**TAGRA: Formula review work plan**

**Introduction:**

1. This note sets out a draft prospective work plan for discussion and decision by TAGRA. The plan reflects the key priorities of maintaining and running the formula whilst fulfilling the Scottish Government commitment, set out in the 2021/22 Programme for Government ‘*A Fairer Greener Scotland*’, to “*review the NHS funding formula.*” It also takes account of the availability of cost and population data required for the formula review.
2. The programme is presented in two phases: the short-medium term and the medium-long term. The short-medium term elements are either required to be undertaken (the formula runs) or could be undertaken (reviews of data or formula developments) given the existing data. The medium-long term work programme is more indicative at this stage as the specific content and timings will be informed by the findings of the earlier phase of the work and the availability of data at that time.
3. Two other projects in particular will interact with the TAGRA work programme: the review of the Costs Book and the implementation of the National Care Service.
4. The Costs Book constitutes a fundamental data source for the formula, without which key elements of the formula cannot be updated. As TAGRA is aware detailed Costs Book data will not be published for 2020/21 and 2021/22, but is expected to be available for 2022/23 (by the spring of 2024). The Costs Book itself will be subject to a review over the next three years, to ensure that it continues to provide relevant and robust data on NHS expenditure at the detailed level. The Cost Book review represents an opportunity for TAGRA to engage with that process, and seek to ensure that the revised Cost Book will provide whatever data is necessary for the NRAC formula.
5. The development of the National Care Service (NCS) is expected to have implications for the coverage of the NRAC formula. Specifically, aspects of the community sector are expected to be incorporated into the NCS and would therefore no longer be covered by the NRAC formula. This would require some revision of the formula to exclude those community elements.
6. The following section lists the areas of work which have been identified both to prepare for and carry forward a rolling review of the formula. The subsequent section provides more detail on the rationale for, data requirements, and potential timing of those areas of work.

**Areas of work:**

1. The following list sets out the specific work projects, separately for the short-medium term (1-2 years) and medium-long term (3-5 years):

*Short/medium term:*

S-M1: Conversion of the formula code from SPSS to R;

S-M2: review of all formula data, exploring the scope for updating or establishing alternative more credible proxies;

S-M3: formula run for 2025/26 target shares;

S-M4: desk review to identify developments in formula methodology since the publication of the NRAC report;

S-M5: assessing the implications of changes in the nature of service provision for the structure and methods of the formula;

S-M6: formula run for 2026/27 target shares;

*Medium/long-term:*

M-L1: formula run for 2027/28 target shares;

M-L2: review the costing methodology for the episodes of care;

M-L3: consider modelling the age/sex weights and morbidity and life circumstances (MLC) weights simultaneously rather than, as at present, sequentially;

M-L4: adjustment of formula to remove community elements which transfer to NCS;

M-L5: In the light of the research undertaken under the headings above, re-assess appropriate scope and depth of the review of the formula and consider whether the remainder of the work programme should be revised;

M-L6: review of any NRAC-retained residual from the Community Care Programme

M-L7: review of the Care of the Elderly Care Programme;

M-L8: review of the Maternity Care Programme;

M-L9: examine the accuracy of the methodology for estimating the target year populations in the context of the three-year projection horizon.

**Detail of work items:**

1. The following tables give more detail for these items.

**Table S-M1: Conversion of formula code from SPSS to R.**

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| --- | --- |
| Rationale | The NRAC formula currently runs on SPSS, but PHS has discontinued their licence to use SPSS, which is being replaced by R. The formula must therefore be implemented in R code. |
| Data | n/a |
| Interaction | Will affect the timing of the formula runs and may reduce the time horizon for the 2025/26 target shares.  |
| Timing | Completed May 2023 |
| Responsibility | PHS |

**Table S-M2: An inventory of all formula data**

|  |  |
| --- | --- |
| Rationale | Compiling an inventory of all data used in the formula, with details on the sources and age of the data, would facilitate discussions about the priority for updating formula data sources.  |
| Data | n/a |
| Interaction | This work would help to ensure that TAGRA was well placed to make submissions regarding priorities for data collection including, but not limited to, the review of the Costs Book.  |
| Timing | Living document. First draft completed May 2023.  |
| Responsibility | PHS |

**Table S-M3: Formula run for 2025/26 target shares**

|  |  |
| --- | --- |
| Rationale | Annual formula run |
| Data | Data availability will determine the extent and timing of the update |
| Interaction | Relies on data availability and the formula being functional in R.  |
| Timing | Options on timing to be discussed in TAGRA on 5th June 2023.  |
| Responsibility | PHS |

**Table S-M4: Desk review of developments in formula methodology**

|  |  |
| --- | --- |
| Rationale | Since the NRAC review was completed in 2007 there have been significant developments in the methodology used for health allocation formulae, particularly in England. A review of the state-of-the-art in formula methods could help inform decisions regarding the scope and content of the formula review.  |
| Data | The extent to which newer methods could be introduced to the formula will depend on Scottish data availability.  |
| Interaction | Could inform the development of the work programme and prioritisation of its elements.  |
| Timing | Could be initiated now. |
| Responsibility | SG |

**Table S-M5: Implications of changes in service provision**

|  |  |
| --- | --- |
| Rationale | There may have been changes in the nature of service provision since the introduction of the NRAC formula which could have implications for its accuracy. For example, an increase in the use of diagnostic techniques such as endoscopy. A review of these developments could establish whether corresponding changes in the formula itself should be considered.  |
| Data | May depend on data availability |
| Interaction | Would parallel the work of the Costs Book review, which would ultimately provide the data |
| Timing | Could be initiated now.  |
| Responsibility | TAGRA/AST |

