



THE UNIVERSITY OF
NOTRE DAME
A U S T R A L I A

Institute for Health and Rehabilitation Research

Annual Report 2009



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Institute for Health and Rehabilitation Research Annual Report 2009

Overview

The Institute for Health and Rehabilitation Research was formally established in 2008, and became a reality in March 2009 with the appointment of the Director, Professor Beth Hands. The academic staff of the Institute now includes Professor Max Bulsara (biostatistician) and Dr Fiona Naumann (Clinical Exercise Physiologist). The Institute's purpose is to promote learning, scholarship, research and professional development in health and rehabilitation by drawing together scholars with different but complementary professional and disciplinary backgrounds. To this end, we have sought to meet with, and involve fellow academics from the Schools of Medicine, Education, Nursing, Health Sciences and Arts and Science in potential research projects. The IHRR has partnered with PHCRED to deliver a seminar series for staff and maintains regular contact with the other UNDA Research Centres on Broome (Nulungu) and Sydney campuses (Centre for Faith, Ethics and Society).

Active Research Projects

The Western Australian Pregnancy Cohort (Raine) study (Hands, Parker, Rose, Larkin)

The Raine study was started from a pregnancy cohort. 2,900 women were enrolled in a controlled trial at or before the 18th week of gestation. Behavioural and physiological data have been collected from the cohort at 1, 2, 3, 5, 8, 10, 14, 17 and now at 20 years of age. Our team has custodianship of the physical activity, physical fitness and motor competence data. This involvement has resulted in Hands being an investigator on several large grants, two PhD projects and numerous publications.

AMPitup (Hands, McIntyre)

The Adolescent Movement Program is designed for adolescents (12 – 18 years of age) with movement difficulties and commenced in February 2010 with 13 participants. To participate in the program, the applicant is screened using the McCarron Assessment of Neuromuscular Development (McCarron, 1997). They need to receive a Neuromuscular Development Index of 85 or less (Mean = 100, SD = 15), and have a history of movement avoidance. While there are some participants with just a motor learning disability (or Developmental Coordination Disorder), others have co-occurring conditions such as cerebral palsy, autism, vision impairment, Autism Spectrum Disorder (including Asperger Syndrome), or Down Syndrome.

This research project will compare and evaluate the effect of a gym and water-based exercise program on the fitness, motor skill and self perceptions of the participants. In this research project we will seek to answer the following questions.

1. To what extent do clinical and field-based tests of health related physical fitness (cardiorespiratory endurance, muscle strength and endurance, flexibility) differ for adolescents with motor learning difficulties?
2. To what extent do clinical and field-based measures of health related physical fitness (cardiorespiratory endurance, muscle strength and endurance, flexibility) change for adolescents with motor learning difficulties after participating in a 12 week exercise program?
3. To what extent do changes in physical fitness affect adolescents' self perceptions?

By identifying which test is most accurate and appropriate as a fitness measure in this group, we will be able to more accurately evaluate and plan effective movement programs, measure individual improvements, and identify activities that are most effective with this group. A secondary goal is to develop life skills in this group that will support and encourage their involvement in physical activity as they enter adulthood. At present there are few programs available to adolescents specifically designed for those with movement difficulties. Many are fee charging and/or require a referral. The participants will be encouraged to continue to attend the clinic with the view to joining community programs once confidence and fitness has been developed.

A Multi-Modal Exercise and Counselling Rehabilitation Program for Cancer Survivors. (Naumann, Parker, Philpott, Arnold-reed, Brett, Wilson, Farringdon, Woolfitt, **Bulsara, Hands, Martin, Smith, Rosario, Munroe - 2010-2011)**

The immediate and lasting symptoms observed in patients diagnosed with cancer have gained attention in the oncology arena, especially as survival rates have improved. Unfortunately, survival is also often associated with compromised quality of life and lingering side effects that may persist for many years. These side-effects include debilitating fatigue, sleeping problems, pain, loss of strength, increased subcutaneous fat and weight gain, lymphodema, disrupted sexual function, disturbances in body image and self-concept, anxiety, depression and the development of co-morbidities. Treatment success may be improved if patients are able to develop physical and psychological strength to deal with its debilitating side effects. Thus, it is crucial that an integrated approach towards managing the physiological and psychological needs of clients with cancer be developed, that involves strategies to reduce the symptoms and enhance recovery and quality of life. This program aims to evaluate the effects of combining two powerful modalities, exercise and counselling, on the quality of life for breast and prostate cancer survivors.

