

## เอกสารอ้างอิง

จรรยา หมื่นรังษี. (2554). ประสิทธิผลของการ ใช้แนวปฏิบัติทางคลินิกสำหรับการจัดการความปวดในผู้ป่วยผ่าตัดหัวใจ หลังผู้ป่วยกี่วันก็ต้องกลับบ้านเร็วๆ มาก ผลกระทบต่อค่าใช้จ่ายและผลลัพธ์ทางเศรษฐกิจ. โรงพยาบาลมหาชลราชเชียงใหม่ (การค้นคว้าแบบอิสระพยาบาลศาสตร์มหาบัณฑิตสาขาวิชาการพยาบาลผู้ป่วย). บัณฑิตวิทยาลัย, มหาวิทยาลัยเชียงใหม่.

จิตรา สิทธิอมร, อนุวัฒน์ ศุภชุติกุล, สงวนสิน รัตนเดช, และ เกียรติศักดิ์ ราชบริรักษ์. (2543).

*Clinical practice guideline:* การจัดทำแนะนำไปใช้. กรุงเทพฯ: ดีไซร์.

นวีวรรณ คงชัย. (2547). แบบประเมินคุณภาพแนวปฏิบัติทางคลินิก (ฉบับแปลภาษาไทย).

คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่. Retrieved from [www.agreetrust.org/docs/AGREE\\_Instrument\\_Translations/AGREE\\_Instrument\\_Thai.pdf.html](http://www.agreetrust.org/docs/AGREE_Instrument_Translations/AGREE_Instrument_Thai.pdf.html)

นครชัย เพื่อนปฐม. (2538). ความเจ็บปวด. สงขลา: ไทยนำหาดใหญ่.

พงศ์ภากรณ์ เจอาท์เกษตรน. (2547). ชุดตำราพื้นฐานความปวด เล่มที่ 1: Pain: ความปวด. กรุงเทพฯ: ทิมส์.

ฟองคำ ดิลกสกุลชัย. (2551). การปฏิบัติการพยาบาลตามหลักฐานเชิงประจักษ์: หลักฐานและวิธีปฏิบัติ (พิมพ์ครั้งที่ 4). กรุงเทพฯ: พรี-วัน.

สถาบันพัฒนาและรับรองคุณภาพโรงพยาบาล. (2543). มาตรฐาน HA และเกณฑ์พิจารณา: บัญชีการภาคร่วมระดับโรงพยาบาล (พิมพ์ครั้งที่ 2). กรุงเทพฯ: ดีไซร์.

สมาคมการศึกษาเรื่องความปวดแห่งประเทศไทย. (2552). แนวทางพัฒนาการระงับปวดเฉียบพลัน (*Clinical guidance for acute pain management*). Retrieved from [http://www.pain-tasp.com/cpg/acute\\_pain.php](http://www.pain-tasp.com/cpg/acute_pain.php)

สำนักนโยบายและยุทธศาสตร์ สำนักงานปลัดกระทรวงสาธารณสุข. (2554). รายงานสถิติประจำปี.

กรุงเทพฯ: สำนักนโยบายและยุทธศาสตร์ สำนักงานปลัดกระทรวงสาธารณสุข.  
สุพรพิมพ์ เจียสกุล, สุพัตรา โลสิริวัฒน์, และ วัฒนา วัฒนาภา. (2551). สรีรัฐยา 3: การรับความรู้สึกเจ็บปวด (Pain). กรุงเทพฯ: คณะแพทยศาสตร์ ศิริราชพยาบาล.

หน่วยงานอุบัติเหตุและฉุกเฉิน โรงพยาบาลกำแพงเพชร. (2554). รายงานสถิติประจำปี.  
กำแพงเพชร: หน่วยงานอุบัติเหตุและฉุกเฉิน โรงพยาบาลกำแพงเพชร.

อัจฉรา สุคนธสรพ์, และ สุภารัตน์ วงศ์รุจุน. (2554). แนวปฏิบัติทางคลินิกการจัดการความปวดผู้บาดเจ็บ. เชียงใหม่: คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่.

