

# Using routinely collected data to figure out where the NHS is going wrong.

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and embedded notes added thereafter.

This work is about to be released in a report, which will include a fuller explanation of NRAC definitions and concepts, co-authored by H Irvine, CPHM and John Gomez, Senior Information Analyst at NHS GG&C.

## Summary of conclusions

This presentation is aimed at demonstrating that a systematic analysis of routinely collected data can shed considerable light on why the NHS in Scotland is facing the problems recently described in an Auditor General's (AG'S) Report on its financial state and performance. The same analysis can be used to explain NHS GG&C's problems which, for most but not all parameters, are similar but more serious than for other health boards, and are of similar origin, namely well meaning but ill thought out centrally driven policy and directives.

The authors believe that most of NHS Scotland's problems result from centrally driven mandates and that health boards struggle to maintain functional services within available resources as a result of faulty decision-making at the highest levels of health service planning. Although the problems are multi-factorial in origin, most of them stem from historical underfunding of general practice, that has become more extreme in recent years. Although this is a national, indeed UK-wide problem, it will be felt most acutely in deprived and rural/remote areas where unmet need is likely to rise and GPs will struggle to continue to provide a service. The underfunding of social care of the elderly imposed by the council tax freeze and the reduction in numbers of fully qualified district nurses are also factors, particularly given the maturation of the 1920 baby boomers, who turned 95 this year.

The evidence also shows that the consultant:GP ratio climbed steadily in both England and Scotland, and for much of the past 20 years has been very similar for the two countries. In recent years, the ratio is almost identical. In light of the fact that so many of Scotland's policies and directives, funding and manpower trends and resultant problems appear to be the same as those observed in England, this raises doubts about the Scottish Government's willingness to exploit devolution of health to Scotland's advantage. Evidence on the workload per WTE by type of doctor also raises questions about whether the relatively high consultant:GP ratio constitutes value for money and whether it is causally related to many of the problems described in the AG's Report.

Against this backdrop, GG&C has an exceptionally high consultant:GP ratio, even when adjusted for incoming cross boundary flow, which, in combination with a relatively high bed provision and super-specialisation, will favour relative over-subscription of secondary/tertiary care overall but particularly in the affluent, and relative under-provision/unmet need in subsections of the deprived. The potential for 'mismatch of service provision and need' is the most likely explanation for the falling morbidity and life circumstances (MLC) index and rising financial over-parity in GG&C in relation to the NRAC (National Resource Allocation Committee) formula.

### 3 challenging questions:

1. In the context of the funding formula that applies to HCHSs (NRAC), why is NHS GG&C in persistent financial over-parity? Is the problem due to social deprivation?
2. In the context of the CSR, how can we ensure that NHS GG&C will fit into the smaller bed complement and offer safe, high quality services more cost-effectively in the future?
3. In the context of Unscheduled Care, why is NHS GG&C's compliance with the 4 hour target rapidly deteriorating and given the SG's concerns about its bed model, should it continue to plan to move into the New South Glasgow Hospital and close the beds at Western and Victoria Infirmaries?

Starting in 2010, one of the authors (H Irvine) was asked to do three pieces of work aimed at answering these three questions, in this order, which were of relevance to senior managers at NHS GG&C. For the second and third question, she worked with a health information colleague (John Gomez) to obtain, analyse and make sense of available data.

In 2010, the CEO was concerned that the board was unable to shake off a sizeable financial over-parity of ~65m per annum, despite stepping up efforts to achieve efficiency savings. (Over-parity is a financial term that applies when a health board needs to spend more money than determined by the NRAC formula in order to protect essential services and does so with the government's permission.) Senior managers wondered if there was scope in exploring the NRAC formula for hospital and community health services (HCHSs) with a view to finding out if it was systematically under-estimating the cost of providing services to an area of concentrated social deprivation.

In 2013, an extensive Clinical Services Review (CSR) was undertaken involving all stakeholders. H Irvine was asked to explore the SMR01 dataset to identify rising trends in hospital activity and explore ways of working more effectively in the smaller bed complement planned following the move to the new university hospital on the Southern General Hospital site.

In 2014, the CEO and the Senior Manager for Unscheduled Care wanted to know why the compliance with the 4 hour waiting time target was plummeting despite stable numbers of A&E attendances and whether this had implications for the plan to move into a smaller bed complement at the south Glasgow site. In addition, A&E consultants at the Western Infirmary were concerned about what they perceived to be a spate of very ill patients requiring admission appearing in July/August 2014, a time when minor injuries normally predominate.

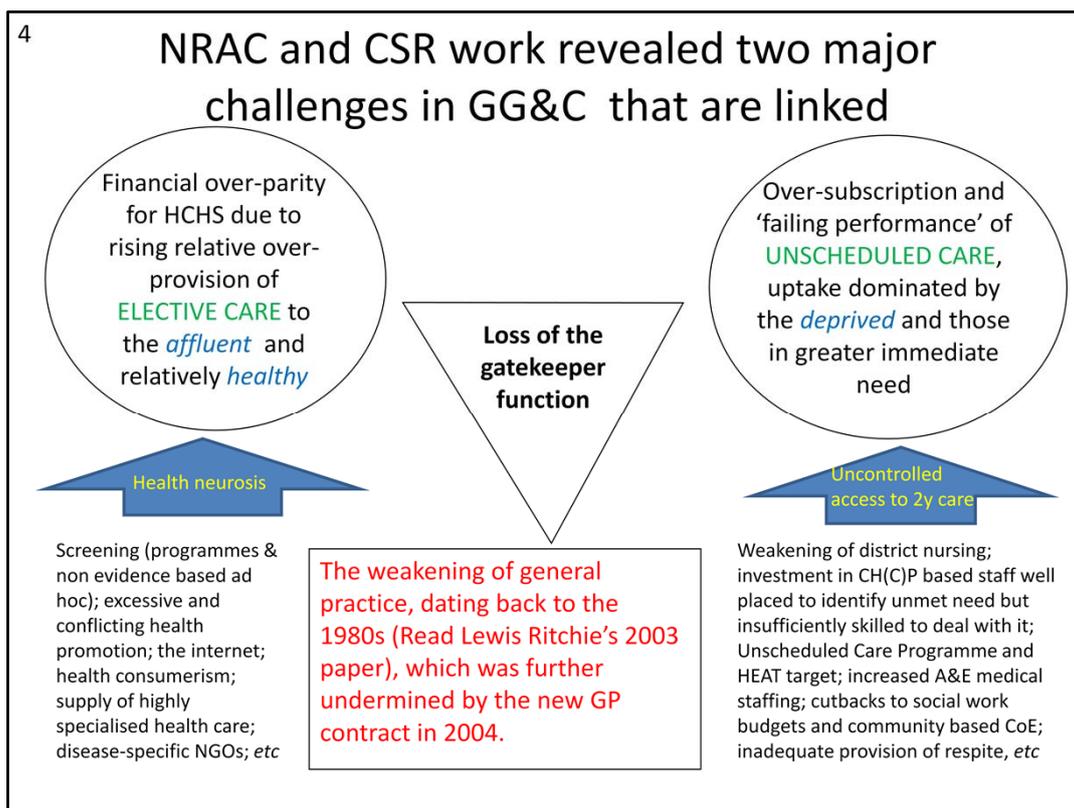
## Bottom line answers:

1. Financial over-parity in GG&C is not the result of under-remunerated cost of social deprivation.
2. Actively pursue a multi-faceted strategy aimed at reducing uptake by the worried well and targeting unmet need/increasing uptake in the deprived because the likely cause of financial over-parity in GG&C is the increasing mismatch of levels of hospital provision against need.
3. Compliance is failing because of the steep aging of ED attendances, that resulted from the reduction of GPs, DNs and Social CoE and the inability of CHCPs to control demand for unscheduled care. Yes, NHS GG&C should stick to its guns and downsize its hospital services, *assuming that the deficit in these community based services is rectified as a matter of urgency.*

The NRAC work revealed that the formula for HCHSs is probably fair in that the underlying principles and methodology are sound and the calculations correct. Despite extensive work, no evidence was unearthed to suggest that the formula was systematically penalising health boards with social deprivation, including NHS GG&C. In addition, the datasets in 2004/5 were shared by the SG with the RCB who confirmed that the calculated indices for NHS Greater Glasgow were correct and the regression modelling used by the SG provided what was probably the best fit available.

The CSR work revealed, unexpectedly, a marked relative excess in age standardised admission rates (all types, all specialities) in GG&C compared to the Rest of Scotland (RoS) that was seen throughout the study period and was most marked for the most affluent quintile in both genders, for which the excess rose the most steeply over the 10 years from 2001/2 to 2010/11 (slides 5 and 6). Digging deeper into the dataset revealed a steep rise in elective work, particularly on the medical side, in the most affluent in GG&C, that was travelling in the opposite direction to that of the RoS equivalent, such that it overtook the admission rate for the most deprived quintile in the RoS by the end of the study period (slides 7 and 8), resulting in clear evidence of the inverse care law at a national level. This phenomenon was seen to varying extents in most clinical specialities, with the notable exception of respiratory medicine and neurosurgery. In some clinical specialities, this phenomenon was so pronounced that it resulted in evidence of inverse care law at local level (slide 9). This work also examined league tables of manpower provision and healthcare supply and revealed that NHS GG&C was well provided with consultant staff and hospital beds but under-provided for in terms of GPs (slides 21-25). This work, when viewed in the context of the NRAC studies, lead to the conclusion that the excess rise in hospital activity in the affluent was the most likely cause of financial over-parity and that the declining capacity of GPs to act as a gatekeeper when faced with rising *demand* in the affluent was a likely factor.

The Unscheduled Care work revealed that the number of ED attendances in GG&C was falling slightly whilst the percentage of those attendances who were 65+/85+ was rising steeply (slide 16). Failure to comply with the 4 hour waiting target (slide 15) correlated closely with the high age of presentation by month over a 4 year period. In light of the fact that the rate of aging was two to three times faster than the aging of the resident population, the evidence suggested that the decline in general practice (slide 25), district nursing (slide 27) and social CoE (slides 28 and 29), in that chronological order, in recent years had resulted in a steep rise in presentation of very old patients to A&E and AAUs, many of whom were being admitted and some of whom ended up as a delayed discharge with subsequent backing up of patient flow into A&E.



Based on the NRAC work carried out by H Irvine, the SMR01 analyses within the CSR carried out by both H Irvine and J Gomez, and the interaction of the two pieces of work, the authors believe that NHS GG&C is facing two different major problems, represented by the two spheres in the slide. Both problems have a wide range of contributing causes as shown below the blue arrows. The two spheres have a common aetiological risk factor, namely the loss of the general practitioner-based gatekeeper function.

'Failing performance' of unscheduled care is placed in quotes because although it is clear that compliance in GG&C with the waiting time target is poor and deteriorating, the authors were unable to produce any evidence that the performance of staff involved with either A&E or emergency inpatient admission was primarily at fault. Many upstream factors, which were the subject of detailed study, were deemed to be more important determinants of compliance. This work did not comprehensively address the downstream factors, which are thought to be of secondary importance to upstream factors and would constitute the next stage of this work. A key example of a supposedly 'downstream' factor is delayed discharge, which was seen to rise after social CoE budgets were reduced, reinforcing the fact that the community based services in the best position to prevent unnecessary visits to A&E, which is an upstream factor, are also the services that enable discharge from hospital.

The GP has a critical role in minimising both unnecessary electively sought health care and responding to genuine acute illness in the community with a view to preventing unnecessary A&E attendances and emergency admissions. Although the GP Contract introduced in 2004 is thought to have improved the standard of care offered in general practice, it is also accused of being excessively bureaucratic and having distracted GPs from using their clinical judgement to assess the needs of the patient in front of them at the time of presentation. The rising workload generated by the Contract combined with the rising expectation of the public and the increasing emphasis on screening, in the face of the decreasing WTE of GP principal and increasing reliance in GG&C on GP trainees (slide 26), has resulted in a decline in GG&C GPs' capacity to respond to acute illness in people across the social spectrum, but particularly amongst the socially deprived and limit over-diagnosis and over-treatment by the affluent.

The inadequacy of per capita GP provision and infrastructure is a nationwide problem, although in the RoS, the per capita provision of GP Principals is higher than in GG&C (slide 25) and has been bolstered by salaried rather than trainee GPs (slide 27). Against the backdrop of insufficient and falling WTE GP numbers in Scotland, the recently published study by McLean et al (2015) reveals that per patient funding is higher in the affluent deciles, providing evidence of the inverse care law at a national level.

The single most important solution to all of these problems is a major investment in general practice nationwide but particularly in deprived areas with a view to substantially increasing GP numbers and improving clinical infrastructure in general practice. In the absence of additional NHS monies being made available, the necessary funding needs to come from the HCHS budget. In addition, the provision of services by the wide array of community health staff needs to be organised around the needs of GPs rather than working in a parallel administrative structure.

All admissions (all types, all specs): GG&C/RoS quotients of age standardised rates and the percentage step change between 2001/2 and 2010/11, by gender and SIMD quintile, n=315,553 and 836,010 adms in GG&C and RoS, respectively, in 2010/11, shown as a table. Source: SMR01 dataset downloaded by J Gomez.

Females	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	% Diff
Q1	1.06	1.08	1.08	1.09	1.10	1.10	1.14	1.15	1.17	1.21	14.0%
Q2	1.03	1.06	1.04	1.06	1.07	1.10	1.11	1.07	1.11	1.14	11.4%
Q3	0.96	0.98	0.99	1.02	0.99	0.97	1.00	1.03	1.04	1.08	12.8%
Q4	1.05	1.08	1.11	1.09	1.10	1.12	1.13	1.11	1.17	1.22	16.3%
Q5	1.11	1.14	1.16	1.16	1.19	1.24	1.20	1.20	1.23	1.30	17.5%
Males	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	% Diff
Q1	1.08	1.12	1.12	1.10	1.12	1.14	1.14	1.16	1.16	1.22	13.0%
Q2	1.02	1.03	1.05	1.05	1.03	1.03	1.06	1.06	1.06	1.09	6.3%
Q3	0.92	0.96	0.95	0.98	0.97	0.97	1.01	1.02	0.99	1.05	14.2%
Q4	1.04	1.04	1.03	1.08	1.08	1.08	1.12	1.10	1.14	1.19	13.5%
Q5	1.12	1.14	1.15	1.18	1.19	1.24	1.25	1.22	1.26	1.34	19.1%

This important summary slide shows the GG&C/Rest of Scotland (RoS) quotients in age standardised rates for all admissions, including both emergency and elective, medical and surgical, the subgroups stratified by gender and SIMD quintile. In the final column, it also shows the percentage rise in those quotients over the 10 year study period, ending in 2010/11. Given that the Morbidity and Life Circumstances (MLC) index for GG&C fell most dramatically during this same 10 year study period (slide 11), this is the ideal period to examine trends in relative activity to the affluent quintile (Q5) of both genders.

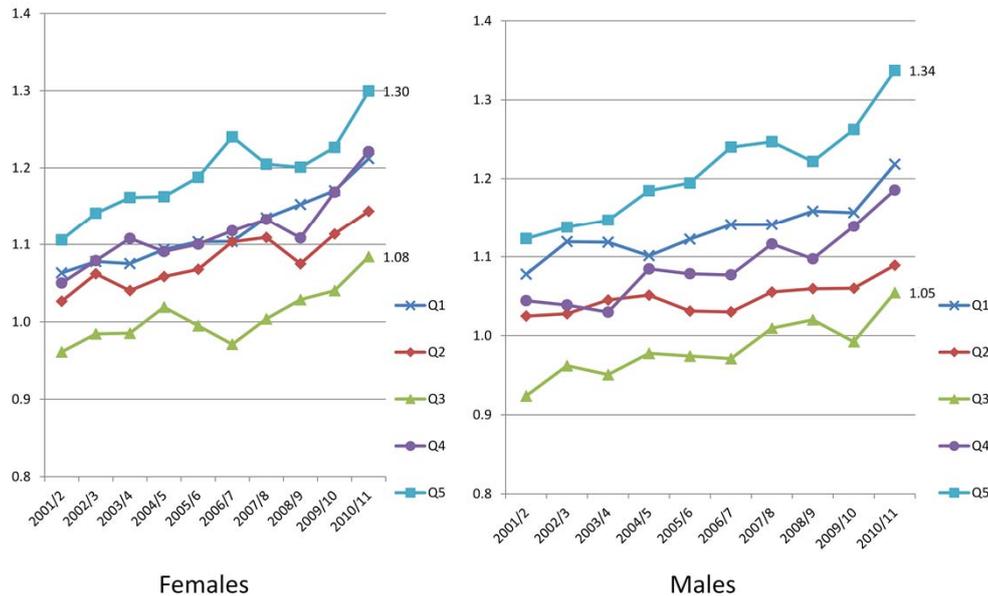
This demonstrates that the quotient was always highest in the most affluent quintile (Q5) for both genders throughout the study period (highlighted in yellow shading) and that the quotient rose most steeply for the most affluent quintile in both genders (highlighted in orange shading).

This is a sensitive way to detect relative over-provision in the affluent because it includes both elective and emergency work, the former contributing dramatic rises to relative over-provision from earlier in the study period and the latter contributing more modest rises to relative over-provision more obviously in recent years (revealed by the CSR analyses and shown in slides 7 & 13 respectively).

This suggests that not only was relative over-provision to the most affluent an issue throughout most of the study period, which is unexpected given the concentration of social deprivation in GG&C, but that it increased markedly over the study period. As the MLC index is directly related to the slope of the national regression modelling of cost against need carried out by NRAC officers, it is very likely that the MLC index is falling in GG&C because of the flattening of the MLC regression line when cost (as a result of hospital activity) rises in affluent datazones and/or falls in deprived datazones. In this table, the quotients do not appear to have fallen in Q1 males and females over the study period, which suggests that relative over-provision also applies to the most deprived. However, unmet need in some sections of Q1 can still exist. Note how close to unity the quotients are for patients in the intermediate quintile (Q3) for both genders and for many years (pale pink shading), suggesting that GG&C clinicians tend to provide more health care to patients at the extreme ends of the social spectrum and provide RoS levels of care to those who appear to be neither 'deprived' nor 'affluent'.

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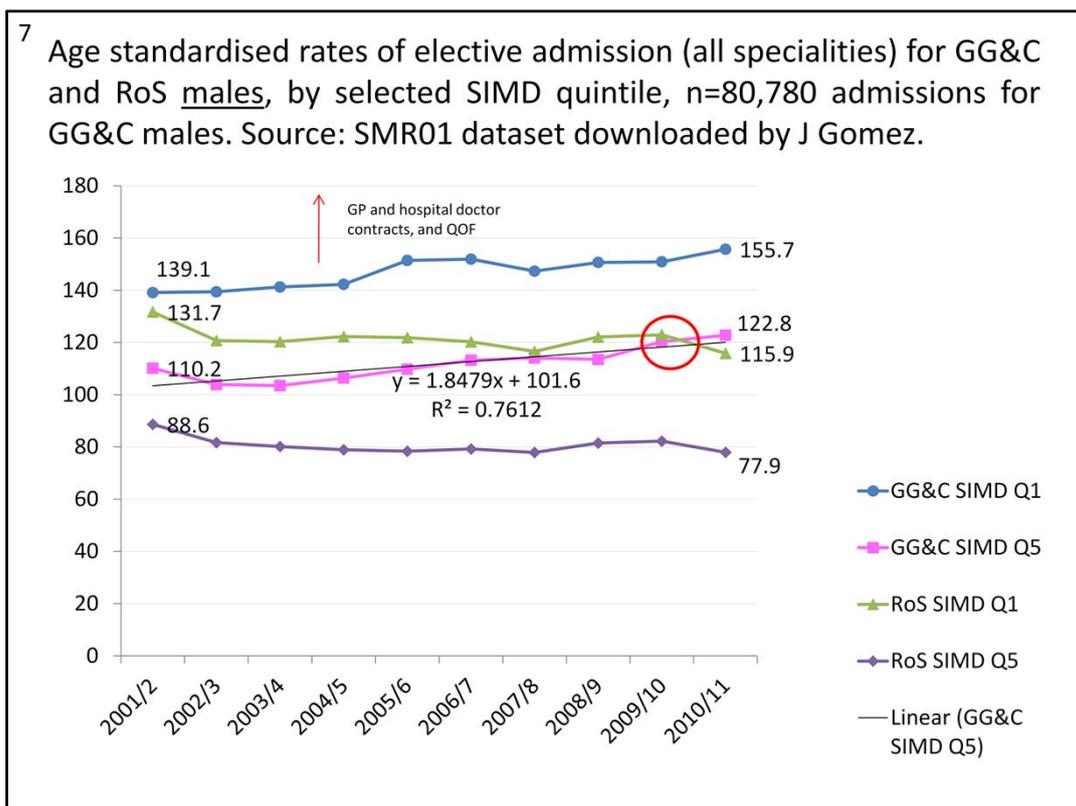
All admissions (all types, all specs): GG&C/RoS quotients of age standardised rates between 2001/2 and 2010/11, by gender and SIMD quintile, n=315,553 and 836,010 adms in GG&C and RoS, respectively, in 2010/11, shown as a graph. Source: SMR01 dataset downloaded by J Gomez.