Enhancing quality of life after breast cancer: Participants' perceptions of the health and wellbeing benefits of the breast cancer survivor program (Naumann, F., Philpott, Farrington, **Bulsara, M & **Bulsara, C**)**

While research into exercise and counselling programs have been shown to enhance the quality of life of breast cancer survivors, it is important to investigate if the healthy lifestyle changes are sustainable beyond the scope of the research participation. We are currently performing exit interviews to establish the personal impact of the exercise and counselling program and the sustainability of healthy behaviour change.

TARGIT - Breast cancer RCT. Baum, M., Joseph, D., Tobias, J.S., Wenz, F.K., Keshtgar, M.R., Alvarado, M., **Bulsara, M.**, Eiermann, W., Williams, N.R. & Vaidya, J.S., on behalf of the TARGIT Trialists' Group)

The main aim of the trial is to evaluate whether a single fraction of radiotherapy given intra-operatively and targeted to the tissues at the highest risk of local recurrence (partial breast irradiation) is equivalent to 5-7 weeks of standard post-operative radiotherapy after breast conserving surgery in women with early breast cancer, in terms of risk of local cancer recurrence.

The trial also aims to compare the treatment arms with respect to site of relapse within the breast, relapse-free and overall survival, cosmetic outcome, local toxicity and quality of life. Sub-studies for patient preferences and satisfaction will also be assessed, likewise health economics issues such as the cost-benefit of the different treatment modalities, and also a translational study.

TREK (Giles-Corti, B., van Niel, K., Timperio, A., **Bulsara, M.**, Pikora, T. & McCormack, G.)

This project aimed to examine the extent to which the urban design of local neighbourhoods hinders or facilitates the active transport (AT) patterns of Year 5 to 7 children attending Perth metropolitan public primary schools, particularly AT to school and specifically to:

- To use Geographic Information Systems (GIS) to develop a child-specific 'walkability' index and to examine walkability within 2 km of all Perth public primary schools;
- To identify the 12 most 'walkable' and 12 least 'walkable' public primary schools;
- To identify individual, social-environmental, school policy and urban design factors associated with AT patterns to school in children attending the most and least walkable schools;
- To examine the relative influence of parental and student perceptions of safety, social environmental factors (e.g., peer influences), and objective measures of safety on AT trips;
- To compare objective GIS measures of the environment and parental and student perceptions of the environment en route to school.

Type 1 Diabetes Mellitus (Jones, T., Davies, E., Siafarikas, A. & **Bulsara, M.**)

We are involved with a team of researchers interested in exploring a number of different issues surrounding Type 1 Diabetes mellitus. Topics include:

- Determinants of Late Onset Post-Exercise Hypoglycaemia
- Oral insulin for prevention of diabetes in relatives at risk for type 1 diabetes mellitus
- Adolescent Type 1 Diabetes Cardio-Renal Intervention Trial (AddIT)
- Fremantle Diabetes Study Phase II: A community-based study of diabetes care, control, complications and cost.
- Impact of Exercise on Macrovascular and Microvascular function and Insulin sensitivity in young people with type 2 diabetes.
- The long-term impact of severe hypoglycaemia on the brain of the young patient with diabetes - a follow-up study.
- Improving access to retinopathy screening and determining the prevalence of diabetic retinopathy in adolescents with type 1 and 2 diabetes
- RCT of the intragastric balloon and lifestyle intervention versus lifestyle intervention alone in obese adolescents.
- Impact of exercise on macro and microvascular function and insulin sensitivity in young people with type 2 diabetes.
- The use of continuous subcutaneous insulin infusion with real-time continuous glucose monitoring system and low glucose suspend feature (CSII + RT-CGMS + LGS) versus continuous subcutaneous insulin infusion with real-time continuous glucose monitoring system (CSII + RT-CGMS) versus continuous subcutaneous insulin infusion only (CSII) in patients with type 1 diabetes (T1D) with impaired awareness of hypoglycaemia – a randomised controlled trial.

Other Small Research Project Involvement

Impact of being born small for gestational age on glucose and lipid metabolism in adults. Siafarikas, A., **Bulsara, M.**, Mohnike, K. & Jones, T.W.

Analysis of current practice of vitamin D supplementation in Germany and possible benefits from sun exposure. Siafarikas, A., **Bulsara, M.** & Hesse, V.

Importance and of parathyroid hormone related peptide (PTHrP) for perinatal calcium regulation. Siafarikas, A., **Bulsara, M.**, Hesse, V. & Jones, T.W.

