

Institution: University of Aberdeen
Unit of Assessment: 2 - Public Health, Health Services and Primary Care
Title of case study: Towards improved policies on public-sector pay: revising the way government funding is allocated to hospitals, schools and public sector pay structures
<p>1. Summary of the impact</p> <p>Researchers at the University of Aberdeen's Health Economics Research Unit (HERU) have developed a theoretical model of the causes of local variations in the competitiveness of pay in the public sector and shown the impact of these variations on health and teaching services. Recommendations arising from the research have changed the way funding is distributed to: Primary Care Trusts in England and Wales; the adjustment for excess costs in the resource allocation formula for health services in Scotland; and the structure of regional pay for doctors in the UK. The evidence also underpinned proposals by the Chancellor of the Exchequer in 2012 to introduce local pay for health service and teaching professionals in England.</p> <p>The claimed impact, as defined by REF guidance, is therefore on <i>policy debate and decisions, legislation and service delivery influenced by research.</i></p>
<p>2. Underpinning research</p> <p>Private sector pay in the UK, as elsewhere, is subject to regional variations – reflecting differences in the cost of living as well as the supply and demand for similarly skilled labour. This is not the case in the public sector. As a result in important areas of the country, London and the South east in particular, public sector pay is perceived as uncompetitive and attracting and retaining staff becomes harder – leading to higher recruitment and training costs, a less productive workforce and disrupted services for the end user. Hence, creating efficient pay systems that neither under- nor overpay public sector staff is crucial for the provision of high-quality services.</p> <p>Since 2002, a team at the University of Aberdeen's HERU, led by Professor Robert Elliott (at Aberdeen since 2001) have investigated the determinants and consequences of local and regional pay variations in the public sector. The University of Aberdeen researchers integral to this research were:</p> <ul style="list-style-type: none"> • Robert Elliott, Director, HERU • Ada Ma, Research Fellow, HERU • Anthony Scott, Reader, HERU (until 31.3.05) <p>Collaborators from the Universities of Manchester, Stirling, York and University College London also contributed to this Aberdeen-led research.</p> <p>The underpinning methodology was developed between 2002 and 2005, led by HERU, funded by a grant from the Economic and Social Research Council (ESRC). The Aberdeen research team employed theories of compensating wage variation and trade union wage bargaining, established in labour economics, to model the determinants of local and regional variations in the competitiveness of pay. [1,2,3]. These variations were then related to recruitment and retention.</p> <p>The methodology was then applied in a number of important policy relevant areas:</p> <ul style="list-style-type: none"> • To develop a new method to calculate the Market Forces Factor (MFF). The MFF compensates for unavoidable cost differences in different areas and is a critical element of the formula used to distribute funding to Primary Care Trusts (PCTs) in England and Wales. Here, research was undertaken by a team at HERU, led by Elliott, in collaboration with researchers at the universities of York and Glasgow and University College, London. The first phase was carried out between November 2005 and December 2008 and was commissioned by the Advisory Committee on Resource Allocation (ACRA) as part of a major review by the Department of Health (DoH). The research recommended six major changes to the MFF formula. A second phase was conducted between December 2009 and November 2010 and resulted in further changes [4, 5, 6]

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- To research regional pay of NHS medical and non-medical staff. With Department of Health (England) funding, research was undertaken by Elliott et al, with researchers from the University of Stirling, between December 2004 and June 2005. It found that the existing structure of regional payments produced substantial local variations in pay for NHS hospital doctors and nurses and suggested this be addressed through a change in pay structure.
- To distinguish the magnitude of local variations in the unavoidable excess costs of delivering health services in Scotland. Elliott et al undertook research between December 2006 and June 2007 with funding from the NHS Scotland Resource Allocation Committee (NRAC). The research developed and applied a method for compensating Health Boards for local variations.
- To research links between local pay for teachers and school performance in England and Wales. Research was conducted between February 2008 and March 2009 by Elliott and Ma (from HERU) and Harminder Battu (University of Aberdeen Business School) with funding from the Office for Manpower Economics. Research proposed and implemented a method for redesigning pay structures, showing how the review body might allocate local authorities to different pay bands.

3. References to the research

The quality of the underpinning research and development of the main theoretical and empirical methods is evidenced by the peer reviewed articles listed below and the initial ESRC grant award which funded the initial research. Researchers from the University of Aberdeen are shown in bold text.

