

Curriculum Vitae Dr Melanie L Bell

Contact Information

Mel and Enid Zuckerman College of Public Health
University of Arizona
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Education

- 2002 Ph.D. Biostatistics: *The use of maximum pseudolikelihood in generalized linear mixed models for the analysis of replicated spatial point patterns.*
University of Colorado Health Sciences Center, Denver, CO
- 1990 M.S. Mathematics Northern Arizona University, Flagstaff, AZ
- 1988 A.B. Mathematics Occidental College, Los Angeles, CA

Professional Affiliations/Memberships

U of AZ Statistics Graduate Inter-disciplinary Program, Vice Chair Executive Committee
Statistical Society of Australia (Council Member)
International Biometric Society
American Statistical Association
Clinical Oncological Society of Australia

Honors and Awards

- 2014 Epi and Biostats Division Teaching Award
- 2008 Visiting Scholar, University of Colorado at Denver
- 2001 Strother Walker Award for Outstanding Biometrics PhD student. University of Colorado Health Sciences Center
- 2001 Ph.D. Fellowship Award, University of Colorado Health Sciences Center
- 2001 Student Service Award, Department of Preventive Medicine & Biometrics, University of Colorado Health Sciences Center

Employment and Appointments

- 2013 – Associate Professor, Department of Epidemiology and Biostatistics, Mel and Enid Zuckerman College of Public Health, University of Arizona, Tucson AZ
- 2013 – Adjunct Senior Lecturer, School of Psychology, University of Sydney, Australia

2010 – 2013	Senior Research Fellow (Biostatistics) Psycho-oncology Co-operative Research Group, School of Psychology, University of Sydney, Australia
2003 – 2009	Lecturer/Senior Lecturer Biostatistics (roughly equivalent to US Assistant/Associate Professor) Department of Preventive and Social Medicine, University of Otago, Dunedin, New Zealand
2000 – 2002	Statistical Research Assistant, Department of Structural and Cellular Biology University of Colorado Health Sciences Center, Denver, CO
1999 – 2002	Statistical Research Assistant, Center for Human Nutrition University of Colorado Health Sciences Center, Denver, CO
1998 – 2001	Graduate Teaching Assistant, Department of Preventive Medicine and Biometrics, University of Colorado Health Sciences Center, Denver, CO
1998 – 1999	Data Manager, San Luis Valley Diabetes Study University of Colorado Health Sciences Center, Denver, CO
1988– 1997	Mathematics Instructor University of Arizona, Tucson, AZ Yavapai Community College, Prescott, AZ Northern Arizona University, Flagstaff, AZ

Research

Research Areas

Missing data in longitudinal studies
Cluster randomized trials
Clinical trials
Analysis of quality of life data and other patient reported outcomes
Evaluation and quality improvement in research methods and statistics

Statistical/Methodological Publications

References with * indicate work with a graduate student supervisee

1. ***Bell ML**, Fiero M, Horton NJ, Hsu C. (2014) Handling missing data in RCTs; a review of the top medical journals. *BMC Medical Research Methodology*,14:118.
2. **Bell ML**, Fairclough DL, King MT. (2014) Bias in area under the curve for longitudinal clinical trials with missing patient reported outcome data: summary measures versus summary statistics. *Sage Open*. May 2014,4(2)DOI: 10.1177/2158244014534858
3. **Bell ML**, Teixeira-Pinto A, McKenzie JE, Olivier J. (2014) A myriad of methods: choice of sample size formula and software for two proportions does matter. *Journal of Clinical Epidemiology*. 67(5):601-605.
4. **Bell ML**, Fairclough DL. (2014) Practical and statistical issues in missing data for longitudinal patient reported outcomes. *Statistical Methods in Medical Research*. 23(5):440-459.

5. **Bell ML**, Kenward MJ, Horton N, Fairclough DL. (2013) Differential dropout and bias in randomised controlled trials: when it matters and when it may not. *BMJ*. 2013; 346: e8668.
6. **Bell ML**, Butow PN, Goldstein D. (2013) Informatively missing quality of life and unmet needs sexual data for immigrants and Anglo-Australians. *Quality of Life Research*. 22(10):2757-2760.
7. King MT, **Bell ML**, Costa D, Butow P, Oh B. (2014) The Quality of Life Questionnaire Core 30 (QLQ-C30) and Functional Assessment of Cancer-General (FACT-G) differ in responsiveness, relative efficiency, and therefore required sample size. *Journal of Clinical Epidemiology*. 67(1):100-7.
8. Olivier J, **Bell ML**. (2013) Effect sizes for 2x2 contingency tables. *PLOS One*. 8(3): e58777.
9. **Bell ML**, McKenzie JE. (2013) Designing psycho-oncology randomised trials and cluster randomised trials: variance components and intra-cluster correlation of commonly used psychosocial measures. *Psycho-oncology*. 22(8):1738-47.
10. Olivier J, **Bell ML**. (2013) The importance of statistics in cancer research. *World Journal of Cancer Research*. 1, 78-81.
11. **Bell ML**, Olivier J, King MT. (2013) Scientific rigour in psycho-oncology trials: why and how to avoid common statistical errors. *Psycho-Oncology*. 22(2):499-505.
12. **Bell ML**, Grunwald GK. (2011) Small samples estimation properties in longitudinal count analysis. *Journal of Statistical Computation and Simulation*. 81(9):1067-1079.
13. ***Bell ML**, von Roode T, Dickson N, Jiang C, Paul C (2010). Consistency and reliability of self-reported lifetime number of heterosexual partners by gender and age in a cohort study. *Sexually Transmitted Diseases*. 37(7):425-431.
14. **Bell ML**, Earl JB, Britt SG (2007). Two types of *Drosophila* R7 photoreceptor cells are arranged randomly: A model for stochastic cell-fate determination. *Journal of Comparative Neurology*, 502: 75-85.
15. **Bell ML**, Grunwald GK (2004). Mixed models for the analysis of replicated spatial point patterns. *Biostatistics* 5: 633-648.
16. Parker MA, **Bell ML**, Barlow LA(2004). Cell contact-dependent mechanisms specify taste bud pattern during a critical period early in embryonic development. *Developmental dynamics* 230 (4), 630-642.