The next four slides are amongst many hundreds of graphs plotted for the CSR work which is reported on separately. These four CSR graphs all relate to the *resident* population of GG&C and do not include the incoming cross boundary flow of patients for that category of care, which includes, for example, admissions for secondary and tertiary activity at the paediatric hospital, the Beatson and the Neurological Institute, for which NHS GG&C attracts separate remuneration from other boards. These four graphs provide a visual impression of varying degrees and forms of inverse care law in so far as the affluent quintile appear to receive more health care than expected and the excess appears to be rising rapidly. The definition of the inverse care law describes the principle that the availability of good medical or social care tends to vary inversely with the need of the population served.

This slide shows the data in the previous slide in a graph rather than in a table format, demonstrating visually how the GG&C/RoS quotients in age standardised rates for all admissions were highest for the most affluent (Q5) of both genders and rose most steeply for that quintile in both males and females (turquoise lines). In contrast, the brown line for Q2 males and females (the second most deprived) is second from the bottom in both graphs (the relative excess is smaller) and the rise much flatter for the males.

The green line for the intermediate SIMD quintile hovered around or close to the unity level for much of the study period suggesting that GG&C residents who are deemed neither 'deprived' nor 'affluent' received very close to Rest of Scotland levels of hospital admission, begging the question as to why the affluent in GG&C require so much higher levels of hospital admission than their RoS equivalent. One obvious factor is that NHS GG&C is sufficiently endowed with hospital service supply and insufficiently endowed with general practice-based gatekeeper controls and effective community based alternatives to hospital care. Another factor is that the affluent, and their advocates, are more vociferous and effective at utilising health care; when barriers to health care exist or are introduced, the evidence from this work shows they are better able to overcome them (see dotted line in slide 17).



When we dig down into the dataset, clear evidence of inverse care law at national level appears at the end of the study period for all elective work. The steeply rising trend for the most affluent males in GG&C (pink line) diverges from the clear decline for the most affluent males in the Rest of Scotland (RoS) (purple line). The fact that age standardisation has been carried out ensures that aging of the affluent quintile, which is occurring quite dramatically over this time period, is not the explanation for the rise in elective admission (all specialities), which include both day cases and inpatients.

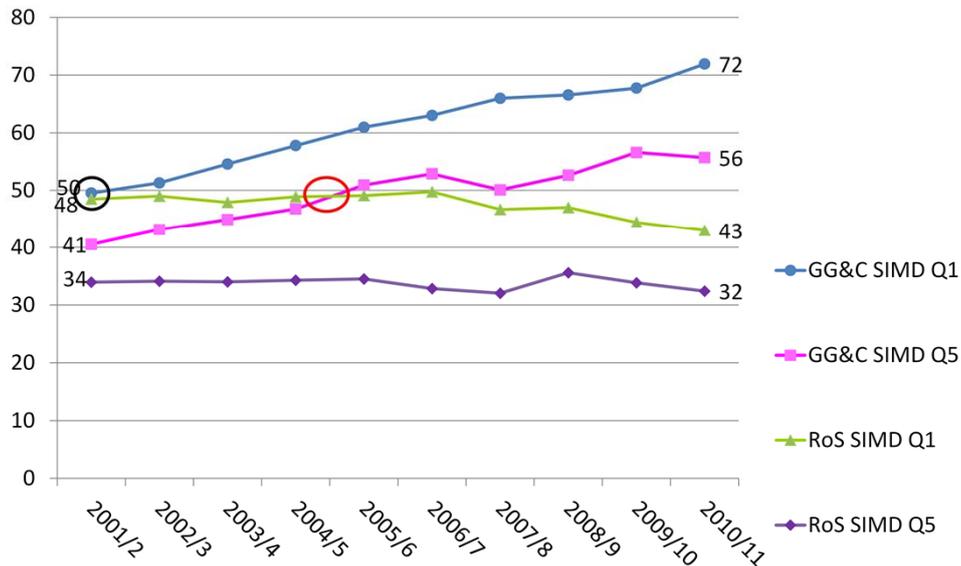
The standardised rate for affluent males in GG&C exceeded the rate for deprived males in the RoS by 2010/11, when it was 5% higher. This was also demonstrated for females although the year of the cross over was a year later (not shown). It is difficult to defend a higher rate of provision of elective care for the most affluent males in GG&C than for the most deprived males in the remaining three quarters of the country. The numbers of admissions shown in the title reveal how large this elective dataset is for males, suggesting that over-provision to the affluent in such a large dataset can not be written off. The RoS dataset is obviously even larger.

The main observation is that elective activity at both ends of the social spectrum is rising very steeply in GG&C and the fact that the slopes for Q1 and Q5 in NHSGG&C are so similar suggests that features of supply (high bed and consultant provision, high degree of specialisation, low GP provision, community health services that are not geared up to control demand) are driving up activity in both. However, in this slide and throughout much of the analysis of the SMR01 dataset, relative over-provision (as measured by the GG&C/RoS quotient) was found to be maximal in the most affluent. In addition, in most analyses, the GG&C/RoS quotient was growing the most rapidly in the most affluent (as measured by the percentage change in the quotient over the 10 year study period). In some specialities, relative over-provision was second highest in the most deprived suggesting that clinicians tend to over-provide to the deprived to avoid clinical risk/meet unmet need and to the affluent to meet demand/avoid a complaint. Although, coding differences in GG&C may explain a small part of this rise in GG&C, attempts to adjust for them have not removed the excess. Furthermore, it is unlikely that coding staff would systematically single out patients at the opposite ends of the social spectrum and code them as daycases in GG&C when they are coding them as outpatients elsewhere in Scotland.

In contrast, the RoS Q1 and Q5 males (and females, not shown) are not experiencing a rise in elective admissions, suggesting that the remainder of the country is tending to adhere to centrally driven aims of reducing the dependency on hospital provision and highlighting how GG&C differs from the RoS. This apparently reduced dependency on elective hospital admission in the RoS is likely to be facilitated by the higher provision of GPs and the lower provision of beds and consultants in the remainder of the country. NB The RoS activity includes admissions taking place in GG&C facilities, paid for by SLAs and other financial arrangements.

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Age standardised rates of *medical elective* admission for GG&C and RoS females, by selected SIMD quintile, n=42,170 admissions for GG&C females. Source: SMR01 dataset downloaded by J Gomez.



When we dig even further down into the dataset, the phenomenon of inverse care law at national level becomes clearer in *medical elective* work. The effect is still present in surgical elective work but is less marked (not shown).

This provides even stronger evidence of excessive provision of elective services in GG&C, particularly to the most affluent females; the most affluent females in GG&C enjoy higher uptake of medical elective hospital activity than do the most deprived in the Rest of Scotland (RoS). Elective medical activity in females makes up 13.4% of all acute admissions (n=42,170/315,553). The standardised rate for affluent females in GG&C exceeded the rate for deprived females in the RoS by 2010/11, when it was 29.5% higher (55.7/43.0).

The rate for the most affluent females in GG&C exceeded the rate for the most deprived females in the RoS as long ago as 2005/6. This slide is similar to that of males (not shown) where the point of crossover was later in the study period. Note that elective medical admissions for both genders combined make up 24% of all admissions implying that this is a major category of hospital activity.

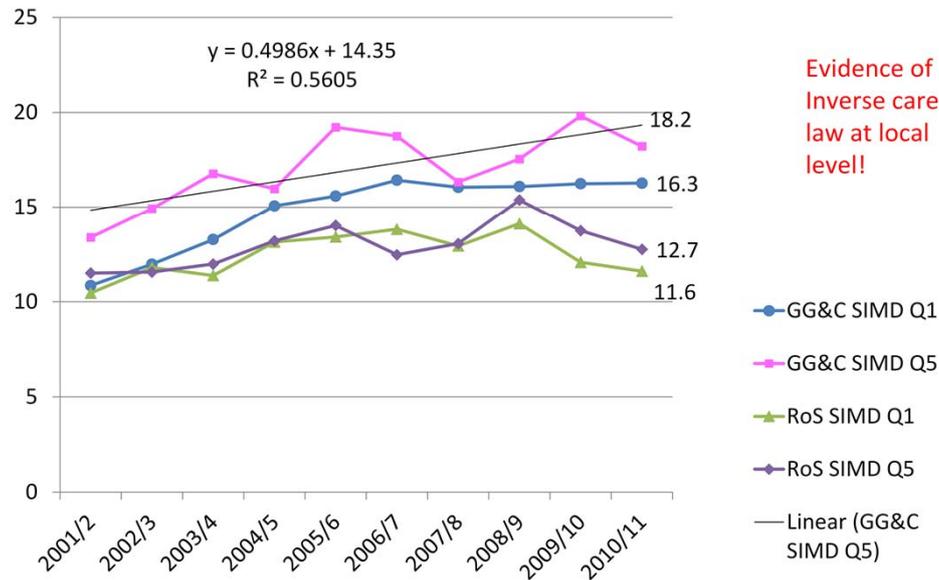
The authors argue that the downward trends seen in the RoS for both ends of the spectrum are more in keeping with central aims to shift services from the hospital to the community and that GG&C is bucking the trend to move in the opposite direction.

It has been suggested that this observation is an artefact of the tendency to admit patients as day cases in GG&C where they may be seen as outpatients in other health boards, for example in the provision of chemotherapy services. Several analyses have been carried out to explore this hypothesis and although the excess in GG&C was reduced slightly for both the most affluent and the most deprived, it persisted and remained higher in the most affluent.

Relative over-provision to the most affluent quintile was greater than relative over-provision to the most deprived quintile in this analysis throughout the study period. The rate of growth for the GG&C/RoS quotient was highest for Q4 females (now shown). This tendency of steeply rising over provision to the most or second most affluent was observed to varying extents in most specialities and was quite marked in some (see next slide). This is unlikely to be due to coding artefacts unless we are suggesting that coding staff code the SMR01 returns differently depending on the socio-economic status of the patient.

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Age standardised rates of elective admission (*oncology*) for GG&C and Rest of Scotland females, by selected SIMD quintile, n=11,432 admissions for GG&C females. Source: SMR01 dataset downloaded by J Gomez.



This slide provides compelling evidence of higher than expected provision of elective oncology services in GG&C to affluent females that requires further exploration. This amounts to inverse care law at a local level: the most affluent females have a higher rate of admission than do the most deprived females in GG&C even though cancer incidence, prevalence and mortality (all cancer types combined) are all higher in socially deprived groups.

In the rest of Scotland, the rates of admission are roughly equal for affluent and socially deprived females for the majority of the study period, and are at much lower levels. The rate of rise in activity over the study period is steeper in both quintiles in GG&C than in the RoS.

Given that breast cancer is the single commonest cause of admission for oncology by ICD10 code, it is assumed that part of the steep rise in admissions for affluent GG&C females is for the investigation and treatment of breast cancer and other forms of breast disease, some of which results from the screening programme, which is preferentially taken up by affluent women, and some of which results from the increased awareness on the part of affluent women to look for and seek NHS treatment for breast lumps. Studied individually, cancer incidence, based on registration rates, of most cancer types is more common in the deprived than in the affluent; the notable exception is breast cancer which is marginally more common in affluent women (7% higher in Scotland in the period 2002-6). However, the excesses seen in these admission rates in GG&C in 2009/10 and 2010/11 were 22% and 12%. Furthermore, lung and cervical cancer, which also form part of the oncology workload, are more common in deprived women which would be expected to reverse these relative positions.

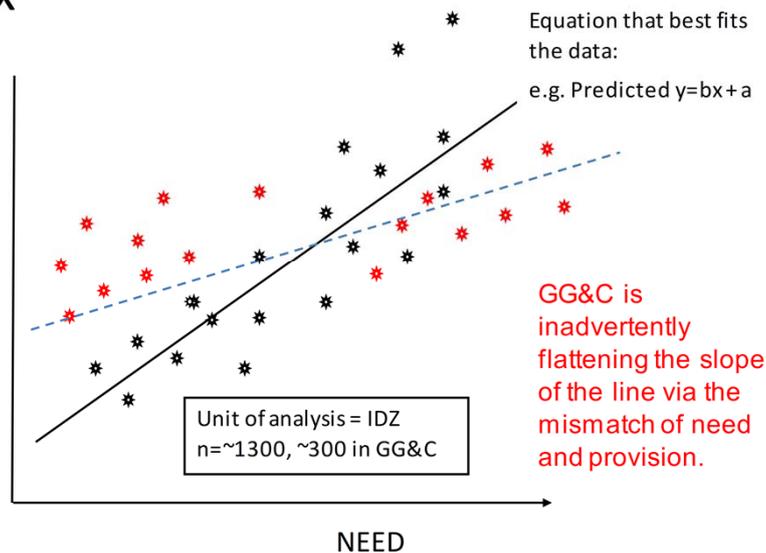
Note that there were more than twice as many female oncology patients in 2010/11 as male oncology patients, which reflects the higher number of older females in the population. This probably also reflects the prominence of cancer screening in women that has not taken off for men now that PSA has lost some of its initial prospect for systematically identifying prostatic cancer. The interesting observation in this slide was not seen in the equivalent slide for oncology admission for males (not shown) which provided a more likely ordering and positioning of trends (the deprived trends were higher than the affluent trends) and a modest difference between GG&C and the RoS.

## More likely Regression model - acute sector MLC index

Dependant  
variable (y)

Actual activity  
multiplied by  
national costing  
fees/predicted  
cost for that age  
sex distribution  
for each IDZ

C  
O  
S  
T



Independent variables (x): 1) Prevalence of SRRLLTI (Census 2001);  
2) SMR All cause <75 yrs for each IDZ.

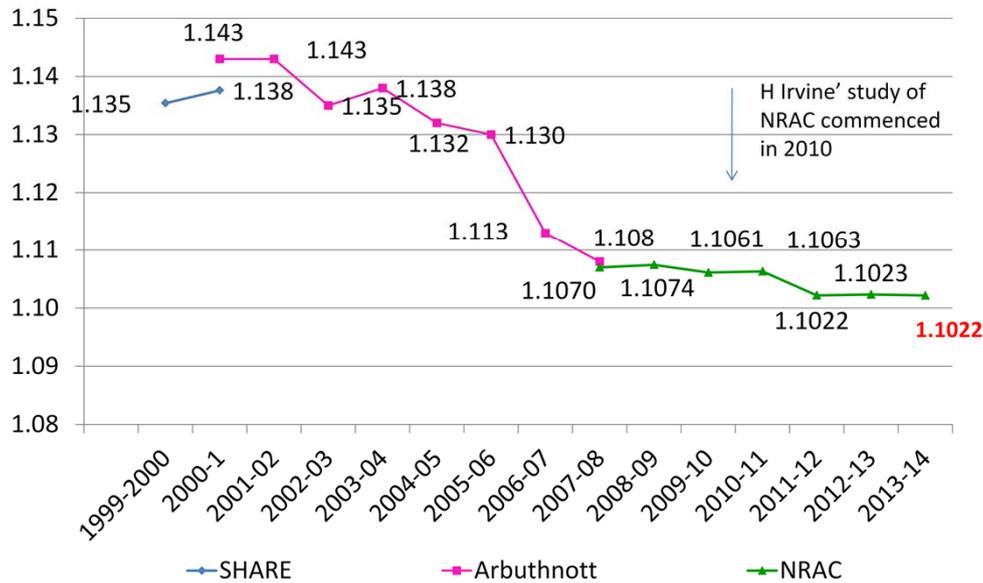
This regression plot demonstrates how NHS GG&C's large size (almost 23% of the Scottish population) can influence the national modelling carried out for the NRAC formula and how inverse care law translates into reduced funding in deprived areas. It provides a powerful argument for stating that inverse care provision doesn't just defy a key principle of equity of healthcare distribution; it also costs health boards, characterised as having areas of considerable social deprivation within their boundary, money in terms of their target share.

If NHS GG&C provides an increasing proportion of its activity to the most affluent quintile, it will drive up expenditure in affluent datazones (those with low mortality and morbidity rates). If this is accompanied by a relative deceleration in the board's ability to provide services to the most deprived datazones (including via failure to meet unmet need), the formula detects this rising 'mismatch' of need and service provision and discounts the MLC (morbidity and life circumstances) Index. Even if the problem is restricted to excess provision to the affluent, the MLC index will reduce. A high MLC index is critical to maintaining NHS GG&C's uplift to its target share of national financial resources because it cannot rely on the age/sex index (GG&C has a relatively young population) nor the remoteness/rurality index (GG&C is largely urban). As the MLC index has fallen since 2001, so has the target share. If the target share falls whilst the provision of services and therefore expenditure continues to rise, financial over-parity results.

It is important for NHS GG&C managers to understand that the board is not subsidised financially for having social deprivation within its boundary; it is remunerated additionally for that deprivation when it demonstrates that it is providing more services to that deprived population and providing less to its affluent population, commensurate with the need as measured by robust morbidity and mortality indicators.

Inverse care provision including any degree of service/need mismatch threatens that principle in GG&C. The falling MLC and rising over-parity that has resulted, most likely from rising provision to the affluent in a health board with considerable social deprivation, are shown in the next two slides.

## Trend in NHSGG and then NHSGG&C's calculated MLC Index since the end of the SHARE period



This slide demonstrates the trend in the MLC index over the past 15 years for GG&C.

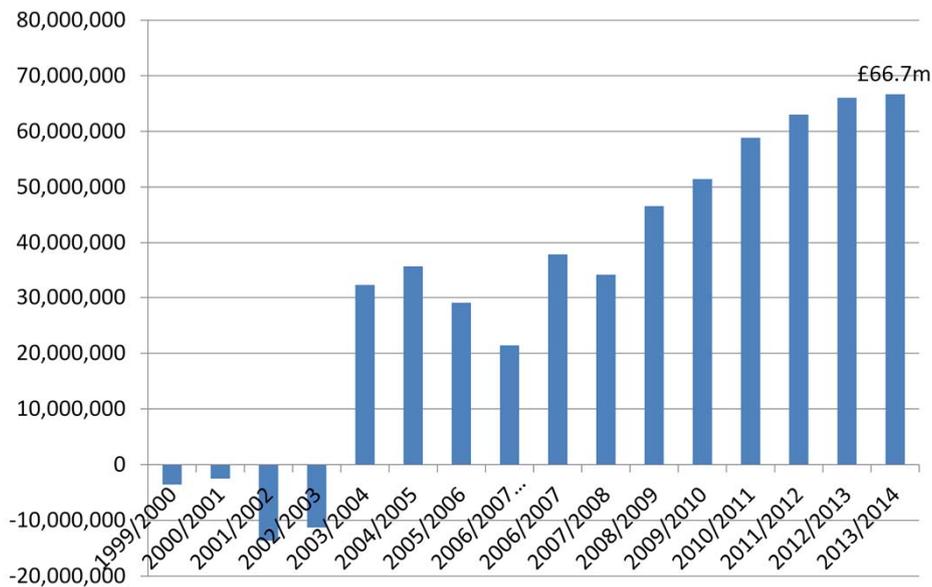
The MLC index is not declining because of a dramatic improvement in social and economic circumstances for GG&C's socially deprived population, although it is true that housing has improved and life expectancy is rising even for the most deprived. The MLC index for GG&C is not a direct measure of poverty and resulting illness.

