

BOARD PAPER - NHS ENGLAND

Title: Allocation of resources to NHS England and the commissioning sector for 2016/17 to 2020/21

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Purpose of paper:

- Last autumn, the NHS published the 5 Year Forward View. This set out our shared strategic vision for the development of the service to 2020/21 and the need to transform the current approach to delivering care.
- On 25 November this year, the government announced a five year funding settlement for the NHS. Annual funding will rise in real terms by £3.8bn in 16/17 and £8.4bn by 2020/21.
- This paper sets out proposals for the allocation of resources announced in the Spending Review to the NHS for 2016/17 to 2020/21.

Summary of benefits of this package:

If these proposals are accepted, they would enable us to use the Spending Review funding to achieve:

- Greater equity of access through pace-of-change:
 - In 2016/17 all CCGs no more than 5% under target for CCG commissioned services;
 - In 2016/17 all CCG areas no more than 5% under target for the total commissioning streams for their population;
 - Three year transition to similar position for primary medical care allocations.
- Closer alignment with population need through improved allocation formulae:
 - A new inequalities adjustment for specialised care and more sensitive adjustments for CCGs and primary care;

- A new sparsity adjustment for remote areas.
- Faster progress with our strategic goals through:
 - Higher funding growth for GP services and mental health;
 - Introduction of a Sustainability and Transformation Fund, with a focus in 2016/17 on restabilising the NHS and a priority in subsequent years of accelerating transformational investment.
- Stronger long-term collaboration between commissioners and providers stimulated and supported through:
 - Shared strategic planning supported by visibility of projected commissioning resources by locality for the next five years, couple with forward guidance on key tariff parameters in the planning guidance;
 - Aligned incentives for effective integrated strategic planning;
 - Opportunities to pilot shared financial control totals.

Actions required by the Board:

The Board is asked to:

- Agree the proposed allocation of funds between areas of commissioning spend including the establishment of a Sustainability and Transformation fund;
- Agree the proposed approach to allocation of funding within CCG, primary care and specialised commissioning streams;
- Agree the proposed approach to pace-of-change; and
- Agree the proposals set out in paragraphs 60-62 with regard to integrated planning, shared financial targets and accelerated funding realignment between CCGs.

Context

1. Last autumn, the NHS published the Five Year Forward View. This set out our strategic vision for the development of the service to 2020/21 and the need to transform the current approach to delivering care.
2. On 25 November this year, the government announced a five year funding settlement for the NHS. Annual funding will rise in real terms by £3.8bn in 2016/17 and £8.4bn by 2020/21. The key figures are summarised below.

Table 1: NHS England Spending Review settlement

| £bn | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | CAGR |
|--------------------------------|---------|---------|---------|---------|---------|---------|------|
| NHS England | | | | | | | |
| Resource | 101.0 | 106.5 | 109.9 | 112.4 | 115.5 | 119.6 | |
| Real growth (£bn) | | 3.8 | 5.3 | 5.8 | 6.7 | 8.4 | |
| Real growth (year on year £bn) | | 3.8 | 1.4 | 0.4 | 0.8 | 1.6 | |
| Real growth (year on year %) | | 3.7% | 1.3% | 0.4% | 0.7% | 1.4% | 1.6% |
| Capital | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| | | | | | | | |
| Total | 101.3 | 106.8 | 110.2 | 112.7 | 115.8 | 119.9 | |
| Real growth (£bn) | | 3.8 | 5.3 | 5.8 | 6.7 | 8.4 | |
| Real growth (year on year £bn) | | 3.8 | 1.4 | 0.4 | 0.8 | 1.6 | |
| Real growth (year on year %) | | 3.6% | 1.3% | 0.4% | 0.7% | 1.4% | 1.6% |

3. This front-loaded funding settlement gives the NHS the platform to begin delivering the vision set out in the Five Year Forward View at a local health economy level. The NHS is, however, facing significant financial challenges during 2015/16, and therefore a key focus in 2016/17 will need to be upon stabilisation of the commissioner and provider sectors in order to create a sustainable footing for transformation.
4. A five year funding settlement gives NHS England the opportunity to set five year allocations for commissioners, providing greater planning certainty in order that commissioners can now develop robust local health plans to deliver the Five Year Forward View. We are proposing to publish 3 years of firm allocations followed by 2 years of indicative allocations for commissioners. Further detail on this approach is set out in Annex A.
5. This paper sets out recommendations in three sections regarding:
 - A. the distribution of funds at commissioning stream level;
 - B. the distribution of funds within each commissioning stream, including proposed changes to funding formulae; and

- C. the approach to pace-of-change in order to support the development of place-based commissioning.

A. Commissioning streams

6. Our approach to distribution of funding between commissioning streams is based upon:
 - i. setting a reasonable level of efficiency challenge for each commissioning stream;
 - ii. directing funding towards Primary Care (GP services) in line with the strategic intent of the Five Year Forward View; and
 - iii. within central budgets reducing day to day expenditure whilst prioritising funding for transformation.
7. We have a set of existing commitments regarding allocation of funding at commissioning stream level. The two principal commitments are:
 - i. parity of esteem, where we do not set a specific allocation of funds, but rather through our assurance processes hold commissioners to account for allocating growth in funding to mental health at a rate at least in line with general growth in their allocation; and
 - ii. the Better Care Fund, where contributions will increase in line with inflation.
8. Overall CCG programme spend is projected to grow above the GDP deflator in all 5 years. Growth is above 3% in 2016/17, mainly due to the funding pressure associated with the changes to pensions payments for employers, and above 3% in 2020/21, when the full rollout of 7 Day Services is completed. To support CCG investment we will reduce the contribution required from CCGs in respect of Continuing Healthcare Provisions from £250m in 2015/16 to £100m in 2016/17 and nothing in subsequent years.
9. Primary care (GP services), which covers the core GP contract as well as other primary care medical services, grows at 4% per annum or greater in all years in line with the stated policy intent above.
10. The NHS is experiencing significant and growing financial pressures due to the licencing of an increasing volume of effective but expensive new drugs and devices. This is a particular challenge for the specialised commissioning budget, towards which most NICE appraisals are aimed, thereby placing a legal limit on the funding discretion we have as between funding streams. We face specific legally binding pressures in 2016/17 regarding the introduction of new drugs for Hepatitis C and Cystic Fibrosis. In restricting headline budget growth in 2016/17 to 7% in specialised commissioning, we have had to limit our budget estimates to the very lowest end of the projected range of potential additions to the portfolio. As well as considering the risk associated with this assumption, the Board will wish to consider whether it wishes to invest in this level of growth for specialised commissioning or whether it wishes to engage in further discussions with NICE and the pharmaceutical industry to reduce pressures further still, freeing up funding for other areas in 2016/17 and with a

view to securing the significantly lower level of funding currently assumed for later years.

