

## Curriculum Vitae

### Personal Details:

**Name:** Graham Stewart Scotland

**Department:** Health Economics Research Unit  
Institute of Applied Health Sciences  
University of Aberdeen  
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### Educational Background and Qualifications:

2005 - 2011: **PhD in Health Economics, University of Aberdeen:** Eliciting and applying preferences in economic evaluation: case studies in reproductive health (Awarded December 2011)

2000 - 2001: **MSc Health Services and Public Health Research,** University of Aberdeen. Modules: Health Economics, Applied Statistics, Health Services Research, Epidemiology and Public Health.

*Dissertation:* The costs and consequences of interventions to reduce mother to child HIV transmission in sub-Saharan Africa: A systematic review.

1994 - 1998: **BSc Biological Science with Honours in Pharmacology,** University of Edinburgh (2:1)

*Dissertation:* Characterisation of the 5-HT<sub>2A</sub> receptor.

### Employment History:

April 2012 -: **Senior Research Fellow (Grade 8):** *Health Economics Research Unit / Health Services Research Unit, University of Aberdeen*

- Assessment of Technologies theme leader

Jan 2010 -: **Research Fellow (Grade 7):** *Health Economics Research Unit, University of Aberdeen*

March 2012

March 2004 -: **Research Fellow (Grade 6):** *Health Economics Research Unit, University of Aberdeen*

Dec 2009

Sept 2001 -: **Research Assistant (Grade 1A):** *Dugald Baird Centre, University of Aberdeen,*

Mar 2004 *Aberdeen*

**Membership of Professional Bodies and Professional status:**

- Scottish Medicines Consortium, appraisal committee member (2015)
- International Health Economics Association (iHEA)
- UK Health Economists Study Group (HESG).
- Expert reviewer for the National Institute for Health Research Health Technology Assessment (NIHR HTA) Programme
- Refereeing for grant awarding bodies: NIHR HTA Programme; MRC; Chief Scientist's Office of the Scottish Government Health and Social Care Directorate
- Refereeing for Journals: *Including*: Value in Health; Health Economics; Lancet; Health Technology Assessment; and health economic submissions to many clinical field journals.

**Other training:**

- Advanced methods in cost-effectiveness analysis. University of Oxford, July 2004
- Introduction to applied health economics. University of York, April 2009
- Statistical analysis with missing data using multiple imputation and inverse probability weighting. Scottish Health Informatics Programme, University of St Andrews, June 2011.
- Advanced modelling methods for health economic evaluation. University of Glasgow, September 2012.
- InterTASC Workshop: Widening the Perspective, May, 2013
- SHIP Information Governance: May 2014
- InterTASC Workshop: Survival analysis, October 2014
- Good Clinical Practice: March 2015

**Teaching and Supervision:**

- Postgraduate Certificate in Health Economics, Health Economics Research Unit, University of Aberdeen: PU5501 *Economic Evaluation - Applications and Policy*
- BS Medical Sciences, University of Aberdeen: Introduction to Economic Evaluation
- Deliver guest lectures on economic evaluation to undergraduate and postgraduate students
- Co-supervising PhD Student: Ante Tockhorn (University of Aberdeen) - The assessment and appraisal of branded pharmaceuticals in the UK – going beyond the QALY in the context of Value-based Pricing

**Analytical software:**

Advanced: TreeAge (decision tree modelling, Markov modelling, patient level micro-simulation, discrete event simulation), STATA (e.g. econometric analysis of cost data, qualitative choice modelling, multilevel modelling), and Excel.

Proficient: SPSS;

Basic: R, SAS

## **Bibliography:**

### **Refereed papers**

**Scotland G**, van Teijlingen E, van der Pol M, Smith WCS. A review of studies assessing the costs and consequences of interventions to reduce mother-to-child HIV transmission in sub-Saharan Africa. *Acquired Immune Deficiency Syndromes* 2003; 17: 1045-1052

Bell J, Hussein J, Jentsch B M, **Scotland G**, Bullough C, Graham W. Improving Skilled Attendance at Delivery: A Preliminary Report of the SAFE Strategy Development Tool. *Birth: Issues in Perinatal Care* 2003; 30: 227-234

Milne L, **Scotland G**, Tagiyeva-Milne N, Hussein J. Safe motherhood programme evaluation: theory and practice. *Journal of Midwifery and Women's Health* 2004; 49(4): 338-344

**Scotland GS**, Bullough CHW. What do doctors think their caseload should be in order to maintain their skills for delivery care. *International Journal of Gynaecology and Obstetrics* 2004; 87(3): 301-7

**Scotland GS**, McNamee P, Bhattacharya S. Is elective single embryo transfer a cost-effective alternative to double embryo transfer? *BJOG: An International Journal of Obstetrics and Gynaecology* 2007; 114: 5-7

Waugh N, **Scotland G**, McNamee P, Gillett M, Brennan A, Goyder E, Williams R, John A. Screening for Type 2 diabetes: literature review and economic modelling. *Health Technology Assessment* 2007; 11 (17): 1-160