Vitamin D deficiency in WA: Role of sun exposure and supplementation. Siafarikas, A., **Bulsara, M.**, Jones, T.W., Burgner, D., Cherian, S. & Simmer, K.

Hypoglycaemia counter regulation in adolescents – impact of initiation of insulin pump therapy from diagnosis. Siafarikas, A., **Bulsara, M.**, Davis, E. & Jones, T.W.

Effect of exercise on insulin sensitivity in obese adolescents. Siafarikas, A., **Bulsara, M.**, Davis, E., Jones, T.W., Green, D. & Watts, K.

Current Grants

1. 2010 Program Development Grant **Naumann, F.**, Parker, H., Philpott, M., Arnold-Reed, D., Brett, T., Wilson, H., Woolfitt, C., **Bulsara, M.** & **Hands B.** Cancer Survivor Program. A joint initiative between The University of Notre Dame, Fremantle Campus, The Fremantle GP Network and HBF. \$96,000
2. 2008+ Institute for Health and Rehabilitation Research - Fogarty Research Grant **Naumann F.** Effects of a Combined Exercise and Counselling Program on Selected Physiological and Psychological Parameters in Post-Treated Breast Cancer Patients. \$12,500
3. 2009 NHMRC 634445 Adams, L. A. et al. Risk factors for the development of NAFLD beyond insulin resistance: genetic, developmental and environmental influences. \$641,125 (**Hands** –AI)
4. 2009 NHMRC 572765 Holman, C.D., Emery, J.D., Saunders, C.M., Walter, F.M., Moorin, R.E., Auret, K.A., Preen, D.B. & **Bulsara, M.** Partnership Project Grant: A Partnership Intervention Trial to Redress Treatment Delay and Improve Outcomes in Rural Cancer Patients. \$1,215,262
5. 2009 NHMRC 634308 Davis, E., Sherrington, C. & Jones, T. RCT of the intragastric balloon and lifestyle intervention versus lifestyle intervention alone in obese adolescents. \$573,700 (**Bulsara** – AI)
6. 2009 Cancer Council Western Australia Einarsdottir, K., Hagggar, F., **Bulsara, M.**, Preen, D. & Holman, D. Cancer in the Adolescent and Young Adult Population: Incidence, Survival and Patterns of Care in Western Australia from 1981-2007. \$24,860
7. 2009 NHMRC 572542 Holman, C.D., Xie, X., Zhang, M., Liu, Y., Zhao, X. & **Bulsara, M.** Green Tea Polyphenols and cancer prevention: Use of Biomarkers and Population Controls to elicit causal pathways. \$913,288
8. 2008 NHRMC 479205 Semmens, J., Lawrence-Brown, M., Fletcher, D., Platell, C., Hendrie, D. & **Bulsara, M.** The WA Safety and Quality of Surgical Care Project: Improving the Safety, Quality and Provision of Surgical Care. \$428,663

Grants under Consideration 2010

1. MBF Foundation **Hands.** Care Through Fitness: A program for adolescents with Autism Spectrum Disorder. \$321,294
2. Perpetual **Hands.** AMPitup Movement program for adolescents. \$33,600.
3. Healthway **Hands, Bulsara,** Rose, Thompson. Care Through Fitness: A community and school based fitness program for adolescents with Autism Spectrum Disorder. \$350,200.

4. Healthway McIntyre, **Hands, Bulsara**. Development and Validation of a Fundamental Movement Skill Test for 6- to 7-year-old children. \$28,240
5. NHMRC – 1009260 Carter, K., **Bulsara, M.**, Francis, R., Ball, S. & Musk, A. Using linked health data and advanced bioinformatics and spatiotemporal techniques to investigate critical factors contributing to childhood asthma in Western Australia. \$258,030 (2011 \$96,010; 2012 \$81,010; 2013 \$81,010)
6. NHMRC - 1008394 Moorin, R., Holman, D., **Bulsara, M.** & Fox, R. Policy translation of an Australian evaluation of computed tomography (CT) scanning. \$395,470 (2011 \$192,244; 2012 \$118,490; 2013 \$84,736)
7. NHMRC - 1004073 Zhang, M., Holman, DC. & **Bulsara, M.** Green Tea and Dietary Intake and Breast Cancer Survival: A Prospective Cohort Study among Women with Breast Cancer. \$108,900 (2011 \$54,450; 2012 \$54,450)
8. NHMRC – 011488 Preen, D., Roughead, E., Saunders, C., Kemp, A., Holman, DC. & **Bulsara, M.** Guideline adherence of endocrine therapies for early breast cancer: health outcomes and policy implications in Australian clinical practice. \$474,803 (2011 \$219,308; 2012 \$127,748; 2013 \$127,748)
9. NHMRC – 1002858 Straker, L., O’Sullivan, P., Smith, A., Pennell, C. Als De Klerk, N., Subrick, S., Kendall, G., **Hands, B.**, Beales, D. & Skouen. Identifying targets for change for early prevention and management of disabling low back pain.
10. NHMRC - 100224 Oddy, W., Ambrosini, G., Mori, T., Adams, L. Byrne, S. Als Beilin, L., Zubrick, S., de Klerk, N., **Hands, B.** & Pennell, C. Life-course nutritional determinants of cardio metabolic and mental health disorders from infancy to adulthood.