11. As part of the Spending Review settlement we have £2.1bn in 2016/17 to invest in a Sustainability and Transformation Fund.
12. The *Transformation* element of the Fund is intended to support the ongoing development of new models of care along with the investment identified to begin implementation of policy commitments in areas such as 7 day services, GP access, Cancer, Mental health and prevention.
13. In 2016/17, we are also proposing to introduce a *Sustainability* element of the Fund, the purpose of which is to support NHS Improvement to bring the provider trust sector back to financial balance in year. Existing provider support funding held by NHS England (included within central programmes) will be added to the fund to create a single process. The Sustainability element of the Fund will have two elements:
 - i. a general element which will be distributed to relevant providers to support the sustainability of emergency services and the achievement of agreed control totals; and
 - ii. a targeted element which we will use to support relevant providers to go further faster through additional efficiency gains.
14. £1.8bn of funding will be allocated at the beginning of 2016/17 to the Sustainability element of the Fund. Funding will be released on a quarterly basis subject to agreement by NHS Improvement and NHS England based on individual providers' performance against financial, access and transformation eligibility criteria. The Board is asked to approve the establishment of the Sustainability Fund and delegate allocation of specific amounts to individual organisations during 2016/17 to the Investment Committee in partnership with NHS Improvement.
15. We intend that over the five year period the split between sustainability and transformation requirements for local health economies will change. As the provider sector comes back into underlying balance under NHS Improvement's supervision, the share of the funding available for transformation and new policy commitments will increase in subsequent years. The overall fund also increases in size to reflect the growing investment funding included in the Spending Review settlement.
16. Within our overall transformation resources we have agreed to carve out a direct allocation of £450m to Greater Manchester, representing their fair share of available transformation budgets over the 5 year period. Under the accountability arrangements established in their devolution agreement, the GM Strategic Partnership Board will oversee the deployment of this funding to deliver the major change programme set out in their recently completed Health and Social Care Strategic Plan, whilst also securing locally the outcomes to which we have committed ourselves nationally in the Spending Review.

17. Other direct commissioning includes primary care (other) which covers dentistry, community pharmacy and ophthalmology services, public health, health and justice and armed forces. There is some growth in public health funding in 2016/17 and 2017/18 which is a result of the planned transfer from Public Health England to NHS England of responsibility for the bowel scope screening programme with a staged rollout programme and the expansion of previously agreed programmes, such as Meningitis B vaccination and the childhood flu programme. Overall there is a reduction in funding for this area over the period as a result of the efficiency requirements agreed as part of the Spending Review.
18. We have updated and reflected pressures in each commissioning stream (see Annex B).
19. We have also included within our modelling the projected contribution of each commissioning stream towards the activity related savings that we have identified for the commissioning sector as its contribution to the overall efficiency challenge to 2020/21. Moderating demand growth in this way is, however, partly dependent on effective government action on prevention and sustained availability of social care relative to rising need. If either of these preconditions to fulfilling the Forward View is not met, it will place additional unfunded pressures on the NHS over the period to 2020/21.
20. Table 2 below sets out our recommended distribution of funds at commissioning stream level.

Table 2: Commissioning stream allocations

| Summary outputs | 15/16 | 16/17 | | 17/18 | | 18/19 | | 19/20 | | 20/21 | |
|---|---------------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|
| | Adjusted allocation | proposed allocation | Budget growth | proposed allocation | Budget growth | proposed allocation | Budget growth | proposed allocation | Budget growth | proposed allocation | Budget growth |
| | £m | £m | % | £m | % | £m | % | £m | % | £m | % |
| CCGs | 69,484 | 71,853 | 3.4% | 73,358 | 2.1% | 74,849 | 2.0% | 76,469 | 2.2% | 79,372 | 3.8% |
| Primary Care (GP) | 7,342 | 7,652 | 4.2% | 7,958 | 4.0% | 8,317 | 4.5% | 8,716 | 4.8% | 9,188 | 5.4% |
| Specialised | 14,643 | 15,662 | 7.0% | 16,413 | 4.8% | 17,151 | 4.5% | 17,918 | 4.5% | 18,820 | 5.0% |
| Place based commissioning budgets | 91,469 | 95,168 | 4.0% | 97,730 | 2.7% | 100,317 | 2.6% | 103,103 | 2.8% | 107,381 | 4.1% |
| Sustainability Fund | 0 | 1,800 | | 2,864 | 33.9% | 2,947 | 2.9% | 3,434 | 16.5% | 3,405 | -0.8% |
| Transformation Fund | 200 | 339 | 69.5% | | | | | | | | |
| Sustainability and Transformation Fund | 200 | 2,139 | | 2,864 | 33.9% | 2,947 | 2.9% | 3,434 | 16.5% | 3,405 | -0.8% |
| Other direct commissioning | 6,684 | 6,642 | -0.6% | 6,641 | 0.0% | 6,609 | -0.5% | 6,526 | -1.2% | 6,462 | -1.0% |
| NHS England central budgets | 1,708 | 1,637 | -4.2% | 1,559 | -4.8% | 1,402 | -10.0% | 1,312 | -6.5% | 1,227 | -6.4% |
| Non-recurrent use of Drawdown | 300 | 250 | -16.7% | 400 | 60.0% | 400 | 0.0% | 400 | 0.0% | 400 | 0.0% |
| Total | 100,360 | 105,836 | 5.5% | 109,193 | 3.2% | 111,675 | 2.3% | 114,775 | 2.8% | 118,875 | 3.6% |

Notes:

- Table 1 earlier in this paper records the Spending Review settlement from HM Treasury, whereas Table 2 above shows the amount available for distribution by NHS England. The differences are agreed adjustments with the Department of Health primarily to reflect changes in responsibilities. In 2015/16 the HMT revenue resource baseline is £101.0bn (table 1). After adjustments, £100.4bn is available for allocation (table 2) on a like-for-like basis, with the most significant difference being the transfer of responsibility for commissioning of public health services for children aged 0-5 to local authorities.
- NHS England central budgets include core programme and management cost expenditure, but also funds managed on behalf of the system, such as Clinical Excellence Awards for hospital consultants and some elements of national resilience funding.
- Drawdown includes utilisation of prior year cumulative surpluses, primarily by CCGs, to fund non-recurrent investments and funding for in-year deficits agreed as part of a multi-year recovery plan.

B. Distribution of funds within each Commissioning stream

21. In this section we describe a number of improvements we have made to the formulae which determine target allocations.

Inequalities

22. NHS England looks to meet some of its legal requirement to reduce inequalities in healthcare provision through its approach to allocations.
23. In previous years we have developed our methodology and the criteria underpinning our approach. In line with the recommendation of the Advisory Committee on Resource Allocation (ACRA) we have established that the Standardised Mortality Ratio for those aged under 75 (SMR<75) is the best indicator of unmet need, and thus current inequality in the provision of healthcare services. We also previously agreed a 15% adjustment within primary care and a 10% adjustment within CCG funding to meet these requirements.
24. This year we have undertaken a comprehensive literature review to investigate whether the evidence base has changed. Whilst work by Ben Barr from the University of Liverpool and colleagues show the benefit of targeting investment at areas with high levels of deprivation, evidence about the impact of additional investment based on inequalities is inconclusive, particularly in relation to the scope for marginal return and thus how much to invest.
25. We therefore propose to keep the inequalities adjustment at current levels for CCGs and for primary care. In introducing a new target formula for specialised services (see below) we are also proposing the introduction of a 5% unmet need adjustment for specialised services on the basis that we would expect unmet need and the potential to impact on inequalities to be lower in this area.
26. We have also reviewed our methodology, and whilst recommending that we continue to use SMR<75 we are proposing to change the application of the inequalities adjustment. ACRA has recommended that the application of the inequalities adjustment moves from a 10 tier to a 16 tier approach that better targets areas with the highest levels of deprivation. ACRA is planning to recommend a similar change to the public health formula used by Public Health England. Annex C shows the details of this change.

Population

27. Population figures for all programme allocations continue to be based on GP list sizes, now updated to October 2015. Increases for future years are based on the Office of National Statistics figures¹.

¹ Whilst many local authorities compile more detailed future population projections, the methodology is not consistent and this means they cannot be brought into a national formula. Hence areas of disproportionately high anticipated growth may be adversely impacted if the ONS does not fully capture this in its assumptions. To mitigate this risk we will review actual changes in population annually to see if any CCG is given an unfair or disproportionate challenge for this reason, and adjust if required.

28. Using GP lists as a basis for the allocations requires these lists to be materially accurate. Following the allocation of funds in 2015/16, further list updating activity has been undertaken in all regions and is reflected in this allocation setting process. This programme of work will continue over the next three years and potentially inform any update to the proposed allocations for 2019/20 and 2020/21. Before any adjustment is made to reflect unexpected population growth in future years (as set out in the footnote to the preceding paragraph) we will require a full analysis of the reasons for the growth to ensure confidence in the local list updating procedures.