Agency for Healthcare Research and Quality. (2000). *Understanding your body: What pain is?*

Retrieved from <http://www.ahrq.gov>

AGREE Collaboration. (2001). *The appraisal of guidelines for research & evaluation (AGREE) instrument*. London: St. George's Hospital Medical School.

American Pain Society. (1999). *Principles of analgesic use in the treatment of acute pain and cancer pain* (4th ed.). Glenview, IL: Author.

Ashburn, M. A., & Ready, L. B. (2001). Postoperative pain. In J. D. Loeber, S. H. Butler, C. R. Chapman, & D. C. Turk (Eds.), *Bonica's management of pain* (3rd ed., pp. 765-779). Philadelphia: Lippincott Williams & Wilkins.

Aubrun, F., Langeron, O., Quesnel, C., Coriat, P., & Riou, B. (2003). Relationships between measurement of pain using visual analog score and morphine requirements during postoperative intravenous morphine titration. *Anesthesiology*, 98(6), 1415-1421.

Auquier, P., Pernoud, N., Bruder, N., Simeoni, M. C., Auffrak, J. P., Colavolpe, C., . . . Blache, J. L. (2005). Development and validation of a perioperative satisfaction questionnaire. *Anesthesiology*, 102(6), 1116-1123.

Australian and New Zealand College of Anesthetists. (2010). *Acute pain management: Scientific evidence* (3rd ed.). Melbourne: Australian and New Zealand College of Anesthetists.  
Retrieved from <http://www.anzca.edu.au/publications/acutepain.htm>

Baumann, B. M., Holmes, J. H., Chansky, M. E., Levey, H., Kulkarni, M., & Boudreaux, E. D. (2007). Pain assessments and the provision of analgesia: The effects of a templated chart. *Academic Emergency Medicine*, 14, 47-52.

Berben, S. A., Meijs, T. H., van Dongen, R. T., van Vugt, A. B., Vloet, L. C., Groot, J. J., & van Achterberg, T. (2008). Pain prevalence and pain relief in trauma patients in the accident & emergency department. *Injury*, 39(5), 578-585.

Bijur, P. E., Kenny, M. K., & Gallagher, E. J. (2005). Intravenous morphine at 0.1 mg/kg is not effective for controlling severe acute pain in the majority of patients. *Annals of Emergency Medicine*, 46(4), 362-367.

Bleakley, C., McDonough, S., & MacAuley, D. (2004). The use of ice in the treatment of acute soft-tissue injury: A systematic review of randomized controlled trials. *The American Journal of Sports Medicine*, 32(1), 251-261. doi:10.1177/0363546503260757

- Block, J. E. (2010). Cold and compression in management of musculoskeletal injuries and orthopedic operative procedures: A narrative review. *Open Access Journal of Sports Medicine*, 1, 105-113. doi:10.2147/OAJSM.S11102
- Bonica, J. J., & Loeser, J. D. (2001). History of pain concept and therapies. In J. D. Loeser, S. H. Bulter, C. R. Chapman, & D. C. Turk (Eds.), *Bonica's management of pain* (3rd ed., pp. 3-16). Philadelphia: Lippincott.
- Bosco, N., Chartov, L., Hepburn, N., Kennedy, L., Kinney, H., Merali, Y., . . . Thornton, D. (2006). *Policy and procedure: Pain assessment and management*. Canada: Toronto and Central East Best Practice in LTC Initiative.
- Brennan, F., Carr, D. B., & Cousins, M. (2007). Pain management: A fundamental human right. *International Anesthesia Research Society*, 105(1), 205-221.
- Bruckenthal, P., & D'Arcy, Y. M. (2007). Assessment and management of pain in older adults: A review of the basics. *Advanced Practice Nursing Journal*, 7(1), 1-8.
- Brunton, L. L., Lazo, J. S., & Parker, K. L. (2005). *Goodman & Gilman's the pharmacological basis of therapeutics* (11th ed.). New Jersey: McGraw-Hill.
- Carlson, J., Youngblood, R., Dalton, J. A., Blau, W., & Lindley, C. (2003). Is patient satisfaction a legitimate outcome of pain management. *Journal of Pain and Symptom Management*, 25(3), 264-275.
- Cavalieri, T. A. (2005). Management of pain in older adults. *Journal of the American Osteopathic Association*, 105(3 Suppl. 1), 12S-17S.
- Chisholm, C. D., Collison, E. K., Nelson, D. R., & Cordell, W. H. (2000). Emergency department workplace interruptions: are emergency physicians "interrupt-driven" and "multitasking"? *Academic Emergency Medicine*, 7(11), 1239-1243.
- Columb, M. O., & MacLennan, K. (2007). Local anaesthetic agents. *Anesthesia & Intensive Care Medicine*, 8(4), 159-162. doi:10.1016/j.mpac.2007.01.007
- Cox, F. (2010). Basic principles of pain management: Assessment and intervention. *Nursing Standard*, 25(1), 36-39.
- Curtis, K. M., Henriques, H. F., Fanciullo, G., Reynolds, C. M., & Suber, F. (2007). A fentanyl-based pain management protocol provides early analgesia for adult trauma patients. *The Journal of Trauma*, 63(4), 819-826.