Collaborative Publications

17. Smith B, Thewes B, Turner J, Gilchrist J, Fardell JE, Sharpe L, **Bell ML**, Girgis A, Grier M, Fairclough A, Byrne D, Clutton S, Butow P.(2015) Pilot of a theoretically grounded psychologist-delivered intervention for fear of cancer recurrence (Conquer Fear). *Psycho-Oncology*. In press, accepted 29 Jan 2015.
18. Sze M, Butow PN, **Bell ML**, Vaccaro L, Dong S, Eisenbruch M, Jefford M, Girgis A, King M, McGrane J, Goldstein D, on behalf of the CALD oncology working group and the Psycho-oncology Co-operative Research Group (PoCoG) CALD team. (2015) Migrant health in cancer:

outcome disparities and the determinant role of migrant specific variables. *The Oncologist*. In press, accepted 2 Jan 2015.

19. Denman CA, **Bell ML**, Cornejo E, Guernsey de Zapien J, Carvajal S, Rosales C.(2015) Changes in health behaviors and self-rated health of participants in Meta Salud: a primary prevention intervention of non-communicable diseases in Hermosillo, Mexico. *Global Heart*. In press, accepted 9 Dec 2014.
20. McDonald FEJ, Patterson P, White, KJ , Butow, P, **Bell ML**. (2014). Predictors of unmet needs and psychological distress in adolescent and young adult siblings of people diagnosed with cancer. *Psycho-Oncology*. First published online 17 Aug 2014. DOI: 10.1002/pon.3653
21. Denman CA, Rosales C, Cornejo E, **Bell ML**, Munguia D, Zepeda T, Carvajal S, Guernsey de Zapien J (2014). Evaluation of the Community-Based Chronic Disease Prevention Program Meta Salud in Northern Mexico, 2011–2012. *Preventing Chronic Disease*. 11:140218
22. Goldstein D, **Bell ML**, Butow P, Sze M, Vaccaro L, Dong S, Liauw W, Hui R, Tattersall M, Ng W, Asghari R, Steer C, Vardy J, Parente P, Harris M, Karanth NV, King M, Girgis A, Eisenbruch M, Jefford M. (2014) Immigrants' perceptions of the quality of their cancer care: An Australian comparative study, identifying potentially modifiable factors. *Annals of Oncology*. 25(8):1643-9.
23. Patterson P, McDonald F E J, Butow P, White KJ, Costa DSJ, Millar B, **Bell ML**, Wakefield C, Cohn R. (2014) Psychometric evaluation of the Sibling Cancer Needs Instrument (SCNI) an instrument to assess the psychosocial unmet needs of young people who are siblings of cancer patients. *Supportive Care in Cancer*. 22(3):653-665.
24. *Ralph A, Ager B, **Bell ML**, Collins I Andrews L, Tucker K, O'Reilly N, Phillips K, Butow P.(2014) Women's preferences for selective oestrogen reuptake modulators: an investigation using the time trade off technique. *SpringerPlus*. 3:264 doi:10.1186/2193-1801-3-264
25. *Ralph A, Ager B, **Bell ML**, Phillips K, Andrews L, Tucker K, Collins I, Butow P. (2014) Women's preferences for selective oestrogen reuptake modulators: an investigation using protection motivation theory. *Patient Education and Counseling*. 96(1):106-12. doi: 10.1016/j.pec.2014.04.011.
26. Juraskova I, Butow P, Bonner C, **Bell ML**, Smith AB, Seccombe M, Boyle F, Reaby L, Cuzick J, Forbes JF. (2014). Improving decision-making about clinical trial participation: A randomised controlled trial of a decision aid for women considering participation in a breast cancer prevention trial (IBIS-II). *British Journal of Cancer*. 111, 1-7 | doi:10.1038/bjc.2014.144
27. Price MA, Butow PN, **Bell ML**, Webb PM, DeFazio A, Friedlander M, The Australian Ovarian Cancer Study Group, The Australian Ovarian Cancer Study - Quality of Life Study Investigators (2014). Caring for women with ovarian cancer: The last year of life. *Gynecologic Oncology*. 132(3):690-697. doi: 10.1016/j.ygyno.2014.01.002.
28. Hodson L, McLachlan JK, Eyles HC, **Bell ML**, Green TJ, Skeaff CM.(2014) Plasma and erythrocyte fatty acids reflect intakes of saturated and n-6 PUFA within a similar time frame. *Journal of Nutrition*. 144(1):33-41. doi: 10.3945/jn.113.183749.
29. Price MA, **Bell ML**, Sommeijer DW, Friedlander M, Stockler MR, Defazio A, Webb PM,

Australian Ovarian Cancer Study Group; Australian Ovarian Cancer Study Quality of Life Study Investigators, Butow PN(2013). Physical symptoms, coping styles and quality of life in recurrent ovarian cancer: a prospective population-based study over the last year of life. *Gynecol Oncol* 2013,**130**:162-168.

