References

- Adams, J.N. & Gautam, P. 1994, 'Warfarin therapy in the elderly', *British Journal of Hospital Medicine*, vol. 51, no. 8, pp. 392-393.
- Aithal, G.P., Day, C.P., Kesteven, P.J.L. & Daly, A.K. 1999, 'Association of polymorphisms in the cytochrome P450 CYP2C9 with warfarin dose requirement and risk of bleeding complications', *The Lancet*, vol. 353, no. 9154, pp. 717-719.
- Aldrich, K. 1997, 'Vitamin K', Retrieved 8/12/2004 from http://www.cheshire-med.com/services/dietary/nutrinew/vitk.html
- Allison, L. 2005a, 'Crisis point: one doctor to 7596', The Advertiser, 28 October, p. 004.
- Allison, L. 2005b, 'Shortage dilemma system that just won't bend. We need GPs but one says he has to leave', *The Advertiser*, 3 November, p. 005.
- Anderson, R.J., Divers, C. & von Hennigs, I. 2005, 'Drug interaction exposure in chronic atrial fibrillation patients maintained on warfarin', *Journal of Thrombosis and Thrombolysis*, vol. 19, no. 2, pp. 123-124.
- Ansell, J.E., Hirsh, J., Dalen, J., Bussey, H., Anderson, D., Poller, L., Jacobson, A., Deykin, D. & Matchar, D. 2001, 'Managing oral anticoagulant therapy', *Chest*, Supplement I, vol. 119, pp. 22S-38S.
- Ansell, J.E., Hollowell, J., Pengo, V., Martinez-Brotons, F., Caro, J. & Drouet, L. 2007, 'Descriptive analysis of the process and quality of oral anticoagulation management in real-life practice in patients with caronic non-valvular atrial fibrillation: the international study of anticoagulation management (ISAM)', *Journal of Thrombosis and Thrombolysis*, vol. 23, no. 2, pp. 83-91.
- Arnsten, J.H., Gelfand, J.M. & Singer, D.E. 1997, 'Determinants of compliance with anticoagulation: a case-control study', *The American Journal of Medicine*, vol. 103, no. 1, pp. 11-17.
- Atrial Fibrillation Investigators. 1994, 'Risk factors for stroke and efficacy of antithrombotic therapy in atrial fibrillation: analysis of pooled data from five randomized controlled trials', *Archives of Internal Medicine*, vol. 154, no. 13, pp. 1449-1457.
- Australian Government 2007, 'Australian Code for Responsible Conduct of Research', National Health and Medical Research Council, Australian Research Council, Retrieved 15 September 2007 from http://www.nhmrc.gov.au/ publications/synopses/r39svn.htm.
- Australian Institute of Health and Welfare 2001, 'Cardiovascular Disease', Retrieved 24 January 2002 from www.aihw.gov.au/publications/health/hsvd/index.html.
- Australian Institute of Health and Welfare 2006, 'Health of Australians', Retrieved 17 August 2007 from www.aihw.gov.au.

- Australian Pharmaceutical Index 2004, IMS Health, Sydney.
- Baglin, T.P. & Rose, P.E. 1998, Members of the Haemostasis and Thrombosis Task Force for the British Committee for Standards in Haematology, Walker, I.D., Machins, S., Baglin, T.P., Barrowcliffe, T.W., Colvin, B.T., Greaves, M., Ludlam, C.A., Mackie, I.J., Preston, F.E. & Rose, P.E. Members of the Haemostasis and Thrombosis Task Force. 'Guideline. Guidelines on oral anticoagulation: third edition', *British Journal of Haematology*, vol. 101, no. 2, pp. 374-387.
- Bajorek, B.V., Krass, I., Ogle, S.J., Duguid, M.J. & Shenfield, G.M. 2002, 'The impact of age on antithrombotic use in elderly patients with non-valvular atrial fibrillation', *Australasian Journal of Ageing*, vol. 21, no. 1, pp. 36-41.
- Bajorek, B.V., Ogle, S.J., Duguid, M.J., Shenfield, G.M. & Krass, I. 2007, 'Management of warfarin in atrial fibrillation: views of health professionals, older patients and their carers', *Medical Journal of Australia*, vol. 186, no. 4, pp. 175-180.
- Baker, R.I., Coughlin, P.B., Gallus, A.S., Harper, P.L., Salem, H.H. & Wood, E.M.; The Warfarin Reversal Consensus Group, 2004, 'Warfarin reversal: consensus guidelines, on behalf of the Australasian Society of Thrombosis and Haemostasis', *Medical Journal of Australia*, vol. 181, no. 9, pp. 492-497.
- Barnett, N.L. 1991, 'Bioequivalence of proprietary warfarin: review of the literature and current practices', *Australian Pharmacist*, vol. 10, no. 3, pp. 115-117.
- Beanland, C., Schneider, Z., LoBiondo-Wood, G. & Haber, J. 1999, Nursing Research, Methods, Critical Appraisal and Utilization, Mosby, Sydney.
- Bereznicki, L., Jackson, S., Jeffrey, E. & Peterson, G. 2006, 'Home-monitoring of warfarin (the ultimate strategy to improve the safety of anticoagulation)', *Aged Care*, vol. 25, no. 3, pp. 246-251.
- Beyth, R.J. 2005, 'Patient self-management of anticoagulation: an idea whose time has come', *Annals of Internal Medicine*, vol. 142, no. 1, pp. 73-74.
- Beyth, R.J., Quinn, L.M. & Landefeld, C.S. 1998, 'Prospective evaluation of an index for predicting the risk of major bleeding in outpatients treated with warfarin', *The American Journal of Medicine*, vol. 105, r.o. 2, pp. 91-99.
- Beyth, R.J., Quinn, L. & Landefeld, C.S. 2000, 'A multicomponent intervention to prevent major bleeding complications in older patients receiving warfarin', *Annals of Internal Medicine*, vol. 133, no. 9, pp. 687-695.
- Black, J.A. 1994, 'Diarrhoea, vitamin K and warfarin', *The Lancet*, vol. 344, no. 8933, p. 1373.
- Bond, C.A. & Raehl, C.L. 2004, 'Pharmacist-provided anticoagulation management in united states hospitals: death rates, length of stay, Medicare charges, bleeding complications and transfusions', *Pharmacotherapy*, vol. 24, no. 8, pp. 953-963.
- Borosak, M., Choo, S. & Street, A. 2004. 'Warfarin: balancing the benefits and harms', *Australian Prescriber*, vol. 27, no. 4, pp. 88-92.

- Bowling, A. 1997, Research methods in health, Open University Press, Philadelphia.
- Breckenridge, A. 1978, 'Oral anticoagulant drugs: pharmacokinetic aspects', *Seminar Hematology*, vol. 15, no. 1, pp. 19-26.
- Brigden, M.L., Kay, C., Le, A., Graydon, C. & McLeod, B. 1998, 'Audit of the frequency and clinical response to excessive oral anticoagulation in an out-patient population', *American Journal of Hematology*, vol. 59, no. 1, pp. 22-27.
- Brooks, B.E. 2001 (updated 2 September 2004), 'Statistics' *The Poisson Distribution*, Retrieved 24 July 2007 from http://www.umass.edu/wsp/statistics/lessons/poisson/index.html.
- Brown, C.H. 2006, 'An overview of traditional anticoagulants', *US Pharmacist*, Retrieved 21 September 2006 from http://www.uspharmacist.com/index.asp?page=ce/105181/default.htm
- Bungard, T.J., Ghali, W.A., Teo, K.K., McAlister, F.A. & Tsuyuki, R.T. 2000, 'Why do patients with atrial fibrillation not receive warfarin?', *Archives of Internal Medicine*, vol. 160, no. 1, pp. 41-46.
- Burgess, C.L., D'Arcy, C., Holman, J. & Satti, A.G. 2005, 'Adverse drug reactions in older Australians, 1981-2002', *Medical Journal of Australia*, vol. 182, no. 6, pp. 267-270.
- Burns, N. & Grove, S.K. 1997, *The Practice of Nursing Research: Conduct, Critique, & Utilization*, 3rd edn, Saunders, Philadelphia.
- Bussey, H.I., Force, R.W., Bianco, T.M. & Leonard, A.D. 1992, 'Reliance on prothrombin time ratios causes significant errors in anticoagulation therapy', *Archives of Internal Medicine*, vol. 152, no. 2, pp. 278-282.
- Campbell, P., Roberts, G., Eaton, V., Coghlan, D. & Gallus, A. 2001, 'Managing warfarin therapy in the community', *Australian Prescriber*, vol. 24, no. 4, pp. 86-89.
- Caplan, G. 1964, *Principles of Preventive Psychiatry*, Basic Books, New York.
- Carter, G., Goss, A.N., Lloyd, J. & Tocchettis, R. 2003, 'Current concepts of management of dental extractions for patients taking warfarin', *Australian Dental Journal*, vol. 48, no. 2, pp. 89-96.
- Caswell, A., Jarvis, V., Dalton, C. & Gagic, V. 2001, 'MIMS Annual' 25th edn, Wills CR, Sydney.
- Chan, T.Y. 1995, 'Adverse interactions between warfarin and nonsteroidal antiinflammatory drugs: mechanisms, clinical significance and avoidance', *Annual Pharmacotherapy*, vol. 29, no. 12, pp. 1274-1283.
- Cheah, G.M. & Martens, K.H. 2003, 'Coumadin knowledge deficits: do recently hospitalized patients know how to safely manage the medication?', *Home Healthcare Nurse*, vol. 21, no. 2, pp. 94-100.

- Clinpath, Retrieved 17/11/2005 from www.clinpath.com.au/ zk.
- Cromhecke, M.E., Levi, M., Colly, L.P., Prins, M.H., Hatten, B.A., Mak, R. Keyzers, K.C. & Baller, H.R. 2000, 'Oral anticoagulation self-management by a specialist anticoagulation clinic: a randomised cross-over comparison', *The Lancet*, vol. 356, no. 9224, pp. 97-102.
- Crookes, P.A., Davies, S. & Chiarelli, M. 2004, Research into Practice, Essential Skills for Reading and Applying Research in Nursing and Health Care, 2nd edn, Bailliere Tindall, London.
- Crowther, M.A. 2003, 'Inadequate monitoring and management of warfarin places patient at significant risk of harm', Retrieved 16 July 2003 from http://www.webmm.ahrq.gov/cases.aspx?ic=21.
- Dade Behring 1999, Dade Actin FSL Activated PTT Reagent, Dade Behring Marburg GmbH, Germany.
- Dade Behring 2002, Thromborel S, Dade Behring Marburg GmbH, Germany.
- Dale, J., Myhre, E. & Loew, D. 1980, 'Bleeding during acetylsalicylic acid and anticoagulant therapy in patients with reduced platelet reactivity after aortic valve replacement', *American Heart Journal*, vol. 99, no. 6, pp. 746-752.
- Davis, F.B., Estruch, M.T., Samson-Corvera, E.B., Voigt, G.C. & Tobin, J.D. 1977, 'Management of anticoagulation in outpatients. experience with an anticoagulation service in a municipal hospital setting', *Archives of Internal Medicine*, vol. 137, no. 2, pp. 197-202.
- Davis, N.J., Billett, H.H., Cohen, H.W. & Arnsten, J.H. 2005, 'Impact of adherence, knowledge and quality of life on anticoagulation control', *The Annals of Pharmacotherapy*, vol. 39, no. 4, pp. 632-636.
- Demirkan, K., Stephens, M.A., Newman, K.P. & Self, T.H. 2000, 'Response to warfarin and other oral anticoagulants: effects of disease states', *Southern Medical Journal*, vol. 93, no. 5, pp. 448-454.
- Diagnostic Stago 2004, Neoplastine CI Plus, Diagnostic Stago Asnieres, France.
- Dobrzanski, S., Duncan, S.E., Harkiss, A. & Wardlaw, A. 1983, 'Age and weight as determinants of warfarin requirements', *Journal of Clinical and Hospital Pharmacy*, vol. 8, no. 1, pp. 75-77.
- Dudley, N. 2000. 'Anticoagulation for patients with atrial fibrillation', *British Medical Journal*, vol. 321, no. 7261, pp. 638-639.
- Duncan, E.M., Casey, C.R., Duncan, B.M. & Lloyd, J.V. 1994, 'Effect of concentration of trisodium citrate anticoagulant on calculation of the international normalised ratio and the international sensitivity index of thromboplastin', *Thrombosis Haematology*, vol. 72, no. 1, pp. 84-88.