CCG formula

29. For this round of allocations the core structure of the CCG formula remains the same, but all underlying data has been updated. This means that the activity data used in the model has been brought forward by 4 years and model parameters re-estimated.

30. We are proposing to make the following changes to the formula:

- i. introduction of a sparsity adjustment;
- ii. refresh of the emergency ambulance cost adjustment (EACA); and
- iii. revision to application of inequalities (as above).

31. These adjustments have been reviewed and agreed by ACRA and are set out in Annex D.

32. Table 3 below summarises the impact of the new formula. This shows that the updated CCG formula for 2015/16 increases the number of CCGs more than 5% below target from 17 to 24 CCGs and the number more than 5% above target from 27 to 28.

Table 3: Distribution of CCGs by distance from target

| Dft distribution | 15/16 | 15/16 |
|------------------|-------------------|------------------|
| | Per 2014 formulae | Per new formulae |
| <5% | 17 | 24 |
| -5% to -2.5% | 46 | 39 |
| -2.5% to 0 | 60 | 57 |
| 0 to 2.5% | 38 | 38 |
| +2.5% to +5% | 23 | 23 |
| >5% | 27 | 28 |
| Total | 211 | 209 |

33. Future developments are expected to include looking at community service provision, where lack of reliable robust data currently prevents detailed needs-based modelling, as well as continuing our analysis of the impact of sparsity and updating the mental health services component of the model.

Primary Care formula

34. The existing allocation model for primary medical care is based on the contractual formula that is at the heart of the General Medical Services (GMS) contract, usually referred to as the Carr-Hill formula. This model has been frequently criticised in this context because it was developed more than ten years ago and is based on data that are around fifteen years old.
35. The key change we are proposing to the primary medical care formula is the inclusion of new estimates of stratified workload per patient for GPs based on 2 million patient records from the Clinical Practice Research Datalink 2014. The previous data were based on information from 1999-2002. This has allowed us to re-estimate the importance of key drivers of primary medical care activity. We have not changed the way we then use these updated estimates to model the consequential cost variation.
36. ACRA has endorsed these changes but has been clear that this is for allocation purposes only and does not in itself imply any particular adjustments to GMS contracts. Work is underway to update the formula to influence such payments for subsequent years while ensuring that any future change to payment formulae is synchronised with the allocation formula developed here.
37. The key impacts of the changes are to reveal an increase in the relative need for primary medical care in London and to reduce the range of the most extreme relative needs in the model, two of the most common criticisms of the Carr-Hill model.
38. To support the transparency of comprehensive place-based expenditure, we have taken the actual allocation at a local geography level for non-medical primary care services (principally community pharmacy, dentistry and optical services) and apportioned to CCGs on a per capita basis. The current non-medical primary care formula is not robust in isolation for a CCG geography, and this disaggregation is therefore indicative only. As part of our future work programme we will undertake further work on the allocation methodologies for these services, but there are no current plans to move to delegated commissioning in these areas, and we have excluded them from the place-based pace-of-change calculations described later in this paper. Further detail on the primary care formula is provided in Annex E.

Specialised formula

39. The analysis of the specialist service budget at a CCG level is not, in itself, intended to result in the transfer of responsibility for commissioning, but it will promote equitable allocations, support greater understanding and transparency and facilitate collaborative commissioning between CCGs and NHS England where appropriate, by influencing the overall balance of allocations through pace-of-change (see below).
40. A needs-based specialised formula has been developed, using a similar approach to the CCG formula (Person Based Resource Allocation).

41. Specialised services are represented variably in the source data used for modelling (SUS-PbR). Only categories of care with a reasonable level of coverage are used in estimating or applying the target formula. This covers c.50% of all specialised services spend. The remaining services have been included within the target for each CCG geography based on historic expenditure. This historic expenditure analysis has been strengthened over the last 18 months, including a number of detailed review and updating procedures designed to build confidence in its validity for use as part of the allocation process.
42. The inclusion of a historic spend element within the formula also at this stage dampens some of the issues identified in the current pattern of specialised service utilisation and needs-based projections of utilisation. Of particular note is the issue that some specialised services in certain locations may be influenced by supply side variables (proximity to a hospital will increase the likelihood of a service being provided, an impact which needs to be eliminated in coming to a needs-based allocation) and demand side variables (where a particular individual, family or patient group specifically moves to a specialist centre for access purposes).
43. ACRA will have an opportunity to carry out a full review of the methodology in due course. In the meantime, our internal review indicates that the formula generates valid target allocations, and we therefore recommend proceeding with utilising the formula given the benefits in terms of supporting co-commissioning and the place-based approach. We have sought to mitigate potential risks by adopting a cautious approach to pace-of-change, and we will continue to work with ACRA over the coming months to enable them to complete their review. There is also potentially an opportunity to adjust any significant distortions in allocations in 2017/18 if required, as we are likely to begin to move elements of the sustainability and transformation funds into local allocations in addition to the core allocations covered in this paper. Further detail on the specialised services formula is provided in Annex F.

Quality Assurance

44. Quality Assurance can never be absolute, and the quanta being finalised through the Spending Review only in November have meant that much of the final phases of this work have been completed at speed. Nevertheless, the various components of the work have been through a range of quality assurance processes including variously peer review, independent internal review, independent methodological review (ACRA) and independent external review.

C. Pace-of-change

45. In previous years the Board has agreed a pace-of-change policy that has sought to:

- i. bring all CCGs to target funding over time and specifically bring all CCGs within 5% of target as quickly as possible (in 2015/16 we halved from 34 to 17 the number of CCGs who were more than 5% below their target funding); and
 - ii. bring all primary care geographies to target funding over time.

- 46. Key considerations for the Board have included:
 - i. the minimum floor growth we can expect any geography to manage without short term destabilisation of service provision;
 - ii. the pace at which over target geographies can adjust their spending to their needs based target; and
 - iii. the maximum growth that any geography can invest in a value for money way in a given year.

- 47. To date, discussions regarding pace-of-change have predominantly focussed upon CCG allocations. With the development of primary medical care and specialised formulae at CCG level we are now able to take a more holistic view of pace-of-change at a place- (or local health economy) based level.

- 48. This gives us some choices for how we wish to operate pace-of-change policy for this allocation round. Options for pace-of-change include:
 - i. apply to each commissioning stream individually;
 - ii. apply at an aggregate place-based level;
 - iii. exclude specialised services from ii. above; or
 - iv. a hybrid option which focuses on alignment with holistic place-based targets but subject to applying rules limiting the volatility and unintended consequences in individual commissioning streams.

- 49. On balance we recommend the hybrid approach with specialised services included. The primary advantage of including specialised services within the pace-of-change calculations is that it will bring much greater equity of overall allocations to populations by factoring in the highly variable utilisation of specialised services by each local health economy. It would support engagement of CCGs in co-commissioning and would enable a fuller expression of place-based utilisation of NHS funds. It would also “future-proof” place-based allocations against potential realignment of specialised service definitions over time. The primary downside is the partial service coverage of the modelled element of the current formula; however, the likely effect of this in practice is to dampen rather than magnify the impact of specialised services in the overall place-based pace-of-change. Our recommendation is therefore that the advantages significantly outweigh the disadvantages.

- 50. The following high-level steps are taken to implement the hybrid approach:
 - i. we apply funding at each commissioning stream level to meet specific rules for minimum growth and caps where appropriate (see paragraph 50);
 - ii. any funds that are not needed to meet these commissioning stream aims are then used to support pace-of-change for the place-based allocation (see paragraph 51);

- iii. any additional funding which a CCG area accrues in step ii. is then redistributed back to the allocations for the CCG and primary medical care commissioning streams as described in paragraph 53 below.