**Scotland GS**, McNamee P, Peddie V, Bhattacharya S. Safety versus success in elective single embryo transfer (eSET): women's preferences for outcomes of IVF. *BJOG: An International Journal of Obstetrics and Gynaecology* 2007; 114(8):977-83

Philip S, Fleming AD, Goatman KA, Fonseca S, McNamee P, **Scotland GS**, Prescott GJ, Sharp PF, Olson JA. The efficacy of automated "disease/no disease" grading for diabetic retinopathy in a systematic screening programme. *British Journal of Ophthalmology* 2007; 91(11):1512-7

**Scotland GS**, McNamee P, Philip S, Fleming AD, Goatman KA, Fonseca S, Prescott GJ, Sharp PF, Olson JA. Cost-effectiveness of implementing automated grading within the national screening programme for diabetic retinopathy in Scotland. *British Journal of Ophthalmology* 2007; 91(11):1518-23

Cheyne H, Hundley VA, Dowding D, Bland JM, McNamee P, Greer I, Styles M, Carol B, **Scotland GS**, Niven C. The effects of an algorithm for diagnosis of active labour: a cluster randomised trial. *British Medical Journal* 2008; 337: a2396

Maheshwari A, **Scotland G**, Bell J, McTavish A, Hamilton M, Bhattacharya S. The direct health services costs of providing assisted reproduction services in overweight or obese women: a retrospective cross-sectional analysis. *Human Reproduction* 2009; 24(3):633-9

Maheshwari A, **Scotland G**, McTavish A, Bell J, Hamilton M, Bhattacharya S. Direct health services costs of providing assisted reproduction services in older women-Retrospective cross-sectional analysis. *Fertility and Sterility* 2010; 93(2):527-36

Fleming AD, Goatman KA, Philip S, Williams GJ, Prescott GJ, **Scotland GS**, McNamee P, Leese GP, Wykes W, Sharp PF, and Olson JA, on behalf of the Scottish Diabetic Retinopathy Clinical

Research Network. The role of haemorrhage and exudate detection in automated grading of diabetic retinopathy. *British Journal of Ophthalmology* 2010; 94(6):706-11

**Scotland GS**, McNamee P, Fleming AD, Goatman KA, Philip S, Prescott GJ, Sharp PF, Williams GJ, Wykes W, Leese GP, and Olson JA, on behalf of the Scottish Diabetic Retinopathy Clinical Research Network. Costs and consequences of automated algorithms versus manual grading for the detection of referable diabetic retinopathy. *British Journal of Ophthalmology* 2010; 94(6):712-9

Black C, Sharma P, **Scotland G**, McCullough K, McGurn D, Robertson L, Fluck N, Hannaford P, MacLeod A, McNamee P, Prescott G, Smith C. Early referral strategies for management of people with markers of renal disease: a systematic review of the evidence of clinical effectiveness, cost effectiveness and economic analysis. *Health Technology Assessment* 2010; 14(21):1-184

Sharma P, McCullough K, **Scotland G**, McNamee P, Prescott G, MacLeod A, Fluck N, Smith WC, Black C. Does stage 3 chronic kidney disease matter? A systematic literature review. *British Journal of General Practice* 2010; 60(575): 442-448

**Scotland GS**, McNamee P, Cheyne H, Hundley V, Barnett C. Women's Preferences for aspects of labour and delivery care: results from a discrete choice experiment. *Birth* 2011; 38(1):36-46

**Scotland G**, Waugh N, Royle P, McNamee P, Henderson R, Hollick R. Denosumab for the prevention of osteoporotic fractures in post-menopausal women: a NICE single technology appraisal. *Pharmacoeconomics* 2011; 29 (11): 951-961

**Scotland G**, McLernon D, Kurinczuk JK, McNamee P, Harrild K, Lyall H, Rajkhowa M, Hamilton M, Bhattacharya S. Minimising twins in IVF: a modelling study assessing the costs, consequences, and cost-utility of elective single versus double embryo transfer over a 20 year time horizon. *BJOG: An International Journal of Obstetrics and Gynaecology* 2011; 118(9):1073-83

Waugh N, Royle P, **Scotland G**, Henderson R, Hollick R, McNamee P. Denosumab for the prevention of osteoporotic fractures in post-menopausal women: TAR Evidence Review Group Synopsis. *Health Technology Assessment* 2011; 15 Suppl 1: 51-9

McBeth J, Prescott G, **Scotland G**, Lovell K, Keeley P, Hannaford P, McNamee P, Symmons DPM, Woby S, Gkazinou C, Beasley M, Macfarlane GJ. Cognitive behavior therapy, exercise, or both for treating chronic widespread pain. *Archives of Internal Medicine* 2012; 172(1): 48-57