30. Macann A, Fua T, Milross C, Porceddu S, Penniment M, Wratten C, Krawitz H, Tang C, Morton R, Hay D, Thomson V, **Bell ML**, King M, Fraser-Browne C, Hockey H. (2014) Phase 3 trial of domiciliary humidification to mitigate to mitigate acute mucosal toxicity during radiation therapy for head-and-neck cancer: First report of Trans-Tasman Radiation Oncology Group (TROG) 07.03 RadioHUM. *International Journal of Radiation Oncology, Biology and Physics*. 88(3):572-79.
31. Thewes B, **Bell ML**, Butow P, Beith J, Boyle F, Friedlander M, McLachlan SA and the Members of the FCR Study Advisory Committee (2013). Psychological not social factors influence level of fear of cancer recurrence in young women with early breast cancer; results of a cross-sectional study. *Psycho-Oncology*. 22(12):2797-2806. DOI: 10.1002/pon.3348.
32. Butow PN, **Bell ML**, Aldridge LJ , Sze M, Eisenbruch M, Jefford M, Schofield P, Girgis A, King M, Duggal-Beri P, McGrane J, Goldstein D, and the Psycho-Oncology Co-operative Research Group (PoCoG) CALD team (2013). Unmet needs in immigrant cancer survivors: a cross-sectional population based study. *Supportive Care in Cancer*. 21(9):2509-20.
33. Butow P, **Bell ML**, Smith AB, Fardell J, Thewes B, Turner J, Gilchrist J, Beith J, Girgis A, Sharpe L, Shih S , Mihalopoulos C. (2013) Conquer fear: protocol of a randomised controlled trial of a psychological intervention to reduce fear of cancer recurrence. *BMC Cancer*. 13:201.
34. Butow PN, Aldridge LJ, Eisenbruch M, **Bell ML**, Sze M, Abdo S, Mikhail M, Dong S, Iedema R, Vardy J, Hui R, Boyle F, Liauw W, Goldstein D. (2013) Should culture affect practice? A comparison of prognostic discussions in consultations with immigrant versus Australian-born cancer patients. *Patient Education and Counseling*. 92(2):246-52.
35. Stein RA, Sharpe L, **Bell ML**, Boyle FM, Dunn SM, Clarke SJ. (2013) A randomised controlled trial of a structured intervention to facilitate end-of-life decision making in patients with advanced cancer. *Journal of Clinical Oncology*. 31:3403-3410.
36. Patterson P, McDonald FEJ, Butow P, White KJ, Costa DSJ, Pearce A, **Bell ML**. (2013) Psychometric evaluation of the offspring cancer needs instrument (OCNI): an instrument to assess the psychosocial unmet needs of young people who have a parent with cancer. *Supportive Care in Cancer*. 21(7): 1927-1938. doi: 10.1007/s00520-013-1749-z
37. Butow PN, Aldridge L, **Bell ML**, Sze M, Eisenbruch M, Jefford M, Schofield P, Girgis A, King M, Duggal-Beri P, Goldstein D, and the Psycho-Oncology Co-operative Research Group (PoCoG) CALD team. Inferior quality of life and psychological well-being in immigrant cancer survivors: a population based study. (2013). *European Journal of Cancer*. 49(8):1948-56.
38. Thewes B, **Bell ML**, Butow P. (2013). Fear of cancer recurrence in young breast cancer survivors: the role of meta-cognitive style and disease-related factors. *Psycho-oncology*. 22(9):2059-63.
39. *Ramrakha S, Paul C, **Bell ML**, Dickson N, Moffit TE, Caspi A. (2013) The relationship between multiple sex partners and anxiety, depression and substance dependence