- Durnas, C., Loi, C.M. & Cusack, B.J. 1990, 'Hepatic drug metabolism and aging', *Clinical Pharmacokinetics*, vol. 19, no. 5, pp. 359-389.
- Enis, J. 1997, 'Stroke prevention in patients with non-valvular atrial fibrillation: a current community perspective', *Journal of Clinical Neuroscience*, vol. 4, no. 3, pp. 320-325.
- Ezekowitz, M.D., James, K.E., Radford, M.J., Rickles, F.R. & Redmond, N. 1999, 'Initiating and maintaining patients on warfarin anticoagulation: the importance of monitoring', *Journal of Cardiovascular Pharmacology and Therapeutics*, vol. 4, no. 1, pp. 3-8.
- Fennerty, A., Dolben, J., Thomas, P., Backhouse, G., Bentley, D.P., Campbell, I.A. & Routledge, P.A. 1984, 'Flexible induction dose regimen for warfarin and prediction of maintenance dose', *British Medical Journal. Clinical Research edn.*, vol. 288, no. 6426, pp. 1268-1270.
- Fihn, S.D., Callahan, C.M., Martin, D.C., McDonel, M.B., Henikoff, J.G. & White, R.H. 1996, 'The risk for and severity of bleeding complications in elderly patients treated with warfarin: the National Consortium of Anticoagulation Clinics', *Annals of Internal Medicine*, vol. 124, no. 11, pp. 970-979.
- Fihn, S.D., McDonel, M., Martin, D., Henikoff, J., Vermes, D., Kent, D. & White, R.H. for the Warfarin Optimized Outpatient Follow-up Study Group. 1993, 'Risk factors for complications of chronic anticoagulation: a multicenter study', *Annals of Internal Medicine*, vol. 118, no. 7, pp. 511-520.
- Flaker, G.C., Gruber, M., Connolly, S.J., Godman, S., Chaparro, S., Vahanian, A., Halinen, M.O., Horrow, J. & Halperin, J.L. 2006, 'Risks and benefits of combining aspirin with anticoagulant therapy in patients with atrial fibrillation: an exploratory analysis of SPORTIF trials', *American Heart Journal*, vol. 152, no. 5, pp. 967-973.
- Flinders Medical Centre 2004, (updated 16 October 2007), 'Hospital @ Home', Retrieved 18 October 2007 from http://www.flinders.sa.gov.au.
- Flinders Medical Centre n.d., Warfarin protocol, Flinders Medical Centre, Adelaide.
- Forfar, J.C. 1979, 'A 7-year analysis of hemorrhage in patients on long-term anticoagulant treatment', *British Heart Journal*, vol. 42, no. 2, pp. 128-132.
- Forster, A.J., Murff, H.J., Peterson, J.F., Gandhi, T.K. & Bates, D.W. 2003 'The incidence and severity of adverse events affecting patients after discharge from the hospital', *Annals of Internal Medicine*, vol. 138, no. 3, pp. 161-167.
- Freese, B.T. 2002, 'Betty Neuman, Systems Model', in A.M. Tomey & M.R. Alligood, *Nursing Theorists and their work*, 5th edn, Mosby, Philadelphia.
- Fry, F.K., P.B.A.C. & The Boots Company, 1997, 'Warfarin tablets', *Australian Prescriber*, vol. 20, no. 2, pp. 33-34.

- Furuya, H., Fernandez-Salguero, P., Gregory. W., Taber, H., Steward, A., Gonzalez, F.J. & Idle, J.R. 1995, 'Genetic polymorphism of CYP2C9 and its effect on warfarin maintenance dose requirement in patients undergoing anticoagulation therapy', *Pharmacogenetics*, vol. 5, no. 6, pp. 389-392.
- Gadisseur, A.P., Breukink-Engbers, W.G., van der Meer, F.J., van den Besselaar, A.M., Sturk, A. & Rosendaal, F.R. 2003, 'Comparison of the quality of oral anticoagulation therapy through patient self-management and management by specialized anticoagulation clinics in the Netherlands: a randomized clinical trial', *Archives of Internal Medicine*, vol. 163, no. 21, pp. 2639-2646.
- Gadisseur, A.P., van der Meer, F.J. & Rosendaal, F.R. 2003, 'Sustained intake of paracetamol (acetaminophen) during oral anticoagulant therapy with coumarins does not cause clinically important INR changes: a randomized double-blind clinical trial', *Journal of Thrombosis and Haemostasis*, vol. 1, no. 4, pp. 714-717.
- Gage, B.F., Fihn, S.D. & White, R.H. 2000, 'Management and dosing of warfarin therapy', *The American Journal of Medicine*, vol. 109, no. 6, pp. 481-488.
- Gage, B.F., Yan, Y., Milligan, P.E., Waterman, A.D., Culverhouse, R., Rich, M.W. & Radford, M.J. 2006, 'Clinical classification schemes for predicting hemorrhage: results from the national registry of atrial fibrillation (NRAF)', *American Heart Journal*, vol. 151, no. 3, pp. 713-719.
- Gallus, A.S., Baker, R.I., Chong, B.H., Ockelford, P.A. & Street, A.M. on behalf of the Australian Society of Thrombosis and Haemostasis. 2000, 'Consensus guidelines for warfarin therapy. Recommendations from the Australasian Society of Thrombosis and Haemostasis', *Medical Journal of Australia*, vol. 172, no. 12, pp. 600-605.
- Gallus, A.S., Coughlin, D. & Teague, M. 2004, Assessment of the incidence of bleeding complications during therapy with low molecular weight heparins (enoxaparin) in patients with renal insufficiency, Repatriation General Hospital, Adelaide.
- Garcia, D., Regan, S., Crowther, M., Hughes, R.A. & Hylek, E.M., 2005. 'Warfarin maintenance dosing patterns in clinical practice: implications for safer anticoagulation in the elderly population', *Chest*, vol. 127. no. 6, pp. 2049-2057.
- Garson, D.G. 2007a, Cox Regression, *Syllabus for PA 765: Quantitative Research in Public administration*. Retrieved 23 July 2007 from http://www2.chass.ncsu.edu/garson/pa765/cox.htm.
- Garson, D.G. 2007b, Testing of Assumptions, *Syllabus for PA 765: Quantitative Research in Public administration*. Retrieved 25 July 2007 from http://www.2.chass.ncsu.edu/garson/pa765/assumpt.htm.
- Gebauer, M.G., Nyfort-Hansen, K., Henschke, P.J. & Gallus, A.S. 2003, 'Warfarin and acetaminophen interaction', *Pharmacotherapy*, vol. 23, no. 1, pp. 109-112.
- Gilles, D.A. 1994, *Nursing Management. A Systems Approach*, 3rd edn, Saunders, Philadelphia.

- Glanze, W.D., Anderson, K.N. & Anderson, L.E. (eds) 1990, *Mosby's medical, nursing and allied health dictionary*, C.V. Mosby, St Louis.
- Glasheen, J.J. 2005, 'Preventing warfarin-related bleeding', *Southern Medical Journal*, vol. 98, no. 1, pp. 96-104.
- Glazer, N.L., Dublin, S., Smith, N.L., Smith, N.L., French, B., Jackson, L.A., Hrachovec, J.B., Siscovick, D.S., Psaty, B.M. & Heckbert, S.R. 2007, 'Newly detected atrial fibrillation and compliance with antithrombotic guidelines', *Archives of Internal Medicine*, vol. 167, no. 3, pp. 246-252.
- Go, A.S., Hylek, E.M., Borowsky, L.H., Phillips, K.A., Selby, J.V. & Singer, D.E., 1999. 'Warfarin use among ambulatory patients with nonvalvular atrial fibrillation: the anticoagulation and risk factors in atrial fibrillation (ATRIA) study', *Annals of Internal Medicine*, vol. 131, no. 12, pp. 927-934.
- Go, A.S., Hylek, E.M., Chang, Y., Phillips, K.A., Henault, L.E., Capra, A.M., Jensvold, N.G., Selby, J.V. & Singer, D.E. 2003, 'Anticoagulation therapy for stroke prevention in atrial fibrillation. How well do randomized trials translate into clinical practice?', *The Journal of American Medical Association*, vol. 290, no. 20, pp. 2685-2692.
- Go, A.S., Hylek, E.M., Phillips, K.A., Chang, Y., Henault, L.E., Selby, J.V. & Singer, D.E. 2001, 'Prevalence of diagnosed atrial fibrillation in adults: national implications for rhythm management and stroke prevention: the Anticoagulation and risk factors in atrial fibrillation (ATRIA) study', The *Journal of the American Medical Association*, vol. 285, no. 18, pp. 2370-2375.
- Goldstein, J.A. & de Morais, S.M. 1994, 'Biochemistry and molecular biology of the human CYP2C subfamily', *Pharmacogenetics*, vol. 4, no. 6, pp. 285-299.
- Goodman Gilman, A., Rall, T.W., Nies, A.S. & Taylor, P. 1991, *The pharmacological basis of therapeutics*, vol. 2, 8th edn, McGraw-Hill, Singapore.
- Gottlieb, L.K. & Salem-Schatz, S. 1994, 'Anticoagulation in atrial fibrillation. does efficacy in clinical trials translate into effectiveness in practice?', *Archives of Internal Medicine*, vol. 154, no. 17, pp. 1945-1953.
- Government of South Australia, Department of Health 2007a, 'Code of Fair Information Practice' (2004), Retrieved 9/12/2007 from http://www.health.sa.gov.au/Default.aspx?tabid=57.
- Government of South Australia, Department of Health 2007b, 'Better health for people through GP plus health care centres', Retrieved 29/08/2007 from http://www.health.sa.gov.au/Default.aspx?tabid=265.
- Gribbles, Retrieved 17/11/2005 from http://www.gribbles.com.au/index.htm.
- Gullov, A.L., Koefoed, B.G. & Petersen, P. 1999, 'Bleeding during warfarin and aspirin therapy in patients with atrial fibrillation. The AFASAK 2 study', *Archives of Internal Medicine*, vol. 159, no. 12, pp. 1322-1328