Gillett M, Royle P, Snaith A, **Scotland G**, Poobalan A, Imamura M, Black C, Boroujerdi M, Jick S, Wyness L, McNamee P, Brennan A, Waugh N. Non-pharmacological interventions to reduce the risk of diabetes in people with impaired glucose regulation: a systematic review and economic evaluation. *Health Technology Assessment* 2012 Aug;16(33):1-236

Mowatt G, **Scotland G**, Boachie C, Cruickshank M, Ford JA, Fraser C, Kurban L, Lam TB, Padhani AR, Royle J, Scheenen TW, Tassie E. The diagnostic accuracy and cost-effectiveness of magnetic resonance spectroscopy and enhanced magnetic resonance imaging techniques in aiding the localisation of prostate abnormalities for biopsy: a systematic review and economic modelling. *Health Technology Assessment* 2013; 17(20):1-281

Porteous T, Wyke S, Smith S, Bond CM, Francis J, Lee AJ, Lowrie R, **Scotland G**, Sheikh A, Thomas M, Smith L. "Help for Hay Fever", a goal-focussed intervention for people with intermittent allergic rhinitis, delivered in Scottish community pharmacies: study protocol for a pilot cluster randomised controlled trial. *Trials* 2013; 14: 217

Olson J, Sharp P, Goatman K, Prescott G, **Scotland G**, Fleming A, Philip A, Santiago C, Borooah S, Broadbent D, Chong V, Dodson P, Harding S, Leese G, Styles C, Swa K, Wharton H. Improving the Economic Value of Photographic Screening for Optical Coherence Tomography-Detectable Macular Oedema - A Prospective, Multi-Centre, United Kingdom Study. *Health Technology Assessment* 2013; 17(51): 1-142

Prescott G, Sharp P, Goatman K, **Scotland G**, Fleming A, Philip A, Staff R, Santiago C, Borooah S, Broadbent D, Chong V, Dodson P, Harding S, Leese G, Megaw R, Styles C, Swa K, Wharton H, Olson J. Improving the cost-effectiveness of photographic screening for diabetic macular oedema: a prospective, multi-centre, UK study. *British Journal of Ophthalmology* 2014; 98(8), 1042-1049.

Denison FC, Norwood P, Bhattacharya S, Duffy A, Mahmood T, Morris C, Raja EA, Norman JE, Lee AJ, **Scotland G**. Association between obesity during pregnancy, short-term morbidity and increased health service costs: a population based study. *BJOG: An International Journal of Obstetrics and Gynaecology* 2014; 121(1): 72-81

Pandey S, McLernon DJ, **Scotland G**, Mollison J, Wordsworth S, and Bhattacharya S. Cost of fertility treatment and live birth outcome in women of different ages and BMI. *Human Reproduction* 2014; 29(10): 2199-2211.

Brittenden J, Cotton SC, Elders A, Ramsay CR, Norrie J, Burr J, Campbell B, Bachoo P, Chetter I, Gough M, Earnshaw J, Lees T, Scott J, Baker SA, Francis J, Tassie E, **Scotland G**, Wileman S. and Campbell MK. A randomized trial comparing treatments for varicose veins. *New England Journal of Medicine* 2014; 371(13): 1218-1227.

Tassie, E., **Scotland, G.**, Brittenden, J., Cotton, S. C., Elders, A., Campbell, M. K., Campbell, B., Gough, M., Burr, J. M., Ramsay, C. R. and on behalf of the Class study team (2014) 'Cost-effectiveness of ultrasound-guided foam sclerotherapy, endovenous laser ablation or surgery as treatment for primary varicose veins from the randomized CLASS trial', *British Journal of Surgery* 2014; 101(12), 1532-1540.

Wardlaw, J., Brazzelli, M., Miranda, H., Chappell, F., McNamee, P., **Scotland, G.**, Quayyum, Z., Martin, D., Shuler, K., Sandercock, P. and Dennis, M. (2014) 'An assessment of the cost-effectiveness of magnetic resonance, including diffusion-weighted imaging, in patients with transient ischaemic attack and minor stroke: a systematic review, meta-analysis and economic evaluation', *Health Technology Assessment* 2014; 18(27).

Brittenden J, Cotton SC, Elders A, Tassie E, **Scotland G**, Ramsay C, Norrie J, Burr J, Francis J, Wileman S, Campbell B, Bachoo P, Chetter I, Gough M, Earnshaw J, Lees T, Scott J, Baker SA, MacLennan G, Prior M, Bolsover D, Campbell MK. Clinical and cost-effectiveness of foam sclerotherapy, endovenous laser ablation and surgery for varicose veins: results from the CLASS trial. *Health Technology Assessment* 2015; 19(27): 1-342

Beasley M, Prescott GJ, **Scotland G**, McBeth J, Lovell K, Keeley P, Hannaford PC, Symmons DPM, MacDonald RIR, Woby S, Macfarlane GJ. Patient-reported improvements in health are maintained two-years after completing a short course of cognitive behaviour therapy, exercise or both treatments for chronic widespread pain: long-term results from the MUSICIAN randomised controlled trial. *RMD Open* 2015; 1(1): e000026

Sharma P, **Scotland G**, Cruickshank M, Tassie E, Fraser C, Burton C, Croal B, Ramsay CR, Brazzelli M. Clinical and cost-effectiveness of point-of-care tests (CoaguChek system, INRatio2 PT/INR monitor and ProTime Microcoagulation system) for the self-monitoring of the coagulation status of people receiving long-term vitamin K antagonist therapy compared with standard UK practice: systematic review and economic evaluation. *Health Technology*

*Assessment* 2015;19(48):1-172.