51. The rules for the initial allocations to individual commissioning streams (referred to as “minimum allocations below”) are set out in table 4 below and build on the principles agreed by the Board for the allocations for 2015/16:

Table 4: pace-of-change allocative decision rules by commissioning stream

| | Allocative decision rules |
|----------------------|---|
| CCG | <ul style="list-style-type: none"> • no CCG is more than 5% below target; • all CCGs receive a minimum per capita growth that is equivalent to real terms cash growth at the average population growth (in 2016/17 this equates to 0.91%, being 1.66% GDP deflator less 0.75% average population growth) ; • all CCGs receive a minimum cash growth equal to real terms growth plus specific non-routine policy pressures (predominantly relating to pensions and 7 day services); unless • the CCG is more than 10% above target, when its cash growth is limited to the specific policy pressures. This cap is phased in between a DfT of +5% and +10%. |
| Primary care medical | <ul style="list-style-type: none"> • a minimum allocation is set that ensures maximum progress is made towards ensuring no locality is more than 5% below target, constrained by allowing no CCG area more than 10% per head growth in this step of the process; • all CCG areas receive a minimum per head growth that is equivalent to real terms cash growth at the average population growth (as defined above); and • all CCG areas receive a minimum cash growth equal to real terms growth plus specific policy pressures; unless • the CCG area is more than 10% above target, when its cash growth is limited to specific policy pressures plus 1%. This cap is phased in between a DfT of +5% and +10%. |
| Specialised | <ul style="list-style-type: none"> • all CCG areas receive the same per head uplift that utilises all the resources allocated to this stream, ensuring that at a national level the allocated funds for NHS England specialised services are maintained and to mitigate any risks relating to the target formula as described above. |

52. Focus then turns to the total of these three streams. The total allocation to each locality must at least meet the sum of the three minimum allocations (CCG core, primary medical care and specialised). The remaining available growth is used to:
- i. ensure that the total allocation to each locality is no more than 5% below target;
 - ii. as for the individual streams, total allocations must in aggregate follow the relevant minimum and maximum growth rules; and

- iii. any remaining funds are channelled into pace-of-change.
53. The additional resources are distributed back across the CCG and primary medical care commissioning streams as follows:
- i. where the minimum CCG core allocation is below target and the minimum primary medical care allocation is above target, any available resources are used to bring the CCG allocation as close as possible to target. If the opposite applies, the resources are focused on the primary medical care allocation;
 - ii. if resources remain after this step, or if the minimum allocations are both above or both below target, resources are distributed to move both individual allocations the same number of percentage points towards their respective target allocations.
54. Having set up the pace-of-change modelling on the basis described above we have identified two options for the Board to consider, the results of which are set out in Table 5 and 6 below:
- Option 1: – more rapid pace-of-change
 - Option 2: – more conservative pace-of-change

Table 5: Pace-of-change option 1

| Option 1 | | 2015-16 | | | 2016-17 | | | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | |
|-------------------|-------------------------------|---------|---------|-------|---------|---------|--------|---------|---------|-------|---------|---------|-------|---------|---------|-------|---------|---------|-------|
| | | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total |
| DfT distribution | <-5% | 24 | 50 | 10 | 0 | 50 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | -5 to -2.5% | 39 | 26 | 48 | 56 | 21 | 41 | 50 | 55 | 32 | 45 | 91 | 3 | 38 | 89 | 1 | 35 | 63 | 0 |
| | -2.5% to 0 | 57 | 29 | 58 | 73 | 30 | 86 | 80 | 32 | 98 | 80 | 40 | 128 | 83 | 54 | 129 | 83 | 78 | 131 |
| | 0 to +2.5% | 38 | 30 | 45 | 37 | 35 | 39 | 36 | 32 | 36 | 36 | 28 | 36 | 40 | 26 | 35 | 42 | 42 | 35 |
| | +2.5 to +5% | 23 | 26 | 28 | 20 | 25 | 27 | 20 | 26 | 30 | 24 | 21 | 30 | 26 | 22 | 33 | 30 | 16 | 33 |
| | >5% | 28 | 48 | 20 | 23 | 48 | 16 | 23 | 37 | 13 | 24 | 29 | 12 | 22 | 18 | 11 | 19 | 10 | 10 |
| Programme Growth | Maximum | | | | 10.79% | 11.99% | 10.31% | 3.96% | 11.74% | 4.47% | 3.56% | 5.75% | 3.82% | 3.29% | 5.11% | 3.90% | 4.85% | 8.84% | 5.25% |
| | Mean | | | | 3.74% | 3.93% | 4.35% | 2.14% | 3.15% | 2.64% | 2.15% | 2.48% | 2.55% | 2.24% | 3.05% | 2.67% | 3.85% | 4.25% | 4.08% |
| | Median | | | | 3.05% | 3.57% | 3.84% | 2.00% | 1.87% | 2.52% | 1.99% | 2.21% | 2.44% | 2.12% | 2.98% | 2.57% | 3.74% | 4.41% | 4.05% |
| | Minimum | | | | 1.39% | 2.90% | 2.12% | 0.16% | 1.00% | 0.71% | 0.06% | 1.00% | 0.61% | 0.02% | 1.00% | 0.61% | 1.46% | 1.00% | 1.88% |
| | Number within 0.1% of minimum | | | | 6 | 27 | 1 | 5 | 23 | 1 | 5 | 15 | 1 | 4 | 8 | 1 | 4 | 6 | 1 |
| Per Capita Growth | Maximum | | | | 9.48% | 10.02% | 8.64% | 2.77% | 10.00% | 2.94% | 2.25% | 5.37% | 2.46% | 2.06% | 3.71% | 2.42% | 3.80% | 7.80% | 3.79% |
| | Mean | | | | 2.97% | 3.16% | 3.58% | 1.41% | 2.41% | 1.90% | 1.42% | 1.75% | 1.82% | 1.53% | 2.34% | 1.96% | 3.14% | 3.54% | 3.37% |
| | Median | | | | 2.62% | 2.97% | 3.24% | 1.46% | 1.39% | 1.93% | 1.47% | 1.59% | 1.86% | 1.59% | 2.31% | 2.04% | 3.24% | 3.78% | 3.46% |
| | Minimum | | | | -0.07% | 1.25% | 1.28% | -1.08% | 0.04% | 0.08% | -1.14% | 0.05% | 0.04% | -1.01% | 0.07% | 0.25% | 0.53% | 0.30% | 1.58% |
| | Number within 0.1% of minimum | | | | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 |

