2143.

Stevens, V. G., Hibbert, C., & Edbrooke, D. (1998). Evaluation of proposed casemix

criteria as a basis for costing patients in the adult general intensive care unit.

Anaesthesia, 53, 944-950.

- Stricker, K., Rothen, U., & Takala, J. (2003). Resource use in the ICU: Short-vs long-term patients. *Acta Anaesthesiologica Scandinavica*, 47, 508-515.
- Suwanjutha, S. (1993). Overview of pediatric intensive care in Thailand. *Critical Care Medicine*, 21(Suppl. 9), S410-412.
- Sznajder, M., Leleu, G., Buonamico, G., Auvert, B., Aegerter, P., Merliere, Y., et al. (1998). Estimation of direct cost and resource allocation in intensive care: Correlation with Omega system. *Intensive Care Medicine*, 24, 582-589.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics (3rd ed.)*. New York: Harper and Row.
- Tarnow-Mordi, W. O., Hau, C., Warden, A., & Shearer, A. J. (2000). Hospital mortality in relation to staff workload: A 4-year study in an adult intensive-care unit. *Lancet*, 356, 185-189.
- Tejavej, A. (1993). Neonatal intensive care: Present and future trends in Thailand. *Journal of the Medical Association of Thailand*, 76 (Suppl. 2), 114-118.
- Thailand Nursing Council (2005). *The standard of nursing and midwifery university hospitals*. Bangkok: Thailand Nursing Council.
- Thomas, J. W., Guire, K. E., & Horvat, G. G. (1997). Is patient length of stay related to quality of care? *Hospital and Health Services Administration*, 42, 489-507.
- Thorens, J. B., Kaelin, R. M., Jolliet, P., & Chevrolet, J. C. (1995). Influence of the quality of nursing on the duration of weaning from mechanical ventilation in patients with chronic obstructive pulmonary disease. *Critical Care Medicine*, 23, 1807-1815.

- Thorpe, K. E. (1990). House staff supervision and working hours. Implications of regulatory change in New York State. *Journal of the American Medical Association*, 263, 3177-3181.
- Tonnelier, J. M., Prat, G., Le Gal, G., Gut-Gobert, C., Renault, A., Boles, J. M., et al (2005). Impact of a nurses' protocol-directed weaning procedure on outcomes in patients undergoing mechanical ventilation for longer than 48 hours: A prospective cohort study with a matched historical control group. *Critical Care*, 9, 138-140.
- Uusaro, A., Kari, A., & Ruokonen, E. (2003). The effects of ICU admission and discharge times on mortality in Finland. *Intensive Care Medicine*, 29, 2144-2148.
- Vaisrub, S. (1980). Laboratory testing-routine or on demand? *Journal of the American Medical Association*, 244, 592.
- Velanovich, V. (1991). The value of routine preoperative laboratory testing in predicting preoperative complications: A multivariate analysis. *Surgery*, 109, 235-243.
- Villet, S., Chiolerio, R.L., Bollmann, M.D., Revelly, J.P., Cayeux, R. N. M.C., Delarue, J., et al. (2005). Negative impact of hypocaloric feeding and energy balance on clinical outcome in ICU patients. *Clinical Nutrition*, 24, 502-509.
- Weissman, C. (1997). Analyzing intensive care unit length of stay data: Problems and possible solutions. *Critical Care Medicine*, 25, 1594-1600.
- Wibulpolprasert, S. (2002). *Health insurance system in Thailand*. Nonthaburi: Health System Research Institution.
- Williams, M. R., Wellner, R. B., Hartnett, E. A., Thornton, B., Kavarana, M. N., Mahapatra, R., et al. (2002). Long term survival and quality of life in cardiac surgical patients

with prolonged intensive care unit length of stay. *Annals of Thoracic Surgery*, 73, 1472-1478.

Wong, D. T., Gomez, M., McGuire, G. P., & Kavanagh, B. (1999). Utilization of intensive care unit days in a Canadian medical-surgical intensive care unit. *Critical Care Medicine*, 27, 1319-1324.

Woods, A. W., MacKirdy, F. N., Livingston, B. M., Norrie, J., & Howie, J. C. (2000). Evaluation of predicted and actual length of stay in 22 Scottish intensive care units using the APACHE III system. *Anaesthesia*, 55, 1058-1065.

Wunsch, H., Mapstone, J., Brady, T., Hanks, R., & Rowan, K. (2004). Hospital mortality associated with day and time of admission to intensive care units. *Intensive Care Medicine*, 30, 895-901.

Zelman, W. N., McCue, M. J., Millikan, A. R., & Glick, N. D. (2003). *Financial management of health care organizations: An introduction to fundamental tools, concepts and applications (2nd ed.)*. Oxford: Blackwell Publishing Ltd.

Zimmerman, J. E., Wagner, D. P., Knaus, W. A., Williams, J. F., Kolakowski, D., & Draper, E. A. (1995). The use of risk prediction to identify candidates for intermediate care units: Implications for intensive care utilization and cost. *Chest*, 108, 490-499.