- Gurwitz, J.H., Avorn, J., Ross-Degnan, D., Choodnovskiy, I. & Ansell, J. 1992, 'Aging and the anticoagulant response to warfarin therapy', *Annals of Internal Medicine*, vol. 116, no. 11, pp. 901-904.
- Gurwitz, J.H., Field, T.S., Harrold, L.R., Rothschild, J., Debellis, K., Seger, A.C., Cadoret, C., Fish, L.S., Garber, L. Kelleher, M. & Bates, D.W. 2003, 'Incidence and preventability of adverse drug events among older persons in the ambulatory setting', *The Journal of the American Medical Association*, vol. 289, no. 9, pp. 1107-1116.
- Gurwitz, J.H., Goldberg, R.J., Holden, A., Knapic, N. & Ansell, J. 1988, 'Age-related risks of long-term oral anticoagulant therapy', *Archives of Internal Medicine*, vol. 148, no. 8, pp. 1733-1736.
- Halkin, H. & Lubetsky, A. 1999, 'Warfarin dose requirement and CYP2C9 polymorphisms', *The Lancet*, vol. 353, no. 9168, p. 1972.
- Hambidge, D. 2002, 'Self management is the future', *British Medical Journal*, vol. 324, no. 2, p. 486.
- Hammerlein, A., Derendorf, H. & Lowenthal, D.T. 1998, 'Pharmacokinetics and pharmacodynamic changes in the elderly clinical implications', *Clinical Pharmacokinetics*, vol. 35, no. 1, pp. 49-64.
- Harder, S. & Thurmann, P. 1996, 'Clinically important drug interactions with anticoagulants. An update.', *Clinical Pharmacokinetics*, vol. 30, no. 6, pp. 416-444.
- Harrison, L., Johnston, M., Massicotte, M.P., Crowther, M., Moffat, K. & Hirsh, J. 1997, 'Comparison of 5-mg and 10-mg loading doses in initiation of warfarin therapy', *Annals of Internal Medicine*, vol. 126, no. 2, pp. 133-136.
- Hart, R.G. 2000, 'What causes intracerebral hemorrhage during warfarin therapy?', *Neurology*, vol. 55, no. 7, pp. 907-908.
- Hart, R.G., Benavente, O., McBride, R. & Pearce, L.A. 1999, 'Antithrombotic therapy to prevent stroke in patients with atrial fibrillation: a meta-analysis', *Annals of Internal Medicine*, vol. 131, no. 7, pp. 492-501.
- Heck, A.M., Dewitt, B.A. & Lukes, A.L. 2000, 'Potential interactions between alternative therapies and warfarin', *American Journal of Health-Systems Pharmacology*, vol. 57, no. 13, pp. 1221-1227.
- Hennekens, C.H. & Buring, J.E. 1987, *Epidemiology in Medicine*, Little Brown and Company, Boston.
- Hirsh, J. 1987, 'Is the dose of warfarin prescribed by American physicians unnecessarily high?', *Archives of Internal Medicine*, vol. 147, no. 4, pp. 769-71.
- Hirsh, J. 1992, 'Substandard monitoring of warfarin in North America. time for change', (Editorial) *Archives of Internal Medicine*, vol. 152, no. 2, pp. 257-258.
- Hirsh, J. 1995, 'Optimal intensity and monitoring warfarin', *The American Journal of cardiology*, vol. 75, no. 6, pp. 39B-42B.

- Hirsh, J. & Fuster, V. 1994, 'Guide to anticoagulant therapy part 1: heparin', Retrieved 24 July 2001 from http://www.americanheart.org/Scientific/statements1994/039401.html.
- Hirsh, J., Dalen, J.E., Anderson, D.R., Poller, L., Bussey, H., Ansell, J., Deykin, D. & Brandt, J.T. 1998, 'Oral anticoagulants. mechanism of action, clinical effectiveness, and optimal therapeutic range', *Chest*, vol. 114, no. 5, pp. 445S-469S.
- Hirsh, J., Dalen, J.E., Deykin, D., Poller, L. & Bussey, H. 1995, 'Oral anticoagulants. Mechanism of action, clinical effectiveness, and optimal therapeutic range', *Chest*, vol. 108, no. 4, pp. 231S-246S.
- Hirsh, J., Fuster, V., Ansell, J. & Halperin, J.L. 2003, 'American heart association/American college of cardiology foundation guide to warfarin therapy', *Journal of the American College of Cardiology*, vol. 41, no. 9, pp. 1633-1652.
- Ho, L.L. & Brighton, T. 2002, 'Warfarin, antiplatelet drugs and their interactions', *Australian Prescriber*, vol. 25, no. 4, pp. 81-85.
- Horton, J.D. & Bushwick, B.M. 1999, 'Warfarin therapy: evolving strategies in anticoagulation', *American Family Physician*, vol. 59, no. 3, pp. 635-646.
- Howard, P.A., Ellerbeck, E.F., Engelman, K.K. & Patterson, K.L. 2002, 'The nature and frequency of potential warfarin drug interactions that increase the risk of bleeding in patients with atrial fibrillation', *Pharmacoepidemiology and Drug Safety*, vol. 11, no. 7, pp. 569-576.
- Hurlen, M., Abdelnoor, M., Smith, P., Erikssen, J. & Arnesen, H. 2002, 'Warfarin, aspirin or both after myocardial infarction' *New England Journal of Medicine*, vol. 34, No.13, pp. 969-974.
- Hylek, E.M. 2003, 'Trends in anticoagulation management across community-based practices in the united states: the anticoagulation consortium to improve outcomes nationally (ACTION) study', *Journal of Thrombosis and Thrombolysis*, vol. 16, no. 1/2, pp. 83-86.
- Hylek, E.M. & Singer, D.E. 1994, 'Risk factors for intracranial hemorrhage in outpatients taking warfarin', *Annals of Internal Medicine*, vol. 120, no. 11, pp. 897-902.
- Hylek, E.M., Chang, Y.C., Skates, S.J., Hughes, R.A. & Singer, D.E. 2000, 'Prospective study of the outcomes of ambulatory patients with excessive warfarin anticoagulation', *Archives of Internal Medicine*, vol. 160, no. 11, pp. 1612-1617.
- Hylek, E.M., Go, A.S., Chang, Y., Jensvolc, N.G., Henault, L.E., Selby, J.V. & Singer, D.E. 2003, 'Effect of intensity of oral anticoagulation on stroke severity and mortality in atrial fibrillation', *New England Journal of Medicine*, vol. 349, no. 11, pp. 1019-1026.
- Hylek, E.M., Heiman, H., Skates, S.J., Sheehan, M.A. & Singer, D.E. 1998, 'Acetaminophen and other risk factors for excessive warfarin anticoagulation', *Journal of the American Medical Association*, vol. 279, no. 9, pp. 657-662.

- Hylek, E.M., Regan, S., Go, A.S., Hughes, R.A., Singer, D.E. & Skates, S.J. 2001, 'Clinical predictors of prolonged delay in return of the international normalized ratio to within the therapeutic range after excessive anticoagulation with warfarin', *Annals* of *Internal Medicine*, vol. 135, no. 6, pp. 393-400.
- Hylek, E.M., Skates, S.J., Sheehan, M.A. & Singer, D.E. 1996, 'An analysis of the lowest effective intensity of prophylactic anticoagulation for patients with nonrheumatic atrial fibrillation', *New England Journal of Medicine*, vol. 335, no. 8, pp. 540-546.
- Institute of Medical and Veterinary Science 2005 (updated 15 November 2005), Retrieved 17/11/2005 from http://www.imvs.sa.gov.au/index.htm.
- Jackson, S.L., Peterson, G.M. & Vial, J.H. 2004, 'A community-based educational intervention to improve antithrombotic drug use in atrial fibrillation', *The Annals of Pharmacotherapy*, vol. 38, no. 11, pp. 1794-1799.
- Jackson, S.L., Peterson, G.M., Vial, J.H. & Jupe, D.M.L. 2004, 'Improving the outcomes of anticoagulation: an evaluation of home follow-up of warfarin initiation', *Journal of Internal Medicine*, vol. 256, no. 2, pp. 137-144.
- Jacobs, L.G. 2003, 'The use of oral anticoagulants (warfarin) in older people American Geriatric Society guideline abstracted from chest', *American Journal of Geriatric Cardiology*, vol. 12, no. 3, pp. 153-160.
- Jick, H., Slone, D., Borda, I.T. & Shapiro, S. 1968, 'Efficacy and toxicity of heparin in relation to age and sex', *New England Journal of Medicine*, vol. 279, no. 6, pp. 284-286.
- Johnston, J.A., Cluxton, R.J., Heaton, P.C., Guo, J.J., Moomaw, C.J. & Eckman, M.H. 2003, 'Predictors of warfarin use among Ohio Medicaid patients with new-onset nonvalvular atrial fibrillation', *Archives of Internal Medicine*, vol. 163, no. 14, pp. 1705-1710.
- Jones, M., McEwan, P., Morgan, C.L, Peters, J.R., Goodfellow, J. & Currie, C.J. 2005, 'Evaluation of the pattern of treatment, level of anticoagulation control, and outcome of treatment with warfarin in patients with non-valvular atrial fibrillation: a record linkage study in a large British population', *Heart*, vol. 91, no. 4, pp. 472-477.
- Kaatz, S., Elston-Lafata, J. & Gooldy, S. 2001, 'Anticoagulation therapy home and office evaluation (AT HOME) study', *Thrombosis Haemostasis*, vol. 86, (suppl): p. 779. Abstract.
- Kagansky, N., Knobler, H., Rimon, E., Ozer, Z. & Levy, S. 2004. 'Safety of anticoagulation therapy in well-informed older patients', *Archives of Internal Medicine*, vol. 164, no. 18, pp. 2044-2050.
- Kaminsky, L.S. & Zhang, Z.Y. 1997, 'Human P450 metabolism of warfarin', *Pharmacology Therapy*, vol. 73, no. 1, pp. 67-74.
- Kayser, S.R. 2005, 'Practical challenges in the management of oral anticoagulation', *Progressive Cardiovascular Nursing*, vol. 20, no. 2, pp. 80-85.

- Kearon, C., Gent, M., Hirsh, J., Weitz, J., Kovacs, M.J., Anderson, D.R., Turpie, A.G., Green, D., Ginsberg, J.S. Wells, P., MacKinnon, B. & Julian, J.A. 1999, 'A comparison of three months of anticoagulation with extended anticoagulation for a first episode of idiopathic venus thromboembolism', *The New England Journal of Medicine*, vol. 340, no. 12, pp. 901-907.
- Kearon, C., Ginsberg, J.S., Kovacs, M.J., Anderson, D.R., Wells, P., Julian, J.A., Math, M., MacKinnon, B., Weitz, J.I., Crowther, M.A., Dolan, S., Turpie, A.G., Geerts, W., Solymoss, S., van Nguyen, P., Demers, C., Kahn, S.R., Kassis, J., Rodger, M., Hambleton, J. & Gent, M. 2003, 'Comparison of low-intensity warfarin therapy with conventional-intensity warfarin therapy for long-term prevention of recurrent venous thromboembolism', *The New England Journal of Medicine*, vol. 349, no. 7, pp. 631-639.
- Kerin, N.Z., Blevins, R.D., Goldman, L., Faitel, K. & Rubenfire, M. 1998, 'The incidence, magnitude and time course of the amiodarone-warfarin interaction', *Archives of Internal Medicine*, vol. 148, no. 8, pp. 1779-1781.
- Kernohan, R.J. & Todd, C. 1966, 'Heparin therapy in thromboembolic disease', *The Lancet*, vol. 1, no. 7464, pp. 621-623.
- Kidd, P.S. & Wagner, K.D. 1997, *High acuity nursing*, 2nd edn, Appleton & Lange, Stamford, Connecticut.
- Kimmel, S.E., Chen, Z., Price, M., Parker, C.S., Metlay, J.P., Christie, J.D., Brensinger, C.M., Newcomb, C.W., Samaha, F.F. & Gross, R. 2007, 'The influence of patient adherence on anticoagulation control with warfarin', *Archives of Internal Medicine*, vol. 167, no. 3, pp. 229-235.
- Klein, J.P. & Moeschberger, M.L. 1997, Survival Analysis-Techniques for Censored and Truncated Data, Springer, New York.
- Koo, S., Kucher, N., Nguyen, P.L., Fanikos, J., Marks, P.W. & Goldhaber, S.Z. 2004, 'The effect of excessive anticoagulation on mortality and morbidity in hospitalized patients with anticoagulant-related major hemorrhage', *Archives of Internal Medicine*, vol. 164, no. 14, pp. 1557-1560.
- Kucukarslan, S.N., Peters, M., Mlynarek, M. & Nafziger, D.A. 2003, 'Pharmacists on rounding teams reduce preventable adverse drug events in hospital general medicine units', *Archives of Internal Medicine*, vol. 163, no. 17, pp. 2014-2018.
- Kuijer, P.M.M., Hutten, B.A., Prins, M.H. & Buller, H.R. 1999, 'Prediction of the risk of bleeding during anticoagulant treatment for venous thromboembolism', *Archives of Internal Medicine*, vol. 159, no. 5, pp. 457-460.
- Kutner, M., Nixon, G. & Silverstone, F. 1991, 'Physicians' attitudes toward oral anticoagulants and antiplatelet agents for stroke prevention in elderly patients with atrial fibrillation', *Archives of Internal Medicine*, vol. 151, no. 10, pp. 1950-1953.
- Kwan, D., Bartle, W.R. & Walker, S.E. 1999, 'The effects of acetaminophen on pharmacokinetics and pharmacodynamics of warfarin', *Journal of Clinical Pharmacology*, vol. 39, no. 1, pp. 68-75.