- Curtis, S. P., Ng, J., Yu, P., Shingo, S., Bergman, G., McCormick, C. L., & Reicin, A. S. (2004). Renal effect of etoricoxib and comparator nonsteroidal anti-inflammatory drugs in controlled clinical trial. *Clinical Therapeutics*, 26(1), 70-83.
- Davidhizar, R., & Giger, J. N. (2004). A review of the literature on care of clients in pain who are culturally diverse. *International Nursing Review*, 51(1), 47-55.
- Doenges, M. E., & Moorhouse, M. F. (1993). *Nurse's pocket guide: Nursing diagnoses with interventions* (4th ed.). Philadelphia: F.A. Davis.
- Eder, S. C., Sloan, E. P., & Todd, K. (2003). Documentation of ED patient pain by nurses and physicians. *American Journal of Emergency Medicine*, 21(4), 253-257.
- Faut-Callahan, M., & Hand, W. R., Jr. (2005). Pain management. In J. J. Nagelhout & K. L. Zaglaniczny (Eds.), *Nurse anesthesia* (3rd ed., pp. 1157-1182). St. Louis: Mosby.
- Fosnocht, D. E., Heaps, N. D., Swanson, E. R. (2004). Patient expectations for pain relief in the ED. *American Journal of Emergency Medicine*, 22(4), 286-288.
- Fry, M., Bennetts, S., & Huckson, S. (2010). An Australian audit of ED pain management patterns. *Journal of Emergency Nursing*, 37(3), 269-274. doi:10.1016/j.jen.2010.03.007
- Given, J. (2010). Management of procedural pain in adult patients. *Nursing Standard*, 25(14), 35-40.
- Goodacre, S. W., & Roden, R. K. (1996). A protocol to improve analgesia use in the accident and emergency department. *Journal of Accident & Emergency Medicine*, 13(3), 177-179.
- Gordon, D. B., Dahl, J. L., Miaskowski, C., McCarberg, B., Todd, K. H., Paice, J. A., . . . Carr, D. B. (2005). American Pain Society recommendations for improving the quality of acute and cancer pain management: American Pain Society Quality of Care Task Force. *Archives of Internal Medicine*, 165(14), 1574-1580.
- Green, C. R., Todd, K. K., Lebovits, A., & Francis, M. (2006). Disparities in pain: Ethical issues. *Pain Medicine*, 7(6), 530-533.
- Guru, V., & Dubinsky, I. (2000). The patient vs caregiver perception of acute pain in the emergency department. *Journal of Emergency Medicine*, 18(1), 7-12.
- Guyton, A. C., & Hall, J. E. (2006). *Textbook of medical physiology* (11th ed.). Pennsylvania: Elsevier.

