

Impact case study (REF3)

Institution: University of Aberdeen		
Unit of Assessment: 17 (Business and Management Studies)		
Title of case study: Increasing uptake of free eye examinations among Scotland's poorer citizens		
Period when the underpinning research was undertaken: 2011-2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
A. Zangelidis	Senior Lecturer in Economics	(07/2011 - present)
H. Dickey	Senior Lecturer in Economics	(07/2011 – 07/2018)
D. Ikenwilo	Research Fellow	(07/2011 - 11/2015)
P. Norwood	Research Fellow	(07/2011 - present)
V. Watson	Senior Research Fellow	(07/2011 - present)
Period when the claimed impact occurred: 2016-2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>Research led by the University of Aberdeen Economics department on the 2006 Scottish eyecare reform has highlighted the role of socio-economic inequalities in limiting uptake of eye examinations in Scotland. Key policymakers, such as the Scottish Government, Optometry Scotland and Royal National Institute of Blind People (RNIB) Scotland, have now acknowledged the importance of addressing these disparities and are seeking to introduce an alternative strategy. The research underpinning this case study has (1) shaped the focus of current RNIB Scotland and Scottish Government awareness-raising campaigns, (2) influenced the methodologies and practices of the Public Health Scotland Data and Intelligence division in Scotland in the way eyecare data are reported, (3) led to the establishment of the Scottish Eyecare for Everyone (SEE) nationwide network for the advancement of eyecare in Scotland, and (4) informed discussions on the current and future funding of General Ophthalmic Services through the Scottish budget.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>In April 2006 the Directive of Primary Care and Community Care, Scottish Executive introduced free (NHS funded) eye examinations to all individuals living in Scotland. The policy aimed to encourage wider use of optometric services in Scotland and to provide an appropriate health assessment allowing for management of a wide range of common conditions in the community. According to Optometry Scotland's published 'GOS Works' report (2019), the introduction of the 2006 Scottish community optometry services have transformed the balance of primary and secondary eyecare, saving the NHS over GBP71,000,000 in a year by easing pressure on hospital ophthalmology.</p> <p>In 2011, Zangelidis and colleagues were awarded funding from the Chief Scientist Office (CSO) of the Scottish Government to ascertain how well received the campaign had been. As part of this research, the CSO aimed to establish:</p> <ol style="list-style-type: none"> 1. How well people had responded to the free eyecare policy and whether there was an increase in the uptake in eye examinations in Scotland 2. Possible socio-economic differences in the demand for eyecare services 3. Whether there were wider health benefits that could be achieved through an eye examination 		

Zangelidis and colleagues used two datasets to investigate the effects, the British Household Panel Survey (BHPS), a nationally representative annual survey of adults, covering over 5000 households in the UK, and a private ophthalmic options company's business records. The researchers made several key findings, including the discovery that there were **significant socio-economic differences in how people responded to the offer of free eyecare** [1]. The research showed that individuals within the lower quartile (bottom 25%) of the income distribution did not increase their uptake of eye examinations. Instead, increase in the demand of eye examinations was primarily driven by individuals from the upper quartile of the income distribution. Given that individuals in the upper bracket were more likely to have their eyes examined before the eyecare reform, the conclusion drawn from these findings was that the eyecare service reform had inadvertently **widened the socio-economic inequalities in the utilisation of eyecare services in Scotland** [2].

Second, Zangelidis' research provided evidence that the eye examinations in Scotland, through the detection of hypertensive retinopathy signs, could represent a crucial opportunity to help provide measures for early prognosis of hypertension and subsequently reduce the health burden on the NHS. Hypertensive heart disease is the leading cause of death, accounting for over a quarter of all deaths both worldwide and in the UK. Its economic burden is estimated to be over GBP 15 billion each year in the UK, with healthcare costs alone estimated around GBP 11 billion each year. Often characterised as a "silent killer", hypertension is difficult to detect if unsuspected since there are rarely any signs or symptoms. Early diagnosis would therefore provide a non-invasive preventative measure and offer routine assessment of prognosis.

Zangelidis found evidence indicating that through increased uptake, the free eyecare reform in Scotland led to an increase in the detection of hypertension [3]. The results have important implications, which highlight the wider health benefits and potential NHS cost savings that an eye examination can offer. Therefore, the disparate uptake of eye examinations across income groups has not only widened inequalities in eye health, but might also widen inequalities in other health conditions. The research subsequently highlighted the **necessity of a targeted raising-awareness campaign** and provided this recommendation to the CSO.