- Landefeld, C.S. & Beyth, R.J. 1993, 'Anticoagulant-related bleeding: clinical epidemiology, prediction and prevention', *The American Journal of Medicine*, vol. 95, no. 3, pp. 315-328.
- Landefeld, C.S. & Goldman, L. 1989, 'Major bleeding in outpatients treated with warfarin: incidence and prediction by factors known at the start of outpatient therapy', *The American Journal of Medicine*, vol. 87, no. 2, pp. 144-152.
- Landefeld, C.S., Anderson, P.A., Goodnough, L.T., Moir, T.W., Hom, D.L., Rooenblatt, M.W. & Goldman, L. 1989, 'The bleeding severity index: validation and comparison to other methods for classifying bleeding complications of medical therapy', *Journal of Clinical Epidemiology*, vol. 42, no. 8, pp. 711-718.
- Leddy, S. & Pepper, J.M. 1993, *Conceptual Bases of Professional Nursing*, 3rd edn, Lippincott Company, Philadelphia.
- Lehne, R.A., Crosby, L., Hamilton, D. & Moore, L. 1990, *Pharmacology for Nursing Care*, W.B. Saunders Company, Philadelphia.
- Levine, M.N., Raskob, G. & Hirsh, J. 1986, 'Hemorrhagic complications of long-term anticoagulant therapy', *Chest*, vol. 89, Supplement II, pp. 16S-25S.
- Levine, M.N., Raskob, G. & Hirsh, J. 1989, 'Hemorrhagic complications of long-term anticoagulant therapy', *Chest*, vol. 95, no. 2, pp. 26S-36S.
- Levine, M.N., Raskob, G., Landefeld, S. & Kearon, C. 2001, 'Hemorrhagic complications of anticoagulant treatment', *Chest*, vol. 119, no. 1 Suppl, pp. 108S-121S.
- Linkins, L., Choi, P.T. & Douketis, J.D. 2003, 'Clinical impact of bleeding in patients taking oral anticoagulant therapy for venous thromboembolism. A meta analysis', *Annals of Internal Medicine*, vol. 139, no. 11, pp. 893-900.
- Lloyd, J.V. & Rodgers, S.E. 1994, 'Anticoagulation and the GP patient', *Australian Family Physician*, vol. 23, no. 8, pp. 1476-1481.
- Loebstein, R., Yonath, H., Peleg, D., Almog. S., Rotenberg, M., Lubetsky, A., Roitelman, J., Harats, D., Halkin, H. & Ezre, D. 2001, 'Interindividual variability in sensitivity to warfarin nature or nurture?', *Clinical Pharmacology and Therapeutics*, vol. 70, no. 2, pp. 159-164.
- Lubetsky, A., Dekel-Stern, E., Chetrit, A., Lubin, F. & Halkin, H. 1999, 'Vitamin K intake and sensitivity to warfarin in patients consuming regular diets', *Thrombosis and Haemostasis*, vol. 81, no. 3, pp. 396-399.
- Malhotra, O.P., Nesheim, M.E. & Mann, K.G. 1985, 'The kinetics of activation of normal and gamma carboxyglutamic acid deficient prothrombins', *Journal of Biological Chemistry*, vol. 260, no. 1, pp. 279-287.

- Matchar, D.B., Jacobson, A.K., Edson, R.G., Lavori, P.W., Ansell, J.E., Ezekowitz, M.D., Rickles, F., Fiore, L., Boardman, K., Phibbs, C., Fihn, S.D., Vertrees, J.E. & Dolor, R. 2005, 'The impact of patient self-testing of prothrombin time for managing anticoagulation: rationale and design of VA cooperative study #481 the home INR study (THINRS)', *Journal of Thrombosis and Thrombolysis*, vol. 19, no. 3, pp. 163-172.
- McCormack, P.M.E., Stinson, J.C., Hemeryck, L. & Feely, J. 1997, 'Audit of an anticoagulant clinic: doctor and patient knowledge', *Irish Medical Journal*, vol. 90, no. 5, pp. 192-193.
- McCrory, D.C., Matchar, D.B., Samsa, G., Sanders, L.L. & Pritchett, E.L.C. 1995, 'Physician attitudes about anticoagulation for nonvalvular atrial fibrillation in the elderly', *Archives of Internal Medicine*, vol. 155, no. 3, pp. 277-281.
- McMillan, J.H. & Schumacher, S. 2006, *Research in Education, Evidence-Based Inquiry*, 6th edn, Pearson Education, Boston.
- McPherson, J. & Street, A. 1995, 'Abnormal laboratory results: tests of haemostasis: detection of the patient at risk of bleeding', *Australian Prescriber*, vol. 18, pp. 38-41.
- Medi, C., Hankey, G.J. & Freedman, S.B. 2007, 'Atrial fibrillation', *Medical Journal of Australia*, vol. 186, no. 4, pp. 197-202.
- Menendez-Jandula, B., Souto, J.C., Oliver, A., Montserrat, I., Quintana, M., Gich, I., Bonfill, X. & Fontcuberta, J. 2005, 'Comparing self-management of oral anticoagulant therapy with clinic management', *Annals of Internal Medicine*, vol. 142, no. 1, pp. 1-10.
- Merli, G.J. 2002, 'Confronting fears of anticoagulation therapy', *Patient Care*, Editorial, vol. 36, p. 8. Abstract Retrieved 16/8/2005 from Expanded Academic ASAP database.
- Michaels, M.M. 1962, 'Bleeding from occult tumors during anticoagulant therapy', *Circulation*, vol. 25, no. 5, pp. 804-806.
- Monane, M., Bohn, R.L., Gurwitz, J.H., Glynn, R.J. & Avorn, J. 1994, 'Noncompliance with congestive heart failure therapy in the elderly', *Archives of Internal Medicine*, vol. 154, no. 4, pp. 433-437.
- Mosby 1997, 'Warfarin Sodium (002444)', Physicians GenRx: WebPool/d00199/seg-19928.htm, Retrieved 9 April 2003 from http://www.hytime.org/ihc97/papers/0024444.htm.
- Mosca, L., Manson, J.E., Sutherland, S.E., Langer, R.D., Manolio, T. & Barrett-Connor, E. 1997, 'Cardiovascular disease in women. A statement for healthcare professionals from the American Heart Association', *Circulation*, vol. 96, no. 7, pp. 2468-2482.
- Mosley, D.H., Schatz, I.J., Breneman, G.M. & Keyes, J.W. 1963, 'Long-term anticoagulant therapy complications and control in a review of 978 cases', *Journal of the American Medical Association*, vol. 186, no. 10, pp. 914-916.

- Murray, E. 2003, 'Anticoagulation management in primary care: the demand for self-testing and self management from patients on anticoagulant therapy is set to increase', *Practice Nurse*, vol. 26, no. 8, pp. 34-40. Retrieved 16 Aug. 2005 from Expanded Academic ASAP database, http://web4.infotrac.galegroup.com.ezproxy.une.edu.au/itw/infomark/944/238/709926.
- Nardi, P.M. 2006, *Doing Survey Research. A Guide to Quantitative Methods*, Pearson Education, Boston.
- National Heart Foundation of Australia 2005, *The shifting burden of cardiovascular disease in Australia*, Access Economics, Melbourne.
- National Prescribing Service Limited 2003, 'Using antithrombotics: maximising benefits; minimising risks', Retrieved 2 February 2002 from http://www.nps.org.au/site.php?content=ntml/ppr.php&ppr=/resources/Prescribing PracticeReviews/ppr24.
- Neuman, B. & Young, R.J. 1972, 'A model for teaching total person approach to patient problems', *Nursing Research*, vol. 21, no. 3, pp. 264-269.
- Ninio, D.M. 2000, 'Contemporary management of atrial fibrillation', *Australian Prescriber*, vol. 23, no. 5, pp. 100-102.
- O'Connell, M.B., Kowal, P.R., Allivato, C.J. & Repka, T.L. 2000, 'Evaluation of warfarin initiation regimens in elderly inpatients', *Pharmacotherapy*, vol. 20, no. 8, pp. 923-930.
- O'Malley, K., Stevenson, I.H., Ward, C.A., Wood, A.J.J. & Crooks, J. 1977, 'Determinants of anticoagulant control in patients receiving warfarin', *British Journal of Clinical Pharmacology*, vol. 4, no. 3, pp. 309-314.
- O'Reilly, R.A. 1974, 'Studies on the optical enantiomorphs of warfarin in man', *Clinical Pharmacological Therapy*, vol. 16, no. 2, pp. 348-354.
- Oake, N., Fergusson, D.A., Forster, A.J. & Van Walraven, C. 2007, 'Frequency of adverse events in patients with poor anticoagulation: a meta-analysis', *Canadian Medical Association Journal*, vol. 176, no. 11, pp. 1589-1594.
- Oden, A. & Fahlen, M. 2002, 'Oral anticoagulation and risk of death: a medical record linkage study', *British Medical Journal*, vol. 325, no. 7372, pp. 1073-1075.
- Oermann, M.H. 1997, Professional Nursing Practice, Appleton & Lange, Stamford, CT.
- Open Architecture Clinical Information System (OACIS) 2006 'OACIS the interoperability pioneer', Retrieved 25 September 2006 from http://www.dinmar.com/00oacis.php.
- Palareti, G. & Legnani, C. 1996, 'Warfarin withdrawal: pharmacokineticpharmacodynamic considerations', Clinical Pharmacokinetics, vol. 30, no. 4, pp. 300-313.