- Hogestatt, E. D., Jonsson, B. A., Armund, A., Andersson, D. A., Bjork, H., Alexander, J. P., . . . Zygmunt, P. M. (2005). Conversion of acetaminophen to bioactive N-acetylphenolamine AM404 via fatty acid amide hydrolase-dependent arachinodic acid conjugation in the nervous system. *Journal of Biological Chemistry*, 280(36), 31405-31412.
- Holdgate, A., Shepherd, S. A., & Huckson, S. (2010). Patterns of analgesia for fractured neck of femur in Australian emergency departments. *Emergency Medicine Australasia*, 22(1), 3-8. doi:10.1111/j.1742-6723.2009.01246.x
- Hwang, U., Richardson, L. D., Sonya, T. O., & Morrison, R. S. (2006). The effect of emergency department crowding on the management of pain in older adults with hip fracture. *Journal of the American Geriatrics Society*, 54(2), 270-275.
- International Association for the Study of Pain. (1979). Pain terms: A list with definitions and notes on usage. *Pain*, 6, 249-252.
- Jackson, S. E. (2010). The efficacy of an educational intervention on documentation of pain management for the elderly patient with a hip fracture in the emergency department. *Journal of Emergency Nursing*, 36(1), 10-15. doi:10.1016/j.jen.2008.08.022
- Jensen, M. P., Chen, C., & Brugger, A. M. (2002). Postsurgical pain outcome assessment. *Journal of Pain*, 99, 101-109.
- Joint Commission on the Accreditation of Healthcare Organizations. (2000). *CAMH revised pain management standards*. Retrieved from <http://www.jcaho.org/standard/pmhap.html>
- Kate, J. A. (2005). NSAIDs and COX-2 selective inhibitor. In H. T. Benzon, S. N. Raja, R. E. Molly, S. Liu, & S. M. Fishman (Eds.), *Essentials of pain medicine regional anesthesia* (2nd ed., pp. 141-158). Philadelphia: Churchill-Livingstone.
- Kehlet, H., & Dahl, J. B. (1992). Are perioperative nonsteroidal anti-inflammatory drugs ulcerogenic in the short term? *Drugs*, 44(suppl. 5), 38-44.
- Lagan, G., & McLure, H. A. (2004). Review of local anaesthetic agents. *Current Anesthesia & Critical Care*, 15(4), 247-254. doi:10.1016/j.cacc.2004.08.007
- Lahtinen, P., Kokki, H., & Hynynen, M. (2006). Pain after cardiac surgery: A prospective cohort study of 1-year incidence and intensity. *Anesthesiology*, 105(4), 794-800.
- Lewis, L. M., Lasater, L. C., & Brooks, C. B. (1994). Are emergency physicians too stingy with analgesics? *Southern Medical Journal*, 87(1), 7-9.

- Lorenz, K. A., Sherbourne, C. D., Sbugarman, L. R., Rubenstein, L. V., Wen, L., Coben, A., . . . Asch, S. M. (2009). How reliable is pain as the fifth vital sign? *Journal of the American Board of Family medicine*, 22(3), 291-298. doi:10.3122/jabfm.2009.03.080162
- Lotsch, J. (2005). Opioid metabolite. *Journal of Pain and Symptom Management*, 29(Suppl. 5), S10-S24.
- Lovrinovic, M., Kotob, F., & Santarosa, J. (2005). Pain management in the trauma setting. *Seminars in Anesthesia, Perioperative Medicine and Pain*, 24(1), 34-40. doi:10.1053/j.sane.2004.11.002
- Marks, R. M., & Sachar, E. J. (1973). Undertreatment of medical inpatients with narcotic analgesics. *Annals of Internal Medicine*, 78(2), 173-181. doi:10.7326/0003-4819-78-2-173
- McCaffery, M. (1979). *Nursing management of the patient with pain* (2nd ed.). Philadelphia: Lippincott.
- McCaffery, M., & Beebe, A. (1989). *Pain: Clinical Manual for nursing practice*. St. Louis: Mosby.
- McClellan, K., & Scott, L. J. (2003). Tramadol/paracetamol. *Drugs*, 63, 1079-1086.
- McLay, L. A., & Mayorga, M. E. (2010). Evaluating emergency medical service performance measures. *Health Care Management Science*, 13(2), 124-136.
- Miner, J. R., Paris, P. M., & Yealy, D. M. (2010). Pain management. In J. A. Marx, R. S. Hockberger, R. M. Walls, & J. G. Adams (Eds.), *Rosen's emergency medicine: Concept and clinical practice* (Vol. 1, 7th ed., pp. 2410-2428). Philadelphia: Mosby.
- Moinishi, S., Romsing, J., Dahl, J. B., & Tramer, M. R. (2003). Nonsteroidal anti-inflammatory drugs and the risk of operative site bleeding after tonsillectomy: A quantitative systematic review. *Anesthesia and Analgesia*, 96(1), 68-77.
- Moore, A., Edwards, J., Barden, J., & McQuay, H. (2003). *Bandolier's little book of pain*. Oxford: Oxford University Press.
- Motov, S. M., & Khan, A. N. (2009). Problem and barriers of pain management in the emergency department: Are we ever going to get better? *Journal of Pain Research*, 2, 5-11.
- National Health and Medical Research Council. (1999). *Acute pain management: Scientific evidence*. Retrieved from [http://www.NHMRC.gov.au/publications/synopses/\\_filescp57.pdf](http://www.NHMRC.gov.au/publications/synopses/_filescp57.pdf)