The MLC index is declining as a result of the flattening slope of the regression line modelled by SG and ISD information analysts when they use the admission data for all the Scottish health boards. The authors believe that the MLC index fell because of the steep rise in activity (slides 5 and 6) to the most affluent quintile, relative to rates taken up in the RoS. Because the rise in emergency admission is concentrated in the most deprived and was relatively modest compared to the rise in elective admission, it does not play as major a role in the aetiology of the financial shortfall (difference between NRAC target share and actual allocation).

Note that the steepest decline occurred just after the Arbuthnott formula was introduced and occurred during the decade from 2001/2 to 2007/8, not long after a Labour government was elected at Westminster and during which devolution of health was acquired via the Scotland Act (1999) and was implemented by the Scottish Labour Party until the SNP gained power in 2006. In contrast, the MLC and target share rose during much of the period from 1978 to 2000, when the SHARE formula applied, during which a Conservative government reigned. This suggests that there is little relationship between the political party in power and the impact on the target share, which is calculated on the basis of a formula that is designed by an independent group of statisticians and health economists.

In the case of the Arbuthnott formula, which had the greatest negative impact on GG&C's share, the key statistician was Roy Carr Hill, who has advised on many allocation formulae in the UK. Roy Carr Hill's main contributions to the development of the formula was to break the simple relationship between the MLC index and the mortality rate and introduce an adjustment for supply. The former modification acknowledged that a high death rate and high unmet need in the deprived should not be additionally remunerated unless the board can direct services preferentially to that demographic. The latter acknowledged that supply is an important determinant of health service usage.

## Distance from Parity in £s for NHSGG&C



This graph shows the steady rise in over parity which has now stabilised at around £60 m per annum despite concerted efforts to achieve efficiency savings every year. As long as admission rates for the most affluent remain higher than expected, and admission rates in deprived datazones are lower than expected, both in relation to robust indicators of need that include self reported limiting long term illness using the Census and mortality rates at datazone level, this overparity, with minor fluctuations each year, is expected to continue.

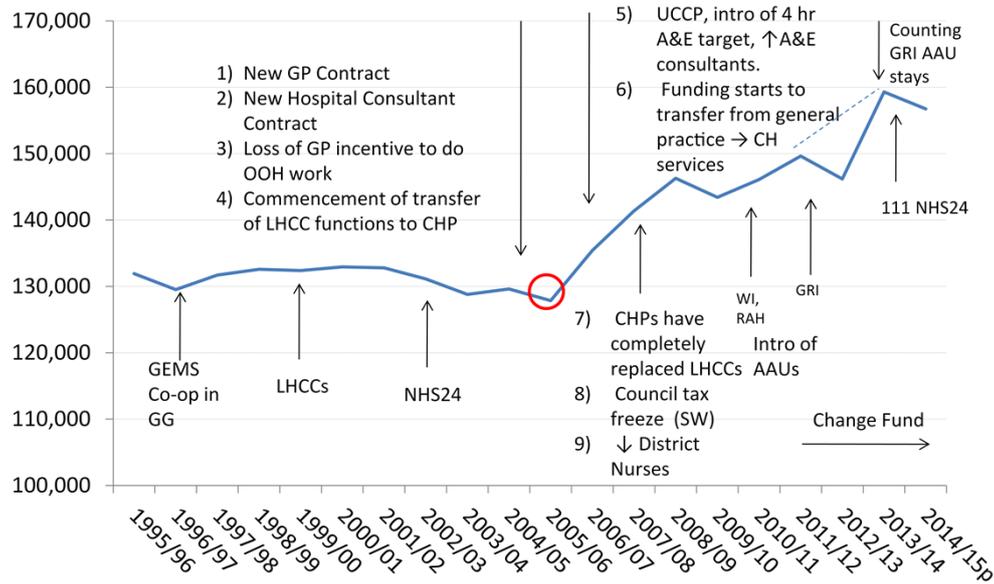
Although these sums are sizeable and difficult to shake off via efficiency savings, and would not be eliminated by closing the Vale of Leven hospital, they still make up less than 3% of the annual expenditure in the board (approximately £2b). This reinforces the hypothesis that the relative increase in activity to the affluent over the study period is a likely candidate for the cause in the deficit and why it has been overlooked as such, because it is subtle and requires a special analysis to detect it.

The health board in Glasgow is already reconciled to the fact that it will have to work harder every year at seeking efficiency savings to keep the level of overparity under the control. Nevertheless, if this analysis is correct it also needs to improve its ability to match the levels of service provision with the levels of need by deprivation level.

The need to find efficiency savings will apply to a lesser extent throughout the Rest of Scotland, where rising demand for health care has started to catch up with health boards that historically were close to or at parity, a recent example being NHS Highland <http://www.inverness-courier.co.uk/News/NHS-Highland-chiefs-set-for-another-public-grilling-amid-spending-probe-11032015.htm>. Outwith the West of Scotland boards characterised by considerable social deprivation, the other health boards will experience different problems related to meeting the greater level of need associated with an elderly population (e.g. Borders, D&G) or the high unit costs of healthcare in remote and rural areas where specific subtypes of clinical staff are increasingly difficult to recruit (e.g. Island health boards, Highland, Grampian).

All health boards, whether characterised by particular problems of deprivation, agedness or rurality / remoteness, or combinations thereof, will have to come to terms with the need to control excessive demand for unnecessary health care (including investigation and treatment).

### Number of emergency admissions (all specs, all ages, all stays) at GG&C sites, 1995/6 - 2014/15. Source: SMR01 data from J Gomez.



This slide attempts to record all the relevant milestones that might be expected to impact on the *number* of emergency admissions. It is argued that understanding the abrupt change in trajectory after 2005/6 (shown with the red circle) is the key to understanding the causes of our current pressures in unscheduled care, and how to relieve them.

The sharp rise in emergency admissions after 2005/6 in GG&C is multi-factorial in origin and was also seen, less dramatically, in the Rest of Scotland, and in England, suggesting that national factors were largely responsible. It is the view of the authors that proactive strategic organisational and funding changes, largely directed by central government, were the cause. The similarity of policy, funding, target-setting, manpower trends and problems, north and south of the border, implicate the English Department of Health, even after health became a devolved matter in Scotland.

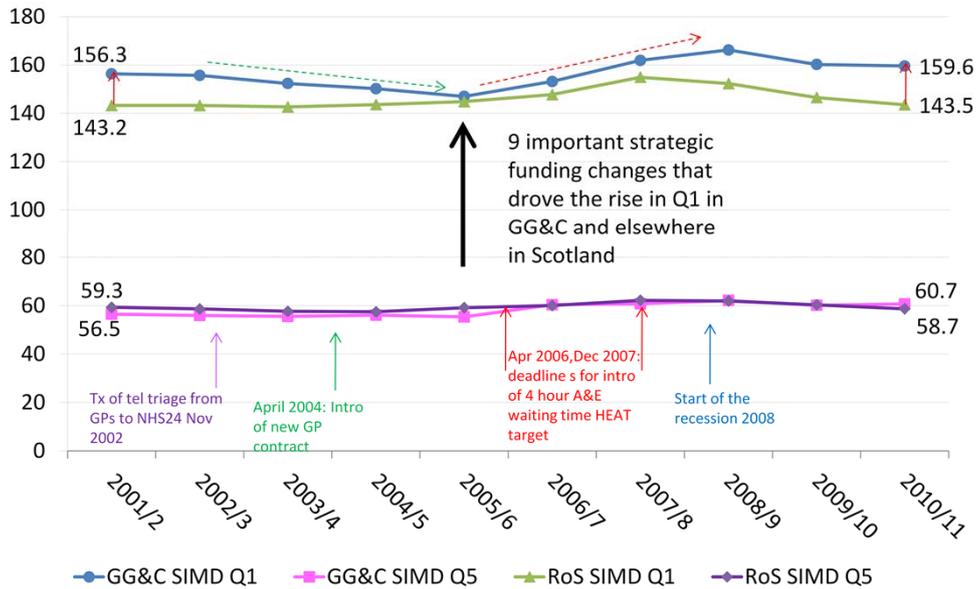
These included the new GP contract, which would direct daytime work for GPs towards improved screening, diagnosis and treatment for chronic diseases in the pursuit of revenue via the QOF framework and various LES schemes. This had the effect of extracting more work from GPs during the day, particularly of the kind that results in elective work in secondary care and ensured that GPs were less able to respond to acute illness during the day and less willing to work out of hours. The new hospital doctor contract ensured that hospitals, including A&E consultants, were in a better position to accept the transfer of emergency work from the community to the hospital and the rising elective work generated by the various screening programmes created over the past 15 years, the CDM initiatives and the rising expectation of the public. The modest remuneration for OOHs work within the Contract would ensure that busy daytime GP principals would now opt out of the OOH rotas, further compromising continuity. The Unscheduled Care Collaborative Programme and 4 hour A&E waiting time target would ensure that A&E settings became more use-friendly to users and the service more timely, inciting '11<sup>th</sup> hour' admissions.

The transfer of LHCC responsibilities to CH(C)Ps over the period from 2004 to 2007 is reported to have been associated with loss of GP involvement in decision-making processes, and the initiation of a long-term process of withdrawal of community health service support from GPs, which was bound to have a negative impact on both A&E attendance and emergency admissions. These changes would have been unhelpfully reinforced by the reduction in GP funding, which resulted in a gradual reduction in GP WTE after the new contract, and the considerable rise in funding of CHP-based community services that have failed to prove their ability to control use of unscheduled care after 2006.

The major reduction in numbers of fully qualified district nurses, who could be seen to be a key extension of general practitioners, following *Agenda for Change* in 2007 could also be expected to have had a negative impact on A&E attendances and emergency admissions. Despite the recent DN Review and rebranding of DNs, the A&E performance data suggests that efforts to reorganise DN services, which leave GG&C with fewer fully qualified DNs per capita than the RoS, have yet to impact positively, 8 years later.

The rise in emergency admissions in GG&C after 2010 (that was not seen in the RoS) is likely to be due to the introduction of AAUs at 3 major hospitals in Glasgow, again reinforcing the view that supply drives activity.

Age standardised rates of emergency admission (all specialities), per 1,000, for the most deprived and affluentest males in GG&C and the RoS, n=65,476 adms in GG&C males. Source: SMR01 dataset downloaded by J Gomez.

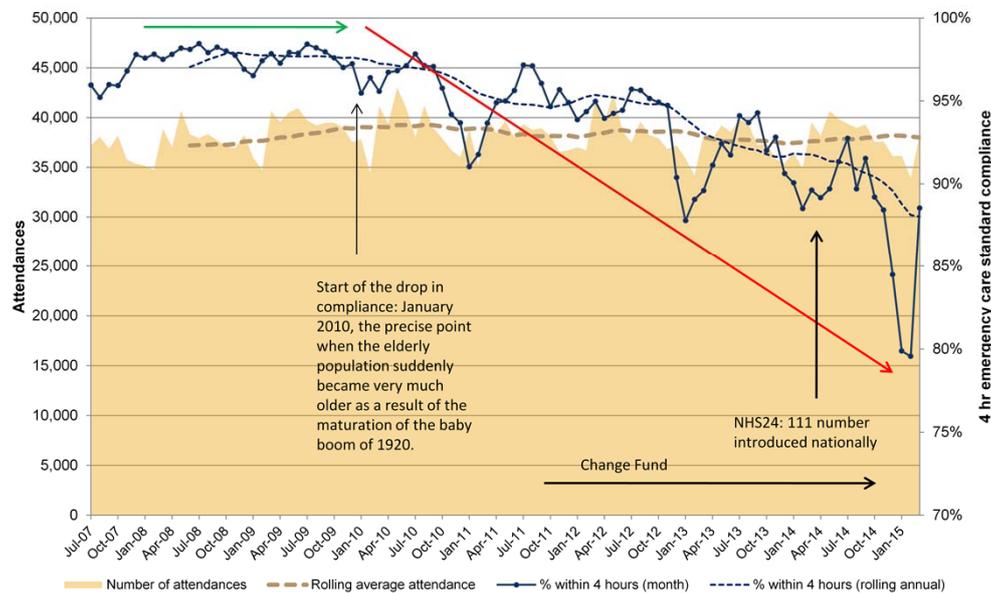


An equivalent graph for females is available on request. The flat or falling trend for the most deprived in GG&C and the RoS prior to the introduction of major strategic and organisational changes suggest that both Scotland and GG&C had a better primary-secondary care balance for unscheduled admission prior to the changes identified by the black arrow.

The graph highlights the fact that:

- 1) The most deprived in both GG&C and the RoS use emergency inpatient admission at more than twice the rate of the most affluent.
- 2) The use of such services is almost identical for the most affluent quintile in both GG&C and the RoS which implies that clinical guidelines are being implemented the same way across Scotland and that the 'Glasgow Effect' only applies to the socially deprived quintiles. Furthermore the trend was essentially flat for the affluent in both GG&C and the RoS, regardless of multiple strategic changes.
- 3) In contrast, the strategic changes impacted on the use of emergency admission by the most deprived in both GG&C and the RoS and drove an increasing gap between them. By 2010/11, the end of the study period, rates had recovered in the RoS, back to their starting point, but remained high in GG&C. This has left GG&C in a vulnerable state, unable to cope with additional stressors of the kind it is now experiencing.
- 4) It is likely the proactive change to the NHS in Scotland at the time of the introduction of the medical contracts actually created problems in unscheduled care across Scotland, more so for the most deprived, and more so for GG&C than for the RoS.
- 5) Rates for the most deprived in GG&C rose steeply between 2005 and 2009 and more recent analyses demonstrate that overall rates (for all 5 quintiles combined) are rising again at ~1% per annum after 2010 (available on request), and largely because of the introduction of additional supply in the form of AAU beds and the inability of community based services to provide an alternative to a hospital response. This reinforces the hypothesis that supply drives activity and at the moment that supply is concentrated in secondary care facilities.

## GG&C: A&E attendance and compliance with 4 hour waiting time standard, 2007-2015. Source: ISD website.



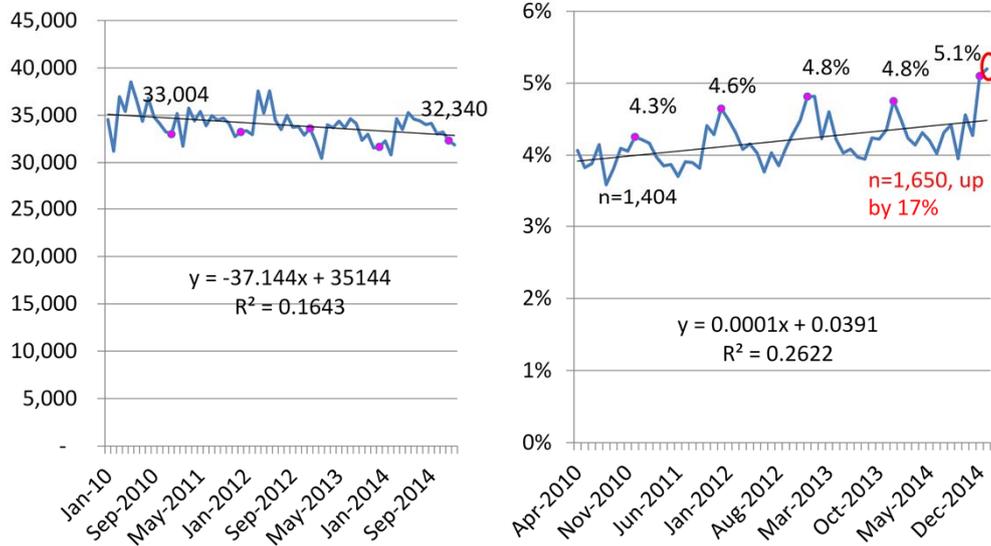
The introduction of the Unscheduled Collaborative Care Programme in 2006 followed by increasing investment in A&E consultants ensured that GG&C hospitals were geared up to accept the transfer of emergency workload from the community to the secondary care sector, an initiative that was not sustainable nor desirable given that it is increasingly being used by the most elderly who are not best treated in acute hospitals.

The council tax freeze in 2007 obliged Scottish Councils to ration their services at their discretion when deciding on budgets and by 2008 there was evidence from routinely collected data that funding of services for care of the elderly was reduced and home care visits to the elderly were rationed to varying extents and timing, depending on the council. This could be expected to have negative consequences for the elderly, with respect to their dependency on A&E and emergency admission to hospital. The steep deterioration in compliance in the 4 hr target after 2010, shown in this graph, roughly coincides with the timing of funding reductions and resultant changes to social care for the elderly for several councils covered by NHS GG&C.

This graph on A&E attendance (which includes both Emergency Department - ED and Minor Injury Unit - MIU attendances) demonstrates that numbers of attendances rose after 2007 and then plateaued after 2010. However, despite the flat profile of numbers in recent years, the compliance with the 4 hour waiting time has deteriorated markedly since the end of the UCCP, is the worst in Scotland, and reached record lows in the winter of 2014/15. The following slide demonstrates that the rapidly deteriorating compliance with the HEAT target is due to the rapid aging of the A&E attendants, a rate of aging which is far more rapid than is predicted by the aging of the resident or incoming cross boundary population, and an increasing rate of attendance by very elderly patients characterised as 'minors' (slide available on request).

This suggests an increasing failure of community services over the same time period. The fact that the community health service budget doubled after 2006 and that CHPs have had access to considerable Change Fund monies for the 4 years during which compliance has collapsed suggests that they have failed to use this resource effectively to keep the very elderly with Ambulatory Care Sensitive Conditions and more minor problems in their community setting and out of A&E, which should be a key aim.

Number of ED attendances and proportion of ED attendances that were 85yrs+ at GG&C sites, regardless of board of residence, by month, 2010 to Jan 2015, with December values highlighted,  $P=0.0012$  and  $0.00004$ , respectively, for the slope of two lines. Source: Internal A&E data downloaded by J Gomez and A&E Datamart.



The first graph shows the clear decline in the *number* of emergency department (ED) attendances at GG&C, a trend that reached statistical significance at the 0.01 statistical cut off level. The numbers show a clear seasonal tendency with higher numbers in the summer, normally inflated by patients with minor injuries who attended EDs, and lower numbers in the winter months. In this slide, the December data values were included and marked with pink dots because the marked drop in 4 hour waiting time compliance is often seen starting in December. This clear and statistically significant decline in numbers is encouraging and should be helped still further using a redirection policy. In addition, work is required to improve the relationships between GPs and A&E staff and acute physicians so that GPs can access expert opinions on patients by phone or by email that might prevent A&E visits; greater GP provision would enable hard-pressed GPs to find the time required.