- Palareti, G., Hirsh, J., Legnani, C., Manotti, C., D'Angelo, A., Pengo, V., Moia, M., Guazzaloca, G., Musolesi, S. & Coccheri, S. 2000, 'Oral anticoagulation treatment in the elderly. A nested, prospective, case-cohort study', *Archives of Internal Medicine*, vol. 160, no. 4, pp. 470-478.
- Palareti, G., Leali, N., Coccheri, S., Poggi, M., Manotti, C., D'Angelo, A., Pengo, V., Erba, N., Moia, M., Ciavarella, N., Deveto, G., Berrettini, M. & Musolesi, S., on behalf of the Italian Study on Complications of Oral Anticoagulant Therapy. 1996, 'Bleeding complications of oral anticoagulant treatment: an inception-cohort, prospective collaborative study (ISCOAT)', *The Lancet*, vol. 348, no. 4025, pp. 423-428.
- Panneerselvam, S., Baglin, C., Lefort, W. & Baglin, T. 1998, 'Analysis of risk factors for over-coagulation in patients receiving long-term warfarin', *British Journal of Haematology*, vol. 103, no. 2, pp. 422-424.
- Parra, D., Beckey, N.P. & Stevens, G.R. 2007, 'The effect of acetaminophen on the international normalised ratio in patients stabilized on warfarin therapy', *Pharmacotherapy*, vol. 27, no. 5, pp. 675-683.
- Patel, P., Weitz, J., Brooker, L.A. Paeo, B. Mitchell, L. & Andrew, M. 1996, 'Decreased thrombin activity of fibrin clots prepared in cord plasma compared to adult plasma', *Paediatric Research*, vol. 39, no. 5, pp. 826-830.
- Pautas, E., Gouin-Thibault, I., Debray, M., Gaussem, P. & Siguret, V. 2006, 'Haemorrhagic complications of vitamin K antagonists in the elderly: risk factors and management', *Drugs Aging*, vol. 23, no. 1, pp. 13-25.
- Pearson, A., Vaughan, B. & FitzGerald, M. 2005, 'Nursing Models for Practice', 3rd edn, Butterworth-Heinemann, Edinburgh.
- Petersen, P., Boysen, G., Godtfredsen, J., Andersen, E.D. & Andersen, B. 1989, 'Placebo-controlled, randomised trial of warfarin and aspirin for prevention of thromboembolic complications in chronic atrial fibrillation. The Copenhagen AFASAK study', *The Lancet*, vol. 1, no. 8631, pp. 175-179.
- Peterson, G.M., Boom, K., Jackson, S.L. & Vial, J.H. 2002, 'Doctors' beliefs on the use of antithrombotic therapy in atrial fibrillation: identifying barriers to stroke prevention', *Internal Medicine Journal*, vol. 32, no. 1-2, pp. 15-23.
- Peterson, G.M., Tompson, A., Jackson, S., Hasan, O., Gee, P., McShane, R., Cooper, C., Fitzmaurice, K., Roberts, B. & Luttrell, D. 2006, 'Facilitating quality use of medicines between hospital and community (Med-E-Support)', *The Pharmacy Guild of Australia*. Retrieved 6 November 2007 from http://www.guild.org.au/research/project_display.asp?id=271.
- Polit, D.F. & Hungler, B.P. 1999, *Nursing Research*. *Principles and Methods*, 6th edn, J.B. Lippincott, Philadelphia.
- Quick, A.J. 1935, 'The prothrombin time in haemophilia and in obstructive jaundice', *Journal of Biological Chemistry*, vol. 109, pp. 73-74.

- Redwood, M., Taylor, C., Bain, B.J. & Matthews, J.H. 1991, 'The association of age with dosage requirement for warfarin', *Age and Ageing*, vol. 20, no. 3, pp. 217-220.
- Relling, M.V., Aoyama, T., Gonzalez, F.J. & Meyer, U.A. 1990, 'Tolbutamide and mephenytoin hydroxylation by human cytochrome P450s in the CYP2C subfamily', *The Journal of Pharmacology and Experimental Therapeutics*, vol. 252, no. 1, pp. 442-447.
- Rettie, A.E., Korzekwa, K.R., Kunze, K.L., Lawrence, R.F., Eddy, A.C., Aoyama, T., Gelboin, H.V., Gonzalez, F.J. & Trager, W.F. 1992, 'Hydroxylation of warfarin by human cDNA-expressed cytochrome P-450: A role for P-4502C9 in the etiology of (S)-warfarin drug interactions', *Chemistry of Residential Toxicology*, vol. 5, no. 1, pp. 54-59.
- Rigby, K., Clark, R.B. & Runciman, W.B. 1999, 'Adverse events in health care: setting priorities based on economic evaluation', *Journal of Quality Clinical Practice*, vol. 19, no. 1, pp. 7-12.
- Roberts, G.W., Helboe, T., Nielsen, C., Gallus, A.S., Jensen, I., Cosh, D.G. & Eaton, V.S. 2003, 'Assessment of an age-adjusted warfarin initiation protocol', *The Annals of Pharmacotherapy*, vol. 37, no. 6, pp. 799-803.
- Roberts, K. & Taylor, B. 1998, *Nursing Research Processes: an Australian Perspective*, Nelson, Melbourne.
- Rosand, J., Eckman, M.H., Knudsen, K.A., Singer, D.E. & Greenberg, S.M. 2004, 'The effect of warfarin and intensity of anticoagulation on outcome of intracerebral hemorrhage', *Archives of Internal Medicine*, vol. 164, no. 8, pp. 880-884.
- Ryan, P. 2002, Survival Analysis, University of Adelaide, Adelaide, South Australia.
- Salem, H.H. on behalf of the Warfarin Reversal Consensus group. 2005, Letters in Reply, *Medical Journal of Australia*, vol. 182, no. 7, pp. 365-368.
- Samsa, G.P., Matchar, D.B., Goldstein, L.B., Bonito, A.J., Lux, L.J., Witter, D.M. & Bian, J. 2000, 'Quality of anticoagulation management among patients with atrial fibrillation', *Archives of Internal Medicine*, vol. 160, no. 7, pp. 967-973.
- Sanderson, S., Emery, J. & Higgins, J. 2005, 'CYP2C9 gene variants, drug dose, and bleeding risk in warfarin-treated patients: A HuGEnet™ systematic review and meta-analysis', *Genetics in Medicine*, vol. 7, no. 2, pp. 97-104.
- Sanoski, C.A. & Bauman, J.L. 2002, 'Clinical observations with the amiodarone/warfarin interaction* dosing relationships with long-term therapy', *Chest*, vol. 121, no. 1, pp. 19-23.
- Schneider, Z., Whitehead, D. & Elliot, D. 2007, *Nursing & Midwifery research. Methods and appraisal for evidence-based practice*, 3rd edn, Mosby, Sydney.
- Seaman, C.H.C. 1987, Research Methods. Principles, Practice and Theory for Nursing, 3rd edn, Appleton & Lange, Norwalk.

- Sheperd, A.M.M, Hewick, D.S., Moreland, T.A. & Stevenson, I.H. 1977, 'Age as a determinant of sensitivity to warfarin', *British Journal of Clinical Pharmacology*, vol. 4, no. 3, pp. 315-320.
- Shetty, H.G.M., Fennerty, A.G. & Routledge, P.A. 1989, 'Clinical pharmacokinetic considerations in the control of oral anticoagulant therapy', *Clinical Pharmacokinetics*, vol. 16, no. 4, pp. 238-253.
- Shireman, T.I., Howard, P.A., Kresowik, T.F. and Ellerbeck, E.F. 2004, 'Combined anticoagulant-antiplatelet use and major bleeding events in elderly atrial fibrillation patients', *Stroke*, vol. 35, no. 10, pp. 2362-2367.
- Shorr, R.L., Ray, W.A., Daugherty, J.R. & Griffin, M.R. 1993, 'Concurrent use of nonsteroidal antiinflammatory drugs and oral anticoagulants places elderly persons at high risk of hemorrhagic peptic ulcer disease', *Archives of Internal Medicine*, vol. 153, no. 14, pp. 1665-1670.
- Siebert, W. n.d., 'Warfarin for atrial fibrillation', Cardiac Services, Flinders Medical Centre, Adelaide
- Sixth American College of Chest Physicians (ACCP) Consensus Conference on Antithrombotic Therapy, 2001, *Chest*, vol. 119, Supplement I, pp. 1S-370S.
- Smith, J.K., Aljazairi, A. & Fuller, S.H. 1999, 'INR elevation associated with diarrhea in a patient receiving warfarin', *The Annals of Pharmacotherapy*, vol. 33, no. 3, pp. 301-304.
- Southpath (updated 24 August 2005), Retrieved from www.southpath.health.on.net/.
- Sowter, F., Feely, M. & Kay, E.A. 1997, 'An audit of warfarin anticoagulation in teaching hospital patients', *The Pharmaceutical Journal*, vol. 259, pp. 612-613.
- StatSoft Inc. 2003, 'Survival/Failure Time Analysis', Retrieved 23 July 2007 from http://www.statsoft.com/textbook/stsurvan.html.
- Stein, P.D., Alpert, J.S., Bussey, H.I., Dalen, J.E. & Turpie, A.G.G. 2001, 'Antithrombotic therapy in patients with mechanical and biological prosthetic heart valves', *Chest*, vol. 119, suppl. 1, pp. 220s-227s.
- Steward, D.J., Haining, R.L., Henne, K.R., Davis, G., Rushmore, T.H., Trager, W.F. & Rettie, A.E. 1997, 'Genetic association between sensitivity to warfarin and expression of CYP2C9*3', *Pharmacogenetics*, vol. 7, no. 5, pp. 361-367.
- Stewart, S. & Pearson, S. 1999, 'Uncovering a multitude of sins: medication management in the home post acute hospitalisation among the chronically ill', *Australian and New Zealand Journal of Medicine*, vol. 29, no. 2, pp. 220-227.
- Sudlow, C.M., Rodgers, H., Kenny, R.A. & Thomson, R.G. 1995, 'Service provision and use of anticoagulants in atrial fibrillation', *British Medical Journal*, vol. 311, no. 7004, pp. 558-561.

- Sudlow, M., Thomson, R., Thwaites, B., Rogers, H. & Kenny, R.A. 1998, 'Prevalence of atrial fibrillation and eligibility for anticoagulant in the community', *The Lancet*, vol. 352, no. 9135, pp. 1167-1171.
- Sullivan-Klose, T.H., Ghanayem, B.I., Bell, D.A., Zhang, Z.Y., Kaminsky, I.S., Shanfield, G.M., Miners, J.O., Birkett, D.J. & Goldstein, J.A. 1996, 'The role of the CYP2C9-Leu359 allelic variant in the tolbutamide polymorphism', *Pharmacogenetics*, vol. 6, no. 4, pp. 341-349.
- Takahashi, H. & Echizen, H. 2001, 'Pharmacogenetics of warfarin elimination and its clinical implications', *Clinical Pharmacokinetics*, vol. 40, no. 8, pp. 587-603.
- Tang, E.O.Y.L., Lai, C.S.M., Lee, K.K.C., Wong, R.S.M., Cheng, G. & Chan, T.Y.K. 2003, 'Relationship between patient's warfarin knowledge and anticoagulation control', *The Annals of Pharmacotherapy*, vol. 37, no. 1, pp. 34-39.
- The Newcastle Anticoagulation Study Group. 1998, 'Effectiveness of anticoagulation among patients discharged from hospital on warfarin', *Medical Journal of Australia*, vol. 169, no. 5, pp. 243-246.
- The Royal College of Pathologists of Australia (updated 12 March 2004), 'Royal College of Pathologists of Australia Manual Validity and Reliability'. Retrieved 8 December 2005 from http://www.rcpamanual.edu.au/sections/single/singlearticle.asp?s=70&printfriendly=1.
- The Stroke Prevention in Atrial Fibrillation Investigators. 1996, 'Bleeding during antithrombotic therapy in patients with atrial fibrillation', *Archives of Internal Medicine*, vol. 156, no. 4, pp. 409-416.
- Tomey, A.M. & Alligood, M.R. 2002, *Nursing Theorists and their Work*, 5th edn, Mosby, St Louis.
- Tortora, G.J. & Grabowski, S.R. 1996, 'Principles of Anatomy and Physiology', 8th edn, Harper Collins, New York.
- UCLA Academic Technology Services. 'Logistic Regression', *Annotated SPSS Output*, Retrieved 23 July 2007 from http://www.ats.ucla.edu/STAT/SPSS/output/logistic.htm.
- UCLA Academic Technology Services. 'Poisson Regression', *Stata Annotated Output*, Retrieved 24 July 2007 from http://www.ats.ulca.edu/stat/stata/output/stata_poisson_output.htm.
- Udall, J.A. 1965, 'Human sources and absorption of vitamin K in relation to anticoagulation stability', *Journal of American Medical Association*, vol. 194, no. 2, pp. 127-129.
- Vadher, B., Patterson, D.L.H. & Leaning, M. 1997, 'Evaluation of a decision support system for initiation and control of oral anticoagulation in a randomised trial', *British Medical Journal*, vol. 314, no. 7089, pp. 1252-1256.