- disorders: a cohort study. *Archives of Sexual Behavior*. 42(5):863-72.
40. Dhillon H, van der Ploeg HP, **Bell ML**, Boyer M, Clarke S, Vardy J. (2012) The impact of physical activity on fatigue and quality of life in lung cancer patients. *BMC Cancer*. 12:572.
 41. Juraskova I, Bonner C, **Bell ML**, Sharpe L, Robertson R, Butow P. (2012) Quantity versus quality: An exploration of the predictors of post-treatment sexual adjustment for women affected by early stage cervical and endometrial cancer. *Journal of Sexual Medicine*. 9(11):2952-60.
 42. Thewes B, Butow P, **Bell ML**, Beith J, Stuart-Harris R, Grossi M, Capp A and the FCR Study Advisory Committee (2012). Fear of cancer recurrence in young women with a history of early-stage breast cancer; a cross-sectional study of prevalence and association with health behaviours. *Supportive Care in Cancer*. 20(11):2651-9.
 43. Butow PN, **Bell ML**, Sze M, Aldridge L, Abdo S, Eisenbruch M, Duggal-Beri P, Mikhail M, Dong S, Iedema R, Goldstein D. (2011) Grappling with cultural differences; Communication between oncologists and immigrant cancer patients. *Patient Education and Counseling*. 84:398-405.
 44. Connor J, Kypros K, **Bell ML**, Cousins K. (2011) Alcohol involvement in aggression between intimate partners in New Zealand: a national cross-sectional study. *BMJ Open*. 1(1) doi:10.1136/bmjopen-2011-000065
 45. Butow PN, Goldstein D, **Bell ML**, Sze M, Aldridge LJ, Abdo S, Mikhail M, Dong S, Iedema R, Vardy J, Ashgari R, Hui R, Eisenbruch M (2011). Interpretation in consultations with immigrant cancer patients; How functionally equivalent is it? *Journal of Clinical Oncology*. 29(20):2801-2807.
 46. Patel D, Thewes B, Sharpe L and **Bell ML**. (2011) The sensitivity and specificity of the distress thermometer and hospital anxiety and depression scale for predicting clinical disorder in patients diagnosed with colorectal cancer. *Journal of Affective Disorders*. 131 (1-3), pp. 412-416.
 47. *Kidd MO, Bond CH, **Bell ML**. (2011) Patients' perspectives of 'patient-centeredness' as important in musculoskeletal physiotherapy interactions: a qualitative study. *Physiotherapy*. 97(2):154-162.
 48. Connor J, Kypros K, **Bell ML**, Cousins K. (2010) Alcohol outlet density, levels of drinking and alcohol-related harm in New Zealand: a national study. *Journal of Epidemiology and Community Health*, 65:841-846.
 49. *Hendrick P, Milosavljevic S, **Bell ML**, Hale H, Hurley DA, McDonough SM, Melloh M, Baxter DG (2009). Does physical activity change predict functional recovery in low back pain? Protocol for a prospective cohort study. *BMC Musculoskeletal Disorders*, 10:136.
 50. *Hendrick P, **Bell ML**, Bagge J, Milosavljevic S (2009). Can accelerometry be used to discriminate levels of activity? *Ergonomics*, 52(8):1019-25.
 51. Bussey MD, Milosavljevic S, **Bell ML** (2009). Sex differences in the pattern of innominate motion during passive hip abduction and external rotation. *Manual Therapy*, 14(5):514-9.

52. Bussey MD, **Bell ML**, Milosavljevic S (2009). The influence of hip abduction and external rotation on sacro-iliac motion. *Manual Therapy*, 14(5):520-5.
53. **Bell ML**, Grunwald GK, Baltz JH, McDonald GO, Grover FL, Shroyer LW (2008). Does pre-operative hemoglobin independently predict short-term outcomes following CABG surgery? *Annals of Thoracic Surgery*, 86:1415–23.
54. Howard R, Karageorge G, van Harselaar K, **Bell ML**, Basford P, Schultz M, Derrett S. (2008) Post-procedure surveillance in liver biopsy: how long is long enough? *New Zealand Medical Journal*, 121(1280): 8-14.
55. Sims S, Rehrer NJ, **Bell ML**, Cotter JD (2008). Endogenous and Exogenous female sex hormones and renal electrolyte handling: effects of an acute sodium load on plasma volume at rest. *Journal of Applied Physiology*. 105(1):121-7.
56. Hammond V, Reeder AI, Gray A, **Bell ML** (2008). Are workers or their workplaces the key to occupational sun protection? *Health Promotion Journal of Australia*. 19(2): 97-101.
57. Kypri K, **Bell ML**, Hay GC, Baxter J (2008). Alcohol outlet density and university student drinking in New Zealand. *Addiction*. 103(7):1131-1138.
58. *Ramrakha S, **Bell ML**, Paul C, Dickson N, Moffit TE, Caspi A (2007). Childhood behavior problems linked to sexual risk taking in young adulthood: a birth cohort study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(10):1272-1279.
59. Takemura M, Schneiders AG, **Bell ML**, Milburn P (2007). The association of ground hardness with injuries in rugby union. *British Journal of Sports Medicine*, 41:582-587.
60. Sims S, Rehrer N, **Bell ML**, Cotter J (2007). Pre-exercise sodium loading aids fluid balance and endurance for women exercising in the heat. *Journal of Applied Physiology*, 103(2): 534-541.
61. Hickey WH, Milosavljevic S, **Bell ML**, Milburn P (2007). Accuracy and reliability of observational motion analysis in identifying shoulder symptoms. *Manual Therapy*, 12: 263-270.
62. Warren J, Schneiders T, Sullivan J, **Bell ML** (2006). Repeated single-limb postural stability testing elicits a practice effect. *Physical Therapy in Sport*, 7: 185-190.
63. Parkin L, **Bell ML**, Herbison GP, Paul C, Skegg DCG (2006). Air travel and fatal pulmonary embolism. *Thrombosis and Haemostasis*, 95: 807-814.
64. Eckel RH, Hernandez TL, **Bell ML**, Weil KM, Shepard TY, Grunwald GK, Sharp TA, Francis CC, Hill JO (2006). Carbohydrate balance predicts weight/fat gain in adults. *American Journal of Clinical Nutrition* 83: 803-808.
65. Krebs NF, Westcott JE, Butler N, Robinson C, **Bell M**, Hambidge KM (2006). Meat as a first complementary food for breastfed infants: feasibility and impact on zinc intake and status. *Journal of Pediatric Gastroenterology and Nutrition*. 42(2): 207-214.
66. Baker J, Cotter JD, Gerrard DF, **Bell ML**, Walker RJ (2005). Effects of indomethacin and