Unsuccessful Grants in 2009

1. Government of Western Australia, Commissioner for Children and Young People. **Hands, Farrington, Drew, Henderson-Yates, MacNish, Obiri-Boateng, Parker & Mayne.** Research project to engage children and young people about views on their well being. \$222,512. (Unsuccessful)
2. NHMRC – 634391 Hynd, A., Roughead, E., Preen, D. & **Bulsara, M.** Project Grant. Endocrine therapies for early breast cancer: utilisation and outcomes in Australian practice. NHMRC 2010 \$342,451. (Unsuccessful)
3. NHMRC - 634440 Carter, K.W., **Bulsara, M.**, Francis, R.W., O’Leary, R.A., Ball, S. & Musk, A.W. Project Grant. Longitudinal analysis of environmental contributors to asthma using health data on the Western Australian population. NHMRC 2010 \$279,500. (Unsuccessful)

4. NHMRC - 634314 Holman, C.D., Millward, M.J., Saunders, C.M., Xie, X., Zhang, M., Sanfilippo, F.M., Ingram, D.M. & **Bulsara, M.** Project Grant. A placebo-controlled RCT of intensified green tea extract in slowing cancer progression. NHMRC 2010 \$847,301. (Unsuccessful)
5. National Breast Cancer Foundation (NBCF) Collaborative Breast Cancer Research Grant. Eakin, L., Hayes, S., Boyle, F., Vardy, J., King, M., Girgis, A., Hiller, J., Graves, N., Baxter, R., Janda, M., Neville, O., Denmark-Wahnefried, W., Courneya, K., Young, L., Marven, M., **Naumann, F.**, Saunderson, C. & James, E. Physical Activity and Breast Cancer Survivorship: A Program of Research on Survival, Quality of Life and Associated Mechanisms. \$5,487,776. (Unsuccessful)
6. Cancer Council WA Early Career Investigator (ECI) Research Grants Program. **Naumann, F.** Exercise and Counselling for Cancer Survivorship. \$25,000. (Unsuccessful)
7. Australian Learning and Teaching Council. **Hands, B.** Using a web-based video analysis program to facilitate reflective practitioners in higher education: Critique. \$149,000..(Unsuccessful)
8. The Australian Learning and Teaching Council (ALTC) Grants Scheme Beck, R., Walker, B., **Hands, B.**, Steketee, C., Jones, B., Hird, K. & **Naumann, F.** Do learning styles change in Health Science students as they transition from academic learning to clinical application? \$199,104 (Unsuccessful)

Papers Published / In Press / Under Review

- Ambrosini, G. L., Huang, R-C., Mori, T. A., **Hands, B.**, O'Sullivan, T. A., de Klerk, N. H., Silburn, S. R., Beilin, L. J. & Oddy, W. H. (2009). Dietary patterns and markers for the metabolic syndrome in a cohort of adolescents. *Nutrition, Metabolism and Cardiovascular Diseases*, doi:10.1016/j.numecd.2009.03.024
- Ambrosini, G. , Oddy, W., Robinson, M., O'Sullivan, T., **Hands, B.**, de Klerk, N., Silburn, S., Zubrick, S., Kendall, G., Stanley, F. & Beilin, L. (2009). Adolescent dietary patterns are associated with lifestyle and family psycho-social factors. *Public Health Nutrition*, 12(10), 107-1815.
- Auret, K.A., Schug, S.A., Bremner, A.P. & **Bulsara, M.** A randomised, double-blind, placebo-controlled trial assessing the impact of dexamphetamine on fatigue in patients with advanced cancer. *Journal of Pain and Symptom Management* (2009); 37(4), 613-621
- Battaglini, C., **Naumann, F.** & Groff, D. (2010). Comparison of Body Composition Assessment Methods in Breast Cancer Survivors. *Oncology Nursing Forum*. (In Review ONF)
- Battaglini, C., Groff, D., Anderson, M., Wallace, J., **Naumann, F.** & Hackney, A. C. Exercise and Cancer: Becoming Aware of the Implications of Exercising a Cancer Patient. (In Review *Medicina Sportiva*)