- van der Meer, F.J.M., Rosendaal, F.R., Vandenbroucke, J.P. & Briet, E. 1993, 'Bleeding complications in oral anticoagulant therapy-an analysis of risk factors', *Archives of Internal Medicine*, vol. 153, no. 13, pp. 1557-1562.
- van der Meer, F.J.M., Rosendaal, F.R., Vandenbroucke, J.P. & Briet, E. 1996, 'Assessment of a bleeding risk index in two cohorts of patients treated with oral anticoagulants', *Thrombosis and Haemostasis*, vol. 76, no. 1, pp. 12-16.
- van Es, R.F., Jonker, J.J.C., Verheugt, F.W.A., Deckers, J.W. & Grobbee, D.E., for the Antithrombotics in the Secondary Prevention of Events in Coronary Thrombosis-2 (ASPECT-2) Research Group. 2002, 'Aspirin and coumadin after acute coronary syndromes (the ASPECT-2 study): a randomized controlled trial', *The Lancet*, vol. 360, no. 9327, pp. 109-113.
- Veronese, M.F., Doecke, C.J., Mackenzie, P.I., McManus, M.E., Miners, J.O., Rees, D.I, Gasser, R., Meyer, U.A. & Birkett, D.J. 1993, 'Site-directed mutagenesis studies of human liver cytochrome P-450 isoenzymes of the CYP2C subfamily', *Biochemistry Journal*, vol. 289, Part II, pp. 533-558.
- Vink, R., Kraaijenhagen, R.A., Hutten, B.A., van den Brink, R.A., de Mol, B.A., Buller, H.R. & Levi, M. 2003, 'The optimal intensity of vitamin K antagonists in patients with mechanical heart valves', *Journal of American College of Cardiology*, vol. 42, pp. 2042-2048.
- Weitz, J.I., Hudoba, M., Massel, D. Maraganore, J. & Hirsh, J. 1990, 'Clot-bound thrombin is protected from inhibition by heparin-antithrombin III but is susceptible to inactivation by antithrombin III-independent inhibitors, *Journal of Clinical Investigations*, vol. 86, no. 2, pp. 385-391.
- Wells, P.S., Holbrook, A.M., Crowther, N.R. & Hirsh, J. 1994, 'Interactions of warfarin with drugs and food', *Annals of Internal Medicine*, vol. 121, no. 9, pp. 676-683.
- Wessler, S. & Gitel, S.N. 1984, 'Warfarin: from bedside to bench', *The New England Journal of Medicine*, vol. 311, no. 10, pp. 645-652.
- White, H.D., Gruber, M., Feyzi, J., Kaatz, S., Tse, H., Husted, S. & Albers, G.W. 2007, 'Comparison of outcomes among patients randomized to warfarin therapy according to anticoagulant control', *Archives of Internal Medicine*, vol. 167, no. 3, pp. 239-245.
- White, R.H., McCurdy, S.A., von Marensdorff, H., Woodruff, D.E. & Leftgoff, L. 1989, 'Home prothrombin time monitoring after the initiation of warfarin therapy: a randomised prospective study', *Annals of Internal Medicine*, vol. 111, no. 9, pp. 730-737.
- White, R.H., McKittrick, T., Hutchinson, R. & Twitchell, J. 1995, 'Temporary discontinuation of warfarin therapy: changes in the international normalised ratio', *Annals of Internal Medicine*, vol. 122, no. 1, pp. 40-42.
- Wiese, M.D. & Cosh, D.G. 1999, 'Raised INR with concurrent warfarin and azithromycin', *The Australian Journal of Hospital Pharmacy*, vol. 29, no. 3, pp. 159-161.

- Wittkowsky, A.K. & Devine, E.B. 2004, 'Frequency and causes of over anticoagulation and underanticoagulation in patients treated with warfarin', *Pharmacotherapy*, vol. 24, no. 10, pp. 1311-1316.
- Wynne, H.A., Cope, L., Kelly, P., Whittingham, T., Edwards, C. & Kamali, F. 1995, 'The influence of age, liver size and enantiomer concentrations on warfarin requirements', *British Journal of Clinical Pharmacology*, vol. 40, no. 3, pp. 203-207.
- Wynne, H.A., Kamali, F., Edwards, C., Long, A. & Kelly, P. 1996, 'Effect of ageing upon warfarin dose requirements: a longitudinal study', *Age and Ageing*, vol. 25, no. 6, pp. 429-431.
- Zivelin, A., Roa, L.V., & Rapaport, S.I. 1993, 'Mechanism of the anticoagulant effect of warfarin as evaluated in rabbits by selective depression of individual procoagulant vitamin-K dependent clotting factors', *Journal of Clinical Investigation*, vol. 92, no. 5, pp. 2131-2140.
- Zweifler, A.J. 1962, 'Relation of prothrombin concentration to bleeding during oral anticoagulant therapy its importance in detection of latent organic lesions', *The New England Journal of Medicine*, vol. 267, no. 6, pp. 283-285.

Appendices

Appendix 1:

Initial Questionnaire for Patients



Initial Questionnaire for Patients

An Investigation of the Management of the International Normalised Ratio (INR) in Warfarin Therapy During the First Five months of Treatment

Review of the management of the blood thinner warfarin during the first five months of treatment

Patient number in study	
Date	

1.	alcohol intake) in the last week?
	□ Yes □ No
2.	If you answered yes, what were those changes?
3.	Have you suffered from any of the following illnesses in the last week?
	 Diarrhea for at least 2 consecutive days Yes No
	If yes, was doctor managing your warfarin treatment informed? Yes No
	 Vomiting for at least 2 consecutive days Yes No
	If yes, was doctor managing your warfarin treatment informed? Yes No
	 Increased temperature or fever that you were aware of Yes No
	If yes, was doctor managing your warfarin treatment informed? — Yes — No
	 Newly diagnosed illness. That is, any new ailment that has been diagnosed by a doctor who is not managing your warfarin treatment Yes No
	If yes, was doctor managing your warfarin treatment informed? Yes No
	Comment

	•	Any other health problem in the last week that has not been mentioned? Yes No
		If yes, was Dr managing your warfarin treatment informed? Yes No
		Comment
	•	Have you let the doctor managing your warfarin treatment know about all of the tablets including vitamins, homeopathic medications, herbal preparations and food supplements you take? — Yes — No
4.	If t	he answer was no, which ones did you forget to tell the doctor
	abo	out?
5.	Ha	ve you started on any new tablets in the last week?
		Yes No
		If yes, was doctor managing your warfarin treatment informed? Pes No
5.	Ha	ve you increased the dose of any of your medicines that you only take
	occ	asionally, e.g. pain killers?
		Yes
		No
		If yes, which medicines?
		How many per week?
7.	If y	res, does your doctor managing your warfarin treatment know?
		Yes
		No

8.	Do	you understand why you have been started on warfarin therapy?
		Yes No
	Co	mments
	• • •	
	•••	
9.	Do	you think you understand basically how warfarin works?
		Yes No
	Co	mments
	• • • •	
	•••	
10.	Ar	e you aware of the main side effects of warfarin?
		Yes No
	Co	mments
	•••	
11.	Do	you understand why your dose of warfarin may change?
		Yes
	<u> </u>	No
		mments
	•••	
12.	Do	you keep a written record of your blood tests and warfarin doses that you take?
	-	Yes No
13.	Do	you get the same brand of warfarin every time from the chemist?
		Yes No Don't know

14.	Do	you take your warrarin at approximately the same time each day?
		Yes No
15.	Но	w often do you miss a dose?
		Never Once a month Once a week Twice a week Other
	••••	
16.	If y	you ever do miss a dose, what do you do?
	••••	
	• • • •	
17.	Are	e you aware of what the signs and symptoms of bleeding caused by warfarin
		Yes
		No
	Co	mments
	••••	
	••••	
18.	Ha	ve you had any of those signs of bleeding while on warfarin?
		Yes
		No If yes, was doctor managing your warfarin treatment informed? □ Yes □ No

	Comm	ents		• • • • • • • • • • • • • • • • • • • •	•••••	•••••
	•••••			• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	
	•••••	• • • • • • • • • • • • • • • • • • • •	•••••		• • • • • • • • • • • • • • • • • • • •	•••••
	•••••	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •		• • • • • • • • • • • • • • • • • • • •	
	•••••	• • • • • • • • • • • • • • • • • • • •				
19. 1	How does the	doctor let you l	know what dos	se of warfarin yo	ou need to take?	
•	• • • • • • • • • • • • • • • • • • • •		• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •		
	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •			•••••
	using?				rfarin you shoul	d be
	1	2	3	4	5	
	1	2		•	•	
	Very Easy	Uncertain	Difficult	Very Easy	Difficult	
21. 1	Very Easy		Difficult			
21. I	Very Easy	Uncertain	Difficult			
21. 1	Very Easy	Uncertain	Difficult			
21.1	Very Easy	Uncertain	Difficult			
21.1	Very Easy	Uncertain	Difficult what way?		Difficult	
	Very Easy If difficult, can	Uncertain	Difficult what way?	Very Easy	Difficult	
22. 1	Very Easy If difficult, can	Uncertain	Difficult what way?	Very Easy	Difficult	
22. 1	Very Easy If difficult, car	Uncertain	Difficult what way?	Very Easy	Difficult	
22. I	Very Easy If difficult, can Do you know l Yes	Uncertain n you tell me in how long you v	Difficult what way?	Very Easy	Difficult	

Appendix 2:

Subsequent Episode of Over-anticoagulation Questionnaire for Patients



Subsequent Episode of Over-anticoagulation Questionnaire for Patients

An Investigation of the Management of the International Normalised
Ratio (INR) in Warfarin Therapy During the First Five months of
Treatment

Investigation of the management of the blood thinner warfarin during the initial five months of treatment

Patient	number	· in	st	uc	ly	 	 •	 			
Date											

1.	Have	there been any major changes in your normal eating habits (including
	alcoho	ol intake) in the last week?
	□ Ye	
2.	If you	answered yes, what were those changes?
	• • • • • • • • • • • • • • • • • • • •	
	•••••	
3.	Have :	you suffered from any of the following conditions in the last week?
		arrhea for at least 2 consecutive days
		Yes No
		If yes, was doctor managing your warfarin treatment informed? Property Yes No
	• Vo	omiting for at least 2 consecutive days Yes No
		If yes, was doctor managing your warfarin treatment informed? Pes No
	• Ind	reased temperature or fever that you were aware of Yes No
		If yes, was doctor managing your warfarin treatment informed? Property Yes No
		ewly diagnosed illness. That is, any new ailment that has been diagnosed by loctor who is not managing your warfarin treatment Yes No
		If yes, was doctor managing your warfarin treatment informed? Yes No
		Comment

	[Any other health problem in the last week that has not been mentioned? Yes No
		If yes, was doctor managing your warfarin treatment informed? Pes No
		Comment
4.	Hav	e you let the doctor managing your warfarin treatment know about all of the
		ets including vitamins, homeopathic medications, herbal preparations or
		neopathic food supplements you take?
		Yes
		No
		If the answer was no, which ones did you forget to tell the doctor about?
	,	
	•	
	•	
5.	Do y	you get the same brand of warfarin every time from the chemist?
	. .	Yes
		No
		Don't know
6.	How	v often do you miss a dose?
		Never
		Once a month
		Twice a month Twice a week
		Once a week
	_	Other
7.	If yo	ou ever do miss a dose, what do you do?