- celecoxib on renal function in athletes. *Medicine and Science in Sports and Exercise* 37: 712-717.
67. EL Melanson, JR Knoll, ML Bell, WT Donahoo, JO Hill, LJ Nysse Lanningham-Foster L, Peters JC, Levine JA. (2004) Commercially available pedometers: considerations for accurate step counting. *Preventive medicine* 39 (2), 361-368
 68. JA Higgins, DR Higbee, WT Donahoo, IL Brown, ML Bell, DH Bessesen. (2004) Resistant starch consumption promotes lipid oxidation. *Nutrition & Metabolism* 1 (8), 1-11
 69. Krebs NF, Hambidge KM, Westcott J, Miller LV, Sian L, **Bell M**, Grunwald G (2003). Exchangeable zinc pool size in infants is related to key variables of zinc homeostasis. *Journal of Nutrition*, 54:856-860.
 70. Hall JMH, **Bell ML**, Finger TE (2003). Disruption of sonic hedgehog signaling alters growth and patterning of lingual taste papillae. *Developmental Biology*, 255: 263-277.
 71. Capell WH, DeSouza CA, Poirier P, **Bell ML**, Weil KM, Stauffer BL, Hernandez TL, and Eckel RH (2003). Short-term triglyceride lowering with fenofibrate improves vasodilator function in subjects with hypertriglyceridemia. *Arteriosclerosis, Thrombosis, and Vascular Biology*, 23: 307-313.
 72. Sharp TA, **Bell ML**, Grunwald GK, Schmitz KH, Sidney S, Lewis CE, Tolan K, Hill JO (2002). Differences in metabolic rate between Caucasian and African American young adults in the CARDIA study. *Obesity Research*, 10: 726-732.
 73. Jalla S, Westcott J, Steirn M, Miller L, **Bell ML**, Krebs N (2002). Zinc absorption and exchangeable zinc pool sizes in breastfed infants fed meat or cereal as first complementary food. *Journal of Pediatric Gastroenterology and Nutrition*, 34:35-41.
 74. Shepard TY, Weil KW, Sharp TA, Grunwald GK, **Bell ML**, Hill JO, Eckel RH (2001). Occasional physical inactivity combined with a high-fat diet may be important in the development and maintenance of obesity in human subjects. *American Journal of Clinical Nutrition*, 73: 703-708.
 75. Agerholm-Larsen L, **Bell ML**, Grunwald GK, Astrup A (2000). The effect of a probiotic milk product on plasma cholesterol - a meta-analysis of short-term intervention studies. *European Journal of Clinical Nutrition*, 54:856-860.

Manuscripts in Submission

1. **Bell ML**, Olivier J. Sydney's gender imbalance on the bike: prevalence and correlates of women commuting by bicycle. In submission.
2. **Bell ML**, McKenzie J. Pilot studies: what should and should not be used for future sample size determination. In submission.
3. Price MA, Butow PN, **Bell ML**, Webb PM, DeFazio A, Friedlander M, Fardell JE, The Australian Ovarian Cancer Study Group, The Australian Ovarian Cancer Study - Quality of Life Study Investigators. Psychosocial predictors of survival in invasive ovarian cancer: a population-based prospective study. In submission.

4. McDonald FEJ, Patterson P, White, KJ , Butow, P, **Bell ML**, Kerridge I. Predictors of unmet needs and psychological distress in adolescent and young adults who have a parent diagnosed with cancer. In submission.
5. Pockett R, Hobbs K, Dzidowska M, Peate M, Baylock B, **Bell ML**, Epstein I. The characteristics of oncology social work in Australia: Implications for workforce planning in integrated cancer care. In submission.
6. *Dodds SE, Pace TWW, **Bell ML**, Fiero M, Negi LT, Raison CL, Weihs KL. Feasibility and effects of cognitively-based compassion training (cbct) on psychological well-being in breast cancer survivors: a randomized, wait list controlled pilot study. In submission.
7. Sabo S, Wennerstrom A, Phillips D, Haywood C, Redondo F, **Bell ML**, Ingram M. Community health worker professional advocacy: voices of action from the 2014 national community health worker advocacy survey. In submission.
8. *Fiero M, Huang S, Horton N, **Bell ML**. Statistical analysis and handling of missing data in cluster randomized trials: a systematic review. In submission.
9. *Ager B, Ralph A, **Bell ML**, Collins I Andrews L, Tucker K, Phillips K, Butow P. Intentions to take selective estrogen receptor modulators in women with an increased risk of familial breast cancer: a cross-sectional application of the theory of planned behaviour. In submission.

Grants

2014 – 2015. Bime C, Gerald LB, **Bell ML**, Gerald JK. Effects of exercise on asthmatic responses in obese adults with asthma. Arizona Biomedical Research Commission. \$75,000.

2013 - 2015. Tattersoll M, Silvester W, Clayton J, Detering K, Hall J, Butow P, Kiely B, Cebon J, Clarke S, **Bell ML**. *Advance care planning in incurable cancer patients with disease progression on first line chemotherapy: a randomised trial*. National Health and Medical Research Council of Australia. \$745,946.06

2013-2014. Bray V, Vardy J, Dhillon H, **Bell ML**, Price M, Cysique L. *Evaluation of a web-based cognitive rehabilitation programme in cancer survivors with self-reported cognitive impairment*. Cancer Council New South Wales. \$195,346.

2013-2014. Sundaresan P, Butow P, Turner S, Kneebone A, **Bell ML**. *Evaluating the utility of a patient decision aid for prospective participants in the TROG RAVES Prostate Cancer Trial (TROG 08.03)*. Prostate Cancer Foundation of Australia, \$130,000.

2013-2014. Vardy J, Dhillon H, van der Ploeg H, **Bell ML**, Boyer M, Clarke S. *The impact of physical activity on fatigue and quality of life in lung cancer patients*. Slater & Gordon Asbestos Research Fund. \$30,000.