- Battaglini, C., Groff, D., Shields, D., Pepercorn, J., **Naumann, F.** & Hackney, A.C. Breast cancer, exercise and recreation therapy: preliminary results of a randomized controlled trial, *Psycho-Oncology*. (Under review)
- Cardwell, C.R., Stene, L.C., Joner, G., **Bulsara, M.**, Cinek, O., Rosenbauer, J., Ludvigsson, J., Jané, M., Svensson, J., Goldacre, M.J., Waldhoer, T., Jarosz-Chobot, P., Gimeno, S.G.A., Chuang, L., Parslow, R.C., Wadsworth, E.J., Chetwynd, A., Pozzilli, P., Brigis, G., Urbonaitė, B., Šipetić, S., Schober, E., Devoti, G., Ionescu-Tirgoviste, C., de Beaufort, C.E., Stoyanov, D., Buschard, K. & Patterson, C.C. Maternal age at birth and childhood type 1 diabetes: a pooled analysis of 30 observational studies. *Diabetes* (in press) (accepted for publication: 23/10/2009)
- Chivers, P., **Hands, B.**, Parker, H., Beilin, L., Kendall, G. & **Bulsara, M.** (2009). Longitudinal Modelling of Body Mass Index from Birth to 14 Years. *Obesity Facts*, 2, 302-310. (doi:10.1159/000235561).
- Chivers, P., **Hands, B.**, Parker, P., Beilin, L., Kendall, G. & **Bulsara, M.** (in press). A comparison of field measures of adiposity among Australian adolescents from the Raine Study. *Malaysian Journal of Sports Science and Recreation*. Paper accepted 26th January 2010.
- Chivers, P., **Hands, B.**, **Bulsara, M.**, Beilin, L., Kendall, G. & Oddy, W. (2010). Body Mass Index, adiposity rebound and early feeding in a longitudinal cohort (Raine Study). Paper accepted *International Journal of Obesity*. 11th February 2010.
- Chivers, P., **Hands, B.**, **Bulsara, M.**, Parker, H., Zubrick, S. & Beilin, L. External replication of the young Finns Study model of physical activity and obesity in the Raine Study cohort (under review).
- Davis, T.M., Brown, S.G., Jacobs, I.G., **Bulsara, M.**, Bruce, D.G. & Davis, W.A. Determinants of severe hypoglycemia complicating type 2 diabetes: The Fremantle Diabetes Study. *Journal of Clinical Endocrinology & Metabolism* (in press) (accepted for publication 27/02/2010)
- Deshpande, G., Rao, S., Patole, S. & **Bulsara, M.** Updated meta-analysis of probiotics for preventing necrotising enterocolitis in preterm neonates-do we need more trials? *Pediatrics* (in press) (accepted for publication: 15/01/2010)
- Hands, B.**, Larkin, D., Parker, H., Straker, L. & Perry, M. (2009). The relationship among physical activity, motor competence and health-related fitness in 14-year-old adolescents. *Scandinavian Journal of Medicine and Science in Sports*, 19, 655-663. doi:10.1111/j.1600-0838.2008.00847.x
- Hands, B.**, Kendall, G., Larkin, D., Rose, E. & Parker, H. (2009). Perinatal risk factors for Motor Learning Disability. *International Journal of Disability, Development and Education*, 56(4), 317-331.
- Hands, B.**, Chivers, P., Parker, H., Kendall, G., Beilin, L. & Larkin, D. The associations between BMI, physical activity and sedentary behaviours from childhood to adolescence: A prospective longitudinal study. Paper in second revision (IJBNPA)