Sharma P, **Scotland G**, Cruickshank M, Tassie E, Fraser C, Burton C, Croal B, Ramsay CR, Brazzelli M. Is self-monitoring an effective option for people receiving long-term vitamin K antagonist therapy? A systematic review and economic evaluation. *BMJ Open* 2015; 5(6): e007758

**Scotland G**, McKeigue P, Philip S, Leese GP, Olson JA, Looker HC, Colhoun HM, Javanbakht M.. Modelling the cost-effectiveness of adopting extended screening intervals in the national diabetic retinopathy screening programme in Scotland. *Diabetic Medicine* 2016; 33(7): 886–895

#### **Papers forthcoming (In press)**

**Scotland G**, Bryan S. Why do health economists promote technology adoption rather than the search for efficiency? A proposal for a change in our approach to economic evaluation in health care. *Medical Decision Making*; In press.

Azuara-Blanco A, Burr J, Ramsay C, Cooper D, Foster P, Friedman DS, **Scotland G**, Javanbakht M, Cochrane C, Norrie J. The effectiveness of early lens extraction for the treatment of primary angle-closure glaucoma: a randomised controlled trial (EAGLE). *Lancet*; Forthcoming.

#### **Conference presentations/papers**

**Scotland GS**, McNamee P, Philip S, Fleming A, Goatman KA, Prescott G, Fonseca S, Sharp PF, Olson JA. Costs and consequences of implementing automated grading within a national screening programme for diabetic retinopathy. Poster presentation, *Diabetes UK Annual Professional Conference*, Liverpool, 2006

**Scotland GS**, McNamee P, Peddie V, Bhattacharya S. Safety versus success in SET: women's preferences for outcomes of IVF. Oral presentation at the *22nd Annual Meeting of the European Society for Human Reproduction and Embryology*, Prague, June 2006 (Human Reproduction 2006; 21(Supplement1): i81, O-205)

**Scotland GS**, McNamee P. A methodological comparison of alternative standard gamble chaining procedures. Paper presented at the *Health Economists Study Group*, York, July 2006

Cheyne H, Hundley V, Dowding D, Aucott L, McNamee P, Styles M, Barnett CA, Greer I, Bland M, Niven K, McNamee P, **Scotland GS**. Measuring the Benefits of an algorithm for diagnosis of active Labour: Results from a Discrete Choice Experiment (DCE). The Early Labour Study in Scotland (TELSiS). *Symposium at the 28<sup>th</sup> Congress of the International Confederation of Midwives*, Glasgow, June 2008

**Scotland GS**, McNamee P, Ryan M. Should we be concerned about learning effects in discrete choice experiments? Oral presentation at the *7<sup>th</sup> European Conference on Health Economics*, Rome, July 2008.

Gillett M, Waugh N, Brennan A, **Scotland G**, Royle P. Cost effectiveness of a 2-step lifestyle or metformin strategy for prevention of type 2 diabetes. Poster presentation at the *The World Congress on Controversies to Consensus in Diabetes, Obesity and Hypertension (CODHy)*. Barcelona, Spain, November 2008.

Maheshwari A, **Scotland G**, McTavish A, Bell J, Hamilton M, Bhattacharya S. Direct health services costs of providing assisted reproduction services in older women. Poster Presentation to the *Grampian NHS Endowments Conference*, November 2008, Aberdeen.

Maheshwari A, **Scotland G**, McTavish A, Bell J, Hamilton M, Bhattacharya S. Direct health services costs of providing assisted reproduction services in older women-Retrospective cross-sectional analysis. Oral presentation at the *British Fertility Association Summer College*, Liverpool, 2008

Black C, **Scotland GS**, Sharma P, McCullough K, Macleod AM. Early referral for chronic kidney disease: the evidence and economic case. Poster presentation at the *Annual Meeting of the American Nephrology Association*, October 2009.

**Scotland GS**, McNamee P, Fleming AD, Goatman KA, Philip S, Prescott GJ, Sharp PF, Williams GJ, Wykes W, Leese GP, and Olson JA, on behalf of the Scottish Diabetic Retinopathy Clinical Research Network. Costs and consequences of automated algorithms versus manual grading for the detection of referable diabetic retinopathy. Oral Presentation at the *World Ophthalmology Congress*, Berlin, June 2010.