How easy to for	ollow are the in	structions for	what dose of wa	rfarin you should be	
using?					
1	2	3	4	5	
Very Easy	Uncertain	Difficult	Very Easy	Difficult	
Is there anythi	ng about your	warfarin therap	y that you woul	d like to comment on	?
			• • • • • • • • • • • • • • • • • • • •		• •
					٠.
					• •
					• •
	using? 1 Very Easy Is there anythi	using? 1 2 Very Easy Uncertain Is there anything about your very service of the service of th	using? 1 2 3 Very Easy Uncertain Difficult Is there anything about your warfarin therap	using? 1 2 3 4 Very Easy Uncertain Difficult Very Easy Is there anything about your warfarin therapy that you woul	1 2 3 4 5

Telephone: 0419851856

Appendix 3:

Initiation of Warfarin Therapy Questionnaire for Doctors



Initiation of Warfarin Therapy Questionnaire for Doctors

An Investigation of the Management of the International Normalised Ratio (INR) in Warfarin Therapy During the First Five months of Treatment

Investigation of the management of the blood thinner warfarin during the initial five months of treatment

Date
Dr ID number
Patient number in study

	General Practitioner Registrar Resident Medical Officer Medical Intern Other
1.	Have you, in 2005, attended any of the thrombolytic/anticoagulant educational
	programs by the National Prescribing Service?
	□ Yes □ No
2.	Do you routinely set a target INR prior to commencement of warfarin therapy for
	each patient?
	□ Yes
	□ No
3.	If yes, what is your normal INR target range?
4.	Are there any situations where you would alter this target range?
5.	Do you determine the duration of the warfarin therapy for each patient in advance
	of commencing therapy?
	□ Yes
	□ No □ Sometimes
	Comments

Please tick relevant box:

6.	With regard to warfarin initiation, would you use a recognised algorithm or would											
	you be guided by your own clinical judgment?											
	Recognised algorithmOwn clinical judgment											
	Comment											
7.	Do you routinely assess each patient for risk of bleeding prior to the											
	commencement of warfarin therapy?											
		Yes No										
	If	yes,	what	factors	would	you	take	into	account			
	• • •		• • • • • • • • • • • • • • • • • • • •		• • • • • • • • • • • • • • • • • • • •	•••••		•••••				
	• • •				• • • • • • • • • • • • • • • • • • • •	•••••		•••••	• • • • • • • • • • • • • • • • • • • •			
	• • •					•••••		•••••				
	• • •					• • • • • • • • • • • • • • • • • • • •		••••••				
	• • •					•••••						
	• • •							• • • • • • • • • • • • • • • • • • • •				
	• • •							• • • • • • • • • • • • • • • • • • • •				
	• • •	•••••			• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • •		•••••				
8.	Do you use a scoring system to stratify the risk of bleeding?											
	0	Yes No										
	Comments											
					• • • • • • • • • • • • •			• • • • • • • • • • • • • • • • • • • •				
9.	What barriers do you face, if any, in the management of warfarin therapy?											
			-									

	• • • •								
1.0	D								
10.	Do you periodically re-evaluate the patient's harm: benefit ratio for warfarin								
		ng the course of their therapy?							
		Yes No							
		nment							
	Con								
	••••								
	• • • • •								
	• • • • •								
	• • • • •								
1 1	D.	ron informatha nations of the night of his ding on a common sing conforma							
11.		you inform the patient of the risk of bleeding on commencing warfarin							
		apy?							
		Yes No							
		nment							
	••••								
	••••								
	••••								
12.	Are	you able to predict or foresee instability of an INR?							
		Yes							
		No							
	Con	nment							

If the INR>4.0, do you attempt to identify the cause?									
□ Yes □ No									
Comment									
If yes, and the cause is identifiable, do you attempt to correct the cause?									
□ Yes									
□ No									
Comment									
Would you consider an increased INR above 4.0 to be an acceptable occurrence									
during warfarin therapy?									
□ Yes									
□ No									
Comment									

16.	If your patient has an INR>4.0, would you consider the possibility of lowering the
	target range?
	□ Yes □ No
	Comment
17.	If the patient's INR is above the target range, would you adjust the dose?
	□ Yes □ No
	Comment
18.	Do you routinely order baseline blood tests prior to commencement of warfarin
	therapy?
	YesNo
19.	If yes, what blood tests would you order?
20.	If dose adjustment is required, do you increase the frequency of INR monitoring
	for a time after?
	□ Yes □ No

	Co	mment
	• • • •	
	••••	
	• • • •	
	••••	
21	TC 41	
21.		here is a change in the patient's health, lifestyle or medications, do you
		rease the frequency of INR monitoring for a time after?
		Yes No
	Co	mment
22.	Ho	w is the patient informed of their warfarin dose and by whom?
	• • • •	
	••••	
	• • • •	
	• • • •	
	••••	
	••••	
22	XX 71	
23.		nat education does the patient receive regarding their warfarin therapy that you
	are	aware of?

24. Which lifestyle factors do you commonly discuss with the patient?
 Consistency of dietary intake of vitamin K
 Minimizing alcohol intake
□ Avoidance of binge drinking
 Reduction of activities with considerable risk of injury, including risk of fall in the elderly population.
 Reporting of acute illnesses to the doctor
 Reporting any new medications/over-the-counter/alternative medications t their doctor
□ Other
Comments

Kerrie Westaway – Researcher

Telephone - 0419851856

Appendix 4:

Subsequent Episode of Over-anticoagulation Questionnaire for Doctors



Subsequent Episode of Over-anticoagulation Questionnaire for Doctors

An Investigation of the Management of the International Normalised
Ratio (INR) in Warfarin Therapy During the First Five months of
Treatment

Investigation of the management of the blood thinner warfarin during the initial five months of treatment

Patient number in study
Dr ID number
Date

Ple	Please tick relevant box:			
	Re Re Me	neral Practitioner gistrar sident Medical Officer edical Intern her		
	1.	INR value:		
	2.	Bleeding event at time of episode of over-anticoagulation: Yes No		
	3.	What did you perceive to be the contributing factors to this patient's episode of INR>4.0?		
	4.	What did you perceive to be the most important aspects of managing this episode of INR>4.0? (i.e. how did you treat the INR>4.0?).		

 $Kerrie\ We staway-Researcher$

Telephone: 0419851856

Appendix 5:

Participant Information Sheet for Patients



Participant Information Sheet for Patients

An Investigation of the Management of the International Normalised Ratio (INR) in Warfarin Therapy During the First Five months of Treatment

This is a research project, and you do not have to be involved. If you do not wish to participate, your medical care will not be affected in any way.

You are invited to take part in a study exploring the management of your warfarin therapy during the first five months of treatment. Warfarin, which is a blood thinner, is a very effective medicine that helps treat and prevent harmful blood clots from forming in the body by decreasing the clotting power of the blood. To do this, we monitor the blood by doing a test called an INR (the risk of bleeding increases when the INR is above 4.0). This is so that your doctor can prescribe the correct dosage.

We hope this will provide important information that will help doctors improve the management guidelines of warfarin therapy and help reduce side effects while you are on warfarin.

If you choose to participate:

• The following information will be collected from your medical records: Your GP's name, your phone number, date of birth, weight, sex, reason for admission to hospital or to see your GP, reason for starting warfarin, medicines you are presently taking, your medical history and details of your warfarin and any side effects from warfarin.

- After you have been commenced or warfarin therapy, I will contact you once a month by phone and I will conduct an interview if your INR value has been above 4.0. This will be to ask questions about your warfarin treatment. It will take approximately 15-20 minutes. It will be done at a time that is convenient to you.
- After that initial interview, each subsequent time your INR value goes above 4.0, I will again conduct further short interviews. These interviews will require approximately 5-10 minutes of your time to complete. These questions will be about your warfarin treatment only.
- I will contact your doctor to gain consent to access your medical records in order to obtain data pertaining to your warfarin therapy. In addition, I will contact him/her to complete a questionnaire on completion of collection of your data.

You are free to refuse to answer any questions presented to you that you are unable to answer or you find to be intrusive in any way.

Duration of participation in the study will be for a period of 5 months or less if the warfarin is ceased before five months. It is unlikely that this research will raise any personal or upsetting issues but if it does you may wish to contact your local Community Health Centre.

You must be 18 years or older to participate in this study.

You will not be required to participate in any additional procedures, other than the interviews, than would normally be expected of you if commenced on warfarin therapy. No risk of physical or emotional harm, including discomfort, anxiety or pain to you is anticipated as a direct result of the study.

Your participation in the study is entirely voluntary and you have the right to withdraw from the study, you may do this freely without prejudice to any treatment at Flinders Medical Centre or in your general practitioner's rooms.

All records containing personal information will remain confidential and no information that could lead to your identification will be released. The data collected will be coded to remove personal identification and kept in a locked cabinet at all times, accessible only by the investigators. On completion of data collection, the information will be compiled and written up as a thesis. Thereafter, the information will be given to those institutions involved in the study, that is, Flinders Medical Centre, the University of New England

and the Southern Division of General Practice Inc. In accordance with usual practice,

study results become the property of the sponsor and may be published in scientific

journals at a later date. It is possible that the results may not be published for commercial,

scientific or other reasons. The data will be kept for 5 years whereupon it will then be

destroyed.

Should you require further details about the project, before, during or after the study, you

may contact:

Kerrie Westaway

Phone: mobile: 0419851856, home: 82741217

Email: kwestaway@tpg.com.au

This study has been approved by the Flinders Clinical Research Ethics Committee.

Should you wish to discuss the project with someone not directly involved, in particular

in relation to matters concerning policies, your rights as a participant, or should you wish

to make a confidential complaint, you may contact the Administration Officer – Research,

Ms. Carol Hakof on 8204 4507.

This project has been approved by the Human Research Ethics Committee of the

University of New England (Approval No.HE04/169, valid to 31/10/2006). Approval

extended until 28/4/2007.

Should you have any complaints concerning the manner in which this research is

conducted, please contact the Research Ethics Officer at the following address:

Research Services, University of New England, Armidale, NSW 2351

Telephone: (02) 67733449, Facsimile (02) 67733543, Email: Ethics@metz.une.edu.au

As a PhD student conducting research I am legally and ethically unable to discuss any

aspects of your condition or treatment with you.

My Supervisors:

Dr Mary Cruickshank

School of Health, University of New England, Armidale, NSW, 2351

Telephone: (02) 67733640, Email: mmacarty@metz.une.edu.au

Mr Greg Roberts

Senior Pharmacist

Repatriation General Hospital, Daws Road, Daw Park, 5041 Telephone: (08) 8751632, Email: greg.roberts@rgh.sa.gov.au

Thank you for taking the time to read this information.

Yours Sincerely,

Kerrie Westaway

Appendix 6:

Participant Information Sheet for Doctors



Participant Information Sheet for Doctors

My name is Kerrie Westaway and I am undertaking a research project in order to complete a Doctor of Philosophy I am presently studying through the School of Health at the University of New England, Armidale, New South Wales.

The title of the project is: 'An investigation of the management of the International Normalised Ratio (INR) in warfarin therapy during the initial five months of treatment'.

This is a research project, and you do not have to be involved. If you do not wish to participate, your position will not be affected in any way.

