

Curriculum Vitae

Personal Details:

Name: Graham Stewart Scotland

Department: Health Economics Research Unit
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Educational Background and Qualifications:

2005 - : **Currently registered part-time for a PhD in Health Economics, University of Aberdeen:** Valuing outcomes in economic evaluations of maternal and reproductive health care interventions

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_{2A} receptor.

Membership of Professional Bodies and/or Professional Qualifications:

- 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

Employment History:

March 2004 - : **Research Fellow (Grade 7):** *Health Economics Research Unit, University of Aberdeen*
Dec 2009

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*

Other training:

- Advanced methods in cost-effectiveness analysis. University of Oxford, July 2004
- Introduction to applied health economics. University of York, April 2009

Other Activities:

Teaching and learning

Tutor for the Distance Learning Postgraduate Certificate in Health Economics, Health Economics Research Unit, University of Aberdeen. Responsible for updating and teaching Module 3: *Economic Evaluation -Applications and Policy*

Responsible for the health economics component of the BS Medical Sciences degree

Deliver guest lectures on economic evaluation to PhD students and undergraduate students

Contribute to the postgraduate teaching programmes of clinical departments through delivery of seminars (Obstetrics and Gynaecology, Genetics, Public Health)

Supervise undergraduate and post graduate master's students

Peer review

Expert referee for the National Institute for Health Research, Health Technology Assessment Programme

Reviewed grant applications for the MRC and the Food and Health Bureau of the Government of Hong Kong.

Review health economics submissions to many clinical journals and some specialist health economics journals.

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 (Impact factor: 5.842)

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 (Impact factor: 2.217)

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 (Impact factor: 0.815)

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 (Impact factor: 1.144)

Scotland GS, McNamee P, Bhattacharya S. Is elective single embryo transfer a cost-effective alternative to double embryo transfer? *British Journal of Obstetrics and Gynaecology* 2007: 114: 5-7 (Impact factor: 2.666)

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 (Impact factor 3.870)

Scotland GS, McNamee P, Peddie V, Bhattacharya S. Safety versus success in elective single embryo transfer (eSET): women's preferences for outcomes of IVF. *British Journal of Obstetrics and Gynaecology* 2007; 114(8):977-83 (Impact factor 2.666)

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 (Impact factor 2.689)

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 (Impact factor 2.689)

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. Submitted to *British Medical Journal* 2008; 337: a2396 (Impact factor 9.723)

Snaith A, Royle P, Gillett M, **Scotland G**, Poobalan A, Imamura M, Black C, Boroujerdi M, Wyness L, Brennan A, Waugh N. Non-pharmacological interventions to reduce the risk of diabetes in people with impaired glucose regulation: systematic review and economic evaluation. *Health Technology Assessment* (Forthcoming) (Impact factor 3.870)

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 (Impact factor 3.543)

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* (E-publication ahead of print) (Impact factor 3.168)

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* (Online First 2009) (Impact factor 2.689)

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* (Online First 2009) (Impact factor 2.689)

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* (Forthcoming 2010)

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

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* (In press)

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* (In press)

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. *British Journal of Obstetrics and Gynaecology* (In press)

Papers under review:

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 28th 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 *7th 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 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

Conference presentations forthcoming:

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

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

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 to the Chief Scientist Office, February 2010 (CZG/2/361)

Scotland G, Royle P, Henderson R, Hollick R, McNamee P, Waugh N. 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, March 2011. Available at: <http://www.nice.org.uk/guidance/index.jsp?action=download&o=49283>

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

Grants under review:

Brittenden J, Lee A, Campbell N, Ritchie L, Bachoo P, **Scotland GS**, Belch J, Stonebridge P, Lockwood P. Cost-effectiveness of screening for peripheral arterial disease in general practice. *Submitted to the Chief Scientist Office for £495,598, July 2009*

Azuro-Blanco A, Burr J, MacLennan G, Sivaprasad S, Peto T, Foss A, Chong V, Martin M, Bailey C, **Scotland G**. Optimal screening intervals for diabetic retinopathy: Development and validation of a risk prediction algorithm, using individual patient level data, and economic modelling. Full application invited to the *NIHR HTA Programme*, for £379,276

Cooper K, Jack SA, Campbell MK, MacLennan G, Burr J, **Scotland G**. Patient satisfaction and menstrual outcome following blind versus visual second generation ablation in the post menstrual phase for the treatment of menorrhagia: A randomised controlled trial. Full application invited to the Chief Scientist Office of the Scottish Government Health Directorates

Referees:

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