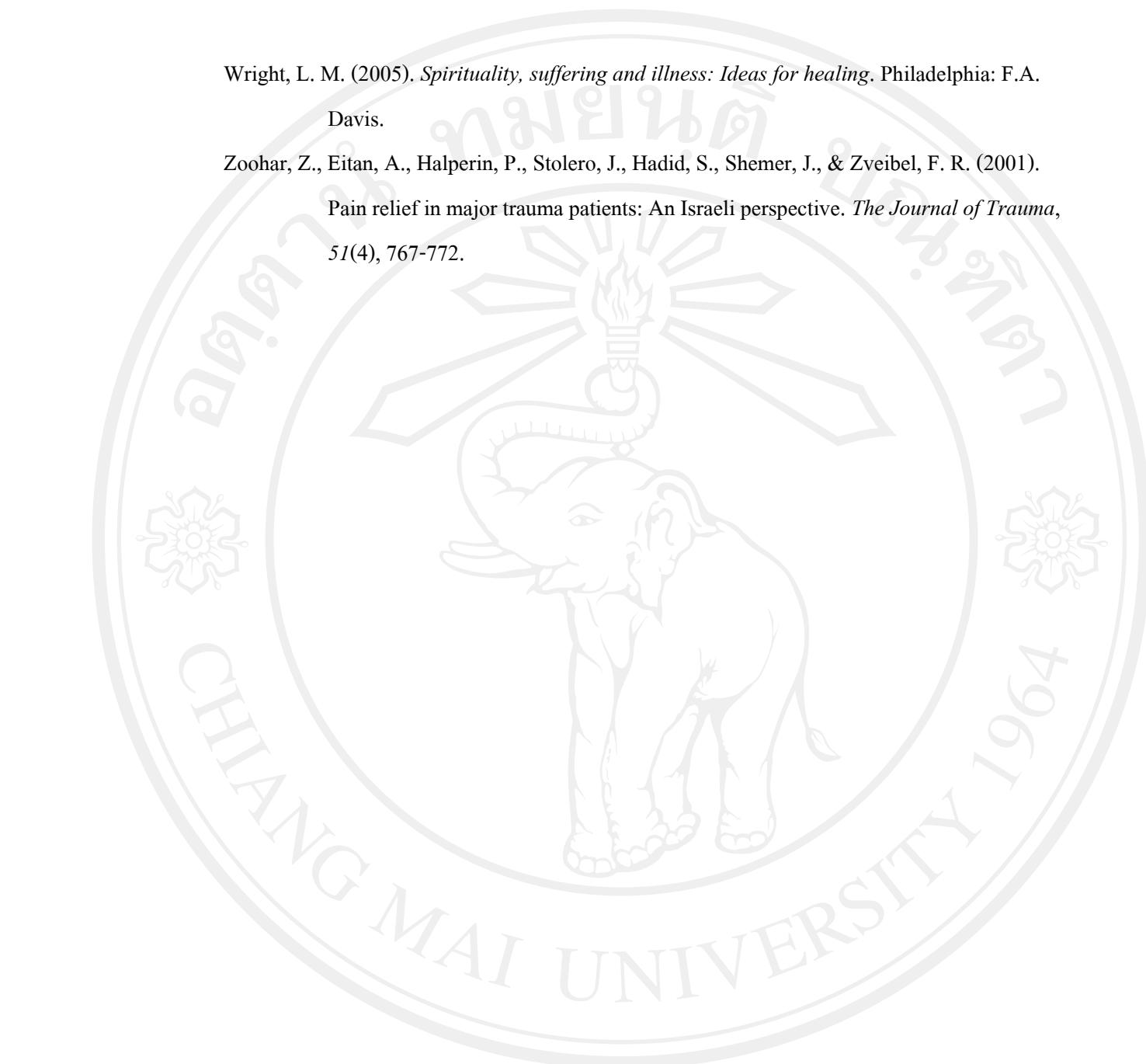
- National Health and Medical Research Council. (2000). *How to put the evidence into practice: Implementation and dissemination strategies*. Retrieved from <http://www.nhmrc.gov.au>
- Nelson, B. P., Cohen, D., Lander, O., Crawford, N., Viccellio, A. W., & Singer, A. J. (2004). Mandated pain scales improve frequency of ED analgesic administration. *The American Journal of Emergency Medicine*, 22(7), 582-585.
- Newman, C. J., Lolekha, R., Limkittikul, K., Luangxay, K., Chotpitayasunondh, T., & Chantavanich, P. (2005). A comparison of pain scales in Thai children. *Archives of Disease in Childhood*, 90(3), 269-270.
- Omerbegovic, M., Duric, A., Muratovic, N., Mulalic, L., & Hamzanija, E. (2003). Metabolic response to trauma and stress. *Medicinski Arhiv*, 57(4), 57-60.
- Oneschuk, D., Fainsinger, R., Hanson, J., & Bruera, E. (1997). Assessment and knowledge in palliative care in second year family medicine residents. *Journal of Pain and Symptom Management*, 14(5), 265-273.
- Ong, C. K., Lirk, C., Seymour, R. A., & Jenkins, B. J. (2005). The efficacy of preemptive analgesia for acute postoperative pain management: A meta-analysis. *Anesthesia and Analgesia*, 100(3), 757-773.
- Perkins, T. J. (2007). Fracture management: Effective prehospital splinting techniques. *Emergency Medical Services Magazine*, 36(4), 35-38.
- Pines, J. M., & Hollander, J. E. (2008). Emergency department crowding is associated with poor care for patients with severe pain. *Annals of Emergency Medicine*, 51, 1-5.
- Registered Nurses Association of Ontario. (2007). *Nursing best practice guideline: Assessment and management of pain*. Toronto, Ontario: Author.
- Rosner, H. L. (1996). The pharmacological management of acute postoperative pain. In M. Lefkowitz & A. H. Lebovits (Eds.), *A practice approach to pain management*. Boston: Little, Brown.
- Roth, W., Kling, J., Gockel, I., Rumelin, A., Hessmann, M. H., Meurer, A., . . . Jage, J. (2005). Dissatisfaction with post operative pain management—A prospective analysis of 1071 patients. *Acute Pain Journal*, 7(2), 75-83. doi:10.1016/j.acapain.2005.05.001
- Rupp, T., & Delaney, K. A. (2004). Inadequate analgesia in emergency medicine. *Annals of Emergency Medicine*, 43(4), 494-503.