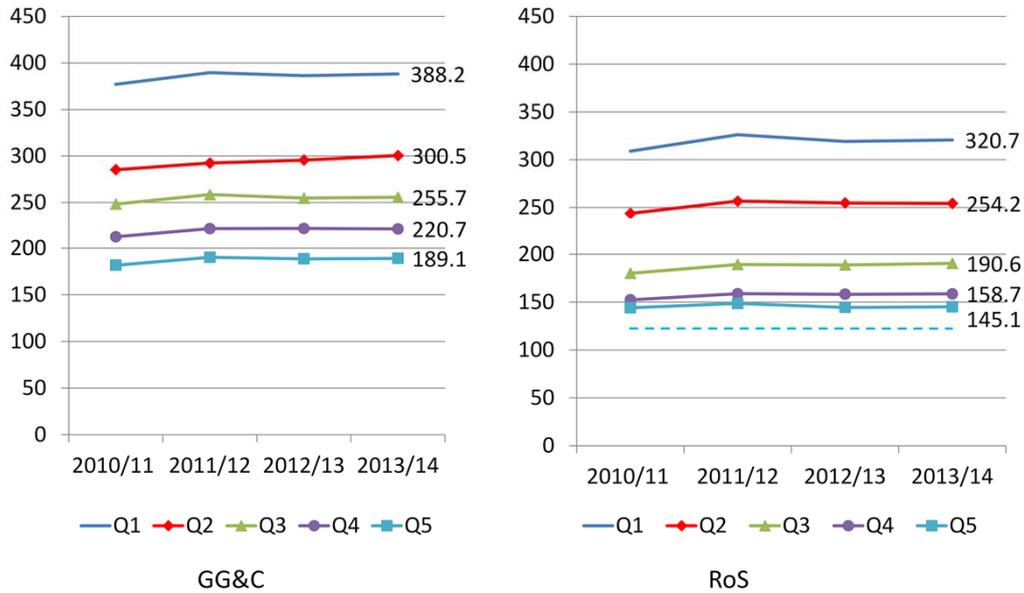
The second graph represents the trend in the proportion of all GG&C ED attendances that were 85+, regardless of board of residence (it includes incoming cross boundary flow by patients who live elsewhere), by month for about 4.5 years worth of data. A longer duration of data with age would have been useful to pinpoint the year in which the proportion that were very elderly started to climb, but unfortunately, the emphasis was on recording time before admission or discharge (compliance with the HEAT target) rather than age in the early period and the data quality falls before 2010. Note that there were 246 more attendances aged 85+ in December 2014 than December 2010; clustering of these types of patients in A&E settings correlates closely with compliance failure.

Given the reports of 'increasingly crowded A&E settings' in GG&C over this study period, particularly during periods of poor compliance with waiting times, it is inevitable that some demographic subgroups are using EDs less, even in the absence of a redirection policy, simply because the experience will not be user-friendly during peak times. The evidence suggests that younger patients aged 0-64 years, who were not subject to Change Fund monies, are indeed using this service less over time in GG&C.

The red circle highlights the fact that the percentage that were 85+ rose still further in January 2015, a month that GG&C normally experiences a reprieve. This is why compliance continued to collapse into the new year, necessitating a visit from a SG team to advise NHS GG&C managers on how to address their problems, particularly at the RAH where the rise in agedness of attendances was particularly marked.

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European Age Sex Standardised Attendance rate (per 1,000) to Emergency Departments in a patient's Health Board of Residence by SIMD and Health Board of Treatment (Fiscal Years 2010/11-2013/14). Source: Ad hoc request to A&E Datamart analysts.



The data used in these graphs result from an ad hoc analysis requested from the A&E Datamart and requires age, gender and patient's address to produce. Because the data for these parameters was incomplete at the start of the 4 year study period, the figures for 2010/11 maybe be unrepresentatively low. However, that small dip in the first year is clear to the eye and suggests we can still interpret the data safely by SIMD by 2013/14.

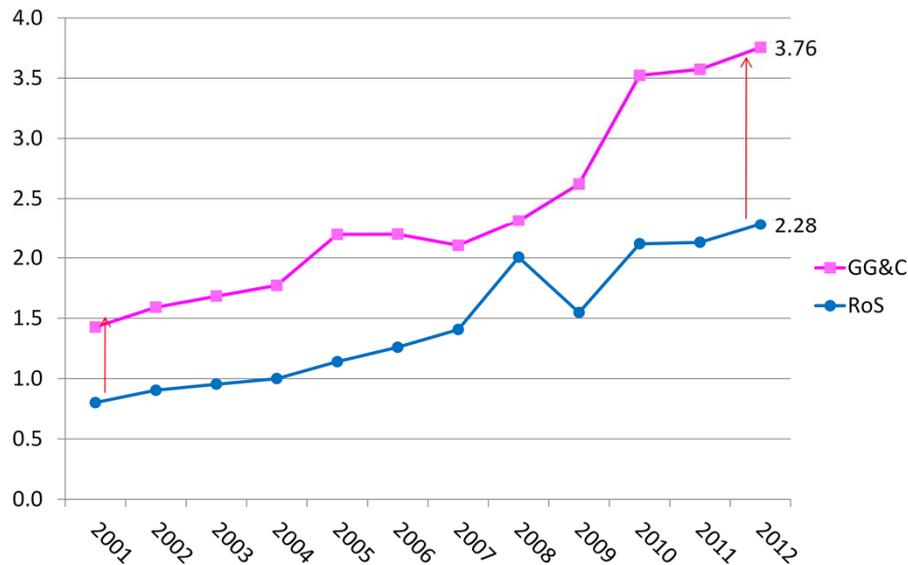
This is a very important slide because the y axes have been juxtaposed to enable easy comparison of the RoS with GG&C by SIMD quintile and because the standard population used to standardise all the data was Europe. This analysis provides clear evidence that there is a strong social gradient in uptake of attendance to emergency departments in both GG&C and the RoS and that all the quintiles in GG&C are experiencing considerable excesses in such attendance compared to the equivalent quintile in the RoS, including the most affluent, Q5. The excesses range from 30-45%. Slide 14 demonstrated that the use by Q5 of emergency admission was identical between GG&C and the RoS, so it is fair to suspect that this excess use of an ED by the most affluent, or much of it, is very likely to be unnecessary.

It is believed that the excess uptake of ED services in GG&C, which also applies to NHS A&A, D&G and Lanarkshire (slide available on request), is partly due to a West of Scotland culture of using A&E, partly due to excessive supply (including number of sites) and partly due to the ability of patients to vote with their feet and use A&E sites in neighbouring boards, where a 'West of Scotland conglomerate service' facilitates use. The insufficient availability of community based services to replace A&E services is the other important factor, as demonstrated by insufficient GP (slide 25) and DN provision (slide 29). NB The RoS lines would sit even lower if the data for the West of Scotland boards were removed.

What this slide clearly provides is evidence to support the need for a redirection policy in GG&C and other WoS boards. It also suggests that the reduced availability of ED services, greater travelling distances and examples of redirection policy (e.g. NHS Tayside) in the RoS reduce attendance rates and yet the most affluent are still able to overcome the barrier to some extent in that the Q5 line is sitting on the Q4 line in the second graph when it should be positioned lower (in the vicinity of the dotted turquoise line).

### Trend in crude per capita provision of WTE medical consultant A&E staff per 100,000 for GG&C and the RoS, 2001 to 2012.

Source: ISD website manpower data.



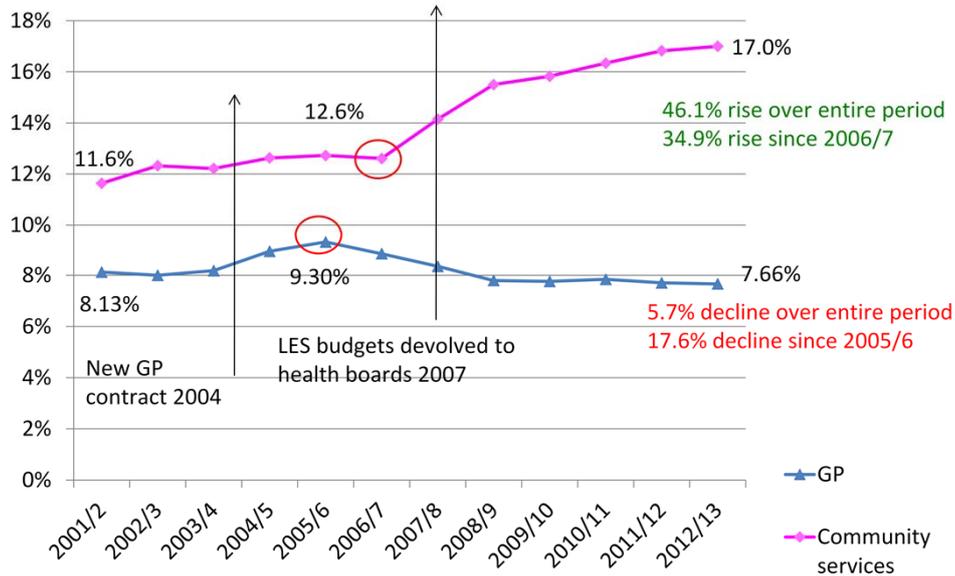
In the middle of an 'A&E crisis', when EDs are overflowing with very sick patients who can not be discharged to any alternative site, it is tempting to think that the solution lies in employing more medical staff in A&E, either in GG&C or elsewhere in Scotland or indeed throughout the UK. Emergency medicine colleges and advocates have been insisting that there is a shortage of A&E medical staff and that recruitment is difficult because of the difficult work-life balance and stresses of the job. This may apply in parts of the UK. However, the view of the authors is that, in GG&C, we need to look elsewhere to solve the problem otherwise the hospital will be increasingly used inappropriately for patients that need earlier intervention from a GP, district nurse or social worker in community based settings that can offer care rather than more sophisticated treatment of the type on offer in large acute hospitals in GG&C.

The GG&C/RoS excess of medical consultants in 2012 was 65% when the excess A&E attendance rate, based on board of treatment, as shown in the previous slide ranged from 30-45%, and was itself deemed to be excessive (unnecessary). In the context of A&E manpower data, whether one looks at 'all medical staff', 'medical trainee staff', or 'medical consultant staff', the crude per capita provision of WTEs in GG&C is at the top or near the top of the Scottish league table and the excesses are too large to be deemed required by the 7-9% estimated cross-boundary flow in combination with the social deprivation in GG&C. It is therefore unlikely that 4 hour compliance problems at GG&C hospitals are due to inadequate provision of A&E medical staffing.

This graph is just one of many graphs available on request that suggest GG&C does not need to employ more medical staff in A&E because the root problems lie in other services and using resources to hire more medical staff in A&E consumes resources that would be better expended elsewhere, indeed outwith the hospital component of the HCHS budget (general practice and district nursing) and possibly outwith the NHS, in social services budgets.

Nevertheless, as the senior A&E medical staff and others have pointed out: if these community based services are not made available, and promptly, the A&E crisis will recur and it is not fair to A&E staff to subject them to these pressures on a recurring basis, even if we can persuade them that more of their own is not the solution.

Percentage of total national territorial board NHS funding spent on general practice vs community services, 2001-2013. Source: ISD Scotland website funding data.



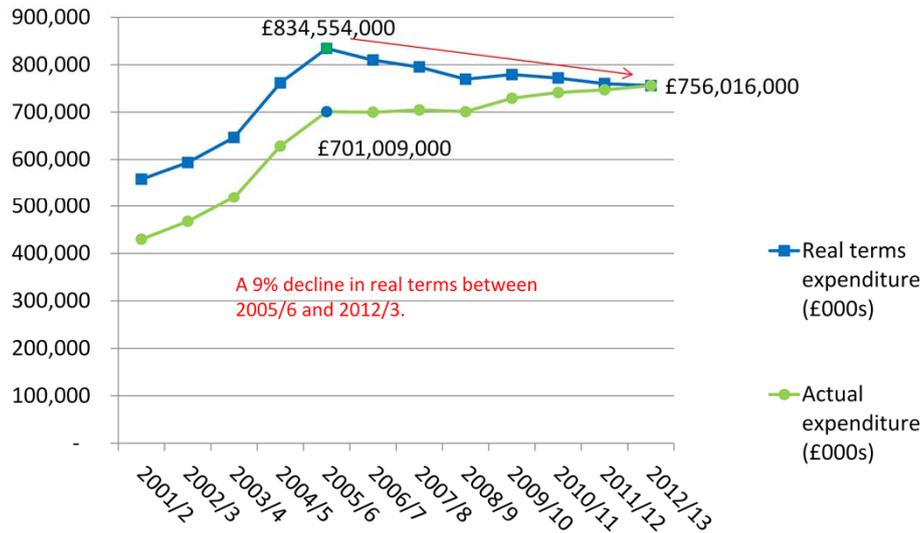
This graph is one of the most important in the collection because it provides the single most telling clue to explain why emergency admissions started to rise and why the ongoing rise in elective admissions accelerated after 2005/6. It was plotted by calculating the percentage of total NHS territorial board expenditure in Scotland that was spent on general practice, and community health services, by year. It demonstrates the clear divergence in the paths for the two broad spending categories after 2005/6 which reflects a strategic change adopted by government favouring community health services over general practice.

The percentage of total NHS territorial board expenditure that was spent on community health services rose by 46.1% according to these figures whilst the percentage spent on general practice rose dramatically and then fell dramatically to end up 5.7% less than where it started pre “New GP Contract”.

On the basis that it is fair to assume that a large investment in a service is part of the problem if it is not part of the solution, one might conclude that the large increase in investment in community health services (excluding district nursing as it is shown to be subject to considerable disinvestment in a slide 30) has not been able to keep patients, either elderly or younger, out of hospital for an emergency admission nor keep the most elderly out of A&E for inappropriate visits. The shape and timing of the trend line for the increasing investment in community based health services looks remarkably like the shape of the rise in emergency admissions shown in slide 13, suggesting that diverting resources has been causally associated with the rise in emergency admissions. The employment of more and more CH staff that are in an ideal position to identify need but who lack the knowledge and skills required to deal with these problems in the community could be expected to result in a rise in the dependency on hospital admission, particularly of the emergency type.

Because the total territorial board budget for HCHS rose substantially over the study period, the actual sums involved for community health services rose from £615m in 2001/2 to £1.67b (more than double). The budget for general practice only rose from £430m to £756m over the same extended time period (which would have amounted to a much smaller rise in real terms). More importantly, general practice has actually sustained a decline in real terms in recent years, as shown in the next slide. General practice is the only category of health care to be singled out for a real terms decline and therefore must be a prime suspect, given its gatekeeper function, in the aetiology of the NHS’ problems.

Actual vs real terms expenditure (after SG GDP deflator applied) on general practice in Scotland between 2001/2 and 2012/3. Source: ISD website funding and SG provided deflators at the time of 2013.

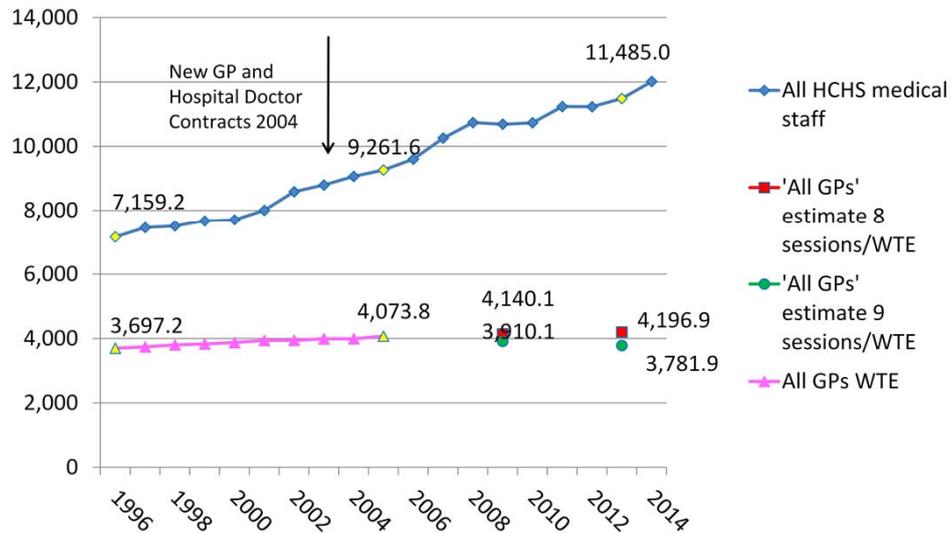


This slide compares the actual expenditure on general practice in Scotland with the real terms expenditure, highlighting the fact that actual expenditure was considerably higher in 2012/3 than in 2001/2, but in real terms, lower than at its peak in 2005/6 (by 9%). General practice is the only major part of the health service that has experienced a material and sustained drop in funding in real terms over the past decade. A similar reduction has occurred in England over the same time period. In fact, the real term funding of general practice has dropped in similar fashion in all four countries of the UK, suggesting that this was a deliberate policy of the English DoH with the other 3 devolved Departments following suit. This suggests that general practice has fallen out of favour as the gatekeeper to other services and the first port of call for health care in the community; increasingly there is evidence that healthcare planners envisage direct access for an increasing range of services.

This drop in 'real terms' investment in general practice for the past 10 years will have forced GP partners to restrict their own numbers and that of salaried GPs they employ to maintain a reasonable pensionable income. The result of that is undesirable for the resident population: fewer GPs with the knowledge and expertise required to identify genuine need for treatment, while at the same time, avoiding overdiagnosis and overtreatment in the worried well. This decline in numbers could be expected to allow a rise in emergency admissions and an excessive rise in unnecessary elective work, as a result of the loss of the gatekeeper function. The reduction in numbers of WTE GP principals/partners per capita is shown graphically in slide 25.

In fact, a study of pensionable incomes by general practice in GG&C (in progress) suggests that average pensionable income per 1,000 patients was flat in actual terms from 2009/10 to 2012/13 and falling in real terms from 2009/10 onwards. The average actual income for the practices in some SIMD deciles fell visibly in recent years, even before the GDP deflator was applied. Static or falling levels of remuneration is one important explanation for the rising chorus of complaints about the pressure of the job, the unfilled training posts, the high rate at which GPs are exiting the profession, as well as falling numbers of WTE principals/partners.

HCHS Medical staff (all grades), All GPs (all grades), All GPs in 2013 assuming 8 and 9 sessions per WTE: numbers of WTE per annum employed in Scotland. Source: ISD Scotland manpower and survey data.



This graph reveals the steep rise in the *number* of WTE medical staff of all grades and all specialities (excluding dental staff) in the hospital and community health services, most of which are largely hospital based, and contrasts them with the much lower and flatter *number* of WTE general practitioners (all grades combined including trainees), which has remained remarkably flat over the same time period, from 1996 to 2014, both trends relating to Scotland.

The WTE trend of 'all GPs' is rising only very slightly between 1996 and 2005 (pink line). Once the new GP Contract is introduced, the WTE data is no longer available and it is replaced with headcount data, so the 2005 WTE figure is an estimate only. The 2009 and 2013 Primary Care Workforce Surveys (which exclude GP trainees) are used to provide *estimates* of WTEs of 'all GPs' (red datapoints), by taking the estimated WTE for those years, assuming 8 sessions per WTE for all GPs and adding the estimated number of WTE GP trainees for those two selected years. The latter was obtained by taking the headcount for trainees in 2009 and 2013 and applying the headcount:WTE ratio for trainees in 2004, assuming it still holds several years later.

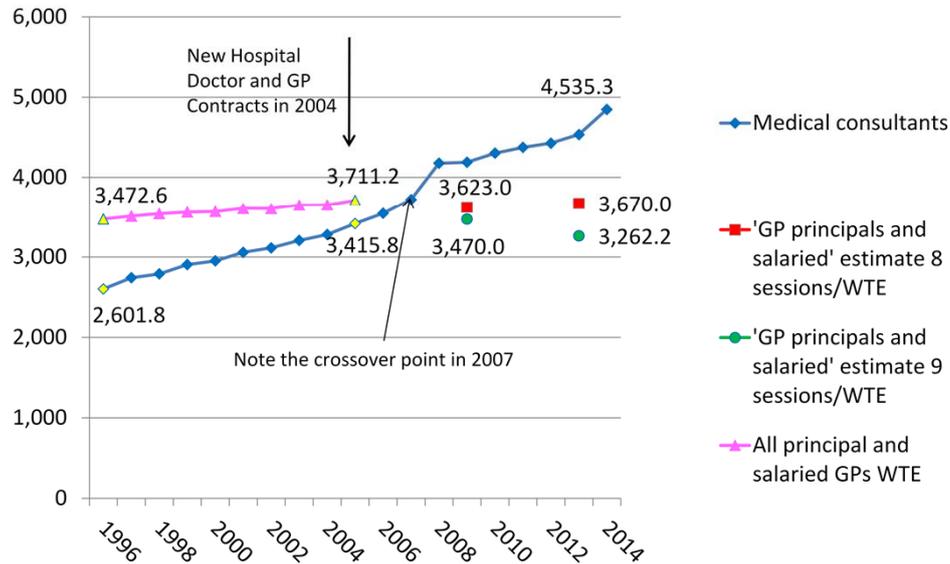
ISD does not consider it legitimate to compare the WTE data up to 2005 with the survey estimates because of the different way the data was collected and analysed. However, bearing these differences in mind, this graph provides a reasonable feel of the genuine trend given what is known about the rising proportion of female GPs and the rising tendency for female GPs to work part-time.