**Scotland GS**, McLernon D, Kurinczuk JJ, Jamieson M, Lyall H, Rajkhowa M, Harrold A, Bhattacharya S. Avoiding twins in IVF: the cost-effectiveness and cost-utility of elective single and double embryo transfer over a 20 year time horizon. Oral Presentation and at the *Annual Meeting of the European Society for Human Reproduction and Embryology*, Rome, June 2010.

Sharma P, Black C, **Scotland G**, McCullough K, Robertson L, Fluck N, Macleod AM, McNamee P, Prescott G, WC Smith from ARRC HTA group. Approaches to care in Chronic Kidney Disease: supporting the development of a health economics model. Poster presentation at *Health Technology Assessment International*, Dublin, June 2010

Sharma P, Black C, **Scotland G**, McCullough K, Robertson L, Fluck N, Macleod AM, McNamee P, Prescott G, Smith WC from ARRC HTA group. The building blocks for complex decision making: an example of HTA in chronic kidney disease care. Poster presentation at *Health Technology Assessment International*, Dublin, June 2010

Cruickshank M, Mowatt G, **Scotland G**, Boachie C, Ford JA, Fraser C, Kurban L, Lam TB, Padhani AR, Royle J, Scheenen TW, Tassie E. Systematic review of the diagnostic accuracy and cost-effectiveness of magnetic resonance spectroscopy and enhanced magnetic resonance imaging techniques in aiding the localisation of prostate abnormalities for biopsy. *Improving quality in health care: translating research into practice*. Edinburgh, November 2012.

Denison FC, Raja A, **Scotland G**, Bhattacharya S, Mahmood T, Morris C, Norman JE, Lee A. Maternal obesity is associated with increased maternal and offspring morbidity in both primiparous and multiparous women. Poster presentation, *59th Annual Scientific Meeting of the Society for Gynecologic Investigation*, San Diego, March 2012.

Denison FC, Norwood PF, Bhattacharya S, Mahmood T, Morris C, Norman JE, Lee A, **Scotland G**. Maternal obesity is independently associated with increased antenatal admissions and health service costs. Poster presentation, *59th Annual Scientific Meeting of the Society for Gynecologic Investigation*, San Diego, March 2012.

Denison FC, Norwood PF, Bhattacharya S, Mahmood T, Morris C, Norman JE, Lee A, **Scotland G**. Maternal obesity is independently associated with increased antenatal admissions and health service costs. POSTER presentation, *British Maternal and Fetal Medicine Society's 15<sup>th</sup> Annual Conference*, April 2012

Denison FC, Raja A, **Scotland G**, Bhattacharya S, Mahmood T, Morris C, Norman JE, Lee A. Maternal obesity is associated with increased maternal and offspring morbidity in both primiparous and multiparous women POSTER presentation, *British Maternal and Fetal Medicine Society's 15<sup>th</sup> Annual Conference*, April 2012

Cruickshank M, Mowatt G, **Scotland G**, Boachie B, Ford JA, Fraser C, Kurban L, Lam TB, Padhani AR, Royle J, Scheenen TW, Tassie E. Systematic review of the diagnostic accuracy of MRS and enhanced MRI techniques in aiding localisation of prostate abnormalities for biopsy. Poster presentation, *Improving Quality ion Health Care: Translating Evidence into Practice*. Edinburgh, November 2012.

Tassie E, Mowatt G, Boachie B, Cruickshank M, Ford JA, Fraser C, Kurban L, Lam TB, Padhani AR, Royle J, Scheenen TW, **Scotland G**. Modelling the cost-effectiveness of using different MRI techniques to localise prostate abnormalities for biopsy in patients with a previous negative biopsy – the challenge of identifying the optimal strategy. *Health Technology Assessment International* (HTAi), Seoul, July 2013.

Beasley, M., Prescott, GJ., McBeth, J., **Scotland, GS.**, Lovell, K., Keeley, P., McNamee, P., Symmons, DPM., Woby, S., Gkazinou, C. & Macfarlane, G. (2013). 'Long-term effects of cognitive behaviour therapy and exercise for chronic widespread pain'. *Annals of the Rheumatic Diseases*, vol 72, no. Suppl3, 131.

**Scotland G**, Tassie E, Mowatt G, Boachie B, Cruickshank M, Ford JA, Fraser C, Kurban L, Lam TB, Padhani AR, Royle J, Scheenen TW,. Modelling the cost-effectiveness of using different MRI techniques to localise prostate abnormalities for biopsy in patients with a previous negative biopsy. Poster presentation, *Methods for Evaluating Medical Tests & Biomarkers*, Symposium 2013, Birmingham, 2013.

Beasley, M., Prescott, G., **Scotland, G.**, McBeth, J., Keeley, P., Lovell, K., Hannaford, P., McNamee, P., Symmons, D. P. M., Woby, S. and Macfarlane, G. (2014) 'Long-term results from a randomised controlled trial of cognitive behaviour therapy and exercise for chronic widespread pain', British Pain Society Annual Scientific Meeting, Manchester, 29 April - 1 May 2014.