- Hands, B.**, Larkin, D., Rose, E., Parker, H., & Smith, A. Can young children make active choices? Outcomes of a feasibility trial in 7-year-old children. Paper accepted for publication 21/2/2010. *Early Child Development and Care*.
- Hands, B.**, Larkin, D., Parker, H., Straker, L. & Perry, M. Physical Activity Choices and Participation Time of Adolescents when Grouped by Sex, Body Composition, Motor Competence, Aerobic Fitness or Physical Activity Level (in second revision) *Journal of Adolescence*.
- Hince, D.A., Brett, T.D., Mak, D.B., **Bulsara, M.**, Moorhead, R. & Arnold-Reed, D.E. Opportunistic Screening for Chlamydia trachomatis in Young Men (15-29 years) attending general practice. *Australian Family Physician* (2009); 38(9), 734-737
- Ho, K.M., Harding, R., Chamberlain, J. & **Bulsara, M.** A comparison of central and mixed venous oxygen saturation in circulatory failure. *Journal of Cardiothoracic and Vascular Anesthesia* (in press) (accepted for publication: 24/09/2007)
- Hynd, A., Roughhead, E.E., Preen, D.B., Glover, J., **Bulsara, M.** & Semmens, J. Increased patient co-payments and changes in PBS-subsidised prescription medicines dispensed in Western Australia. *Australian and New Zealand Journal of Public Health* (2009); 33(3), 246-252
- Jiwa, M., Arnet, H., Halkett, G., Smith, M., O'Connor, M., Rhodes, J., Poland, K., **Bulsara, M.** (2009). Does smoking status affect the likelihood of consulting a doctor about respiratory symptoms? A pilot survey in Western Australia, *BMC Family Practice*, 10(16); 1-5 URL: <http://www.biomedcentral.com/1471-2296/10/16>
- Jiwa, M., Halkett, G., Arnet, H., Smith, M., McConigley, R., Lim, D., **Bulsara, M.**, Islam, A. Advice to consult a general medical practitioner in Western Australia: could it be cancer? *Quality in Primary Care* (2009); 17(1), 23-29
- Jiwa, M., Arnet, H., **Bulsara, M.**, Ee, H.C. & Harwood, A. What is the importance of the referral letter in the patient journey? A pilot survey in Western Australia. *Quality in Primary Care* (2009); 17(1), 31-36
- Lee, S., Varano, J., Flexman, J.P., Cheng, W., Watson, M.W., Rossi, E., Adams, L.A., **Bulsara, M.** & Price, P. Decreased IP-10 and elevated TGFb1 levels are associated with viral clearance following therapy in patients with Hepatitis C Virus. *Disease Markers* (in press) (accepted for publication: 11/02/2010)
- Louise, S., Warrington, N., McCaskie, P., Oddy, W., Zubrick, S., **Hands, B.**, Mori, T., Silburn, S., Palmer, L., Beilin, L. & Mattes, E. Depressive and/or Anxious Mood: A Cardiovascular Disease Risk Factor in Childhood and Adolescence. Paper in second revision (Pediatrics)
- Louise, S., Warrington, N., McCaskie, P., Oddy, W., Zubrick, S., **Hands, B.**, Mori, T., Silburn, S., Palmer, L., Beilin, L. & Mattes, E. A Cardiovascular Disease Risk Factor in Childhood and Adolescence. Paper under review (Circulation).

- Min Zhang, C., D'Arcy, J., Holman, D., Sylvie, D., Price, Frank, M., Sanfilippo, F. M., Preen, D. & **Bulsara, M.** (2009). Comorbidity predicts repeat hospitalisation for adverse drug reactions in older adults: a retrospective cohort study of 28,548 patients. *British Medical Journal* (2009); 338:a2752
- Naumann, F.**, Philpott, M., **Bulsara, M.**, Buchan, J., Smith, C., Groff, D., Battaglini, C. (2010) The Benefits of a Multi-Modal Exercise and Counselling Program for Breast Cancer Survivors: A Randomized Control Study (In Review, *Journal of Cancer Survivorship*).
- Ridley, K., Olds, T., **Hands, B.**, Larkin, D. & Parker H. (2009). Intra-individual variation in children's physical activity patterns: Implications for measurement. *Journal of Science and Medicine in Sport*, 12(5), 568-572. doi:10.1016/j.jsams.2008.09.009
- Robinson, M., McLean, N. J., Oddy, W. H., Mattes, E., **Bulsara, M.**, Li, J., Zubrick, S.R., Stanley, F.J. & Newnham, J.P. Smoking cessation in pregnancy and the risk of child behavioural problems: A longitudinal prospective cohort study. *Journal of Epidemiology and Community Health* (in press) (accepted for publication: 13/07/2009)
- Rose, E., Larkin, D., **Hands, B.**, Parker, H. & Howard, B. (2009). Evidence for the validity of the Children's Attraction to Physical Activity Questionnaire (CAPA) with young children. *Journal of Science and Medicine in Sport*, 12(5), 573-578.
- Spilsbury, K., Semmens, J., Hammond, I., **Bulsara, M.** Authors response to letter regarding Morbidity outcomes of hysterectomy. A study of 78,577 hysterectomies for benign reasons over 23 years. *British Journal of Obstetrics and Gynaecology* (2009) 116(5); 734-735.