Table 6: Pace-of-change option 2

| Option 2 | | 2015-16 | | | 2016-17 | | | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | |
|-------------------|-------------------------------|---------|---------|-------|---------|---------|-------|---------|---------|-------|---------|---------|-------|---------|---------|-------|---------|---------|-------|
| | | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total | CCG | PC (GP) | Total |
| DfT distribution | <-5% | 24 | 50 | 10 | 0 | 50 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | -5 to -2.5% | 39 | 26 | 48 | 64 | 24 | 66 | 64 | 57 | 64 | 61 | 95 | 62 | 60 | 93 | 62 | 59 | 69 | 66 |
| | -2.5% to 0 | 57 | 29 | 58 | 65 | 27 | 61 | 66 | 32 | 66 | 67 | 40 | 69 | 66 | 51 | 71 | 66 | 77 | 70 |
| | 0 to +2.5% | 38 | 30 | 45 | 37 | 35 | 39 | 36 | 28 | 36 | 33 | 24 | 36 | 36 | 25 | 34 | 38 | 37 | 30 |
| | +2.5 to +5% | 23 | 26 | 28 | 18 | 25 | 24 | 17 | 26 | 23 | 21 | 21 | 23 | 22 | 22 | 23 | 21 | 17 | 24 |
| | >5% | 28 | 48 | 20 | 25 | 48 | 19 | 26 | 37 | 20 | 27 | 29 | 19 | 25 | 18 | 19 | 25 | 9 | 19 |
| Programme Growth | Maximum | | | | 10.36% | 11.99% | 9.98% | 3.96% | 11.74% | 4.40% | 3.21% | 4.96% | 3.79% | 3.18% | 5.19% | 3.85% | 4.77% | 7.12% | 5.15% |
| | Mean | | | | 3.75% | 3.85% | 4.35% | 2.14% | 3.13% | 2.64% | 2.15% | 2.47% | 2.55% | 2.23% | 3.14% | 2.67% | 3.86% | 4.16% | 4.08% |
| | Median | | | | 3.05% | 3.57% | 3.85% | 2.00% | 1.84% | 2.44% | 1.95% | 2.15% | 2.40% | 1.99% | 3.21% | 2.51% | 3.66% | 4.41% | 3.96% |
| | Minimum | | | | 3.05% | 2.90% | 3.49% | 2.00% | 1.00% | 2.20% | 1.95% | 1.00% | 2.13% | 1.99% | 1.00% | 2.17% | 3.66% | 1.00% | 3.54% |
| | Number within 0.1% of minimum | | | | 138 | 27 | 12 | 151 | 23 | 31 | 131 | 16 | 28 | 120 | 9 | 11 | 141 | 7 | 6 |
| Per Capita Growth | Maximum | | | | 9.06% | 10.00% | 8.31% | 2.77% | 10.00% | 2.94% | 1.94% | 3.41% | 2.24% | 2.07% | 3.65% | 2.36% | 3.79% | 5.40% | 3.82% |
| | Mean | | | | 2.98% | 3.08% | 3.58% | 1.41% | 2.40% | 1.90% | 1.42% | 1.73% | 1.82% | 1.52% | 2.43% | 1.96% | 3.15% | 3.45% | 3.37% |
| | Median | | | | 2.65% | 2.96% | 3.28% | 1.41% | 1.36% | 1.90% | 1.44% | 1.56% | 1.83% | 1.54% | 2.49% | 1.97% | 3.20% | 3.72% | 3.39% |
| | Minimum | | | | 0.88% | 1.25% | 1.91% | 0.74% | 0.04% | 1.35% | 0.73% | 0.05% | 1.37% | 0.94% | 0.07% | 1.52% | 1.95% | 0.07% | 2.55% |
| | Number within 0.1% of minimum | | | | 1 | 1 | 1 | 2 | 1 | 4 | 2 | 2 | 3 | 2 | 1 | 2 | 2 | 1 | 1 |

55. Both options fulfil the stated goal of bringing all CCGs to no more than 5% under target in 2016/17 and achieve the same objective for the total place-based allocation. A similar position is reached for primary medical care allocations over the three year period to 2018/19, with all CCG geographies moving to within 5% in both options. Option 1 has a greater impact than Option 2 on narrowing the distribution for both CCGs and local health economies over the 5 year period. For this reason we recommend that the Board adopts Option 1.
56. Primary Care (non GP service) resources are allocated to commissioning hubs using a similar approach, but are not appropriate for inclusion in a place-based pace-of-change policy because of the challenges of delegating responsibilities for the services and the inherent limitations of the target formulae discussed above. In publishing final allocations we plan to provide additional information showing an “extended” place-based allocation through the addition of an indicative amount for these services for information only.
57. We have also considered whether or not pace-of-change should be adjusted for the potential differential nature of growth in social care spend over the next 5 years as a result of the Spending Review settlement. We have considered this factor given our previous policy of seeking to ensure that local health economies do not suffer short term destabilisation of services. The data does not however exist to model this impact across the country given the structure of the Spending Review settlement and the dependency on individual local authority decisions. In addition, the relationship between social care spend and health need needs further investigation. Furthermore, there is a risk of wrongly signalling that the local NHS has in some way been funded to offset reductions in social care, which is not the case. For these reasons we have not included this factor in our pace-of-change considerations.
58. When local authority public health allocations are published they could be included in a similar way.

CCG admin

59. CCG admin allowances at an overall level will remain flat to 2020/21, as determined by HM Treasury’s Spending Review settlement. Individual CCG allowances will be rebased to adjust for changing share of population.

Aligning allocations, devolution and planning policies

60. As set out in the business rules for commissioners published in the forthcoming NHS planning guidance, the real terms element of growth in allocations from 2017/18 onwards for CCGs, as well as their access to the Sustainability and Transformation Fund, will be contingent upon the development and sign off of a robust Local Health Economy Strategic plan during 2016/17. Providers will be similarly incentivised, as the proposed criteria to access sustainability and transformation funding include sign off of Local Health Economy plans. The Board is asked to approve this approach.

61. We are also proposing to the Board that we should explore the potential to allow commissioners and providers who wish to work together as a local health economy to operate to a combined financial control total. This would require combined oversight with NHS Improvement (and collaboration with the Department of Health) in adapting the relevant financial regimes. However, this cannot affect the statutory position that NHS England is only responsible for managing its spending limit and overseeing its hosted bodies and CCGs. NHS Improvement and the Department of Health have equivalent legal responsibilities for provider finances and DH resource limits.
62. We are also recommending that the Board should in principle support any proposals from groups of CCGs, particularly in areas working towards devolution, who wish to implement a more accelerated internal pace-of-change policy by mutual agreement.

Recommendations

63. The Board is asked to:
- i. agree the proposed allocation of funds between areas of commissioning spend including the establishment of a Sustainability and Transformation fund;
 - ii. agree the proposed approach to allocation of funding within CCG, primary care and specialised commissioning streams;
 - iii. agree the proposed approach to pace-of-change; and
 - iv. agree the proposals set out in paragraphs 60-62 with regard to integrated planning, shared financial targets and accelerated funding realignment between CCGs.
64. Subject to the decisions made by the Board, we intend to publish allocations at CCG level for CCG, primary care and specialised programme costs and CCG running costs in early January.

Paul Baumann
Chief Financial Officer
17 December 2015

ANNEX A: 5 YEAR ALLOCATIONS

We are giving three year firm allocations with a further two years of indicative allocations to assist planning.

However, NHS England will reserve the right to change firm allocations in a number of specific circumstances where the financial stability of the commissioning system is challenged or it is clear that the allocations are no longer fair in their distribution to health economies.

To mitigate this NHS England needs to be clear to all parts of the commissioning system the circumstances under which the allocations will be reviewed. Examples of these might be:

- a disproportionate financial imbalance in any part of the commissioning system;
- a new government policy with additional funding creating an additional pressure in one area;
- a disproportionate increase or decrease in the share of the national population caused by a change to underlying population statistics;
- a new national contract or pay award established by Government that requires additional funding or redistribution of resources; and
- any other change in mandate funding.

NHS England may also need to review allocations in the light of:

- changes to commissioning responsibilities in the light of any further changes to IR rules;
- the need to ensure minimum contractual growth to GP practices through the primary care allocations; and
- changes to payment currencies which may move funding pressures between commissioning streams (for example a move to HRG4+).

ANNEX B: PRESSURES IN COMMISSIONING STREAMS

Cost pressures

In developing our analysis of pressures in commissioning streams we have developed a series of assumptions in partnership with our stakeholders which have been used to underpin the financial modelling supporting the spending review settlement. We discuss the key drivers of these assumptions below.

In developing our NHS England specific commissioning stream pressures we have taken these assumptions and adapted them as appropriate for applicability to each stream.