You are invited to take part in a study investigating the anticoagulant control and the management of patients receiving warfarin therapy. Specifically, the objectives of this project are to:

- 1. Determine the frequency of INR monitoring that currently occurs in both the hospital setting and GP rooms.
- 2. Evaluate the number of episodes of over-anticoagulation that were potentially preventable and the number of episodes of over-anticoagulation that were unforeseeable.
- 3. Determine the rate of over-anticoagulation during the initial five months of warfarin therapy, specifically the rate in the first month compared with subsequent months.
- 4. Determine the number of major bleeds associated with episodes of overanticoagulation.
- 5. Assess the concepts of medical management and current trends in the treatment of patients receiving warfarin.
- 6. Determine patient compliance and degree of understanding of warfarin therapy.

If you choose to participate:

You will be asked to complete a questionnaire regarding questions about the

patient's warfarin management. This questionnaire will take approximately 20

minutes of your time to complete. This will be completed at a time that is

convenient to you. General Practitioners only, will receive remuneration for their

time in accordance with the Southern Division of General Practice's policy of GPs

participation in divisional activities. This fee will be paid for time spent in

completing the questionnaire by the GP.

Data will be analysed collectively. Individual performance will not be analysed or

compared.

Data will be collected from the patient for a period of 5 months or less if the warfarin is

ceased prior to this time. Your participation in the study is entirely voluntary and you

have the right to decline participation or withdraw, you may do this freely without

prejudice.

All records containing personal information will remain confidential and no information

that could lead to your identification will be released. The data collected will be coded to

remove personal identification and kept in a locked cabinet at all times, accessible only

by the researcher. On completion of data collection, the information will be compiled and

written up as a thesis. Thereafter, the information will be given to those institutions

involved in the study, that is, Flinders Medical Centre, the University of New England

and the Southern Division of General Practice Inc. In accordance with usual practice,

study results become the property of the sponsor and may be published in scientific

journals at a later date. It is possible that the results may not be published for commercial,

scientific or other reasons. The data will be kept for 5 years whereupon it will then be

destroyed. Should you require further details about the project, before, during or after the

study, you may contact:

Kerrie Westaway

Phone: 0419851856

Email: <u>kwestaway@tpg.com.au</u>

This study has been reviewed by the Flinders Clinical Research Ethics Committee.

Should you wish to discuss the project with someone not directly involved, in particular

in relation to matters concerning policies, your rights as a participant, or should you wish

to make a confidential complaint, you may contact the Administration Officer – Research,

Ms. Carol Hakof on 8204 4507.

This project has been approved by the Human Research Ethics Committee of the

University of New England (Approval No.HE04/169, valid to 31/10/2006). Extension

provided until 28/4/2007).

Should you have any complaints concerning the manner in which this research is

conducted, please contact the Research Ethics Officer at the following address:

Research Services, University of New England, Armidale, NSW 2351

Telephone: (02) 67733449, Facsimile (02) 67733543, Email: Ethics@metz.une.edu.au

My Supervisors:

Dr Mary Cruickshank

School of Health, University of New England, Armidale, NSW, 2351

Telephone: (02) 67733640, Email: mmacarty@metz.une.edu.au

Mr Greg Roberts

Senior Pharmacist

Repatriation General Hospital, Daws Road, Daw Park, 5041

Telephone: (08) 8751632, Email: greg.roberts@rgh.sa.gov.au

Thank you for taking the time to read this information.

Yours Sincerely,

Kerrie Westaway

Appendix 7:

Patient Consent Form





Consent to Participate in Research

(Patient Consent Form)

I,	request and give consent to my n investigation of the management of the
International Normalised Ratio (INR) in watereatment".	rfarin therapy during the initial five months of
especially as far as they affect me have	contemplated effects of the research project, been fully explained to my satisfaction by consent is given voluntarily. First or

I acknowledge the detail(s) of the following procedure(s):

- 1. Access to medical records to collect basic patient demographics, relevant medical information pertaining to warfarin therapy and treatment and outcomes of any episodes of over-anticoagulation (INR above 4.0).
- 2. An initial phone interview conducted if the INR value is above 4.0.
- 3. Shorter successive interviews each subsequent episode of the INR above 4.0

have been explained to me, including indications of risks; any discomfort involved; anticipation of length of time and the frequency with which the procedure(s) will be performed.

I have understood and am satisfied with the explanations that I have been given.

Page 1 (continued on page 2)

Page 2 (continued from Page 1)

I have been provided with a written information sheet.

I understand that my involvement in this research project and/or the procedure(s) may not be of any direct benefit to me and that I may withdraw my consent at any stage without affecting my rights or the responsibilities of the researchers in any respect.

I acknowledge that I have been informed that should I receive an injury as a result of taking part in this study, I may need to start legal action in order to receive compensation.

I declare that I am over the age of 18 year	rs.	
Signature of research participant:	Date:	
Signature of Witness:		
Printed name of Witness:		
I,to	(name) have	e described
the research project and the nature and opinion he/she understands the explanation	•	•
Signature:	Date:	
Status in project:		

Appendix 8:

General Practitioner Consent Form



Consent to Participate in Research

(General Practitioner Consent Form)

I, request and give consent to my involvement in the research project: 'An investigation of the management of the International Normalised Ratio (INR) in warfarin therapy during the initial five months of treatment'.				
I acknowledge that the nature, purpose and contemplated effects of the research project, especially as far as they affect me have been fully explained to my satisfaction by and my consent is given voluntarily. First or				
I acknowledge the detail(s) of the following procedure(s):				
1. Access to medical records to collect basic patient demographics, relevant medical information pertaining to warfarin and INR treatment and outcomes of any episodes of over-anticoagulation (INR>4.0).				
have been explained to me, including indications of risks; any discomfort involved; anticipation of length of time and the frequency with which the procedure(s) will be performed.				

Page 1 (continued on page 2)

I have understood and am satisfied with the explanations that I have been given. I have

been provided with a written information sheet.

Page 2 (continued from page 1)

I understand that my involvement in this research project and/or the procedure(s) may not be of any direct benefit to me and that I may withdraw my consent at any stage without affecting my rights or the responsibilities of the researchers in any respect.

I declare that I am ov	er the age of 18 years.		
Signature of research	participant:	Date:	
Signature of Witness:			
Printed name of Witn	ess:		
Ι,	have described	d to	
opinion he/she unders		fects of the procedure(s) in and has freely given his/her cor Date:	nsent.
Status in project:			

Appendix 9:

Doctor Consent Form





Consent to Participate in Research

(Doctor Consent Form)

I,	request and give consent to my
International Normalised Ratio (INR) treatment".	in warfarin therapy during the initial five months of

I acknowledge the detail(s) of the following procedure(s):

1. Completion of questionnaire pertaining to the management of warfarin and requiring approximately 15-20 minutes of my time.

has been explained to me, including indications of risks; any discomfort involved; anticipation of length of time and the frequency with which the procedure(s) will be performed.

I have understood and am satisfied with the explanations that I have been given. I have been provided with a written information sheet.

Page 1 (continued on page 2)

Page 2 (continued from page 1)

I understand that my involvement in this research project and/or the procedure(s) may not be of any direct benefit to me and that I may withdraw my consent at any stage without affecting my rights or the responsibilities of the researchers in any respect.

I acknowledge that I have been informed that should I receive an injury as a result of taking part in this study, I may need to start legal action in order to receive compensation.

I declare that I am over the ag	e of 18 years.	
Signature of research participa	ant:	Date:
Signature of Witness:		
Printed name of Witness:		
I,	have described to	
the research project and the opinion he/she understands the		the procedure(s) involved. In mely given his/her consent.
Signature:		_ Date:
Status in project:		

Appendix 10:

University of New England Ethics Consent



RESEARCH SERVICES

Armidale NSW 2351 Australia Telephone (02) 6773 2070, Fax (62) 6773 3543

HUMAN RESEARCH JUNIOS COMMITTEE

MEMORANDI MILO: Dr M C a zeshank, Mr G Roberts & Ms K Westaway

Sensor, of Health

ons is to across you that the Hamar Research into a Committee has approved the following:

PROJECT TITLE: investigation of the management of the laternational Normal collision (INR) in warfar in the upy during the lateral

five mentes of treatment

COMMENCEMENT DATE: 0.10 \$ 2.005 COMMITTEE APPROVAL No.: HL04 .59

APPROVAL VALID TO: $28.14.2\,(0)$

COMMENTS: Nill Co. 2 from met nifel :

the Haman Research Ethics Committee may grant approval for up to a maximum of three years. For approval periods greater than 12 months, researchers are required to submit at application for renewal at each twelve-month period. All researchers are required to submit a binal Report at the compution of their project. The progress binal Report form is evaluable at the following web audities with months and months of the months. nting www.une.edu.uu.reseuren-services et mes linee, pages final reportidoe

The MHMRC National Materiori on Ethical Confloct in Research Insolving Humans requires that researchers must report appropriately to the Human Research Ethics Committee anything that original feed affined lacecontained of the protocol. The includes accordance of participants, proposed charges in the protocol, and any other unforescent events that might affect the confinaed educal acceptantity of the

In issuing this approval number, it is required that all data and consent forms are stored in a secure location, for a minimum period of five years. Here documents may be recurred for compliance addit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.

co-Arn Sozea

29.1. 2001

Secretary

Appendix 11:

Candidate's Letters Advising Approval by the Human Research

and Ethics Committee of the relevant Health Care Facility for Pilot

Study and (actual) Study

Pilot Study

I, the researcher, hold an approval from the Human Research and Ethics Committee of the

health care facility in which the pilot study was conducted. For reasons of confidentiality

these documents have been withheld from the appendices but are available if required.

Approval number: F/N 3.180405

Study

I, the researcher, hold an approval from the Human Research and Ethics Committee of the

health care facility in which the study was conducted. For reasons of confidentiality these

documents have been withheld from the appendices but are available if required.

Application number: 84/045

Appendix 12:

Data Collection Form for Patients



Data Collection Form for Patients

An Investigation of the Management of the International Normalised Ratio (INR) in Warfarin Therapy During the First Five months of Treatment

Patient	number in study:	Dr ID number:
Date:		
1.	Place of Initiation of warfarin therapy: GP rooms:	
	Hospital: Adm Date: D/C date:	Name of
	GP	
	Discharge letter to GP?	
	□ Yes □ No	
	OPD appointment on discharge from hospital	11:
	□ Yes – Appointment date:	
2.	Initial date seen by GP	
3.	Patient's phone number	
4.	UR number	
5.	Date of Birth	
6.	Sex:	
	□ Male □ Female	

7.	Reason for Admission / see GP:						
8.	Reason for starting warfarin:						
	AFDVT/PEVascular SurgPost						
	InfarctOtherProsthetic Heart Valve						
9.	Present medications: NSAIDsSSRIs COX						
	lis ANTIPLATELETS: type (s):						
10.	Other Medications						
11.	Previous warfarin therapy?						
	□ Yes – Reason:						
12.	Medical history: TIA Haem. Stroke Emb. Stroke Diabetic						
	CCF IHD HT (uncontrolled) GIT bleed/ulceration						
	Genito-urinary bleed Cerebrovascular disease Peripheral vascular						
	disease Renal insufficiency Anemia Liver disease						
	Malignant disease Platelet dysfunction Coag defect						
13.	Date commenced on warfarin						
14.	Pre-dose INR						
16.	6. Pre-dose platelets						
18.	Weight 19. Check Hb near end of study period:						
	date						

Warfarin Doses and INR results

Treatment if INR>4.0 Code:

H=hold

* = Number of days warfarin held

= Lower dose given

Vit K = Vitamin K given

P-HT = Prothrombinex HT given

FFP = Fresh frozen plasma given

T = Blood transfusion given

Date	Warfarin dose	INR result	Txif INR >4.0	New dose yes/no	M. Bleed yes/no	Hb done yes/no
		<u> </u>				

Researcher: Kerrie Westaway

Telephone: 0419851856

Supervisors: Dr Mary Cruickshank

Mr. Greg Roberts

Date of commencement of data collection at study hospital: September 2005