2012-2013. Butow P, **Bell ML**. *How do women at increased risk for breast cancer weigh up the pros and cons of risk management strategies? A patient preference study*. Australia New Zealand Breast Cancer Trials Group. \$10,000.

2012-2014. Vardy J, Dhillon H, **Bell ML**, Cysique L, Tattersall M, Clarke S, Boyle F, McLachlan A. *Ginkgo biloba preserves cognitive function in women treated with adjuvant chemotherapy for early breast cancer: a double-blind, placebo-controlled, randomised phase III trial*. Cancer Australia, Beyond Blue, Australian Breast Cancer Foundation. \$600,000.

2012- 2014. Butow P, Thewes B, Turner J, Gilchrist J, Beith J, Girgis A, Sharpe L, **Bell ML**, Mihalopoulos C. *Evaluation of a psychological intervention for fear of cancer recurrence; A cluster randomised controlled trial*. Cancer Australia, Beyond Blue, Australian Breast Cancer Foundation. \$496,702.

2009-2010. Kypri K, **Bell ML**, Connor J. *Alcohol outlet accessibility, area deprivation, and adult drinking patterns*. NZ Lottery Health Research Grant. \$21,464.

Mentoring

Junior Faculty

2014 - 2019 Associate Professor Sheila Gephart, UA School of Nursing. K08-award, Agency for Healthcare Research and Quality \$696,661.

2014 - Post-doctoral fellow, David Garcia, UA,MEZCOPH. R25T Cancer Prevention and Control Training Program.

2014- Associate Professor Eyal Oren, MEZCOPH, UA. American Lung Association grant proposal.

Postgraduate Students

2015- PhD minor supervisor, Yoshira Ornelas, Environmental Health Sciences

2014 - MPH internship supervisor, Brittany Shutes, Biostatistics

2014 - MPH internship supervisor, Elinora Price, Biostatistics

2014 - MS thesis supervisor, Erin Ashbeck, Biostatistics

2014 - MS thesis supervisor, Zuxi (Terry) Cui , Biostatistics

2014 - PhD supervisor, Mallorie Fiero, Biostatistics

2014 - PhD dissertation committee, Nancy Stroupe, Epidemiology

2014 - PhD dissertation committee, Jasmin Dorian, Health Policy

2012 - 2013 Co-supervisor to Honors students (psychology) Brittany Ager. High risk for breast cancer patient preferences in prevention. Breast Cancer Risk and Selective estrogen receptor modulators SERMs; An Application of the Theory of Planned Behavior. Graduated with first class honors.

2012 - 2013 Co-supervisor to Honors students (psychology) Angelique Ralph. High risk for breast cancer patient preferences in prevention: Protection Motivation Theory. Graduated with first class honors.

2007 – 2009 Co-supervisor to PhD student (physiotherapy) Paul Hendricks. Activity monitors in low back pain patients.

2007 – 2008 Supervisor of Post-graduate Diploma student (Maths and Statistics) Chikako van Koten. Spatial location of pokie machines and problem gambling.

2004 – 2008 Co-supervisor PhD student (epidemiology) Sandhya Ramrakha.

The relationship between mental health and risky sex.

2005 – 2007 Co-supervisor to Masters of Health Sciences student (physiotherapy) Martin Kidd. The use of patients' perceptions in assessment of physiotherapy students. Passed with Distinction. Winner of ANZAME post-graduate student prize.

2006 – 2007 Supervisor of Honor's student, dept of Maths and Statistics: Zijia (Carrie) Jiang. The reliability of the report of number of sexual partners in the Dunedin Multidisciplinary Study.

Statistical advisor to many Bachelors, Masters and PhD students in psychology, health and basic sciences.

Invited Presentations and Panels

2 Nov 2012. Bias with differential dropout: what matters and what doesn't. *The George Institute for Global Health, Sydney.*

16 May 2012. Design errors and missing data in cancer research. *Australasian Leukaemia and Lymphoma Group Annual Scientific Meeting, Sydney.*

11 May 2011. Missing data in quality of life outcomes: statistical and practical aspects. *Clinical Trials Centre, University of Sydney.*

11 Apr 2011. Aspects of statistics for trial managers, with emphasis on missing data. *Trans-Tasman Radiation Oncology Group Annual Scientific Meeting. Adelaide.*

11 Nov 2010. Complementary and alternative therapy in cancer research. Expert member panel discussion. *Complementary and integrative therapies concept development workshop COSA (Clinical Oncological Society of Australasia). Melbourne.*

5 Aug 2010. What does a biostatistician working in psycho-oncology do? *Statistical Society of Australia. Sydney.*

14 Apr 2010. Statistical issues in psycho-oncology. *University of Technology Sydney.*

Workshops

International Psycho-Oncology Society Academy (2 days). Nov 2012. Complex intervention designs; Sample size issues, with Professors Penelope Schofield, Madeleine King, Susanne Dalton.

Design and Analysis of Patient Reported Outcomes (2 days). Sept 2012, with Professor Diane Fairclough.

Quality of Life Protocol Checklist (2 days), April 2011; May 2012, with Professor Madeleine King.

Common Statistical Pitfalls (1 day). University of Sydney, August 2010; June 2011; Melbourne, Sept 2011. Sole presenter.

PoCoG Concept Development Workshops (1 day). University of Sydney. 2010- 2012, 2 times per year, with the PoCoG scientific advisory committee.