Booroah, S., Megaw, R., Goatman, K., **Scotland, G.**, Prescott, G., Sharp, P. and Olson, J. (2014) 'Multi-centre, prospective, observational, cohort study to assess the cost-effectiveness of English, Scottish and a hybrid grading schemes for diabetic macular oedema screening: improving screening for macular oedema (ISMO) study', Royal College of Ophthalmologists Annual Congress Birmingham, 20-22 May 2014.

Megaw, R., Booroah, S., Goatman, K., **Scotland, G.**, Prescott, G., Sharp, P. and Olson, J. (2014) 'The use of OCT in retinal screening: results from the Improving Screening for Macular Oedema (ISMO) Study', Royal College of Ophthalmologists Annual Congress Birmingham, 20-22 May 2014.

**Scotland, G.** (2014) 'Future directions and challenges for assessment of technologies ', *HERU conference celebrating 40 Years of Health Economics at Aberdeen University: a tribute to Professor Gavin Mooney*, University of Aberdeen, 21 October 2014.

**Scotland, G.** and Bryan, S. (2014) 'In with the old, out with the new'. In search of ways to help health economists' break their addiction to technology adoption', *Health Economists' Study Group (HESG) Meeting*, Glasgow Caledonian University, 23-25 June 2014.

**Scotland, G.** and Bryan, S. (2014) "In with the old, out with the new": In search of ways to help health economists' break their addiction to technology adoption', *Health Economics in the Age of Longevity: a Joint iHEA & ECHE Congress*, Trinity College, Dublin, 13-16 July 2014.

Bryan S, **Scotland G**, Sadatsafavi M. In Search of Efficiency, Consistency, Fairness, and Impact in HTA: The Case for Clinical Pathway Management and Modelling. Panel Session at the



Canadian Agency for Drugs and Technology in Health (CADTH) Symposium, Saskatoon, April 2015.

Tassie E, **Scotland G**. Characterising structural uncertainty arising from the use of a Markov model to extrapolate longer-term estimates of cost-effectiveness from short-term randomised data. Oral presentation, HTAi, Oslo, June 2015.

Sharma P, **Scotland G**, Cruickshank M, Tassie E, Fraser C, Burton C, Croal B, Ramsay CR, Brazzelli M. Assessment of diagnostic tests and the impact on decision making: self-monitoring of oral anticoagulation therapy. Oral presentation, HTAi, Oslo, June 2015.

Bryan S, **Scotland G**. 'Why do health economists promote technology adoption rather than the search for efficiency?' Oral presentation accepted at the 11th meeting of the International Society for Priorities in Health (ISPH), Birmingham, 7-9<sup>th</sup> September 2016.

#### Conference abstracts under review

#### Other external presentations

Jentsch B, **Scotland GS**. The Skilled Attendance for Everyone (SAFE) strategy development Tool. Presentation to the National Institute of Public Health, Cuernavaca, Mexico, March 2002

Hussein J, Bullough C, Bell J, Jentsch BM, **Scotland GS**. The Strategy Development Tool. Panel presentation at the *Skilled Attendance for Everyone (SAFE) International Research Partnership Workshop*, Aberdeen, February 2003

**Scotland GS**. Costing the strategy development Tool. *Skilled Attendance for Everyone (SAFE) International Research Partnership Workshop*, Aberdeen, February 2003

**Scotland, G**. (2014) 'In with the old, out with the new. In search of ways to help health economists' break their addiction to technology adoption', Health Economics Research Centre (HERC) Seminar Series, University of Oxford, 20 November 2014.

#### Other reports, commissions and exhibitions

**Scotland GS**, Stearns S on behalf of the SAFE international Research Partnership (2003). Costing Manual for the SAFE strategy development tool: A guide for developing strategies to improve skilled attendance at delivery. The Dugald Baird Centre for Research on Women's Health, University of Aberdeen, Scotland. <http://www.abdn.ac.uk/dugaldbairdcentre/safe/resources.hti>

The SAFE international Research Partnership (2003). The SAFE Strategy Development Tool: A guide for developing strategies to improve skilled attendance at delivery. The Dugald Baird Centre for Research on Women's Health, University of Aberdeen, Scotland. <http://www.abdn.ac.uk/dugaldbairdcentre/safe/resources.hti>

**Scotland GS**, McNamee P, Philip S, Fleming AD, Goatman KA, Sharp PF, McNamee P, Fonseca S, Prescott GJ, Olson JA Manual versus automated: the diabetic retinopathy screening debate. Automated screening could be the cost-effective route. *Ophthalmology Times Europe* 2008; 4(2): 14-16

Philip S, Fleming AD, Goatman KA, Fonseca S, McNamee P, **Scotland GS**, Prescott GJ, Sharp PF, Olson JA. The role of automated grading of diabetic retinopathy in a primary care screening programme. Scottish Executive Health Department Chief Scientist Office, Focus on Research