3. References to the research (indicative maximum of six references)

References:

[1] Dickey, H., Ikenwilo, D., Norwood, P., Watson, V. and Zangelidis, A. (2012) 'Utilisation of eye-care services: the effect of Scotland's free eye examination policy', *Health Policy*, 108(2-3), 286-293, <https://doi.org/10.1016/j.healthpol.2012.09.006>

[2] Dickey, H., Ikenwilo, D., Norwood, P., Watson, V. and Zangelidis, A. (2016) Doctor my eyes": a natural experiment on the demand for eyecare services', *Social Science and Medicine*, 150, 117-127, <https://doi.org/10.1016/j.socscimed.2015.12.037>

[3] Dickey, H. S., Norwood, P. F., Watson, V., & Zangelidis, A. (2018). More Than Meets The Eye: Has the Eyecare Policy in Scotland Had Wider Health Benefits? (Discussion Paper in Economics; Vol. 18, No. 1). University of Aberdeen Business School. https://pure.abdn.ac.uk/ws/files/115118021/DP_2018_1.pdf

Grant funding:

Zangelidis, A., Dickey, A., Ikenwilo, D., Norwood, P., V. Watson. Eyecare Service in Scotland: Did the Scots Get it Right? Scottish institute for research In economics; Chief Scientist Office (CSO); 07/2011 to 06/2012 (GBP43,034)

4. Details of the impact (indicative maximum 750 words)

Research led the Department of Economics, University of Aberdeen has (1) shaped the focus of current and impending raising-awareness campaigns and (2) influenced methodology and changing practices on how information is presented by Public Health Scotland Data and Intelligence division (previously Information Services Division Scotland), (3) established the Scottish Eyecare for Everyone (SEE) network which seeks to improve access to eyecare through collaboration with practitioners and policymakers across Scotland, and (4) informed discussions on the current and future funding of General Ophthalmic Services through the Scottish budget.

In 2006, the NHS introduced free eye tests in order to provide more comprehensive eye health examinations. Although this initiative sought to enable optometrists to assess a patient's eye health, research led by the University found evidence that it inadvertently widened pre-existing socio-economic inequalities in eyecare utilisation. Similar disparities are reflected in the wider health benefits that an eye examination can achieve (i.e. detection of hypertension).

Raising-awareness campaigns

Based on the research findings, Zangelidis and colleagues made policy recommendations to the Chief Medical officer (CMO), outlining the need for a targeted raising-awareness campaign. Following dissemination of the research findings, the idea of a targeted campaign has been featured in policy documents and argued for by stakeholders.

RNIB Scotland acknowledged the findings stating that “there is a need to highlight that there is a much lower up-take of eye health checks by those in areas of deprivation and hard to reach groups” [S1]. Responding to the need for an awareness campaign, RNIB Scotland ran the 'Eye Health Matters' campaign in September 2019, during the National Eye Health Week [S2]. The campaign used special coasters featuring iconic Scottish landmarks as seen through different sight loss conditions. The coasters were distributed to selected pubs and cafes throughout Scotland with a message urging people to go for regular eye examinations. Stuart McMillan MSP also placed a relevant motion to the Scottish Parliament, which ‘commends RNIB Scotland on its Scotland-wide campaign, Eye Health Matters, which raises awareness of free eye health checks through cardboard coasters’ [S8].

The Scottish Government also recognised that there were important issues that needed to be addressed in order to get the message to the wider population [S3]. In May 2018 Zangelidis and colleagues presented evidence to the Scottish Parliament's Cross Party Group on Visual Impairment [S4]. Based on this testimony, the chair of the committee, Stuart McMillan MSP, wrote to the Scottish Government asking a public awareness campaign. He reiterated this point again when addressing the Scottish Parliament (September 2018) [S5]. The Minister for Public Health, Sport and Wellbeing, Joe FitzPatrick MSP, acknowledged the issue of socio-economic disparities and confirmed that, based on the evidence of Aberdeen researchers, the Government plans “to run targeted awareness-raising campaigns for specific patient groups among whom take-up of free eye examinations is lower, including those living in more disadvantaged communities” [S5].

Changing practice

Zangelidis' research informed the way in which eye examination dates is reported. In 2018, the Public Health Scotland Data and Intelligence division reported patient uptake of eye examinations by regional deprivation. This has been cited as an important change in methodology as the information will now be used to identify deprived areas that are potentially harder to reach and will inform policy. Minister for Public Health, Joe FitzPatrick stated, “*This will further help identify which patients would benefit most from targeted campaigns promoting the range of services provided in Scotland*” [S5]. Given their expertise in this area, representatives from the Scottish Government invited the Aberdeen team to participate in discussions regarding further data improvements for the 2019/20 ISD report on eye examinations.