Conference and Oral Presentations (as first author)

30 Oct 2013. A myriad of methods: choice of sample size formula and software for two proportions does matter. Poster. *University of Arizona Health Sciences Research Symposium*.

15 Nov 2012. Joint Breakfast Symposia: Streamlining psycho-oncology research – using psycho-oncology Standard Operating Procedures. Breakfast session. *Clinical Oncological Society of Australia, Brisbane, QLD*.

12 Nov 2012. Bias due to differential attrition: what matters and what doesn't. Poster *Clinical Oncological Society of Australia, Brisbane, QLD*.

30 July 2012. Differential attrition in clinical trials: what matters and what doesn't. Oral. *Joint Statistical Meetings, San Diego, CA*.

16 Nov 2011. Scientific rigour in psycho-oncology trials: why and how to avoid common statistical errors. Poster. *Clinical Oncological Society of Australasia, Perth WA*.

16 Nov 2011. Bias in area under the curve for longitudinal RCTs: Summary measure versus summary statistics. Poster. *Clinical Oncological Society of Australasia, Perth WA*.

29 Sep 2010. Bias in area under the curve for longitudinal RCTs: Summary measure versus summary statistics. Poster. *Australasian Epidemiologic Association Conference, Sydney, Australia*.

19 Mar 2009; 19 May 2009. Small sample properties of longitudinal count Poisson models. Center for Applied Statistics and Mathematics, *University of Otago; AgResearch-Invermay, Dunedin*.

19 Jul 2007. Consistency and reliability of the report of sexual partners in a cohort study, with particular attention to statistical challenges. *New Zealand Public Health Association, University of Otago*.

2 Feb 2007. A brief review of some basic statistics. *School of Physiotherapy Research Student Seminar Series, University of Otago*.

7 May 2007. Fractional Polynomials, a Socratic Dialogue, with Mr. Andrew Gray. *Centre for Applied Statistics and Mathematics, University of Otago*.

6 Nov 2006. Some approaches to the analysis of replicated bivariate spatial point patterns: drosophila retina. *Spatial Information Research Centre 2006 Workshop, Dunedin, New Zealand*.

29 Jun 2006. Models for the analysis of replicated spatial point patterns. Oral presentation. *Western North American Region of the International Biometric Society and the Institute of Mathematical Statistics, Flagstaff, AZ*.

15 May 2006. Issues with categorizing continuous variables. *Epi Methods Group, University*

of Otago.

30 Mar 2006. An introduction and overview of mixed models. *Centre for Applied Statistics and Mathematics, University of Otago.*

14 Aug 2003. The use and misuse of baseline measurements in longitudinal analyses. *Center for Applied Statistics and Mathematics, University of Otago.*

26 Aug 2003. Some applications of spatial statistics for replicated point patterns: taste bud formation in salamanders & cone patterns in drosophila eyes. *Department of Anatomy, University of Otago.*

2002. The use of maximum pseudolikelihood in generalized linear mixed models for the analysis of replicated spatial point patterns. Poster. *Center for Computational Biology, Denver, CO.*

2001. Carbohydrate balance on a high carbohydrate diet predicts fat gain over 4 years. Poster. *20th Annual Epidemiological Exchange, Denver, CO.*

Teaching

Curriculum Development

MSc Biostatistics University of Otago, Program Director 2007 – 2009

Primary developer of a proposal for a new MSc in Biostatistics, a joint divisional, joint departmental degree introduced in 2009. I developed a proposal with colleagues in the Department of Preventive and Social Medicine and the Department of Mathematics and Statistics, and was responsible for writing the proposal, proposing four new classes for the degree, gaining internal and external consultation from statisticians and scientists, and submitting the proposal to the Divisions of Science and Health Science, Board of Graduate Studies, and the Committee on University Academic Programmes.

Teaching

(2014-) University of Arizona

Major Involvement:	Approximate enrollment
CPH 675: Clinical Trials and Intervention Studies	12 (2014); 23 (2015)
CPH 576C: Applied biostatistics analysis	18

Minor Involvement:

CPH 376: Introduction to Biostatistics (Faculty on record)

2003 – 2009 (University of Otago)

Major Involvement:	Approximate enrollment
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STAT 440: Longitudinal Analysis	10-15
HASC 413: Introduction to Biostatistics	25-30
HASC 415: Regression Methods for Health Sciences	10-15
HASC 411: Research Methods and Study Design	25-30
HASC 402: Independent Study: Data Analysis	2-3
Medical Students Health Care Evaluation projects. Co-supervisor.	10

Minor Involvement:

INDX 704: Research Methods in Occupational Health	15-20
HEAL 192: Foundations of Epidemiology	500
PUBH 701: Epidemiology and Biostatistics	25-30
2nd and 3rd year medical students	200
Dunedin basic medical sciences course	200

1998 – 2002 (University of Colorado Health Sciences Center)

SAS computer labs for Masters of Public Health students

1988 – 1997 Mathematics (NAU, Yavapai College, University of AZ)

Basic math/pre-algebra; College Algebra; Trigonometry; Business calculus; Liberal Arts Math; Pre-calculus; Calculus I; Calculus II; Calculus III (Vector Calculus); Differential Equations

SERVICE

Grant review

Medical Research Council, UK 2013
Istituto Toscano Tumori (Tumour Institute of Tuscany), Italy 2014
National Health and Medical Research Council, Australia 2014

Reviewing

Associate Editor BMC Medical Research Methodology

Reviewing(ad-hoc)