Activity

We have developed assumptions based on the underlying historic growth rates of activity across the health system. Using data from 2009/10- 2014/15 we calculate an average secondary care growth rate of 2.7%. In order to project forwards we have taken this historic figure and adjusted it for the impact of the aging and growing population, resulting in an activity pressure of 2.9% per annum.

As part of allocations we have apportioned the activity pressure between CCGs and Specialised, resulting in a 4.4% activity pressure within specialised and 2.4% activity pressure within CCGs. This compares to population growth in the region of 0.7% per annum.

Pay

Our pay assumptions are based on estimates calculated by the Department of Health of the underlying pay pressure in the system. These have then been updated for the impact of the government's pay restraint policy (limiting growth to 1% per annum plus an agreed estimate for pay drift).

The pay pressure is higher in 2016/17 due to changes to national insurance in relation to pensions; this adds a 1.75 percentage point pressure on top of the 2016/17 pay assumption.

Our pay pressure assumption is consistent throughout all commissioning streams, weighted accordingly. For example within GP services pay comprises c.80% of expenditure, whereas in specialised pay only accounts for c.55%.

Drugs

Secondary care, non-specialised drugs expenditure is projected using the Department of Health's drugs projection models. For specialised drugs we assume underlying combined activity and price growth of 9% per annum in line with detailed work performed by NHS England in addition to any specific and material new high cost drugs. The cost of primary care drugs are assumed to rise in line with the numbers of prescriptions and inflation.

Other

For the majority of other pressures we have included an assumption of GDP deflator pressure. This includes secondary care procurement pressure for non-pay non-drugs related costs.

We have funded commissioners for the projected increases in CNST over the five year period.

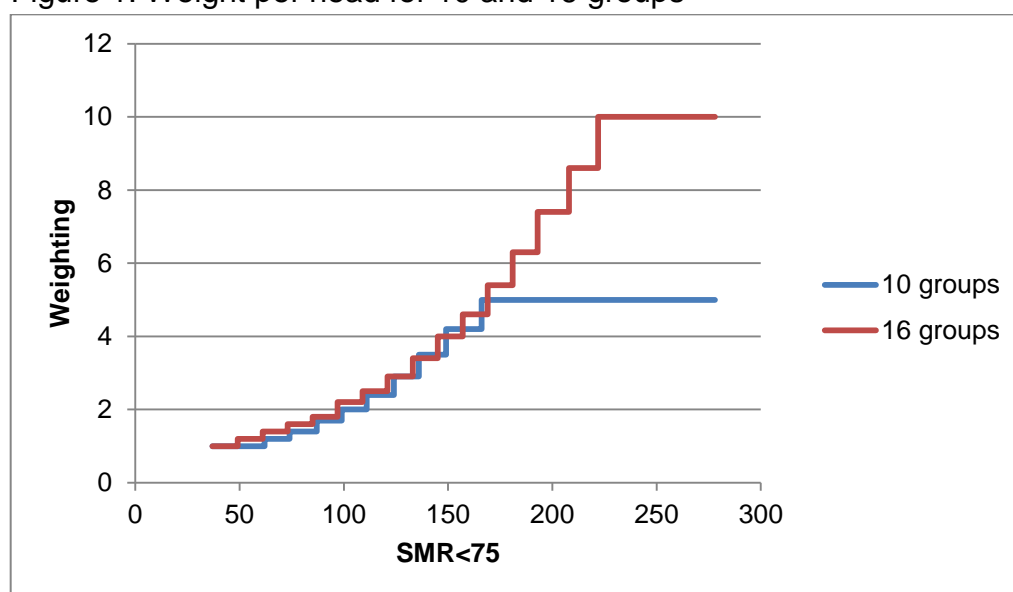
ANNEX C: ANALYSIS OF INEQUALITIES ADJUSTMENT IMPACT

The unmet need adjustment in the current target CCG formula is aligned with the current public health formula. The adjustment uses the standardised mortality ratio under 75 (SMR<75) for small geographical areas – Middle Layer Super Output Areas (MSOAs) – of which there are 6791 in England. MSOAs are currently placed into 10 groups according to the value of their SMR<75. All MSOAs in the same group receive the same weight per head, with the MSOAs in the group with the highest SMR<75s receiving a weight per head 5 times higher than those in the group with the lowest SMRs. The intermediate 8 groups receive a weight per head between 1 and 5.

In line with its recommendations for the public health formula, ACRA is advising us to increase the number of groups for the unmet need adjustment to the CCG formula from 10 to 16 and increase the weight per head across these to a range of 10 to 1.

The impact of moving to 16 groups is to increase the target allocations to the areas with the very worst SMR<75. This can be seen from the steeper curve for the 16 group model compared to the 10 group model in Figure 1, which show the weights per head for the MSOA groups.

Figure 1: Weight per head for 10 and 16 groups

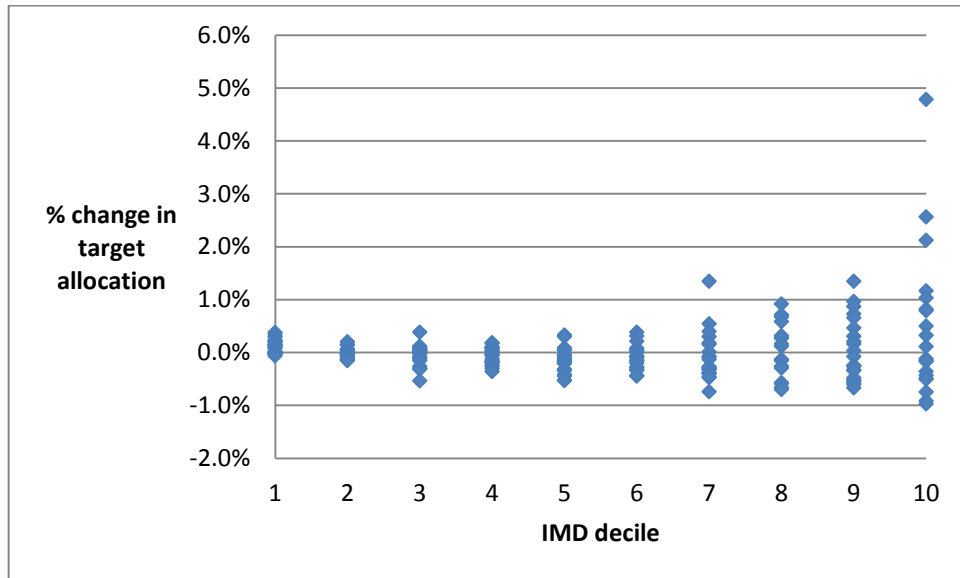


The general impact of this more sensitive approach is to increase or decrease individual target allocations by up to 1%. Six CCGs see an increase in their target allocation of more than 1% (up to 4.8% in one case) because they have a high proportion of small areas with the worst SMR<75s, which are now given a higher weight.

Figure 2 shows for CCGs the change in total target allocations by reference to their Index of Multiple Deprivation (IMD) decile, with decile 1 being the least deprived. This indicates that by changing the formula we are targeting more resources to the CCGs which have areas with the very poorest health. The dispersion in the higher deciles is due to differences between CCGs in the number of small areas with the highest SMR<75s and the number of small areas with a high but not the highest

SMR<75s. Small areas in the former are now given a much higher weight per head and small areas in the latter are given a relatively lower weight per head than previously.

Figure 2: Change in target allocation by IMD decile



ANNEX D: REVISIONS TO THE CCG FORMULA

Refreshing the formula

We have refreshed the data supporting the underlying formula in a number of areas. The components updated are:

- the Nuffield formula which covers general & acute and A&E services;
- the prescribing formula which covers the cost of the drugs prescribed by GP practices;
- the maternity formula; and
- the emergency ambulance cost adjustment (EACA).

The mental health component has not been updated this year other than to correct significant underreporting of activity by an individual provider in the previous data. Mental health was already the most up to date component.