Research Reports

- Hands, B.**, Parker, H., Coffey, A., Das, A., Macnish, J., van Staden, C., Rycroft, P., Miller, D., Jenkins, S., Hackett, C. & Gerrard, P. (2009). *Interactive video analysis to develop learning and Assessment of University students' practical and communication skills: The PHENC project. Final report.* Strawberry Hills, NSW: ALTC

Conference Presentations

- Ambrosini, G.L., Huang, R.C., Mori, T.A., **Hands, B.**, O'Sullivan, T.A., de Klerk, N.H., Silburn, S., Beilin, L.J. & Oddy, W.H. (2009). *Dietary patterns and markers for the metabolic syndrome in adolescents.* 3rd International Congress of Prediabetes and the Metabolic Syndrome, April Nice, Italy.
- Battaglini, C.L., Groff, D.G., Shields, E.W., **Naumann, F.**, Behera, M. & Hackney, A.C. (2009). *Combining Exercise and Recreation Therapy: Preliminary Results of a Randomized Trial in Breast Cancer Survivors.* American College of Sports Medicine. ACSM National Meeting. 56th Annual Meeting, Seattle, Washington, May 27-30.
- Bulsara, M.** (2009). *Trends in the Incidence of Childhood Type 1 Diabetes in Australia.* Paper presented at PCHRIS (GP & PHC Research) Conference, Melbourne, 15-17th July

- Cantell M., **Hands B.**, Larkin D., Crawford SG., Doyle-Baker P., Parker H., & Rose E. (2009). *Symposium: Issues surrounding Developmental Coordination Disorder and fitness: Canadian and Australian perspectives* Paper presented at ISAPA Gavle. Sweden
- Chivers, P., **Hands, B.**, & Parker, H. (2009) *The role of physical activity is different for normal weight, overweight and obese 14-year-old adolescents.* Paper presented at the Seventh National Physical Activity Conference, Brisbane QLD. October
- Hands, B.**, Larkin, D. & Parker, H. (2009). *Does perceived competence, motor competence or fitness best predict physical activity among adolescents?* Paper presented at the Seventh National Physical Activity Conference, Brisbane QLD. October
- Hands, B.** & Rycroft, P. (2009). *Using a web-based program to develop critical self-analysis of practical skills in university students.* ATN Conference, Melbourne November
- McIntyre, F., **Hands, B.** & Parker, H. (2009). *Is it confidence or competence that best predicts physical activity in young children?* Paper accepted for presentation at the Seventh National Physical Activity Conference, Brisbane QLD. October
- Naumann, F.**, Buchan, J., Philpott, M. & Smith, C. (2009). *The effects of an exercise and counselling program on the quality of life of breast cancer survivors. Is there an additive effect of combining two modalities, for a more comprehensive rehabilitation?* WA Cancer Research Symposium, Advancing Cancer Research in WA. Fremantle, December
- Naumann, F.** & Nimphius, S. (2009). *Assessment and Training of Functional Strength in Athletes and PT Clients.* Wellness and Fitness Industry Conference. Perth, February 6-8th
- Rose, E., Larkin, D., **Hands, B.** & Parker, H. (2009). *Australian Adolescents' motor competence and perceptions of physical activity outcomes.* The 12th ISSP World Congress of Sport Psychology, Marrakesh, June 17-21.
- Siafarikas, A., **Bulsara, M.**, Jones, T.W. (2009). *Seasonality, sun exposure, skin type and vitamin D levels influence Parathyroid Hormone related Peptide (PTHrP) metabolism during pregnancy and after delivery in mothers and their newborns.* Australasian Paediatric Endocrine Group Annual Meeting, Coolum, QLD
- Siafarikas, A., Hesse, V., **Bulsara, M.** & Jones, T.W. (2009). *Comparison of vitamin D status, sun-exposure and personalised UVB-radiation dosimetry of mildly pigmented, breastfed newborns during their first 6-8 weeks of life in Perth, Western Australia and Berlin, Germany.* Australasian Paediatric Endocrine Group Annual Meeting, Coolum, QLD
- Straker, L., Smith, A. & **Hands, B.** (2009). *Computer use clusters, sedentary and moderate/vigorous activity, physical and mental health in Australian adolescents.* Paper presented at the Seventh National Physical Activity Conference, Brisbane, QLD. October.