- [1] **Ma A, Elliott RF**, Bell D, **Scott A** and Roberts E. 2006. Comparing the NES and LFS: An analysis of the differences between the data sets and their implications for the pattern of geographical pay in the UK. *Regional Studies*, 40 (6), 645-65
Reported and evaluated the secondary data sets available for empirical research into local and regional pay
- [2] **Elliott RF**, Bell D, **Scott A, Ma A** and Roberts E. 2007. Geographically differentiated pay in the labour market for nurses. *Journal of Health Economics*. 26, 190-212
Reported the underpinning theoretical model and econometric method in an application to NHS nursing staff
- [3] **Elliott RF**, Bell D, **Scott A, Ma A**, and Roberts E. 2007. The pattern and evolution of geographic wage differences in the public and private sectors in Britain. *Manchester School* 75(4), 386-421
Explored different econometric method and data and reported the evolution of local pay differences
- [4] Resource Allocation Working Paper 1 and Resource Allocation Research Papers (RARP) 32 plus Technical Appendices, together with RARP 34a and RARP 34b at <http://www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Allocations/index.htm>
Reported the research undertaken for the Advisory Committee on Resource Allocation between 2005 and 2010
- [5] Morris S, **Elliott R, Ma A**, McConnachie A, Rice N, **Skåtun D** and **Sutton M**. (2008). Analysis of consultants' NHS and private incomes in England in 2003/4. *Journal of the Royal Society of Medicine*. 101: 372-380
Extended the analysis to provide the first detailed analysis of regional variations in consultants earnings
- [6] **Elliott R, Sutton M, Ma A**, McConnachie A, Morris S, Rice N and **Skåtun D**. (2010). The role of the staff MFF in distributing NHS funding: taking account of differences in local labour market conditions. *Health Economics*: 19, 532-548
Reported the underlying theoretical model and its empirical application to the issue of resource allocation to PCTs in the NHS in England.

The initial development of the theoretical model and empirical methods was funded by the ESRC

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(Chief Investigator, Elliott, HERU):

- Competition and Reform: Devolved Government and Public Pay-Setting. ESRC, July 2002 to June 2005 - £141,775

Further funding (all led from the University of Aberdeen, with Elliott as Chief Investigator) included:

- Regional Pay for NHS Medical and Non-Medical Staff, £35,000 - Department of Health, January 2005 - June 2005
- Adjusting the General Medical Services Allocation Formula to Reflect Recruitment and Retention Difficulties, £68,000 - Department of Health - May 2005 - January 2006
- Review of the Market Forces Factor following the Introduction of Payment-by-Results: Improving the General Labour Market Method, £96,932 - Department of Health - November 2005 - July 2006
- Review of the Resource Allocation Adjustment for Excess Costs of Supply of Healthcare Services in Scotland, £51.344 - Scottish Executive - November 2005 - June 2006
- Spatial Wage Variation for Teachers in the Public Sector in England and Wales, £25,000 - Office of Manpower Economics - February - August 2008
- The Staff Market Forces Factor Component of the Resource Allocation Weighted Capitation Formula £68,983 - Department of Health - January - September 2010

4. Details of the impact

The research described has created a substantial body of evidence and has influenced public policy and services in several ways. Geared towards improving the quality, accessibility and cost-effectiveness of UK health and education services, the work has advanced policy debate and has had a major impact on the way hospitals and schools are allocated funding. The research has produced impact in four main areas:

- **Review of the Market Forces Factor (MFF)**

The first phase of research into the MFF, commissioned in 2005, recommended six major changes to the MFF formula. The report was presented to policy makers within the Department of Health (DoH), the Technical Advisory Group on Resource Allocation (TAGRA) and ACRA. The recommendations were adopted by ACRA and formed part of their 2008 report to the DoH [a] which was implemented in 2009/10. Recommendations were geared towards a fairer distribution of funding and for the first time took part-time NHS workers, as well as those working in the City of London, into account. The second phase of the research resulted in further changes to the formula and to the distribution of funding of Primary Care Trusts which were recommended to the Secretary of State for Health in 2010 and implemented from 2011/12 onwards [b] funding totalled £89 billion for 2011/12.