The 2013 Survey also provides WTE estimates based on the assumption that one WTE equals 9 sessions and this was used to provide an alternative (green) datapoint. This graph demonstrates that whether one uses 8 or 9 sessions per WTE in recent years makes a subtle difference to the interpretation of the direction of trend for GPs in Scotland; that is whether it is rising only slightly between 1996 and 2013 (2.3% for the assumption of 9 sessions) or modestly (13.5% for the assumption of 8 sessions). The 9 session assumption suggests a decline in numbers of WTE GPs in the past decade in Scotland.

These flat trends or very small rises in WTE 'all GPs' contrast with the rise over the same 17 year period of 60.4% for 'all medical staff, all grades' in the HCHS services. Note that the rise in medical staff in hospitals in Scotland was fairly gradual, the commencement of which preceded the introduction of the new Hospital Doctor Contract in the Spring of 2004.

NB These trend lines do not take into consideration the size of the resident and non resident user population. The crude per capita rate provision trends are shown elsewhere or are available on request.

*Consultant Medical HCHS staff, All Principal and Salaried GPs, All Principal and Salaried GPs assuming 8 and 9 sessions per WTE in 2013: numbers of WTE per annum employed in Scotland. Source: ISD Scotland manpower and Primary Care Workforce Survey data.*



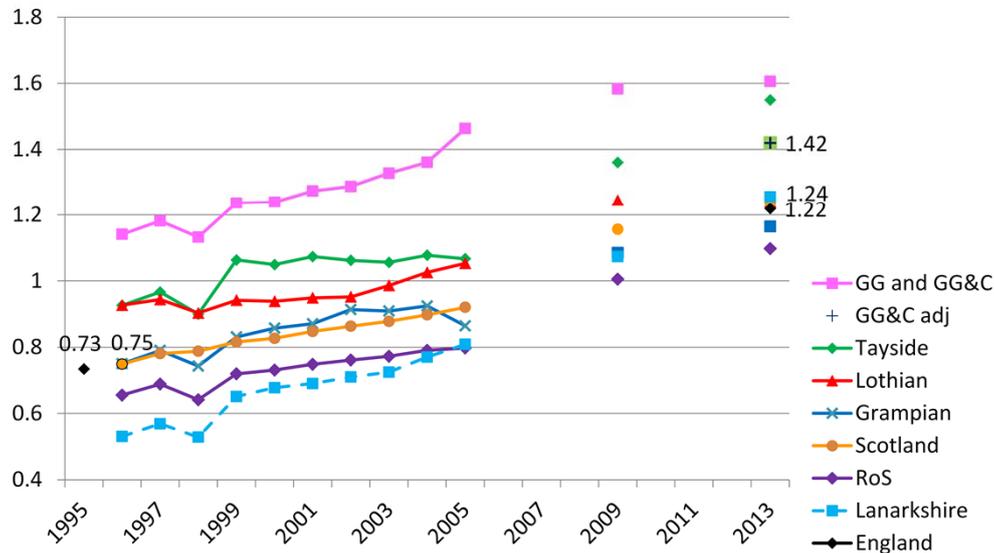
This important graph reveals the steep rise in the *number of WTE consultant medical staff* of all specialities (excluding dental staff) in the hospital and community health services, most of which are largely hospital based, and contrasts them with the much lower *number of WTE fully qualified general practitioners (principals and salaried combined)*, which has remained remarkably flat over the same time period, from 1996 to 2014, both trends relating to Scotland.

The WTE trend of 'Principal and Salaried GPs' is rising only very slightly between 1996 and 2005 (pink line) where it is rising more steeply for HCHS medical consultants (blue line) over the same period. Most importantly the number of Principal and Salaried GPs exceeded the number of medical consultants until the crossover period around 2007. This did not apply to GG&C where numbers of medical consultants always exceeded the numbers of principal and salaried GPs (see next slide).

This graph demonstrates that whether one uses 8 or 9 sessions per WTE in recent years makes a considerable difference to the interpretation of the direction of trend for Principal and Salaried GPs in Scotland; *i.e.* whether it is falling only slightly between 2005 and 2013 (1% for the assumption of 8 sessions) or considerably (12% for the assumption of 9 sessions). Meanwhile, over the same study period from 2005 to 2013, the WTE medical consultant numbers rose by 33%. The equivalent percentage changes between the two surveys in 2009 and 2013, 4 years apart, were a 1.3% rise for GPs assuming 8 sessions/WTE, a 6.0% fall for GPs assuming 9 sessions and an 8.3% rise for HCHS consultants.

This modest rise and fall in WTE 'Principal and Salaried GPs' contrast with the persistent and steep rise over the 17 year period from 1996 to 2013 of 74% for 'all consultant medical staff' in the HCHS services. Note that the rise in consultant medical staff in hospitals in Scotland was fairly gradual, the commencement of which preceded the introduction of the new Hospital Doctor and GP Contracts in the Spring of 2004. Principal and Salaried GPs rose by 6% (8 sessions) and fell by 6% (9 sessions) over the same 17 year time period.

Manpower ratio: Numbers of WTE HCHS medical consultant staff: Numbers of GP principals and salaried assuming 8 sessions per WTE in 2009 and 2013, by year, for selected health boards, RoS, Scotland and England. Source: ISD manpower data and Centre for Workforce Intelligence for English data.



This graph plots the ratio of the two trends in the previous slides, which include numbers of WTE HCHS consultant medical staff and GPs (combined principals and salaried), but also includes the trends for the other large mainland health boards and two datapoints for England. The ratio is a summary figure that represents the excess of HCHS consultant medical staff, most of whose work is carried out in the hospital setting, over combined principal and salaried GPs.

For several of the geographic areas studied, it appears that the trends may have been flat immediately prior to 1999 when the trend starts to rise. The rising trend is steeper for GG/GG&C than for the RoS and starts off at a much higher level and this cannot be attributed to the merger with Clyde.

This graph highlights:

- 1) How much higher the quotient is for GG/GG&C than for the other large mainland health board and the RoS, even when adjusted for net incoming flow (brown diamond, value of 1.42 in 2013). The other outlier is for NHS Tayside which would also remain high once adjusted for its incoming CBF (adjusted ratio not shown).
- 2) The steep rises for most large mainland boards that start between 1992 and 2002 and gather momentum in the second half of the study period.

The authors interpret this slide as evidence of a major risk factor for the high and rising elective hospital activity in GG&C after 2000 and a requisite factor for the high and rising emergency admission rate in GG&C after 2006. The transfer of work from the community to the hospital is facilitated by the increasing employment of consultant medical staff on the HCHS payroll and the *relative loss* of the fully qualified GP gatekeeper function in the community when their numbers stay the same in the face of rising demand and expectation as well as rising clinical guideline and QOF-related workload.

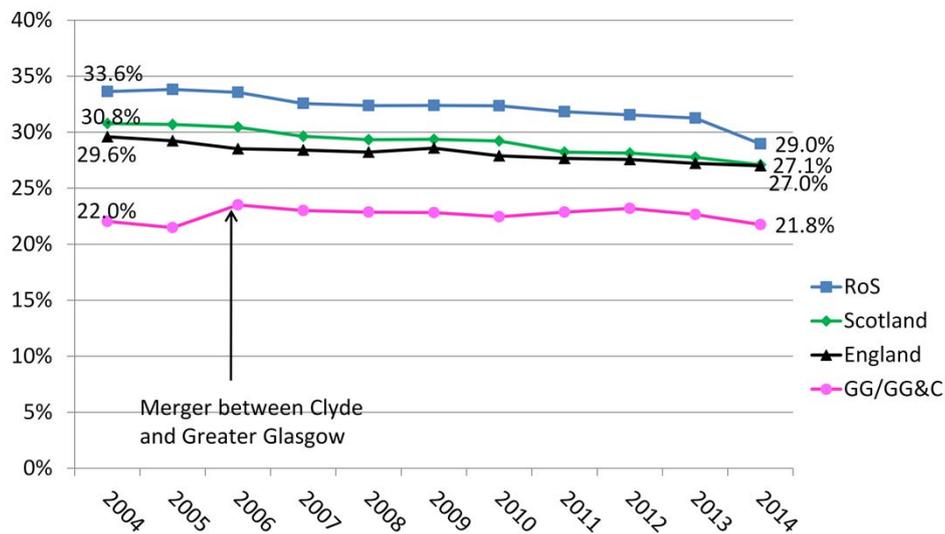
A recent report by AGE UK confirms that many of the policies, trends and problems experienced in Scotland are the same as in England, including the steep rise in the use of A&E and emergency admission by the elderly, which the Age UK authors also attribute to the failure of general practice and social work services

<http://www.ageuk.org.uk/professional-resources-home/research/reports/health-care-services/the-health-and-care-of-older-people-in-england-2015/>.

Note the remarkable similarity in the 2013 ratios for England and Scotland when 8 sessions are assigned to a WTE. This suggests that by 2013, the predominant provision of medical expertise within the NHS both North and South of the border was clearly within the HCHS budget and in reality provided within hospitals. In both England and Scotland in 1995 and 1996, when healthcare was a reserved matter, fully qualified GPs clearly outnumbered consultant medical staff, as shown by a ratio of less than unity (0.73, 0.75 respectively). In fact, until 2005, most of the datapoints were below unity with the exception of those for GG&C and Tayside. This rose in tandem for the two countries to reach 1.22 (England) and 1.24 (Scotland) by 2013, when consultants clearly outnumber GPs. Despite the devolution of health and social care in 1999, Scotland appears to have managed to precisely replicate English funding and manpower strategies by 2013.

Although it is fair to adjust the WTE consultant provision for net cross boundary flow of workload when calculating these ratios, the authors do not believe that concentrated social deprivation is a reason to have a high consultant:GP ratio.

All GPs (all grades), as a percentage of All HCHS medical staff (all grades) and All GPs combined, calculated on the basis of *headcount*, GG/GG&C, RoS, Scotland, and England, 2004-2014. Source: ISD manpower data and data obtained on request from CfWI.



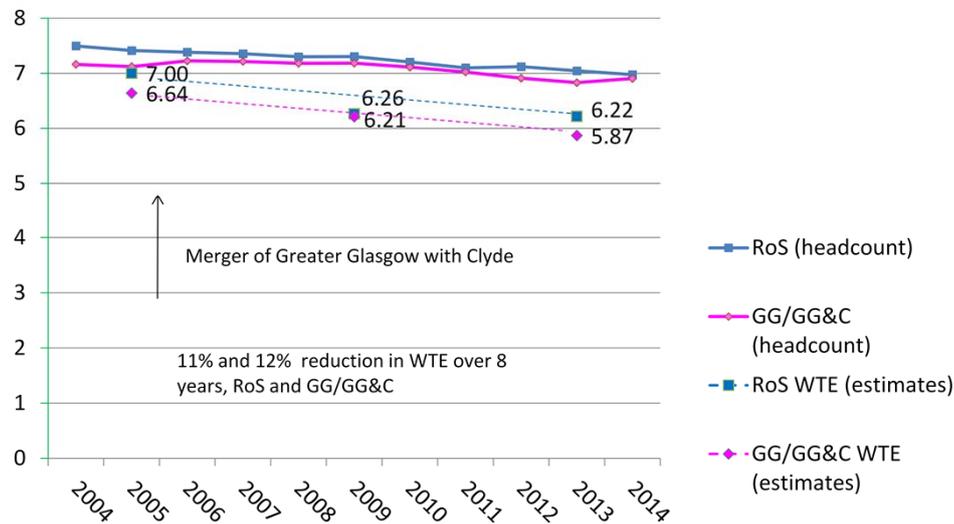
This uses the same data sources but calculates the percentage of the combined sum of all HCHS medical staff and GPs (all grades) for the denominator and uses headcount data for that period when only headcount data was routinely available in Scotland, i.e. from 2004 onwards. Although the overall study period is shorter, it is worth analysing the data in this way because there is comparable headcount data from England over the same time period to which the Scottish data can be compared. Furthermore, given the advice from ISD to avoid comparing GP WTE data prior to 2005 with 2009, 2011 and 2013 Survey estimates, it was worth plotting headcount data for the recent period for which this data is routinely available for both types of healthcare professional for both countries. The headcount data for all hospital medical staff and GPs (all grades) for England was requested by the authors from the Centre for Workforce Intelligence and for Scotland was available on the ISD Scotland website.

Accepting the vagaries of using headcount data, using headcount data for this recent period confirms the declining percentage of medical staff (any type or place of work) that were GPs, overcoming to some extent the problem of the missing WTE data in Scotland since 2004 and confirming that GPs have gradually played a declining role as providers of medical care compared to hospital doctors who have played a rising role, in both England and Scotland. In the RoS, the percentage declined by 14% from 33.6% to 29.0% but in GG/GG&C, the percentage started off very low and dropped by only 1.3% over the 10 year study period. It would appear that Glasgow's provision, which is an outlier, has been dominated by hospital staff and this has changed little in the short study period in this graph.

In addition, it is interesting to observe that the percentages are similar for the two countries (Scotland and England) from 2004 to 2011 (only about one percentage point or so apart) and then start to converge again in 2011 until they are almost identical by 2014 (27.1% vs 27.0%), despite the entirely different sources of data.

This again suggests that health service planning and funding has been remarkably similar north and south of the border despite the potential for Scotland to organise its services differently since 1999 and despite the very different stated intentions, in terms of the degree of reliance on the private sector for example, for the design for the two health services by their respective governments. Both governments clearly believe that reducing the proportion of medical expertise that is provided in primary care is the preferred option and yet this strategy has been accompanied by rising demand for hospital care, including what is presumed to be unnecessary emergency care, financial shortfalls, the failure to move services from the hospital to the community, recruitment problems in selected hospital specialities and in general practice, and wasteful expenditure on agency and locum staff to fill the gaps. The authors believe that this makes the disinvestment in general practice a prime suspect in the aetiology of these problems over this time period. Further reductions to the funding of general practice is expected to worsen those problems.

GP principal in general practice, headcount: Crude rate per 10,000 pop'n, 2004 onwards, n=789 in GG&C and 2,933 in the RoS by 2014, using *GROS denominator*; and 3 WTE estimates from 2005 ISD Return and 2009 and 2013 Workforce Surveys for GG/GG&C and RoS (8 sessions/WTE). Source: ISD website.



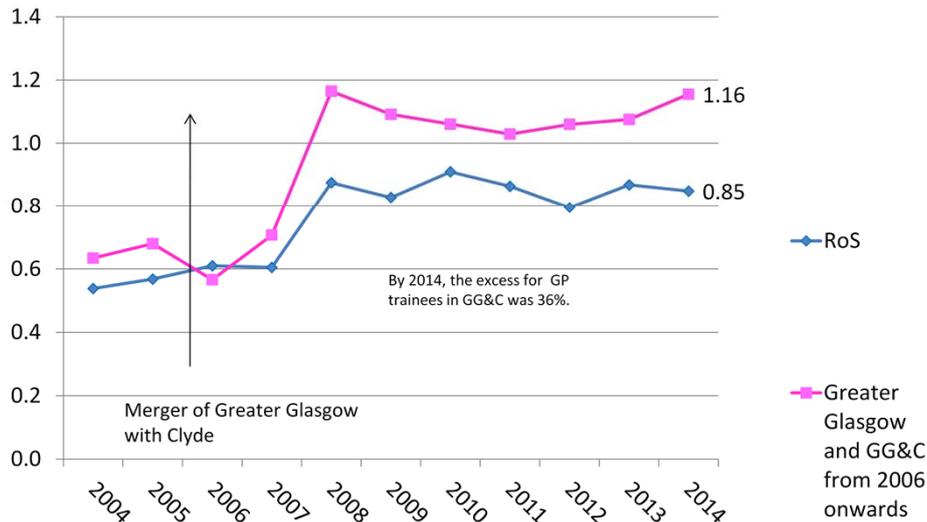
The transfer of ~75,000 residents to NHS Lanarkshire from NHS GG&C in April 2014 also involved the transfer of administration of 16 GP practices and about 40 GPs. However, this is accommodated in this graph which adjusted both numerator and denominator for the 2014 datapoint for NHS GG&C.

Crude rate provision in headcounts is essentially the same for GG&C and the RoS, is slightly falling for both and is a considerable over-estimate of the actual trend in per capita provision of WTE principals in both areas. The latter is falling much more sharply (shown in hypothetical dotted pink trend line for GG/GG&C by connecting the estimated rate for GG in 2005 with the estimated value for GG&C in 2009 and 2013). Increasingly in recent years, advertised partner posts are part-time. The WTE trend for the RoS is about 5% higher than in GG/GG&C but experiencing a similar fall of 11% between 2005 and 2013, confirming that decreasing GP WTE principal provision is occurring across Scotland.

In conclusion, GG/GG&C has consistently had lower levels of per capita WTE provision of GP principal than the RoS, despite the concentration of Deep End practices within its boundary. It could reasonably be argued that patients in deprived areas need a higher provision of highly skilled and experienced GPs who are better able to offer continuity of care and who are willing to work beyond their fixed hours

Although it could be argued that the GP contract introduced in 2004 further weakened general practice in a number of ways, the authors believe that the decline in per capita provision of WTE principals seen throughout Scotland in this graph was the result of the deliberate reduction in funding of general practice as a percentage of the total national territorial board expenditure on the NHS. GP partners/principals responded by restricting their own numbers to maintain their pensionable incomes. The end result is a contracted senior GP workforce that has to work much harder and longer hours to cope with rising demand, disenchantment within the profession that may well be at the root of poor recruitment and high exit rates, short consultation times that inevitably fail to meet the unmet needs of the more deprived patients, and longer waits for appointments. The knock on effect of long and intense working days for principals is an unwillingness to contribute to the out of hours service, hence the need for Professor Ritchie's review.

**GP Trainees in general practice, headcount: Crude rate per 10,000 pop'n, 2004 onwards, n=132 in GG&C and 357 in the RoS by 2014. Source: ISD website.**

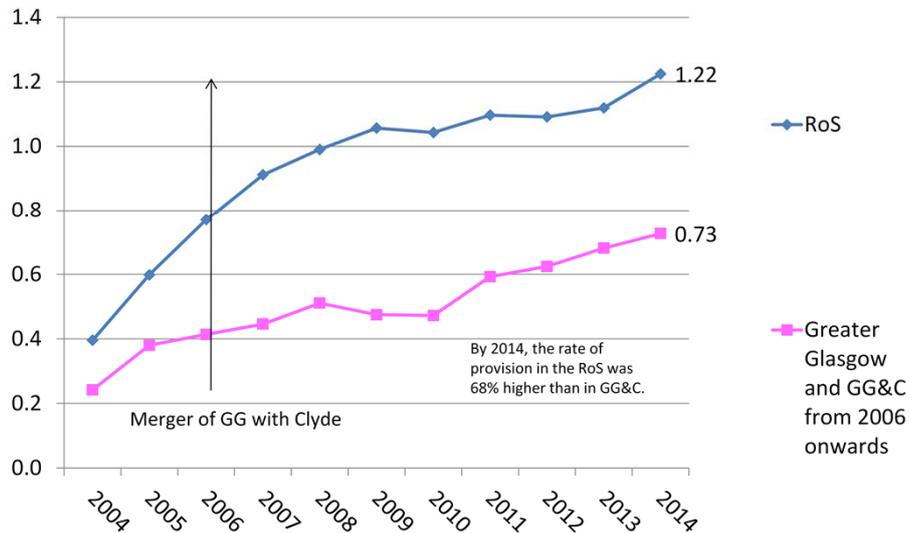


This slide demonstrates the greater reliance in GG&C, to maintain the overall numbers of GPs, on GP trainees who by definition, will be less confident at detecting genuine illness in the sick, preventing unnecessary investigation in the worried well, and preventable admission in those with more confusing clinical presentations, than in the RoS. It also reveals the steep rise in numbers of GP per capita provision of trainees across Scotland during which time per capita GP principal provision was falling.