Students

Honours (UNDA)

- S McIntyre *Aerobic fitness of WA children : A trend analysis.* (First class) **Hands**
- H Norrish *Friend or Foe: The impact of school uniforms on incidental physical activity in school.* (First class) Farringdon and **Hands**

Honours (UWA)

- B Williams *Aerobic fitness in children with type 1 diabetes mellitus.* **Bulsara** et al

Master of Education (UNDA)

- M Doolan *Development and trial of a report card on children's physical activity in Western Australia.* **Hands**

Master of Exercise Science (UNDA)

- J Buchan *Benefits of a Multi-Modal Exercise and Counselling Program on Self Efficacy in Breast Cancer Survivors.* **Naumann.** (2009)
- A Monroe *Benefits of a Multi-Modal Group Based Exercise and Counselling Program on Quality of Life in Breast Cancer Survivors.* **Naumann.** (2010)
- P Rosario *Benefits of a Multi-Modal Group Based Exercise and Counselling Program on Fatigue in Breast Cancer Survivors.* **Naumann.** (2010)

PhD (UNDA)

- P Chivers *Individual, behavioural and environmental pathways to healthy weight from birth to early adolescence.* **Hands, Parker and Bulsara.** (2007 in progress)
- T Grace *Predictors of motor competence from birth to 17 years: A longitudinal study.* **Hands and Bulsara.** (2010)
- E Martin *Physiological and Psychological Response to Group Based Rehabilitation of Cancer Survivors.* **Naumann.** (2010 in progress).
- F McIntyre *Interactions in motor competence, perceived motor competence and physical activity in young children.* **Hands** and Parker. (Completed 2009)

PhD (UWA)

- K Mackie *Validation of Musculoskeletal Tissue Banking in Australia.* **Bulsara** et al
- N Paramalingam *Prevalence, distribution and familial transmission of other disease and co-morbidities in families affected by type 1 diabetes.* **Bulsara** et al
- K Villanueva *Children's independent mobility in the neighbourhood.* **Bulsara** et al
- G Woods *Driving up obesity? Exploring the relationship between travel mode to school and weight status in children.* **Bulsara** et al

PhD (Curtin)

P Wyndow

*Longitudinal determinants of political change: investment and equity in population health and education. **Bulsara** et al*

Other Activities

Staff Research Seminars

August - Bulsara, M. Sample Size and Power

October - Bulsara, C. The Power of Words

November - Walker, B. Cochrane Systematic Reviews

Public Forum December 10th

Two Lizards Drinking: A close conversation on health and healing in Aboriginal communities.
Darryl Kickett and Darryl Henry chaired by Professor Anna Haebich. Two men of Aboriginal descent who work in the coalface of Aboriginal communities were the two key speakers.

Annual Research Seminar December 16th

An all day forum highlighting staff research presentations from the Schools of Medicine, Health Sciences, Arts and Science and Nursing.

Adjunct Appointments

Tim Jones – Clinical Professor, PMH

Aris Siafarikas – Clinical Assoc Prof, PMH

Visiting Scholar - Professor Anna Haebich, Griffith University

Meetings Attended

Beth Hands

Centre Directors Meeting, Fremantle December 2009

Sydney campus visit

Public Health Advocacy Institute, Obesity Forum. Invited workshop to establish advocacy targets for overweight and obesity.

Australian Sports Commission Strategic Intent Communication Seminar. Invited stakeholders.

Max Bulsara

TARGIT ISC/DMC meeting – Zurich

TARGIT ISC/DMC meeting - Berlin

Cancer & Palliative Care Research & Evaluation Unit Advisory Group meeting - Perth

Committee Membership

Beth Hands

University Research Committee
Human Research Ethics Committee

Max Balsara

School Research Committee Medicine
UWA, Centre for Health Services Research Committee
Advisory Group member of Cancer and Palliative Care Research and Evaluation Unit
Member of TARGIT DMC and ISC
Member of the Editorial Board of BMC Public Health Journal
Member of the Editorial Board of BMC Medical Research Methodology Journal
Member of the Editorial Board of BMC Proceedings Journal
Statistical Editor for Cochrane Acute Respiratory Infections Group