Their relative importance in the overall CCG formula is shown in Table 1, below, with the assumption that the NHS England Board maintains the share of the unmet need/health inequalities adjustment at 10%.

Table A1: Shares of overall CCG formula

| Component | Share in overall CCG formula |
|--|------------------------------|
| G&A, A&E, community and ambulance services | 65% |
| Prescribing | 12% |
| Mental health | 10% |
| Maternity | 3% |
| Unmet need adjustment | 10% |

We have updated the core formula using the most recently available complete data, which is between four and nine years more current than the data in the models used for 2014/15 and 2015/16 allocations.

The **Emergency Ambulance Cost Adjustment (EACA)** takes account of the differential cost of providing ambulance services in different parts of the country, principally the higher costs of providing these services in sparsely populated areas. It is included in the formula to provide funding to commissioners to meet the differential costs.

The current formula, unchanged since its inception in 1998/99 apart from mapping to the different commissioning organisations over time, is based on the volume of activity, the case-mix of activity and a measure of rurality. We have modelled the times by ambulances to reach incidents, provide treatment and convey patients to hospitals by MSOA across the combined data set from four of the 10 Ambulance Trusts to derive a new adjustment. ACRA supports our view that this is an improvement on the current EACA, which is more than 15 years old and was originally estimated for the then 100 or so Health Authorities. The impact of the EACA on target allocations is very small (range of +0.7% to -0.4% across CCGs).

Adjusting allocations for remote provision

The purpose of this proposed new adjustment is to provide funding to CCGs to meet the unavoidably higher costs of remote hospital sites, where the costs are higher because the level of activity is too low for the hospital to operate at an efficient scale.

The package of recommendations has three key elements:

- the criteria for considering a provider's site remote;
- the cost curve for assessing the unavoidable impact of scale on efficiency; and
- the reference point on the cost curve used as the basis for deriving a cost adjustment.

Criteria for remoteness

We have developed three criteria that a hospital providing Type I A&E services must meet for its commissioning CCG to be considered eligible for the uplift to its target:

- there must be 200,000 or fewer population within a one-hour travel time. A population served of 200,000 is the estimated scale at which a hospital can achieve close to national efficiency levels. This ensures that we do not support a large provider that is geographically remote but operating at efficient scale;
- the next nearest provider must be one hour or more by normal road travel times (including ferry times where relevant). This is a measure of whether or not consolidation of services on to fewer sites is feasible; and
- for at least 10% of the population in the hospital's catchment area, this must be the closest provider, with the next nearest provider over an hour away. An adjustment to target allocations for the relevant CCG is only made when this percentage is 10% or higher. This avoids us giving very small (immaterial) adjustments to very many providers.

Cost curve for assessing the unavoidable impact of scale on efficiency

To generate a relevant cost curve we have analysed the costs of all hospital sites relative to their size as measured by activity levels. The estimated relative costs were adjusted to remove the impact of differences in case mix and in costs that are already compensated through the market forces factor (e.g. differential staff and premises costs across the country).

Reference point for the adjustment

We have used national average costs at the point representing the average size of hospital sites as the reference point for deriving the size of individual adjustments. The cost curve gives the estimated higher costs above national average costs for each of the hospitals with activity levels which correspond to population catchment areas of under 200,000 people. Note: the adjustment therefore reflects the expected cost premium based on national scale/cost relationships rather than the actual cost position of the individual site, which may be affected by a number of factors unrelated to its scale.

Applying the adjustment

Once calculated, the financial impact of the sparsity adjustment is added to the target allocation of the relevant CCGs. This results in an adjustment for six CCGs in relation to eight hospital sites. The adjustment to target allocations is in total £31m, with a range across the six CCGs of £2.6m to £14.2m. The impact on actual allocations in any year will depend on the resulting distance from target and the pace-of-change policy adopted.

Overall impact of changes to the CCG formula

The changes are relatively small overall but tend to move money in the direction of a combination of age and deprivation. Taking all of the updates and methodology changes together, the resulting target allocations have the following profile with respect to age and deprivation.

Table A2: Age and deprivation distribution of 2015-16 target model

| | | Younger | | | | | | | | Older | | All ages | |
|---------------|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
| | | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | | |
| Less deprived | D1 | | 1,084 | 1,097 | 1,169 | 1,120 | 1,086 | 1,117 | 1,156 | 1,158 | | 1,124 | |
| | D2 | | | 0 | 1,170 | 1,127 | 1,140 | 1,117 | 1,142 | 1,182 | 1,196 | 1,244 | 1,152 |
| | D3 | | | 1,121 | | 1,139 | 1,256 | | 1,204 | 1,164 | 1,202 | 1,303 | 1,215 |
| | D4 | 1,026 | 1,125 | 1,137 | | | | 1,192 | 1,289 | 1,200 | 1,224 | 1,302 | 1,195 |
| | D5 | | 1,121 | | 1,168 | 1,218 | 1,264 | 1,276 | 1,262 | 1,286 | 1,267 | | 1,244 |
| More deprived | D6 | 1,110 | 1,158 | 1,161 | 1,168 | 1,301 | 1,262 | 1,327 | 1,292 | 1,282 | 1,258 | | 1,236 |
| | D7 | 1,153 | 1,160 | 1,163 | 1,136 | 1,193 | 1,354 | 1,346 | 1,380 | | 1,303 | | 1,212 |
| | D8 | 1,149 | 1,167 | 1,191 | 1,295 | 1,351 | 1,291 | | 1,445 | | 1,330 | | 1,262 |
| | D9 | 1,183 | 1,147 | 1,336 | 1,462 | 1,249 | 1,381 | 1,397 | 1,456 | 1,397 | | | 1,290 |
| | D10 | 1,152 | 1,200 | 1,351 | 1,252 | 1,374 | | | 1,463 | | | | 1,275 |
| All deprn | | 1,152 | 1,159 | 1,263 | 1,187 | 1,226 | 1,246 | 1,235 | 1,246 | 1,236 | 1,295 | | 1,222 |

Table A3: Age and deprivation distribution of 2016-17 target model

| | | Younger | | | | | | | | Older | | All ages | |
|---------------|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
| | | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | | |
| Less deprived | D1 | | 1,059 | 1,059 | 1,126 | 1,144 | 1,111 | 1,148 | 1,119 | 1,198 | | 1,135 | |
| | D2 | | | 1,157 | 1,142 | 1,171 | 1,101 | 1,138 | 1,200 | 1,197 | 1,220 | 1,156 | |
| | D3 | | 1,062 | | 1,135 | 1,237 | | 1,220 | 1,164 | 1,203 | 1,291 | 1,209 | |
| | D4 | 1,005 | 1,126 | 1,118 | | | 1,208 | 1,251 | 1,211 | 1,217 | 1,299 | 1,194 | |
| | D5 | | 1,109 | | 1,168 | 1,227 | 1,277 | 1,267 | 1,278 | 1,298 | 1,290 | 1,250 | |
| More deprived | D6 | 1,061 | 1,094 | 1,169 | 1,173 | 1,283 | 1,216 | 1,312 | 1,299 | 1,315 | 1,281 | 1,230 | |
| | D7 | 1,143 | 1,141 | 1,166 | 1,184 | 1,179 | 1,339 | 1,351 | 1,366 | | 1,308 | 1,207 | |
| | D8 | 1,150 | 1,168 | 1,173 | 1,286 | 1,356 | 1,303 | | 1,486 | | 1,348 | 1,265 | |
| | D9 | 1,164 | 1,115 | 1,332 | 1,426 | 1,253 | 1,354 | 1,400 | 1,452 | 1,401 | | 1,275 | |
| | D10 | 1,151 | 1,243 | 1,343 | 1,284 | 1,371 | | | 1,527 | | | 1,285 | |
| All deprn | | 1,139 | 1,158 | 1,254 | 1,189 | 1,234 | 1,239 | 1,235 | 1,254 | 1,247 | 1,295 | | 1,222 |

| |
|----------------------------------|
| Key: |
| Decrease over £5 per head |
| Increase over £5 per head |
| Changes of less than £5 per head |

Note: The published target distribution has been normalised to 2016-17 quantum and normalised using 2016-17 populations to facilitate comparison.