Not only does GG&C have smaller overall per capita GP headcount provision than does the RoS (in 2014 this was 8.9 vs 9.2 per 1,000 population, not shown) but they have a substantially smaller provision of fully trained senior staff. This is because of a lower historical provision of salaried GPs and a greater percentage of trainee GPs making up those smaller numbers. In 2015, the headcount data revealed that 13.2% (139/1,055) of all GG&C GPs were trainees whilst the equivalent percentage for the RoS was 9.1% (353/3883). The difference in the percentages reaches statistical significance ( $P=0.00008$ ). It is difficult to defend a smaller provision of GPs that relies on GP trainees to boost numbers in the largest health board in Scotland when it is home to a large population characterised by considerable social deprivation.

A study of general practice in Scotland by MacKay and Watt (2010) demonstrated that affluent practices are more likely to be involved with post-graduate training, ie provide training to specialist registrars in general practice. Given the analysis of routinely collected data shown in this slide, it is assumed that the higher provision of GP trainees in GG&C reflects the greater number of training posts and the popularity of these posts in Glasgow, given the amenities on offer. However, the systematic study of practice characteristics published by MacKay and Watt would predict that this higher provision in GG&C will be concentrated in the affluent practices in East Dunbartonshire, East Renfrewshire, the west end of Glasgow, Kilmacolm and Gourrock. This will be subject to further study.

**Salaried GPs, headcount: Crude rate per 10,000 pop'n, 2004 onwards, n=83 in GG&C and 515 in the RoS by 2014. Source: ISD website.**

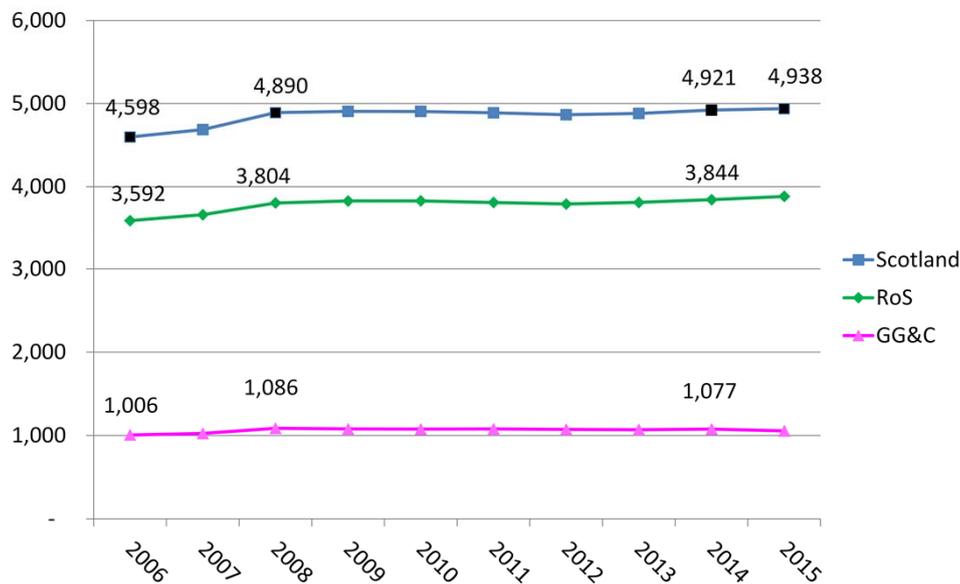


In contrast, this slide demonstrates the much greater reliance in the Rest of Scotland on salaried GPs than in GG&C. It can probably be assumed that a salaried GP who has completed their training is a more competent decision maker than a trainee GP and will be in a better position to identify unmet need and prevent unnecessary admissions.

It has been argued that the rising use of salaried GPs reflects the diminishing investment in general practice with GP principals increasingly resorting to replacing retired GP principals with salaried GPs in order to preserve their own income.

Historically in GG&C, more conventional models of provision were favoured by its LMC, including a preference for the GMS contract and the subcontracting of principals with a resultant low uptake of 17c contracts and salaried posts. However, in recent years more practices are opting for alternative contracts and a relatively large increase in the number of salaried posts was observed in 2015 (data not shown). This step change increase in 2015 succeeded the reduction in overall numbers of GPs in GG&C that resulted when the boundary with NHS Lanarkshire was redrawn as of April 2014 and 16 GG&C practices were transferred to NHS Lanarkshire.

Headcount numbers of all GPs (all grades combined, including trainees) in GG&C, the RoS, and Scotland, 2006-2015. Source: ISD website.



The authors do not believe that it would be fair to emphasise, as has become the habit amongst Scottish Government politicians, including the Cabinet Secretary, the modest rise in the overall *headcount number of GPs (all grades combined)* that has occurred over this same time period in Scotland. For example, the Cabinet Secretary recently stated at a Holyrood First Minister's Questions that there had been "a 7% rise in GPs in Scotland". When the numbers are plotted, this graph shows that although there was indeed a 7% rise between 2006 and 2014 or a 7.4% rise up to 2015, almost all of that rise (a 6.4% rise) occurred in the short period from 2006 to 2008 in the immediate aftermath of the New GP Contract. The percentage rise from 2008 to 2015 was just 1.0%, highlighting how the rise has slowed down markedly in recent years. This, and her other statement on the subject, that 'GP numbers are the highest on record', while strictly true, fails to account for:

- the rapid increase over the time period in the percentage of these staff who work part-time, emphasising the overwhelming need for WTE data, which is routinely collected in England but not in Scotland;
- the increasing component that were trainees who can not be expected to perform at fully qualified level;
- the increasing component that were salaried and who tend to work shorter, fixed hours and who have less interest in ensuring that the practice survives as a 'going concern' in financial terms;
- the increasing size of the population which ensures that per capita provision has been falling since 2008;
- the increasing agedness of the population, bearing in mind the steep rise in consultation rate with rising age;
- the increasing demand in terms of number of consultations per patient per year amongst patients in most age groups;
- the increasing complexity of clinical presentation that results from co-morbidity and increasing demand for investigation and treatment that is now on offer and therefore the increasing complexity of each GP consultation.

This is particularly relevant in GG&C where the falling trend in the headcount number of GPs (all grades combined) between 2008 and 2014 (minus 1%) becomes even more problematic, bearing in mind that GG&C contains most of the Deep End practices in Scotland. In addition, the bulk of the increase between 2006 and 2008 in GG&C was due to the rise in the number of trainees shown in slide 26, who cannot be regarded as the same as a fully qualified GP.

Unit of Workload to WTE senior doctor: Scottish HCHS medical consultant vs Scottish GP (principal or salaried) at the start and end of the PTI sampling study period. Source: ISD Scotland website data on GP consultations and hospital episodes.

	2003/4			2012/13		
	Units of workload	WTE	Ratio	Units of workload	WTE	Ratio
Hospital episode:WTE HCHS Medical Consultant (workload excludes txs)	1,048,974	3,205.5	327.2	1,190,022	4,427.1	268.8
Hospital episode:WTE HCHS Medical Consultant (workload includes txs)	1,221,277	3,205.5	381.0	1,480,986	4,427.1	334.5
All IP discharges and OP attendances : WTE HCHS Medical Consultant	6,038,426	3,205.5	1,883.8	6,215,476	4,427.1	1,404.0
'GP only' consultation : WTE GP (8 sessions)	15,563,750	3,650.0	4,264.0	16,236,010	3,670.0	4,424.0
'GP only' consultation : WTE GP (9 sessions)	15,563,750	3,650.0	4,264.0	16,236,010	3,262.2	4,977.0

This simple analysis may reveal important clues about relative workload per WTE medical consultant or GP in Scotland in that it suggests that the unit of workload per GP has increased but that of HCHS medical consultant has decreased, no matter how one calculates the ratio.

In Scotland, it would appear that the estimated number of 'GP only' consultations (i.e. those carried out by the GP and not by the practice nurse, district nurse or health visitor), which was reported to have risen by 4.3% between 2003/4 and 2012/13, which was the start and end date of the PTI sampling period, from 15.6m to 16.2m, was carried by an almost flat GP provision (having gone up by just 0.55% over that same period if 8 sessions are assumed) or a falling GP provision (having fallen by almost 11% if 9 sessions are assumed). In contrast, the number of hospital episodes of care (all specialities, all types, excluding transfers) rose by 13.4% over the same time period, from 1.05m to 1.19m, or 21.3% including transfers, from 1.22m to 1.48m, during which time the HCHS medical consultant provision rose by 38.1%. The consultant workload can also be tallied to include all outpatient attendances and hospital episode discharges (third row) where it can be seen to rise from 6.04m to 6.22m (a 2.9% increase).

This data can be converted to a 'unit of workload to WTE ratio' by type of 'responsible doctor' (medical consultant vs fully qualified GP) by calculating the number of hospital episodes of care (including and excluding transfers), the total OP attendances and hospital episode discharges or the number of 'GP only consultations' and dividing by the number of WTE medical professional employed either directly by a health board or subcontracted by a health board in the same year. This approach over-estimates the ratio somewhat for the HCHS consultants because the workload in the numerator includes dental care offered in hospital but excludes dental consultants in the denominator. This means the ratios would have fallen even more steeply for the hospital side had these been included.

The ratio fell by 18%, 12% and 25% for the first three rows relating to HCHS medical consultants and rose by 4% and 17% for the fourth and fifth rows for Principal and salaried GPs.

The most likely explanation for the diverging trends is that the secondary care based HEAT targets oblige health boards to employ more and more consultants to meet these targets and the absence of such targets in primary care leave GP partners free to decide their own numbers with a view to preserving their personal incomes in the face of a real terms decline in funding. Both groups of doctors are facing increasingly complex presentations. Both groups of doctors are increasingly distracted from clinical work by a long list of other obligations related to CPD, annual appraisal, audit, MDT meetings, online training exercises, e-portfolio, etc but the GPs have been forced to increase their unit productivity whereas the consultants haven't. This helps explain why GPs feel increasingly disaffected.

Mandate to address efficiency and productivity originated in England in 2005 (Atkinson) and then translated into the Scottish versions for the NHS in 2007, 2009 and 2011.



The existence of these four reports suggests that there is a commitment to maximising efficiency and productivity in public services, north and south of the Border, including in the NHS. Public service healthcare productivity is estimated by comparing growth in the total amount of healthcare output with growth in the total amount of inputs used. Productivity will increase when more output is being produced for each unit of input compared with the previous year.

In 2007, *Better Health, Better Care* argued for Whole System Benchmarking to help NHS Boards to track the timing and sources of efficiencies and productivity and improve the way in which we measure quality and productivity in line with the work of the Atkinson Review commissioned by the ONS and published in 2005. The NHS Scotland Efficiency and Productivity Programme published in 2009 emphasised Lean Improvement Methodologies, etc with little mention of measuring annual productivity growth. The 2011 re-write includes mention of enablers such as “benchmarking and the right quality, performance and productivity data” and one of 7 workstreams relates to workforce productivity aimed at identifying where savings can be made.

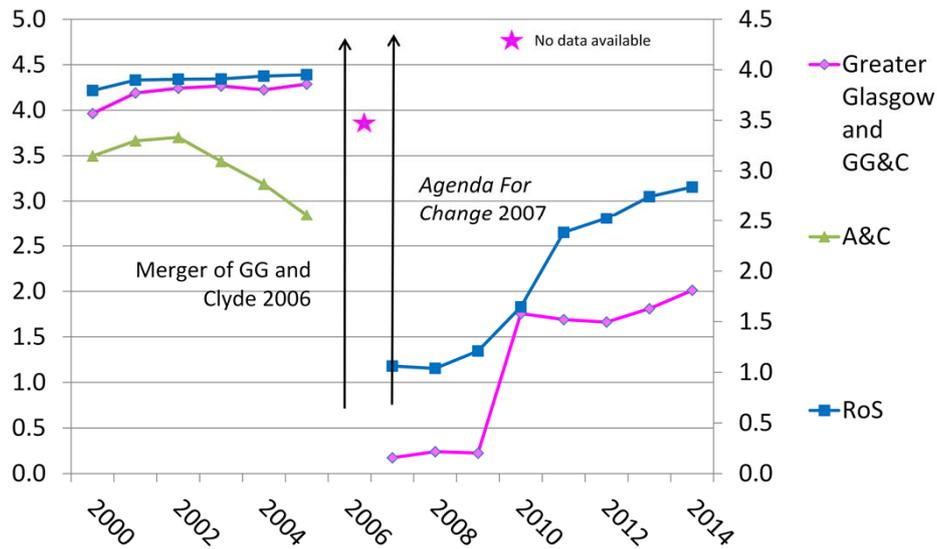
The authors believe that much of the work in this powerpoint is an example of whole system benchmarking that should be carried out routinely and on a regular basis. Interpreted in their totality, the analyses suggest that the whole of the NHS has become less *efficient* and less productive, and oversubscribed, because of the disinvestment in general practice, the excessive emphasis on a wide range of secondary care based HEAT targets and the inadequate monitoring of efficiency and productivity of increasingly well funded community health service alternatives to general practice.

The previous table shows an example of a simple measure of productivity that suggests that general practice has become more productive and hospital consultant work less so. This is not because of failings on the part of consultants or virtues on the part of GPs, it is because of the systems that have been set up by policy makers that enforce HEAT targets in secondary care whilst increasing investment in hospital budgets whilst leaving general practice to contend with rising demand in the face of decreasing real terms funding. That kind of simple analysis should also be done more often and used to underpin additional work to explore the reasons these ratios are moving in the opposite direction.

Productivity measures for the UK used by the ONS have undergone major revision in recent years because of improvements to the methodology and better capture of outputs carried out in the non-NHS sector (although paid for with NHS inputs). Despite initial results of concern that suggested that investment in the health service was rising faster than activity, it is now believed that in recent years productivity is growing slowly in the UK healthcare sector year on year (<http://www.ons.gov.uk/ons/rel/psa/public-sector-productivity-estimates--healthcare/2013/art-public-service-productivity-estimates--healthcare-2013.html>). However, the UK analyses published by the ONS have not been replicated for Scotland, which they need to be, to demonstrate whether the results of the simple analysis carried out in the previous slide can be substantiated: those demonstrating that productivity is rising in general practice and falling in the hospital sector in Scotland. Any such productivity analysis would need to adjust for improvements in quality over the same time period.

The recent Community Health Activity Dataset consultation document refers to the feasibility of using the new minimum dataset to pursue Atkinson’s aims regarding productivity. This emphasises the fact that the funding to community health services has more than doubled since 2006 with no evidence that an efficient or productive service was achieved.

**District Nurses: Crude rate of WTE provision per 10,000, for GG, GG&C, A&C, RoS, 2000 to 2013.** Source: ISD Website on Nursing and Midwifery stats, based on data submitted by health boards.



This graph suggests that *Agenda for Change* was used, across Scotland, to completely reorganise the district nursing service. This must have involved the retirement of many nurses, accompanied by the loss of their unique skill mix, and the subsequent re-deployment of staff perhaps at lower grades, recruited from the graduating cohort of nurses and the hospital contingent of nurses. These two groups might not possess the knowledge and skills required to readily accept older, sicker or more complex patients post-discharge or keep elderly and sick people in the community.

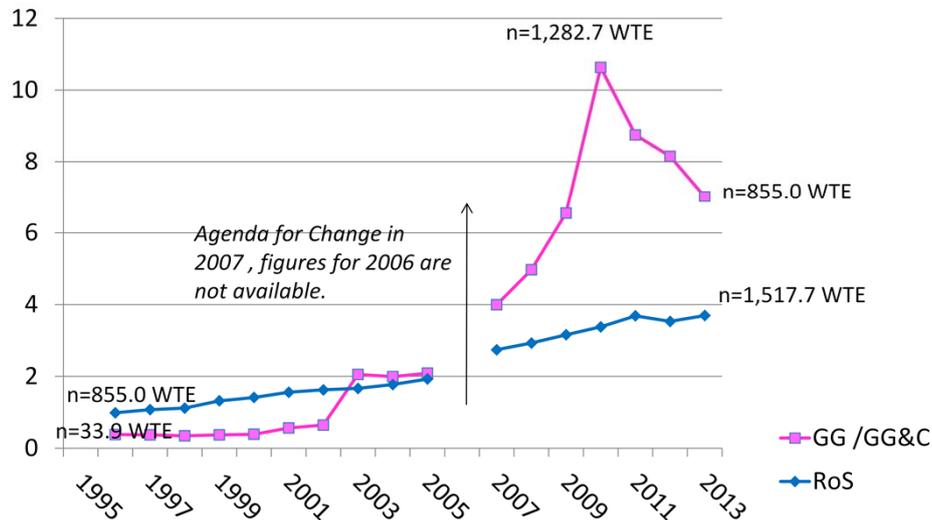
In more recent years, the GG&C DN Review that has been drafted envisages a hierarchy of district nursing staff including an expanded tier of Band 3 and 4 healthcare assistants and Band 5 & 6 DNs, who will work in agile fashion managed by a relatively small number of higher banded DNs (Band 7). This suggests that the small number of the most experienced DNs, those with full qualifications, will be spending considerable time managing the much larger number of less qualified staff who do not necessarily possess a full specialist qualification in district nursing and who may not even be qualified nurses. In recent months, shortages of higher band DNs have come to light and anecdotally some GPs have complained of being unable to obtain a district nurse when needed. Furthermore, recent manpower numbers classified as 'district nursing' need to be compared to the numbers in 2005, pre-*Agenda for Change*, bearing in mind the reduction in level of skill mix.

This is an important component of support to hospital services because as the mean stay has progressively shortened, patients are being discharged earlier and with more complex nursing needs, of the type requiring professional input to the patient in their own community-based setting.

Note that prior to the merger with Clyde and *Agenda for Change*, the provision at Greater Glasgow was more generous than in the RoS. Thereafter, these changes appear to have been imposed more dramatically in GG&C than elsewhere in the RoS, leaving GG&C with substantially lower provision than in the RoS. In Sept 2014, community general nurses were re-labelled as 'district nurses' which resulted in a dramatic uplift of official numbers of 'DNs' in Scotland by Dec 2014 (not shown), to approach pre-*Agenda for Change* levels. These coding changes make it difficult to make genuine comparisons over time.

District nursing is an extension of general practice and a critical component of admission prevention and discharge facilitation. District nurses address a range of clinical and health problems including the care of surgical wounds, lower limb ulcers, catheters, stomas, gastrostomy tubes, tracheostomies, skin infections, injections, parenteral drugs and feeds, etc. As such, a shortage of district nurses or a diminution of their capabilities could be expected to impact on 4 hr waiting time targets directly by allowing more A&E visits, but also indirectly by forcing GPs to admit patients to AAUs rather than manage them in the community and by facilitating the backing up of wards into the A&E when patients in downstream wards cannot be discharged.

Community Mental Health Nurses: Crude per capita provision per 100,000 for GG/GG&C and the RoS, 1995-2013. Source: ISD Manpower dataset.



As with all the manpower slides shown in this powerpoint, this slide uses routinely published ISD manpower data that has been validated by ISD once it has been supplied by the individual health boards.

This slide suggests that Greater Glasgow under-provided mental health nurses compared to the RoS between 1995, (when there were just 34 WTE) and 2002. This probably reflects the delay in Greater Glasgow in moving from hospital based to community based mental health care. In 2002, Greater Glasgow experienced a marked step increase in provision, possibly fuelled by the closure of inpatient psychiatric facilities to approximate the RoS provision for about 2 years. After the merger with Clyde and *Agenda for Change*, GG&C provision then sharply overtook that of the RoS by 2007 and going on to administer much larger per capita WTE provision than the RoS, peaking in 2010 when there were more than 1,200 such nurses, and then falling dramatically to remain at a very generous level.