Fleming AD, Goatman KA, Philip S, Williams GJ, Prescott GJ, **Scotland GS**, McNamee P, Leese GP, Wykes W, Swa K, Viridi M, Sharp PF, and Olson JA. The role of automated level-two

grading within the diabetic retinopathy screening collaborative network. Scottish Executive Health Department Chief Scientist Office, Focus on Research

Tinelli M, **Scotland G**, Watson M. An economic evaluation of the NHS Grampian Chlamydia Testing Study. Report submitted to NHS Grampian, December 2008. Available at: [http://www.hi-netgrampian.org/hinet/file/5066/economic\\_evaluation\\_FINALversion260609.doc](http://www.hi-netgrampian.org/hinet/file/5066/economic_evaluation_FINALversion260609.doc)

Bhattacharya S, **Scotland G**, Harrild K, Kurinczuk JK, Lyall H, Rajkhowa M, Harrold A. Clinical and cost-effectiveness of elective single embryo versus double embryo transfer policy in assisted reproduction. Final Report submitted to the *Chief Scientist Office*, February 2010 (CZG/2/361) (Graded Excellent)

**Scotland G**, Royle P, Henderson R, Hollick R, McNamee P, Waugh N. (2010) *Evidence Review Group: denosumab for the prevention of osteoporotic fractures in post-menopausal women*. Final report submitted to the National Institute for Health and Clinical Excellence STA Programme. Available online: <http://www.nice.org.uk/guidance/index.jsp?action=download&o=49283>

Denison FC, Lee A, Norman J, Bhattacharya S, **Scotland GS**, Morris C, Mahmood T. (2011) *The clinical and short-term NHS costs of maternal obesity for maternity services in Scotland*. Final Report submitted to the Chief Scientist Office (CZG/2/471)

Scotland G. Economic Evaluation of an Early Referral Strategy for People with Chronic Kidney Disease. *HERU Briefing Paper*, University of Aberdeen, February 2011

Mowatt G, Scotland G, Boachie C, Cruickshank M, Ford JA, Fraser C, Kurban L, Lam TB, Padhani AR, Royle J, Scheenen TW, Tassie E. (2012) *Systematic review of the diagnostic accuracy and cost-effectiveness of magnetic resonance spectroscopy and enhanced magnetic resonance imaging techniques in aiding the localisation of prostate abnormalities for biopsy*. Technology Assessment Report submitted to the NIHR HTA programme

Lee A, Porteous T, Bond C, Francis J, Lowrie R, **Scotland G**, Sheikh A, Smith L, Thomas M, Wyke S. (2013) *Can a goal-focussed intervention delivered in Scottish community pharmacies improve outcomes for people with intermittent allergic rhinitis? A pilot randomised controlled trial*. Final Report submitted to the CSO.

Sharma P, **Scotland G**, Cruickshank M, Tassie E, Fraser C, Burton C, Croal B, Ramsay CR, Brazzelli M. (2013) *Clinical and cost-effectiveness of point-of-care tests (CoaguChek system, INRatio2 PT/INR monitor and ProTime Microcoagulation system) for the self-monitoring of the coagulation status of people receiving long-term vitamin K antagonist therapy compared with standard UK practice: systematic review and economic evaluation*. Diagnostic Assessment Report submitted in support of the NICE Diagnostic Assessment Programme. Available online: <http://guidance.nice.org.uk/DT/16>

**Scotland G**, Philip S, Mckeigue P, Leese G, Olson J, Looker H, Colhoun H. Modelling the cost-effectiveness of adopting risk stratified screening intervals within the national diabetic retinopathy screening programme in Scotland. Final Report to the CSO, January 2015.

**Scotland G**, Javanbakht M, Scott N, Cruickshank M, Sharma P, Fraser C, Simpson W, Brazzelli M. Ezetimibe for treating primary (heterozygous-familial and non-familial) hypercholesterolaemia. Evidence Review Group report in support of the NICE STA Programme. Aberdeen HTA Group, 2015.

**Scotland G**, Neilson A, Javanbakht M, Fielding S, Cruickshank M, Sharma P, Fraser C, Simpson W, Brazzelli M. Alirocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia.

Evidence Review Group report in support of the NICE STA Programme. Aberdeen HTA Group, 2015.

Grants awarded:

Maheshwari A, Bhattacharya S, **Scotland GS**, Hamilton M. Economic costs to the NHS following live birth subsequent to IVF at an advanced reproductive age. *NHS Endowment Grant*, £5,600, 13/03/2007 – 01/04/2007

Olson J, Sharp P, Goatman K, **Scotland GS**, McNamee P, Prescott G, Philip S, Swa K, Newsom R. Improving the value of screening for diabetic macular oedema using surrogate photographic markers. *National Institute for Health Research Health Technology Assessment Programme*, £432,174, 01/08/2008 – 31/07/2010.

**Scotland GS**. Assessment of values that individuals place on reducing maternal and neonatal mortality. *The Carnegie Trust for the Universities of Scotland*, £2,450, 01/06/08 – 31/08/08.