ANNEX E: REVISIONS TO THE PRIMARY CARE MEDICAL FORMULA

The key change in the primary medical care formula is the development of new estimates of stratified workload per patient for GPs based on 2 million patient records from the Clinical Practice Research Datalink 2014. The previous data were based on 1999-2002. This has allowed us to re-estimate the importance of key drivers of primary medical care activity.

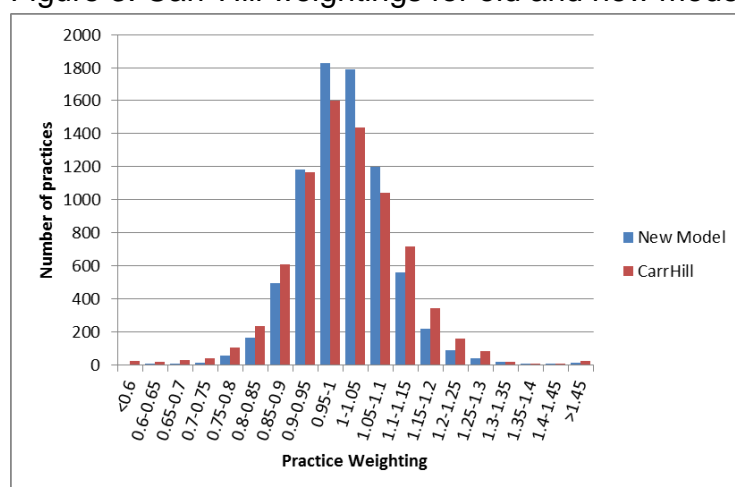
We have considered this information in detail to identify if there should be adjustments to the mapping of workload required (i.e. time spent per patient) based on a patient's age and sex, the relative deprivation of the area, and the volume, number and impact of new patient registrations in a practice.

We have considered rurality as an explanatory factor of workload, based on the Census 2011 definition of rurality. We have found that rurality has a small, positive correlation with time spent per patient, equal to around four minutes per patient per year. However, ACRA recommends that this driver is not included for the purpose of calculating allocations, as there is not sufficient evidence to distinguish higher demand in rural areas (which would be a reflection of need) from potential supply factors (e.g. time available per patient).

We have compared the weighting of each GP practice with the weightings under the Carr-Hill formula (the formula used to allocate the global sum to GP practices). The general distribution of weightings Across GP practices under the new formula is slightly narrower than under Carr-Hill. The central 90% of practices have indices between 0.87 and 1.16 under the new model compared with 0.83 and 1.2 under Carr-Hill.

The histogram below shows the two weighting values.² The horizontal axis is the weight under the workload estimates for Carr-Hill (red) and the new model (blue) grouped into bands and the vertical axis shows the number of practices with weightings in each band. The new model has a higher proportion of practices in the central bands (weightings 0.9-1.1) and the Carr-Hill model has a higher proportion of practices in the more extreme bands (less than 0.9 and greater than 1.1)

Figure 3: Carr-Hill weightings for old and new models



² Practices without comparable Carr-Hill weights have been excluded (10 of 7711 practices).

The Table below compares the performance of this new approach, once implemented as a target model, with the previous target model, based on the Carr-Hill model. The analysis groups CCGs in to deprivation deciles, based on the 2015 Index of Multiple Deprivation. These are not age standardised and so care needs to be taken when comparing individual deciles, but it is clear that the new model will tend to target more resources at the most deprived areas, compared with the baselines, but to a lesser extent than the existing model. This is consistent with the results discussed above and reflects a much more up to date profile of the key cost drivers.

Table A4: Deprivation distribution for Carr-Hill and new target models

| | Deprivation decile | 2015-16 baseline distribution | | Carr-Hill based target | | New target | |
|---------------|--------------------|-------------------------------|--------|------------------------|--------------------|------------|--------------------|
| | | £/head | £/head | £/head | Diff from baseline | £/head | Diff from baseline |
| Less deprived | 1 | 113 | 110 | -3.28 | 114 | 0.52 | |
| | 2 | 116 | 112 | -3.76 | 114 | -1.46 | |
| | 3 | 122 | 116 | -5.88 | 119 | -3.18 | |
| | 4 | 122 | 117 | -5.10 | 119 | -3.58 | |
| | 5 | 120 | 122 | 1.74 | 120 | -0.15 | |
| More deprived | 6 | 122 | 123 | 0.99 | 122 | -0.41 | |
| | 7 | 123 | 123 | -0.26 | 125 | 2.09 | |
| | 8 | 125 | 129 | 3.68 | 126 | 0.69 | |
| | 9 | 130 | 133 | 3.18 | 131 | 0.74 | |
| | 10 | 129 | 138 | 8.86 | 134 | 5.12 | |
| | England | 122 | 122 | 0 | 122 | 0 | |

Note: All comparisons use 2016-17 primary medical services quantum and populations to facilitate comparison of target distributions.

ANNEX F: NEW SPECIALISED SERVICES FORMULA

In order to support the development of a “place-based” approach to understanding the current and future utilisation of all healthcare resources at the CCG level of geography we have developed for the first time a formula for specialised services.

This formula uses a needs based person based resource application (PBRA) approach (the same approach as was followed for the development of the CCG formula which was originally undertaken by the Nuffield Trust).

The model uses anonymised person-level data for inpatients, outpatients, A&E and critical care activity, with the activity data linked at person level to GP practice registered lists. The prescribed specialised services identification tool was used to identify specialised services consistently across the country.

Costs of specialised services at the person level were modelled using as explanatory variables patients’ age, sex, diagnostic history from previous inpatient admissions, characteristics of the small geographical area where they reside, and characteristics of the local NHS services. In getting to this formula a wide range of explanatory factors was tested.

The activity data are from the SUS-PBR extract. It was found that some specialised services were poorly represented in this data set (e.g. forensic and secure mental health services). The modelling was therefore undertaken on the sub-set of activity for areas of care for which the SUS-PBR data have a reasonable level of coverage (c.50% of total specialised services spend).

For other areas of care, historic expenditure at CCG geography level has been used as the best available estimate of need and has been included in the target for each CCG.

The development of the specialised services model breaks new ground for services characterised by low volume, high cost activity with volatile demand and the formula is inevitably less robust when used in isolation than the CCG formula, as only a small number of people in each CCG use specialised services (on average, around 2%), and need is volatile from year to year.

In addition, the use of specialised services in certain locations may be influenced not only by population demand but also by the local availability of these services, an impact which needs to be eliminated in estimating needs-based allocations. In some locations higher use may be due a particular individual, family or patient group having specifically moved close to a specialist centre for access purposes, which is relevant for allocation purposes. It is often difficult to disentangle these two effects; however, the use of person-level data and diagnostic data seems to have overcome this issue. No service capacity measure was found to be significant in the final formula.

The benefit of adopting this approach is that for the first time we can compare patterns of utilisation of specialised services by local CCG geography and set them alongside target projections at CCG level for CCG commissioned services and primary medical care services. This gives us greater insight into the distribution of resources and the opportunity to begin to identify where resources may not be distributed equitably between commissioning streams or between geographies.

In order to mitigate any potential issues with the formula we have not included pace-of-change within specialised services for these allocations, rather the distance from target of specialised services is included as a factor within the total place-based pace-of-change calculations.