Establishment of SEE network

In September 2019, during National Eye Health week, Zangelidis and colleagues organised, jointly with Optometry Scotland, a summit at the University of Aberdeen. The summit, 'Spotlight on Scotland's Eye Health – breaking down barriers and collaborating for a more inclusive future', brought together representatives from the Scottish Government, Lord Provost of Aberdeen, NHS, RNIB Scotland, academics, the International Glaucoma Association (IGA) and Aberdeenshire Visual Impairment to discuss about the future of eyecare in Scotland and how to address socio-economic disparities in demand for eyecare. The summit received considerable media attention and led to the announcement of Scottish Eyecare for Everyone (SEE), a new nationwide network and forum for the advancement of eyecare in Scotland. SEE will enable the group of stakeholders to collaborate in tackling the issue of socio-economic inequalities, and other eyecare issues on an ongoing basis [S6], [S7].

Scottish Budget 2020-2021: General Ophthalmic Services (GOS) Priorities

The Scottish Budget 2020-2021: Equality and Fairer Scotland was announced on 6th February. The report, published by the Cabinet Secretary for Social Security and Older People, stated "To ensure regular, free eye examinations of high quality are available to all Scottish residents, the Scottish Government is continuing to invest in General Ophthalmic Services (GOS). In 2020-21, the estimated budget for providing GOS will be [GBP110,000,000]. Evidence also suggests that people are less likely to attend an eye examination if they live in a more deprived area. Of those people who attended a primary eye examination in 2018-19, 28.6% were in SIMD one (most deprived) compared with 33.6% in SIMD five (least deprived). In order to tackle health inequalities, a national group is being formed with Optometry Scotland and other key stakeholders." [S9]

In addition, an Expert working group has been set up to review the performance of Scotland's community eyecare services and explore ways to maintain and enhance service delivery. Zangelidis was invited to participate in this group, which met on three occasions in October-December 2020. The findings of the Expert working group culminated in a report (for release early 2021) that argued that the universal NHS-funded eyecare in Scotland should be sustained and recommended to the Scottish Government a rolling three-year funding settlement with a minimum budget increase of 3% annually in real terms on fees [S10]. The report was presented to Minister for Public Health, Sport and Wellbeing, Mairi Gougeon MSP and was subsequently distributed to all Members of the Scottish Parliament.

5. Sources to corroborate the impact (indicative maximum of 10 references)

[S1] RNIB, The State of the Nation: Eye Health 2016

<https://www.rnib.org.uk/knowledge-and-research-hub-research-reports/prevention-sight-loss/stateofthenation>

[S2] RNIB press release on 23 September 2019

<https://www.rnib.org.uk/scotland/scotland-news-and-media/scottish-landmarks-highlight-healthy-eyes>

[S3] Scottish Government, Community Eyecare Services Review (2017)

<http://www.gov.scot/Resource/0051/00516810.pdf>

[S4] Scottish Parliament, Cross Party Group on Visual Impairment, Minutes of Meeting (8 May 2018)

http://www.parliament.scot/CrossPartyGroups/Session5CrossPartyGroup/Minutes/VI_20180508.pdf

[S5] Scottish Parliament: Official Report, Meeting of the Parliament 25 September 2018 (Eye Health Week 2018; 15.35)

<http://www.parliament.scot/parliamentarybusiness/report.aspx?r=11685#ScotParIOR>

[S6] Optometry Scotland coverage of 'Spotlight on Scotland's Eye Health' (7 October 2019)

<https://www.optometryscotland.org.uk/2019/10/07/spotlight-on-scotlands-eye-health-video-highlights/>

[S7] Beattie Communications on behalf of Optometry Scotland. (30 September 2019)

<https://www.beattiegroupp.com/work-plus/client-releases/vision-for-the-future/>

- [S8] Stuart McMillan MSP motion S5M-18845 (11 September 2019)
<https://www.parliament.scot/parliamentarybusiness/28877.aspx?SearchType=Advance&ReferenceNumbers=S5M-18845&ResultsPerPage=10>
- [S9] Scottish budget announcement, 2020: General Ophthalmic Services (GOS) Priorities (p115) <https://www.gov.scot/publications/equality-fairer-scotland-budget-statement-scottish-budget-2020-21/pages/12/>
- [10] Expert Working Group for Primary Eyecare Services, Policy Report. (February 2021) and evidence of involvement. Link: https://www.optometriscotland.org.uk/wp-content/uploads/2021/03/Expert-Working-Group-Report_Version-3-1.pdf