**Scotland GS**. Assessment of values that individuals place on reducing maternal and neonatal mortality. *University of Aberdeen Small Grants Fund*, £500, 01/06/08 – 31/08/08.

Bhattacharya S, **Scotland GS** (Joint PI), Harrild K, Kurinczuk J, Lyall H, Harrold A, Rajkhowa M. Clinical and cost-effectiveness of elective single embryo versus double embryo transfer policy in assisted reproduction. *Chief Scientist Office*, £45,638, 01/03/08 – 28/02/09.

Denison FC (University of Edinburgh), **Scotland GS** (HERU, University of Aberdeen), Lee A (University of Aberdeen), Norman J (University of Edinburgh), Bhattacharya S (University of Aberdeen), Morris C (Information Services Division, NHS Scotland), Mahmood T (NHS National Services Scotland); The clinical and short-term NHS costs of maternal obesity for maternity services in Scotland; Source of Funding: Chief Scientist Office; Total Funding: £49,970; HERU funding: £18,234; Proposed start date: 01/08/10; Duration of research: 1 year

Pandey S, Mollison J, **Scotland G**, Wordsworth S, Bhattacharya S. Cost-effectiveness of fertility diagnosis and treatment in women of different BMI groups. *NHS Grampian Endowment Fund*; Total funding: £8,570; Start date: March 2011; Duration of research: 12 months.

Porteous T, Bond C, Sheikh A, Thomas S, **Scotland G**, Francis J, Smith L, Wyke S, Lowrie R. Can a goal-focussed intervention delivered in Scottish community pharmacies improve outcomes for people with intermittent allergic rhinitis? A pilot randomised controlled trial. *Chief Scientist Office*; Funding: £165,738; Start date: May 2012; Duration of research: 12 months.

**Scotland G**, Looker H, Colhoun, Leese G, McKeigue P, Olson J, Philip S. Modelling the cost-effectiveness of adopting risk stratified screening intervals within the national diabetic retinopathy screening programme in Scotland. *Chief Scientist Office*; Funding: £100,532; Start date: October 2013; Duration of research: 12 months.

Bhattacharya S, Cooper K, Clark J, Hawe J, Phillips K, Hawthorne J, Norrie J, Cook J, **Scotland G**. A multicentre randomised controlled trial comparing laparoscopic supracervical hysterectomy with second generation endometrial ablation for the treatment of heavy menstrual bleeding. NIHR HTA Programme; Funding: £1,470,447; Start date April 2014; Duration of research: 45 months.

Denison F, Brook-Smith S, Peace M, Norman JE, Clarkson C, Lawton J, **Scotland G**, McPherson G, Norrie J. pragmatic group sequential placebo controlled randomised trial to determine the effectiveness of Glyceryl trinitrate for retained placenta (Got-it trial) (HTA reference 12/29/01). NIHR HTA Programme, £1,719,603, Start Date April 2014, Duration of research: 42 months

Brittenden J, Ramsay C, Campbell M, Norrie J, Cotton S, **Scotland G**, Burr J, Chetter I, Bachoo P, Earnshaw J, Campbell B, Baker S, Lees T, Scott J. Randomised controlled trial comparing foam sclerotherapy, alone or in combination with endovenous laser therapy, with conventional surgery as a treatment for varicose veins (extended follow-up). NIHR HTA Programme, £248,740.20; Start Date June 2014; Duration of research: 54

Chakravarthy U, Ramsay C, Sivaprasad S, Hogg R, Heimann H, **Scotland G**, Banister K, Cook J, Azuara-Blanco A. Early detection of neovascular age-related macular degeneration (EDNA). NIHR HTA Programme; £2,749,178; Start date 1 January 2015; duration: 66 months

Maheshwari A, Macklon N, Khalaf Y, Lavery S, Child T, Rajkohwa M, Coomarasamy A, Cutting R, Brison D, Troup D, Juszczak E, Hardy P, Kurinczuk J, Lewis-Jones C, **Scotland G**, Raine-Fenning N, Bhattacharya S. E-FREEZE: Freezing of embryos in assisted conception: a randomised controlled trial evaluating clinical effectiveness and cost-consequences of freezing all embryos followed by thawed frozen embryo transfer compared with fresh embryo transfer in women undergoing in-vitro fertilization treatment. NIHR HTA Programme; £1,353,359; Start date 1 Jan, 2015; duration: 48 months.

Ramsay C, Brazelli M, Campbell M, **Scotland G**, Cummins E. Production of Technology Assessment Reviews for the National Institute for Health Research. NIHR Contract awarded; £2,674,999.60. Start date: April 2016; Duration: 60 months.

Neilson A, Tassie E, **Scotland G**. A model based cost-effectiveness analysis of opportunistic screening for identifying (undetected) atrial fibrillation (AF) with a single lead handheld electrocardiogram (ECG) monitor compared to standard practice (i.e. usual case finding) in general practitioner (GP) practices in Scotland. Digital Health Institute; £40,000; Start date: November 2015; Duration: 8 months.