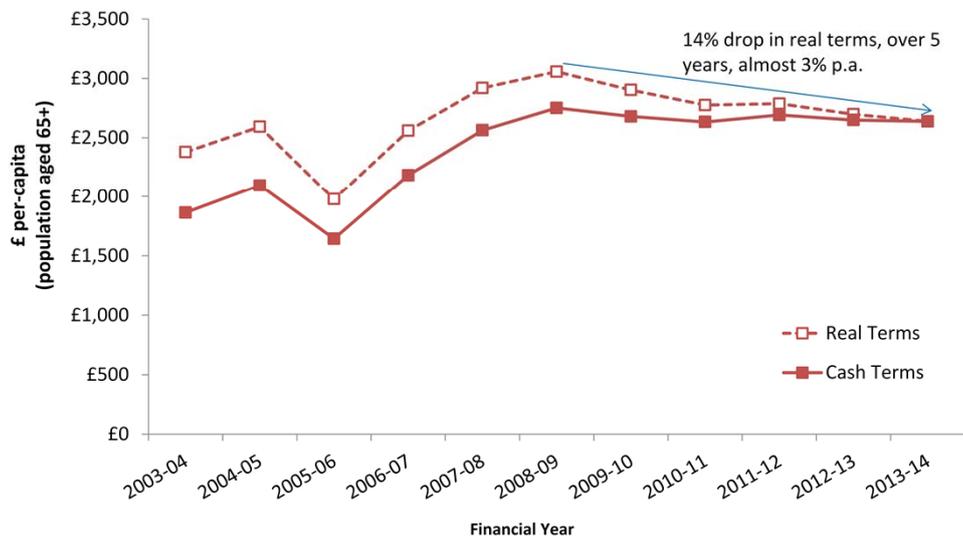
The large spike in 2010 probably relates to generous provision in community addiction teams and community mental health teams and may reflect an attempt to temporarily re-employ hospital nurses after the closure of some inpatient facilities (eg Stobhill was closed in 2010). With the exception of Ravenscraig Hospital in Inverclyde which underwent a prolonged process of closure extending from 2011 until very recently, psychiatric hospital closure in Glasgow had been largely completed well before 2010 so is unlikely to be the cause of this manpower spike.

The concern that this slide generates is the possibility that we have released large numbers of professionals into the community who are in an ideal position to identify possible unmet need (eg shortness of breath, leg ulcers, 'being off their feet'), but not in a position to prevent an unnecessary emergency admission, particularly if the problem is unrelated to mental health or requires attention after 5 pm when most of these health care professionals will be unavailable.

Given the relatively generous provision of CPNs in GG&C, there should be no issues in Glasgow relating to access to community mental health services for such patients or their GP when making a referral, a high dependency on A&E by mental health patients, or unaddressed physical health needs in those with mental illness, problems recently highlighted by Sir Simon Stevens in relation to the NHS in England.

<http://www.theguardian.com/society/2016/jan/18/simon-stevens-trying-save-nhs-from-mother-of-messes>

Per capita expenditure on all forms of social services (care home, home care, day care, SDSP, assessments) to the 65+ residents of Glasgow City, real and cash terms, 2003/4 to 2013/14. Source: LFR03 Returns published by SG.

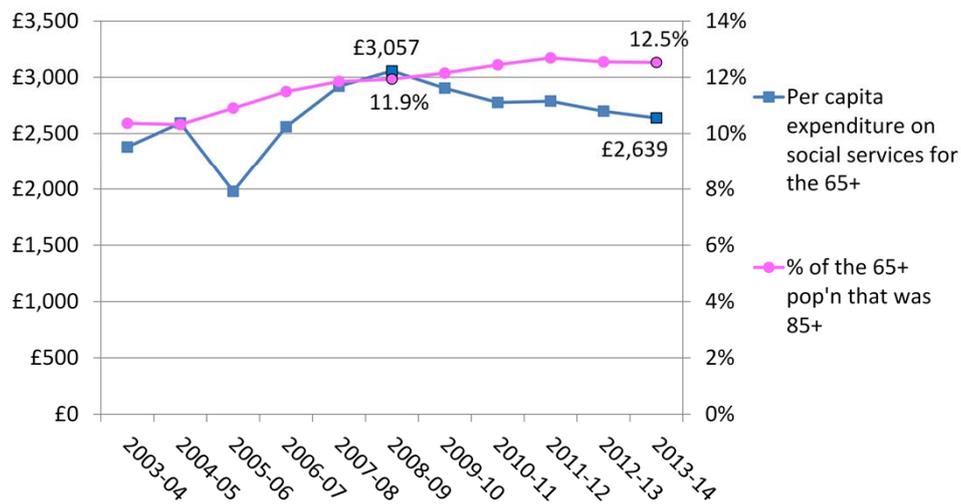


This graph is important because it refers to roughly half of the GG&C population and covers much of the most deprived populations in GG&C and the older populations in the west end of Glasgow.

This graph requires to be plotted for each council individually within GG&C because expenditure varies by council. These have been plotted and are available on request.

This important slide demonstrates the per capita expenditure on all forms of social care for the 65+ in Glasgow City over the most recent 10 year study period for which data is routinely available. In cash terms the expenditure appears stable from 2008/9 onwards. However, in real terms this expenditure is falling at a rate of ~3% per annum. However, it also needs to be borne in mind that the percentage of the 65+ who were 85+ rose steeply over this time period in Glasgow City and therefore in relative terms this fall in real terms expenditure is much more likely to generate pressure at the coal face than suggested by this graph because the very elderly aged 85+ require much more care than does a resident aged 65-84 years. This point is highlighted in the next graph.

Per capita expenditure in real terms on social services for the 65+ in Glasgow C based on LFR03 Returns compared to the percentage of the Glasgow City 65+ population that was 85+ based on GROS mid year estimates. Source: LFR03 Returns published by SG and NRS MYEs.



This graph plots the per capita real terms expenditure on social care (all forms) for the 65+ for Glasgow City residents as shown in the previous slide but also plots the percentage of the 65+ population in Glasgow City that was 85+. The two trend lines are rapidly diverging which will suggest increasing difficulty meeting the needs of the elderly in Glasgow City.

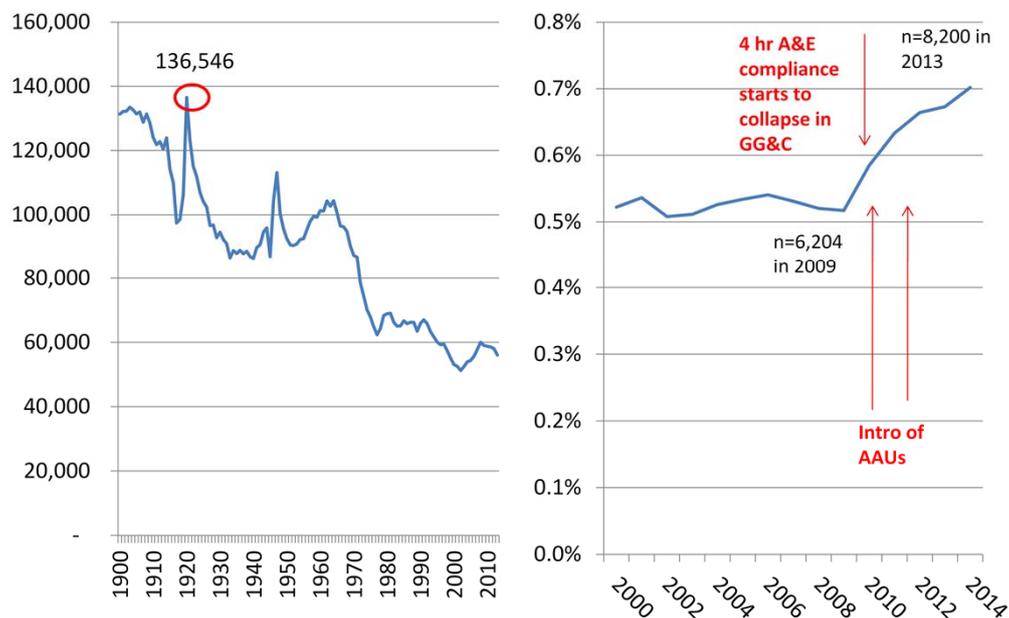
There has been a 14% drop in funding for the 65+ against a 5% increase in the percentage of the 65+ population that are very old in Glasgow C, over a 5 year period from 2008/9 to 2013/14. This amounted to a rise in the 85+ population of 486, from 9,938 to 1,424.

This pattern was also seen in other two other councils covered by GG&C (graphs available). In Renfrewshire, there was a 7% drop in 65+ per capita funding and a 23% increase in the percentage of the 65+ population that was 90+ in age over just 4 years from 2009/10 to 2013/14. This amounted to a rise in the 90+ population of 287, from 878 to 1,165.

In Inverclyde there was a 14% drop in funding and a 25% increase in the percentage of 65+ that were 90+ over a 5 year period from 2008/9 to 2013/14. This amounted to a rise in the 90+ population of 170, from 503 to 673.

The rise in funding of social CoE looks reasonable to the eye in E Dunbartonshire (not shown), i.e. commensurate with the rise in the proportion that are very elderly. However, £1,900 by 2013/14 per 65+ may not be sufficient given the large rise in the most costly types of patients in E Dunbartonshire, the 90+, bearing in mind the fact that £1,900 is just over 2/3 of what Glasgow city spent per 65 year old in 2009 (£3,000). *Between 2009/10 and 2014/15 the number of 90+ rose by almost 50% in East Dun from 567 to 946 (another 380 90+ residents).*

Live births in Scotland, 1900-2010 and Percentage of GG&C population that was 90+ years of age over time, 2000-2014. Source: NRS.



This important slide provides the number of births in Scotland by year from 1900 to 2010, highlighting why Scotland generally is finding it difficult to cope with the aging of the population.

A major demographic reason Scotland's NHS started to feel the strain from 2010 onwards: those born in 1920, the time of the 'real baby boom of the 20<sup>th</sup> century', turned 90. Note that the baby boom of 1920 is much steeper, much bigger (in terms of numbers of births) and more short lived than the more talked about baby boom of the 1950s and 1960s which was much more spread out and involved much smaller numbers of births per annum.

The baby boomers of 1920 have been reaching very old age these past 15 years having suddenly increased the percentage of the population that is 90+ as of 2010. This explains the *timing* of the compliance problems in A&E. However, it does not absolve health boards of responsibility for the need to provide community based services for the elderly and those that have worked harder to develop such services and keep the very elderly out of the emergency department settings and out of inpatient beds have much lower A&E attendance rates, much better 4 hour compliance and much lower inpatient admission rates (e.g. NHS Tayside).

This slide reminds us that the baby boom of 1920 affected all of Scotland and in fact GG&C is a younger population than the Rest of Scotland, and much younger than NHS Tayside, which has much better unscheduled care statistics. Therefore, GG&C cannot attribute its poor statistics to the maturation of the 1920 baby-boomers, which was experienced across the country.

This past decade was not the time to centralise acute services, over-fund acute hospitals and consultant provision, reinforce A&E, introduce AAUs, which are not the best places to respond to the care needs of the 90+ population, and under-fund general practice, social care of the elderly and district nursing, while transferring the last vestiges of primary care based community nursing staff to CHCP/HSCP control.

Because of the sharp fall in the birth rate following the 1920 baby boom, the numbers of very elderly could be predicted to fall in the next few years as the 1920 baby boomers pass away; in 2015 they turned 95 years of age. However, the birth rate in 1925 dropped to baby boom levels seen in the 1950s and 1960s and therefore we can expect to see continued high levels of elderly patients.

## Read these 3 reports together



These three reports should be read together because they make clear what the problems are and how they might be related. Once we have figured out where those problems originate from, even if the conclusions are unpalatable, we have the opportunity to solve it.

The first report was published in 2011 by Audit Scotland. The authors' reading of this report is that it was highly critical of several aspects of community partnerships, describing the landscape as 'cluttered' and highlighting the poor governance and financial accountability of their arrangements.

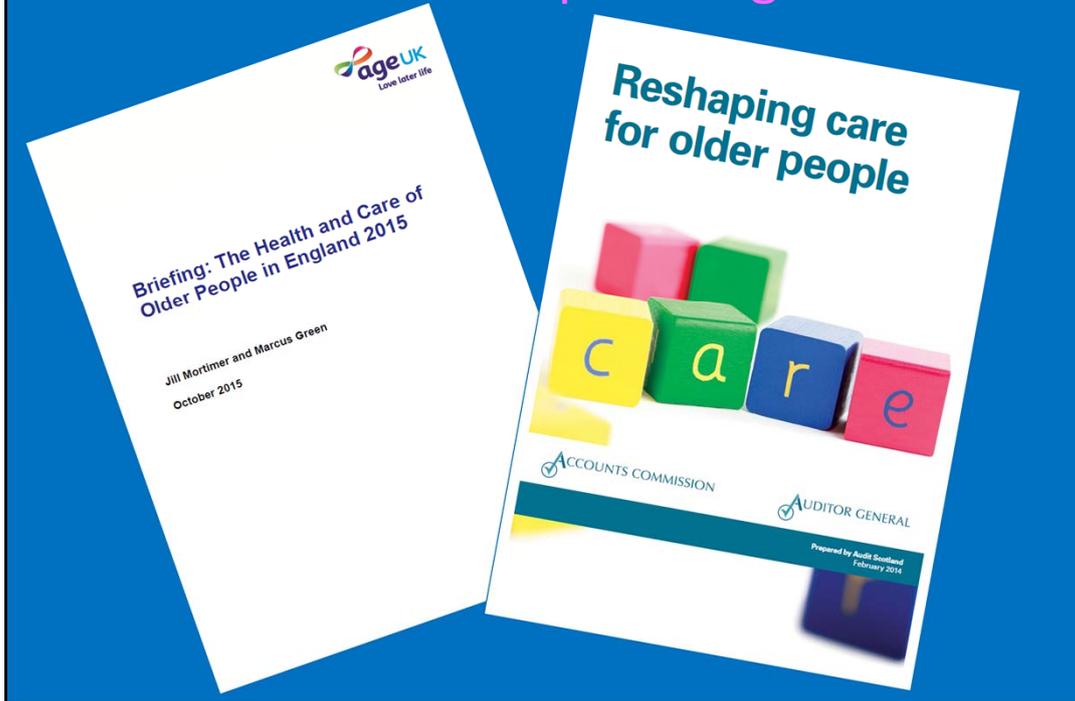
The second report was published in October 2015 by the Auditor General for Scotland. It reports on the financial and high level performance against targets for NHS Scotland, citing record levels of NHS Scotland staff against areas of recruitment failures/high vacancies in critical areas; failure against most performance targets; rising demand outstripping supply with financial shortages that are expected to get worse; and increasing inefficient use of financial resource on locum and agency staff to plug staffing gaps.

The third report was published in December 2015 and it provides an update on the progress of health and social care integration in Scotland, expressing clear caution on the slow pace of change, the paucity of functional plans produced thus far when the deadline for integrated budgets is less than 6 months away. The authors note that just £138-£157m of annual savings are planned as a result of integration at a national level which seems a small sum considering the efforts required and the many potential risks, including conflict of interest and uncertainty about which organisation holds responsibility in the event of a dispute between partners. These nationally accrued annual savings are just over double the annual over-parity sum for GG&C, an over-parity sum that has been tolerated for many years with little mention and little effort to address the root cause.

The authors believe that the combination of CHPs/HSCPs in Scotland, which many believe have left GPs marginalised and unsupported, with funding and manpower strategies that originate in the English Department of Health, has resulted in a bloated NHS in Scotland that is functioning sub-optimally.

The high vacancies, and therefore high locum fees expended, in hospital specialities (A&E, acute medicine and geriatrics) are in fact artefacts of excessive demand on hospitals. The high vacancies, and therefore high locum fees in general practice, are an indirect result of marked underfunding of general practice via the inadequacy of the global sum. The high and rising rates of hospital activity are the result of the underfunding of general practice, district nursing and social care of the elderly. In GG&C, this has been exacerbated by the increasing mismatch of provision and need. The widespread failures in performance are an artefact of excessive demand for hospital services, which is where the performance targets are concentrated.

## Read these 2 reports together



These two reports should be read together, and in conjunction with these powerpoint slides, because they highlight how similar the funding and manpower trends, strategies and problems are between England and Scotland in the context of health and social care of the elderly and how difficult will be the challenges that lay ahead.

The first report, published in the summer of 2015 by Age UK and written by Jill Mortimer and Marcus Green, highlights the failures in health and social care of the elderly in England, emphasising the rising numbers of elderly and the high prevalence of preventable and manageable conditions in the elderly, the falling funding for social care of the elderly, the fact that resources are increasingly being focussed on those with the greatest need such that the prevalence of those elderly who have an unmet need is rising, the rising rates of delayed discharge and the rising admission rates to hospital in the elderly for ambulatory care sensitive conditions. The authors also document the reduction in funding to general practice and district nursing and the rise in funding to hospitals in England, which implicates funding and manpower trends in the failure to shift services to the community.

Many of the slides in this Powerpoint are uncannily similar to those in the English Report published by Age UK despite the fact that they were written by different authors unaware of each other's work.

The second report published in February 2014 by the Auditor General in Scotland is an audit that assesses the progress made three years into a 10 year programme set by Reshaping Care for Older People (RCOP) and two years into the 4 year Change Fund (CF) programme. It describes the interim progress in Scotland as slow, and the achievements of the Change Fund difficult to measure or scale up. It cites some areas of improvement such as the reduction in emergency bed day rates for the 75+; the small rises in the number of overnight and daytime respite weeks available to carers and the very small increase in the rate of provision of telecare to the 75+ age group. However, given that the emergency admission rates for older people have risen, which the report acknowledges, and bearing in mind that emergency bed day rates for the elderly in Scotland have been dropping steadily for many years, long before RCOP and the CF, and mirroring reducing bed availability as bed complements fall, the reduction in emergency bed day rates needs to be interpreted with caution.

## Problems with CH(C)Ps, HSCPs and future IAs (IJBs)

- Management costs, superimposed on those of LAs and HBs (n=32→31, prev 40).
- No standard robust process for identifying individual 'patients' amongst 'clients' and prioritising their needs vs historical habit of 'going to see your GP'.
- In administration terms, they work in parallel with general practice instead of supporting it, risking duplication and fragmentation of both community based health services and primary care, and therefore wasting precious resources.
- Poor track record re use of *Change Fund* monies (£320m over 4 years).
- Oversaw District Nursing Reviews that sanctioned the reduction in number of fully qualified DNs at a time when 1920 baby boomers needed them most.
- Most are lacking epidemiological expertise and numeracy required to interpret their own data and evaluate any of their own interventions.
- Integration of health and social care will not solve the under-funding of social care, which requires adequate funding in its own right.
- Legitimate cultural and value differences between health care and social care.
- ?Ideologically driven. *E.g.* antipathy toward independent contractor status, preference for lower grade staff and therefore aim to 'deprofessionalise'.
- Conceived as a solution to a problem whose root causes lay elsewhere.

The authors believe that, overall, the evidence suggests a shortage of coal face workers empowered to do the clinical and social care tasks required of an aging and/or socially deprived population. Concerted effort needs to be made to ensure that 'working with the real patient or client' is restored to its rightful position as the most important and respected function provided by health boards and local authorities. Given the evidence in the Auditor General's Report (Oct 2015) that suggests the NHS is failing despite record levels of staffing in the face of critical shortages of some types of staff, focus needs to be directed at paring down the numbers of staff who do not directly provide services, including middle management, and increasing the number of hands-on workers. A complex bureaucratic structure as further envisaged by IAs and IJBs will inevitably incur high management costs when what is needed is more GPs, fully qualified DNs, and social workers.

A fundamental flaw of partnerships is that the average user doesn't feel inclined to contact them when in need, their natural inclination since 1948 has been to phone their GP. This gives the GP a natural head-start in targeting genuine need because the latter is likely to be hidden in the 'demand' pool; the GPs' main challenge is to weed out the demand for unnecessary health care and sift out the genuine need. In contrast, the partnership relies on historical datasets of named clients or patients and has to proactively find ways to identify unmet need. Using SPARRA to identify multiple admitters is just one example which results in services being directed at false leads, including patients who are about to die. Once the high risk group is broadly identified, partnerships lack the needs assessment skills to precisely locate and quantify the need.