**Table S-M6: Formula run for 2026/27 target shares**

|  |  |
| --- | --- |
| Rationale | Annual formula run |
| Data | Data availability will determine the extent and timing of the update |
| Interaction | Relies on data availability  |
| Timing | Spring 2024 |
| Responsibility | PHS |

**Table M-L1: Formula run for 2027/28 target shares**

|  |  |
| --- | --- |
| Rationale | Annual formula run |
| Data | Data availability will determine the extent and timing of the update |
| Interaction | Relies on data availability  |
| Timing | Spring 2025 |
| Responsibility | PHS |

**Table M-L2: Review of the costing methodology for acute episodes of care.**

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| --- | --- |
| Rationale | The case mix adjustment in the current costing method is based on speciality and length of stay: this is a relatively crude approach to costing. In addition, the current method is different from the costing methods used to calculate charges for cross-boundary provision of services by health boards. A review of NRAC costing (in the contest of the review of the Costs Book) could assess the potential both for an improved costing method and one which is consistent with cross-boundary costing.  |
| Data | Costing relies on detailed data from the Costs Book, which will not be available until early 2024. |
| Interaction | This work would both inform the Costs Book review and be reliant on the implementation of the review.  |
| Timing | Initial exploratory work could be undertaken now: development and implementation would likely require the revised cost data.  |
| Responsibility | TAGRA  |

**Table M-L3: Modelling age/sex and MLC weights simultaneously**

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| --- | --- |
| Rationale | Currently the age/sex weights are estimated and residual variation attributed (as far as possible) to the MLC weights, which are constant across age/sex cohorts. In contrast, estimating age/sex weights and MLC weights simultaneously would allow for a less a priori constrained estimation.  |
| Data | Ideally would use cost data based on the revised cost methods |
| Interaction | Costing review and Cost Book review.  |
| Timing | TBC after the review of the costing methodology |
| Responsibility | TAGRA/AST |

**Table M-L4: Revision of the formula to excise the community elements transferred to NCS**

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| --- | --- |
| Rationale | The NCS will take over ultimate responsibility for some or all aspects of the community sector services. This implies that these aspects of the formula should be removed and the formula adjusted.  |
| Data | Removing part of formula may not require data, per se, but there are significant community data issues discussed in Table M-L4. |
| Interaction | This interacts with the NCS. Work could only take place when it is clear how much of the community sector will be transferred to the NCS. |
| Timing | TBC in context of developing understanding of NCS |
| Responsibility | TAGRA/AST. |

**Table M-L5: Stock take and decisions on further work**

|  |  |
| --- | --- |
| Rationale | The literature reviews, data inventory and exploration of the costing methodology will provide an evidence base upon which to re-consider the nature of the further work required for the formula review and therefore the forward work plan.  |
| Data | na |
| Interaction | This builds on the other work especially: S-M2, S-M4, S-M5, M-L2, M-L3 and M-L4. |
| Timing | TBC in context of the evolving research |
| Responsibility | TAGRA/AST. |

**Table M-L6: Review of the NRAC-residual Community Care Programme.**

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| Rationale | The Community Care Programme is the care programme with the most out of date data: much of the NRAC data were taken from the PTI dataset, which was discontinued in 2012/13 and some of that data had already been dropped from the PTI in 2005/06. Any of the care programme which remains with NRAC after the establishment of the NCS would be in need of review and updating.  |
| Data | Despite the imperative to update the data, it remains the sector which has the worst data availability. TAGRA supported a project (The Community Health Activity Dataset) through which ISD/PHS would progressively roll out activity data collection across the community sector, but this has not produced much usable data yet.  |
| Interaction | This interacts with the NCS and potentially with the Costs Book review. Work could only take place when it is clear how much of the community sector will remain within the purview of NRAC. On the other hand, if the review of the Costs Book is thought to present an opportunity to improve the data on the community sector, there would be merit in undertaking some work on the community sector inform a TAGRA submission to the Costs Book review.  |
| Timing | TBC in context of developing understanding of NCS |
| Responsibility | TAGRA/AST |

**Table M-L7: Review of the Care of the Elderly Care Programme**

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| --- | --- |
| Rationale | Although the Care of the Elderly (COTE) care programme is the smallest care programme (2.1% of the formula by expenditure weight) it has not previously been reviewed and it is thought that there have been significant changes in service provision since the NRAC report. It also had some changes implemented during the maintenance phase, due to volatility in the excess cost indices in the island boards (and these changes could benefit from a fuller review). |
| Data | Requires detailed data from the Costs Book |
| Interaction | Interacts with the Costs Book review |
| Timing | TBC after publication of the full Costs Book. |
| Responsibility | TAGRA sub-group |

**Table M-L8: Review of the Maternity Care Programme**

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| Rationale | The maternity care programme is the second smallest care programme (3.3% of the formula by expenditure weight) and has not previously been reviewed. Substantial volatility has been observed over time for some elements of the care programme weights.  |
| Data | Requires detailed data from the Costs Book |
| Interaction | Data requirements may have some relevance for the CB review.  |
| Timing | TBC after publication of the full Costs Book. |
| Responsibility | TAGRA sub-group |

**Table M-L9: Assessing the effect of the 3-year forecast on population accuracy**

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| --- | --- |
| Rationale | In 2016 there was a change to running the formula three years in advance rather than was previously the case for the next financial year. It would now be possible to have a look at some of the outturn data to check if the accuracy of the population estimates remains acceptable, given the longer-term forecast now required.  |
| Data | NRS population estimates and NRAC population estimates |
| Interaction | Depends on final NRS population estimates for the period.  |
| Timing | TBC: could be undertaken after the Mid-Year-Estimate population series has been revised using the 2022 census data |
| Responsibility | TAGRA/AST |