- Schug, S. A., & Auret, K. (2008). Clinical pharmacology: Principles of analgesic drug management. In N. Sykes, M. I. Bennett, & C.-S. Yuan (Eds.), *Clinical pain management: Cancer pain* (2nd ed., pp. 104-141). London: Hodder Arnold.
- Sexton, D. F., Nugent, P. M., & Peliken, P. K. (2003). *Mosby's comprehensive review of nursing for NCLEX-RN* (17th ed.). St Louis: Mosby.
- Shen, Q., Sherwood, G. D., McNeill, J. A., & Li, Z. (2008). Postoperative pain management outcome in Chinese inpatients. *Western Journal of Nursing Research*, 30(8), 975-990. doi:10.1177/0193945908319576.
- Sherwood, G. D., McNeill, J. A., Starch, P. L., & Disnard, G. (2003). Changing acute pain management outcomes in surgical patients. *Journal of Association of Perioperative Registered Nurses*, 77(2), 374-395.
- Silbernagl, S., & Lang, F. (2000). *Color atlas of pathophysiology*. New York: Thieme.
- Silverstein, F. E., Faich, G., Goldstein, J. L., Simon, L. S., Pincus, T., Whelton, A., . . . Geis, G. S. (2000). Gastrointestinal toxicity with celecoxib vs nonsteroidal anti-inflammatory drugs for osteoarthritis and rheumatoid arthritis: the CLASS study: A randomized controlled trial. Celecoxib long-term arthritis safety study. *The Journal of the American Medical Association*, 284, 1247-1255.
- Sloman, R., Wruble, A. W., Rosen, G., & Rom, M. (2006). Determination of clinically meaningful levels of pain reduction in patients experiencing acute postoperative pain. *Pain Management Nursing*, 7(4), 153-158.
- Smeltzer, S. C., & Bare, B. C. (2004). Pain management. In Brunner and Suddarth's textbook of medical-surgical nursing (10th ed., pp. 216-248). Philadelphia: Lippincott William and Wilkins.
- Stalnikowicz, R., Mahamid, R., Kaspi, S., & Brezis, M. (2005). Undertreatment of acute pain in the emergency department: A challenge. *International Journal for Quality in Health Care*, 17(2), 173-176.
- Swann, J. (2010). Pain: cause, effects and assessment. *Nursing & Residential Care*, 12(5), 212-215.
- Tanabe, P., & Buschmann, M. (1999). A prospective study of ED pain management practices and the patient's perspective. *Journal of Emergency Nursing*, 25(3), 171-177.