- **Regional Pay for NHS Medical and Non-Medical Staff**

Here, research findings were communicated to the DoH via a written report and several presentations addressed to policy makers. The results of the research formed a central part of the DoH's submissions to the both the *Nursing and other Health Professionals Review Body* and the *Doctors and Dentists Review Body* (DDRB) in 2006, as well as the *NHS Pay Review Body* in 2011 [c,d]. In 2012 the NHS Pay Review Body Report – Market Facing Pay “*recommend[ed] a fundamental review of high cost area supplements, [and] appropriate use of local recruitment and retention premia*” on the basis of the research into how NHS labour markets are connected to the private sector” [e]

- **Review of Resource Allocation Adjustment for the Excess Costs of Health Care Services**

Having been commissioned by the NHS Scotland Resource Allocation Committee (NRAC), impact resulted from production of a report to NRAC and presentations of research to the NRAC Committee. The research formed part of the evidence base for the recommendations in NRAC's 2007 final report. It developed and applied a method for compensating Health Boards in Scotland for local variations in the unavoidable excess costs of delivering health services to different geographical areas. The report was published in full by the Committee and was the basis of a full consultation, after which further work was commissioned. Recommendations by HERU on the

hospital cost adjustment and that for travel-intensive community health services were accepted by the Committee. The Committee wrote: “*The new adjustment for unavoidable excess costs reflects a rigorous programme of research...[which] provides a better reflection of all unavoidable excess costs of supplying health services rather than just remoteness.*” As a result of the research, the model used to predict the costs of travelling to deliver services in the community was updated to encompass the activities and travel times of a variety of community staff. This adjustment in turn affects the formula which now distributes funding for hospital and community services to Health Boards in Scotland. [f], page 70.

- **Local and Regional Pay Structures for Teachers in England and Wales**

The research project focusing on school teachers in England and Wales proposed and implemented a method for redesigning the regional and local structure of pay, showing how the Review Body might allocate different local authorities to different local pay bands. The research was disseminated in 2009 via presentations to the Office for Manpower Economics, Scottish Government Health Department, Department of Health, HM Treasury, and Cabinet Office, as well as through frequent informal and follow-up meetings and participation in a seminar at Number 11 Downing Street in 2012. As a result the findings form part of the evidence base cited by the Chancellor of the Exchequer in his letter to the Review Bodies in March 2012 [g].

In summary, the research has had impacts on public policy and services in the following ways: policy debate has been stimulated and advanced by research evidence; policy decisions have been informed by research evidence; and the implementation of a policy for funding hospitals and setting the pay of health service professionals and teachers or the delivery of a public service has changed. The purpose of these policy changes is to improve the quality, accessibility, acceptability or cost-effectiveness of the health and education service.

The claimed impact, as defined by REF guidance, is therefore on: *policy debate and decisions, legislation and service delivery influenced by research.*

5. Sources to corroborate the impact

- [a] Report of the Advisory Committee on Resource Allocation, Report Section 5, December 2008. See: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_091484
- [b] Letter dated 27 September 2010 from Chair ACRA to Secretary of State for Health https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147600/dh_122685.pdf.pdf
- [c] Thirty-Fifth Report of *Doctors and Dentists Review Body*, Cm 6733, 2006, Recommendation 1 http://www.ome.uk.com/DDRB_Reports.aspx
- [d] Twenty-First Report on *Nursing and Other Health Professionals* Cm 6752, 2006 pp 43-45. See: http://www.ome.uk.com/NHSPRB_Reports.aspx
- [e] *NHS Pay Review Body - Market Facing Pay: Written Evidence from the Health Department for England*: pp 35,36,41 and 93-96. April 2012 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_133505 and NHS Review Body: *Market Facing Pay*, p 13 and 48, Cm 8501, December 2012 http://www.ome.uk.com/NHSPRB_Reports.aspx
- [f] *Delivering Fair Shares for Health in Scotland: the report of the NHSScotland Resource Allocation Committee*, NRAC Final Report, Chapter 6.3, September 2007. See http://www.nrac.scot.nhs.ukhttps://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147600/dh_122685.pdf.pdf/research.htm
- [g] Chancellor of Exchequer, George Osborne, Letter to Review Bodies dated 20th March 2012 and government economic evidence, in particular paragraphs 1 and 28 for reference to research by Elliott et.al. See: http://www.ome.uk.com/Search/Default.aspx?q=Chancellor&page_num=1