BMC Medical Research Methodology
Circulation: Cardiovascular Quality and Outcomes
Journal of Statistical Computation and Simulation
Supportive Care in Cancer
Biometrics
Communications in Statistics
International Journal of Collaborative Research on Internal Medicine & Public Health
Human Reproduction
Child Abuse and Neglect

Tenure Review(external)

University of South Carolina, H Chakraborty

Outreach

Statistical Society (ASA, IBS, ISCB, IMS) student membership social and information session

Nov 2014

Online learning modules. Introduction to Biostatistics and Study Design. Consumer Learning and Engagement Project with Clinical Oncological Society of Australia and Cancer Australia. July 2012

Introduction to Biostatistics. Joint Consumer Advisory Group. Adelaide. Sep 2011

Data Safety Monitoring Boards

Cystic Fibrosis Foundation Therapeutic. Nov 2014 -

Activate: Phase IV Hepatitis C trial. Nov 2011 – May 2014

Committees

Graduate Inter-disciplinary Program, Vice Chair Executive Committee, summer 2014 -

Biostatistics Faculty Search Committee, 2014.

Environmental Health Sciences Faculty Search Committee, Spring/summer 2014.

Graduate Admissions Committee, Statistics Graduate Interdisciplinary Program (GIDP), Spring 2014.

Annual Performance Review Epi & Biostats Division Committee, Nov 2013, Feb 2014

Consumer Engagement Curriculum Committee, COSA. March 2012 – Nov 2012.

Council member, Statistical Society of Australia New South Wales Branch Dec 2011 – May 2013

Standard Operating Procedures Committee, PoCoG. June 2011 – April 2013

Scientific Advisory Committee, PoCoG. Nov 2011 – April 2013

Expert panel member, Complementary and Alternative Medicine Concept Development Workshop (Clinical Oncological Society of Australia satellite). Nov 2010.

Examiner for Workplace Project, master's in biostatistics, Biostatistics Collaboration of Australia, 2010-2012.

Program director of the University of Otago Masters in Biostatistics.

Organizer New Zealand Biostatistics 2-day workshop: Applied Longitudinal Data Analysis. Speakers: Patrick Heagerty and Garret Fitzmaurice. 2008.

Research Advisory Committee, Dept of Preventive and Social Medicine. 2007–2009.

Internal examiner for master's thesis from Department of Mathematics and Statistics, 2006.

Consulting

Statistical Consultant for the Quality of Life Office, cancer co-operative groups, 2010-2013

Statistical Consultant to PoCoG members (up to 4 hours per year free), 2010-2013

Statistical Consultant to School of Physiotherapy, 2003–2009.

Statistical Consulting for Warren Frost, NZ Cricket trainer, 2006.

Statistical Consultant to U of Otago, Department of Anatomy and Structural Biology, 2003–2004.

Review Courses

Consumer Engagement: Introduction to Biostatistics and Study Design. Two online learning modules. *Consumer Learning and Engagement Project with Clinical Oncological Society of Australia and Cancer Australia.*

Basic Physician Training, Dept of Medical and Surgical Sciences, Dunedin School of Medicine: Statistics. 2005, 2008.

The Royal Australasian College of Physicians Written Examination Revision Course: Statistics. 2004, 2006, 2007.

STATISTICAL SOFTWARE

SAS, R, Stata, SPSS

PROFESSIONAL DEVELOPMENT/CONTINUING EDUCATION

1. Missing Data (one day). Joint Statistical Meetings, Profs Rod Little and Trivellore Raghunathan July 2012, San Diego.
2. Good Clinical Practice (GCP): Certificate 1 – Research and GCP Foundations (3 online modules); Certificate 2 – Stakeholder roles and responsibilities (3 modules) Certificate 3 – Practical Considerations in the conduct of clinical trials (4 modules). January 2012. Online course by Australian Research Collaboration Service
3. Health Economics in Cancer Trials (three days). May 2011, Centre for Health Economics Research and Evaluation, University of Technology Sydney.
4. Data Confidentiality Symposium (one day). January 2011. Commonwealth Scientific and Industrial Research Organisation (CSIRO), Sydney.
5. Structural Equation Modeling (three day). December 2010. University of Sydney.
6. Longitudinal Analysis for Categorical Data (two days), Prof Geert Mohlenberghs. August 2008. International Society for Clinical Biostatistics, Copenhagen.
7. Applied Longitudinal Data Analysis (two days), Profs Patrick Heagerty and Garrett Fitzmaurice. Feb 2008. University of Auckland.
8. Causal Inference in Experimental and Observational Studies (one day), Prof Donald Rubin. American Statistical Association, Western North American Region conference, University of

California, Irvine.

9. New Developments in Meta-Analysis (two days). Feb2006. University of Auckland.

REFERENCES

Professor Phyllis Butow, PoCoG Head. University of Sydney. Australia.
phyllis.butow@sydney.edu.au; (612) 9351-2859

Dr Melanie Price, Executive Director PoCoG. University of Sydney. Australia.
melanie.price@sydney.edu.au; (612) 9351-3916

Dr Katrina Sharples, Associate Professor Biostatistics. University of Otago, Dunedin, New Zealand. katrina.sharples@otago.ac.nz; (643) 479-7221

Dr Rob McGee, Head of Department, Preventive and Social Medicine. University of Otago.
rob.mcgee@otago.ac.nz; (643) 479 7243

Dr Gary Grunwald, Professor Biostatistics. University of Colorado at Denver.
gary.grunwald@ucdenver.edu; (303) 388-3373