- Tcherny-Lessenot, S., Karwowski-Soulié, F., Lamarche-Vadel, A., Ginsburg, C., Brunet, F., & Vidal-Trecan, G. (2003). Management and relief of pain in an emergency department from the adult patients' perspective. *Journal of Pain and Symptom Management*, 25(6), 539-546.
- Todd, K. H., Ducharme, J., Choiniere, M., Crandall, C. S., Fosnocht, D. E., Homel, P., & Tanabe, P. (2007). Pain in the emergency department: results of the pain and emergency medicine initiative (PEMI) multicenter study. *Journal of Pain*, 8(6), 460-466.
- Ware, J. L., Bruckenthal, P., Davis, G. C., & O'Corner-Von, S. K. (2011). Factors that influence patient advocacy by pain management nurses: Results of the American society for pain management nursing survey. *Pain Management Nursing*, 12(1), 25-32.  
doi:10.1016/j.pmn.2009.12.001
- Warfield, C. A., & Fausett, H. T. (2001). *Manual of pain management* (2nd ed.). Philadelphia: Lippincott.
- White, L. (2002). Pain management. In *Basic nursing foundation of skill & concepts* (pp. 547-572). New York: Delmar.
- White, P. F., Rawal, S., Latham, P., Markowitz, S., Issioui, T., Chi, L., . . . Ing, C. (2003). Use of a continuous local anesthetic infusion for pain management after median sternotomy. *Anesthesiology*, 99(4), 918-923.
- Wilkie, D. J. (2000). Nurse management: Pain. In S. M. Lewis, M. M. Heitkemper & S.R. Dirksen (Eds.), *Medical-surgery nursing: Assessment and management of clinical problem* (5th ed., pp. 126-154). St. Louis: Mosby.
- Wilson, J. E., & Pendleton, J. M. (1989). Oligoanalgesia in the emergency department. *The American Journal of Emergency Medicine*, 7(6), 620-623.
- Wolf, L. (2010). Anxiety is the last diagnosis on the list. *Journal of Emergency Nursing*, 36(3), 287-289. doi:10.1016/j.jen.2010.01.001
- World Health Organization. (1996). *Cancer pain relief with a guide to opioid availability* (2nd ed.). Geneva: Author.
- World Health Organization. (2013). *Road traffic injuries 2012-2013*. Retrieved from [www.who.int/mediacentre/factsheet/fs358/en/index.html](http://www.who.int/mediacentre/factsheet/fs358/en/index.html)

Wright, L. M. (2005). *Spirituality, suffering and illness: Ideas for healing*. Philadelphia: F.A. Davis.

Zoohar, Z., Eitan, A., Halperin, P., Stolero, J., Hadid, S., Shemer, J., & Zveibel, F. R. (2001). Pain relief in major trauma patients: An Israeli perspective. *The Journal of Trauma*, 51(4), 767-772.



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