CHPs/HSCPs don't just work in parallel to general practice, they have removed the support from general practice of community health professionals by taking over the latter and managing them from their geographically based administrative structure. This has been perceived by GPs to have weakened general practice, which has the responsibility for the biomedical decision making and ultimate responsibility for the welfare of the patient. NHS Scotland cannot afford two systems that don't work together: CHP/HSCPs/IAs and CHI based general practice. Furthermore, it cannot afford a fragmented overly complex system with a wide range of component services over which, in the context of the individual patient, no one professional is responsible or accountable in the way we rely on GPs to be.

As the GP is the most highly trained, the most highly paid and is best placed to oversee and prioritise all the problems facing an individual patient, the authors believe that the GP should be given the role of leader of primary care with ultimate decision making over which services should be commenced and brought to an end for each patient at any point in time. Responsibly making the decision to stop a service for a patient is just as important as initiating the service.

This would require health boards to retake control of the wide range of community health service staff to enable them to organise the provision of those services specifically around the needs of the GPs in their efforts to provide the best quality holistic care available to their patients. This would save on management costs and make these services more responsive to the GP, which is essential if we are to have a sustainable NHS in Scotland.

The slide also cites other reasons why partnerships, whatever their name, will fail. However, the most important reason is that they were never needed in the first place. If sufficient respect and funding were directed toward social services departments and budgets respectively and the '2y vs 1y' imbalance of funding within the NHS was rectified, the two services would work together effectively without a complex programme of integration that is at serious risk of failure and further waste of scarce resources.

## Scotland vs England

- Very similar funding and manpower trends (including sharp rise in per capita provision of consultants and fall in GPs, social care for the elderly and district nurses).
- Very similar consultant:GP ratios for the past 20 years.
- Broadly similar GMS and Hospital Doctor Contracts and performance targets (4 hour waiting time, RTT, etc)
- Very similar problems (e.g. Financial shortfalls, steeply rising uptake of hospital services, A&E crises & performance target failures, deterioration in quality of clinical care in care homes, recruitment problems in key clinical specialities, etc).
- Similar approaches to problem solving: ↑ A&E consultants, intro of AAUs, 7 day working, token funds to rescue general practice.
- **Inefficient use of financial resources and fragmentation of 1<sup>st</sup> care and CH services due to privatisation in England and transfer of LHCC functions to CH(C)Ps/HSCPs in Scotland.**

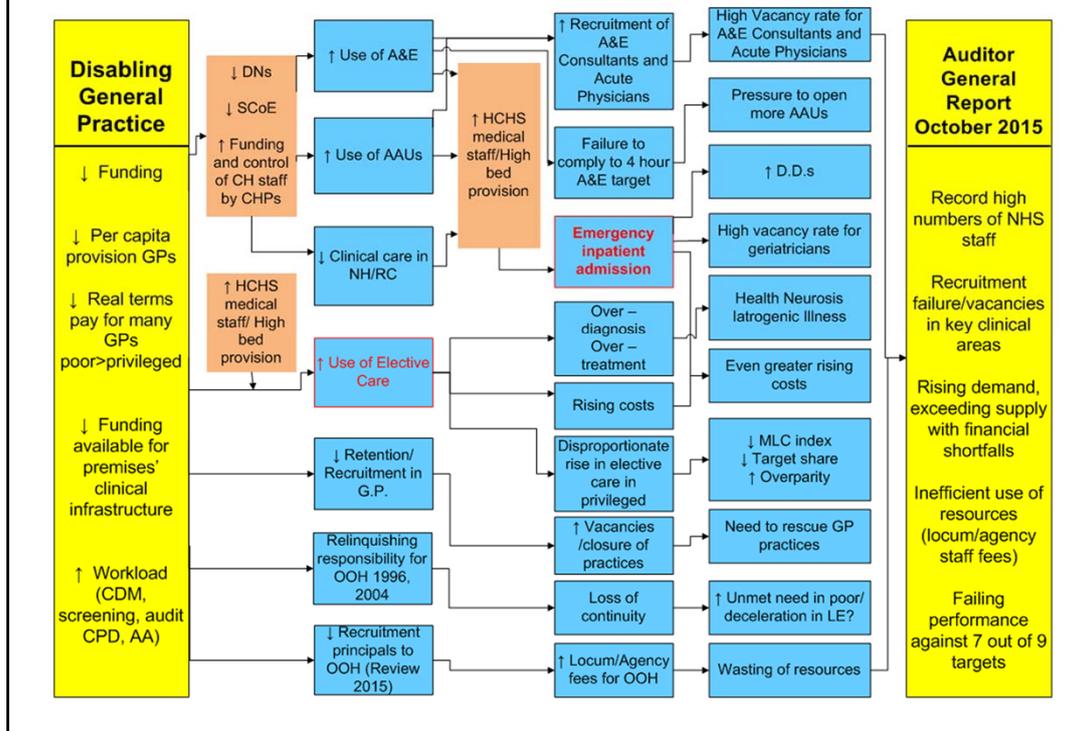
When Dr John Gillies took up the chairmanship of the Royal College of General Practitioners (Scotland) in 2011 he described the time as a critical period in healthcare, with England and Scotland's NHS diverging on different paths. It proved to be prophetic. The Health and Social Care Act 2012 was enacted in England, which saw clinical commissioning groups established and a focus on competition, while in Scotland there has been the move toward integration of health and social care as outlined in the Scottish Government's 2020 Vision for Health and Social Care and enshrined by the Public Bodies (Joint Working) (Scotland) Act 2014.

In fact, despite the appearance of *divergence* described by Dr Gillies, the funding and manpower trends, policies, directives, targets etc, and resulting problems have been remarkably similar between Scotland and England.

One feature that is clearly very different is the ideologically driven desire to privatise the health care in England and the ideologically driven desire to create partnerships to administer health and social care and its integration, and, in the process, reduce the GP's influence over how community health and social care staff time is deployed. Both strategies risk wasting scarce resources, one via transaction costs in England and one via management costs in Scotland and both strategies result in fragmented and suboptimal primary and community health services that fail to protect both unscheduled and planned care services from over-subscription.

This suggests that Scotland has failed to take advantage of devolution of health care since 1998 when the Scotland Act was passed and has uncritically adopted much of the English health care planning and decision-making, to its detriment. Furthermore, the advantages conferred by minimising privatisation in Scotland, have not been realised because of the disabling of general practice by the 'cluttered partnership landscape' described by the Audit Scotland report on CHPs (2011).

### Tracing back problems described in Auditor General's Report to General Practice



The authors believe that most of the problems described in the AG's recent report on the financial state and performance of the NHS in Scotland are due to the historical weakening of general practice as described in Lewis Ritchie's 2003 paper and that has continued since the New GP Contract was introduced in 2004. This flow chart shows the various pathways connecting the two yellow columns.

The report describes the *record levels of staff* in NHS Scotland that paradoxically is facing increasing recruitment and retention problems in general practice, A&E, acute medicine and geriatrics. The authors believe that the problem of vacancies in general practice has been generated by the deliberate underfunding of general practice that was carried out to fund the planned expansion of CHCPs/HSCPs, leaving it a less desirable profession to join and commit to until retirement. They also believe that the problem of vacancies in those selected hospital specialities is an artefact of the excessive demand for these services that results from a weakened general practice service. Finally, they believe that the numbers of staff who have no clinical contact as a percentage of what are record high levels of NHS staff should be reduced so as to fund much needed coal face staff including GPs, DNs and social workers.

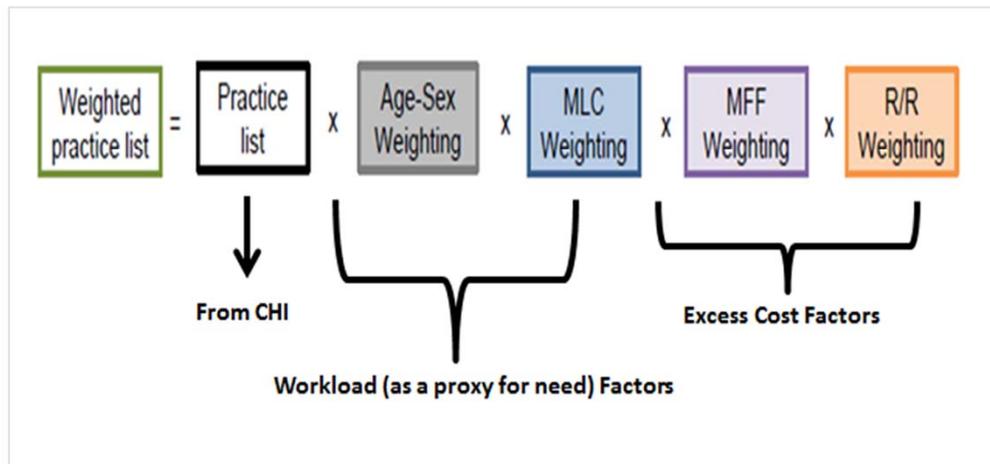
The report also describes financial shortfalls which the authors believe are the result of rising demand for services, both elective and emergency, on which there are no controls now that the gatekeeper function of general practice is disabled. This is accelerated in health boards characterised by considerable social deprivation, such as GG&C, that over-provide to the wealthy demographic.

The report describes performance failures including for A&E waiting time that is a direct result of record levels of presentation of very elderly patients who would be better managed in the community and who require biomedical services from overstretched GPs and more support from underfunded social CoE services.

Finally, the report describes the increasing proportion of resources that is wasted on locum and agency staff. This is a symptom of the imbalanced service that results from insufficient investment in general practice as described above. The analogous problem is seen in nursing homes where working conditions are so poor that recruitment of permanent nurses becomes a problem and bank nurses can command much higher remuneration. In addition, the artefactual demand for hospital consultants that are in relatively short supply drives up expenditure meeting the cost of rotas using relatively expensive locums.

## Current SAF formula

*OFFICIAL – SENSITIVE (COMMERCIAL IN CONFIDENCE)*



As shown at the top of the slide, details of the Scottish Allocation Formula (SAF) and its review, are kept strictly secret, at the wish of GPs representative, the BMA. The authors believe that this excessive secrecy, which is not bestowed on any other group in receipt of funding from taxpayers, has worked against the interests of GPs by preventing a wider and open discussion of the method used to calculate the share of the global sum for each practice. Furthermore, it isn't justified given that the vast majority of the documentation contains no information about the financial income of individual practices, which is the main reason given for the secrecy, i.e. commercial sensitivity given that general practices are private businesses. In fact, those few documents that might contain such sensitive financial information about individual practices could easily be singled out for such labelling and restricted in their distribution. The requirement for restricted circulation means that the author is not free to divulge material shared with the TAGRA (Technical Advisory Group on Resource Allocation) members and a more open debate of this formula is severely limited.

As with the NRAC formula for HCHSs, there is a risk that population groups whose additional healthcare costs are easily measured win out over those whose costs are not easily measured. Unmet need in the poor is a good example with implications for present and future cost that is difficult to measure and few finance managers are keen to remunerate boards or practices for unmet need. Because the formula divvies up a fixed sum this means that practices which can easily demonstrate their additional costs, including published locum fees in remote areas, win out over those who cannot, including the cost of neglecting the other three or four other co-morbidities that were not addressed in the 10 minute appointment in a deprived area. The results is underweighting of the weighted practice list for social deprivation (MLC) and overweighting for remoteness and rurality (R/R). This means that general practice costs of providing services to affluent residents of Scotland who choose to live in remote and rural parts might be subsidised by the deprived residents who are obliged to live in densely populated urban areas where housing and transport costs are lower and jobs more readily available. The MPIG was introduced to enable practices in deprived areas to survive financially but these are increasingly being withdrawn. This highlights how important it is for deprived practices to have a fair formula that uses high quality representative data to calculate their MLC index and the existence of the Deep End Practices as a group suggests that funding to deprived practices is not adequate. The recent publication by McLean et al (2015) supports that assertion.

This suggests that, in addition to a major increase in funding of general practice overall, improvements to the SAF formula are required to ensure that the privileged living in remote areas are not subsidised by the poor living in urban areas.

## General Conclusions

- Most of the serious problems experienced in Scottish Health Boards, and described in the October 2015 Auditor General's Report, have been caused by strategic funding changes and directives that originate in the SG; most boards are affected to varying degrees but for most parameters NHS GG&C is the most severely affected because of the very high consultant:GP ratio, historically high levels of hospital supply in terms of bed provision, the low DN provision and falling SCoE funding affected by most of its population.
- Many of these problems result from the uncritical adoption of policy that originates in the English Department of Health. Despite vast differences in the health and social care legislation and the degree of privatisation north and south of the Border, the funding and manpower trends and policy directives, including target setting are very similar and they ultimately determine the functionality of the health services.
- Conversely, one policy that originated in Scotland and is now being implemented south of the Border is health and social care integration. All the evidence examined by the authors suggests that CHCPs/HSCPs have failed to provide a cost-effective community based service and have actually undermined general practice. Policy makers should consider that their formation and implementation constituted a costly failed experiment, one that escaped proper monitoring, evaluation and scrutiny, including analysis of productivity.

Self-explanatory.

## Bottom line conclusion:

- We need to acknowledge that the NHS needs fully functioning and empowered GPs more than any other professional grouping because of the unique ability they have to *prioritise and address genuine need* in patients with more than one problem, particularly the unmet need in the deprived, but also in the demanding affluent, ∴ we need considerably more GPs and they need to be fully supported by the large collection of community health professionals as and when required.
- If the NHS is to flourish in, as opposed to just survive into, the future, we also need to train GPs to identify and control over-investigation, over-diagnosis and over-treatment in both the deprived and the affluent, which is the biggest threat to the NHS in the future.

Self-explanatory.

## Recommendations I

- Review and reverse most of the 9 strategic changes introduced between 2004-7, preserving the 'good bits' .
- Hold off plans to further reduce beds until a major increase in investment is made to general practice, DN and social care.
- Transfer funding from HCHS budget back to general practice budget including from both hospital budget and community health service components with a view to substantially ↑ GP numbers, ensure reasonable remuneration via practice revenue and invest in practice infrastructure. Target for general practice: 12%.
- Give leadership of, and control over, primary care team, including wide range of CH service professionals, to GPs. Someone needs to have the final say and the GP is the best professional to do this.

The authors endorse the new QEUH because they believe that the deprived in Glasgow, who use hospitals more than anyone else, deserve a new state of the art hospital to replace the old facilities at the Western and Victoria Infirmaries, which were no longer fit for purpose. In addition, this move is accompanied by a reduction in bed complement which is a strategy they favour in the long term trend toward shifting resources to community services. The authors believe that hospitals appear crowded because of excessive demand generated by inadequate funding of community based services. However, until the latter is rectified, it would seem reasonable to hold off plans for further bed reduction.

The main recommendation in this slide is about restoring effective general practice so that it can treat ill patients in the community, including in the very elderly, identify unmet need in the deprived, and prevent unnecessary investigation and treatment in the worried well and in the affluent. This will require a significant transfer of resource and the obvious source is in the administration costs of CHPs/HSCPs and the excessive expenditure on hospital staff employed to meet the current unnecessary demands for hospital care (eg very old patients who would do better with high quality care in the community).

Given the relatively small percentage of the national territorial NHS budget that is spent on general practice (almost 8%, raising that by 50% to 12%, should be achievable by reducing the percentage spent on community health services (which enjoys a much higher percentage expenditure at 17%) and on hospitals (which enjoys by far the highest percentage at almost 60%).

Shifting 4% of the overall territorial budget by shaving 2% off the hospital budget and shaving 2% off the community health service budget would hardly be noticed by these larger budgets but would make a huge difference to that part of the service on which the rest is so critically dependent.

## Recommendations II

- Provide GPs with the training, time and authority to detect and limit over-diagnosis and over-treatment.
- Abolish HSCPs and return management of CH service professionals back to the HB so the HB can organise their activity around the needs of GPs.
- Review and relax secondary care HEAT targets, prioritising the most important, eg RTT for those with confirmed cancer.
- Reduce the number of NHS employees who have no contact with patients to the minimum (?15%), *both within health boards and within SG departments.*

The British Medical Journal's *Too Much Medicine* Campaign and the series of international conferences it has organised in conjunction with the Oxford-based Centre for Evidence Based Medicine on 'Overdiagnosis and Overtreatment' provides a wealth of evidence that documents the rising problem of medicalising so-called pre-disease states and the identification of 'pathology' that was never going to shorten the life of the patient. GPs are inundated with demands from the public and an increasing plethora of clinical guidelines that leave them with no time to study the science underpinning this new area of concern. As such, GPs need to be trained to understand over-diagnosis and empowered to resist it, making them the kind of effective gatekeeper the West will need in the future if nationalised health systems are to survive.

Once one accepts that the GP is the natural leader to lead primary care then it follows that the health board should be dedicated to organising the provision of the many community health care professionals on its payroll around their needs in providing high quality care to their patients. The social care component would sort itself out in the absence of partnerships and integration if social care services were bestowed the respect and the funding they deserve, in their own right, to run the services that are critical to the survival of the NHS.

In order for the consultant:GP ratio to be restored to an effective level of balanced provision, the 2y care HEAT targets require to be reviewed and either toned down, preserving the essential cancer RTT based targets, or counteracted with new 1y care based targets. When one half of the system is dominated by targets that can only be met with increasing numbers of consultants and the other half does not have the funding to match that rise, the gatekeeper to the secondary care system is lost and demand for sophisticated investigation and treatment rises out of control.

Life has become so hard at the coal-face that clever staff who want to remain employed, migrate to non-clinical roles including in health improvement, health economics, health statistics, public health, management, and academic fields of medicine. We need to ensure that we reduce the

## Recommendations III

- Pare down the excessive burden of non clinical tasks carried out by clinical staff.
- Study Ninewells' approach to unscheduled care.
- Increase the levels of numeracy and epidemiological skills in the health boards, ISD and SG planning.
- Stop the uncritical adoption of English DoH health and social care policies.
- *Last but not least, Respect and fund social services properly.*

In order to improve the productivity of, and job satisfaction experienced by, our most expensive clinical staff, specifically GPs and consultants, we need to pare down the excessive range of non clinical tasks that are not directly related to the patients' needs that these professionals are now compelled to regularly carry out. These include those related to CPD, annual appraisal, recognition of trainer status, reflection/self-promotion exercises, creation and maintenance of PDPs, e-portfolio training form completion, application for discretionary points, ineffective participation in MCNs, etc. We should also resist the temptation to expand these unhelpful distractions in other clinical groups such as nurses and AHPs. The current demands on these staff are excessive and may be contributing to the apparent drop in productivity of consultant staff and hence some of the problems described in the Auditor General's Report (Oct 2015) which include the fact that the NHS is employing record levels of staff and yet is unable to meet demand.

NHS GG&C and other health boards could learn a lot by studying Ninewells' approach to unscheduled care including a wide range of policies they implement to control demand for, and improve the efficiency, of every aspect of their service. The introduction of a redirection policy to control use of A&E in all West of Scotland health boards, which are high users of A&E, would be just one example of many.

We need to increase the levels of numeracy and epidemiological skills in the health boards, ISD and SG planning teams to better understand the mountains of available data, with a view to making vast improvements to decision-making. Faulty decision-making usually results from inadequate analysis and interrogation of the large amounts of un-mined data that was collected at considerable time and expense.

Scotland needs to stop the unquestioning adoption of English DoH health and social care policies and start to 'think for ourselves', developing a fairer, evidence-based and more sensible health service that suits Scotland and the values of its people. Apart from the health and social care partnerships, and the rejection of full scale privatisation, most of what Scotland does has been borrowed from down south.

In Scotland and throughout the UK we need to show much greater respect for the various social services functions and fund their budgets properly; the NHS can't function without a strong and well funded social service. Health and social services are different but can work together effectively if they respect each other and are funded properly and organised in an evidenced based way, in their own right.

Thank you for listening!

Any comments or questions?

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We invite comments and questions, both positive and critical, as we rely on these to improve the standard of our work. Please send these to [hirvine@nhs.net](mailto:hirvine@nhs.net)