Department
of Health

Department for
Communities and
Local Government

Local
Government
Association

NHS
England

Better Care Fund Task Force

'How to' Guide: The BCF Technical Toolkit

Section 4:
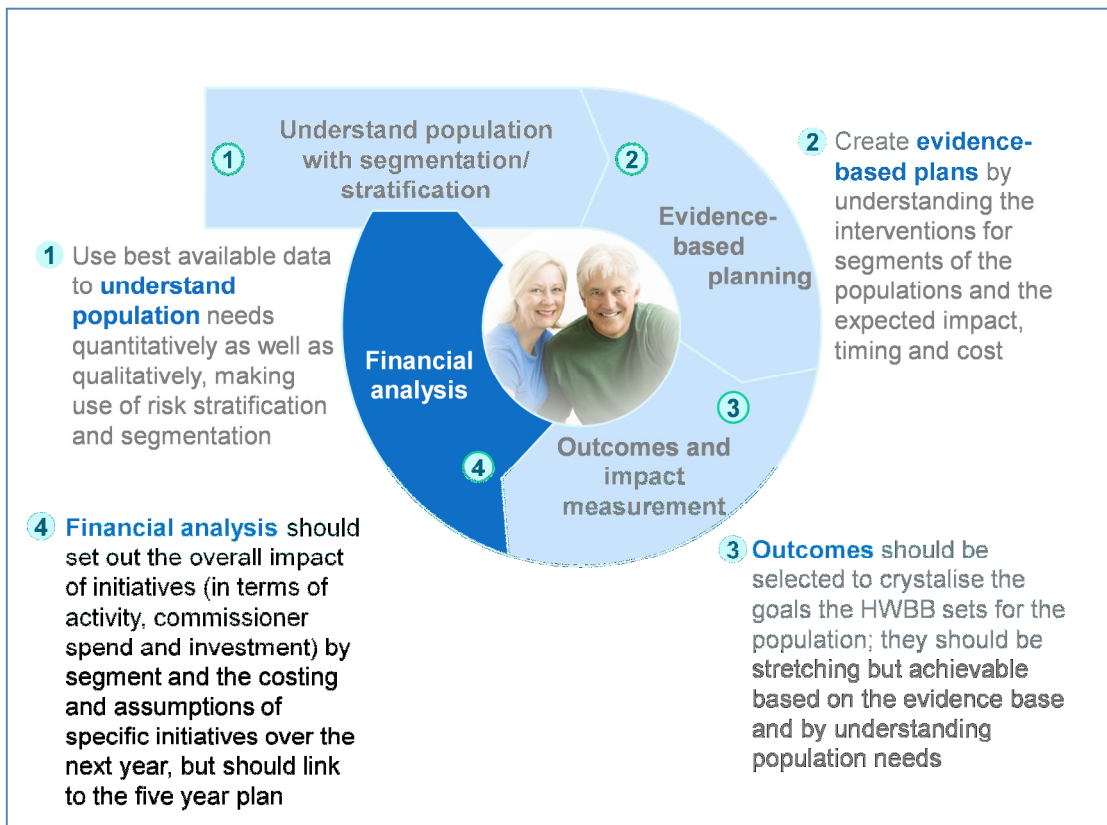*Financial Analysis*

August 2014

The Better Care Fund

Contents

BACKGROUND

This document provides advice on conducting a financial analysis. Also included in the following sections are hints and steps that will support the preparation of BCF plans as they pertain to the financial analysis sections. This document is meant to be used in conjunction with the other documents that make-up the "how to guide." Please refer to the document entitled "Introduction to the How To Guide" to understand how to best use this document.

Financial analysis is the last component of the technical sections in this toolkit. It requires an understanding of what population segments were targeted, and what the evidence says about likely impact and knowledge of the outcome metrics being tracked. As such, it is important that the analysts conducting the financial analysis are well-acquainted with all components of the BCF plan.

Figure 1. Four steps for robust planning

1 Use best available data to **understand population** needs quantitatively as well as qualitatively, making use of risk stratification and segmentation

2 Create **evidence-based plans** by understanding the interventions for segments of the populations and the expected impact, timing and cost

3 **Outcomes** should be selected to crystalise the goals the HWBB sets for the population; they should be stretching but achievable based on the evidence base and by understanding population needs

4 **Financial analysis** should set out the overall impact of initiatives (in terms of activity, commissioner spend and investment) by segment and the costing and assumptions of specific initiatives over the next year, but should link to the five year plan

FINANCIAL ANALYSIS

What is it?

The financial analysis takes the projected baseline spend (i.e. expected spend if no BCF schemes are implemented) and assesses the financial impact and the benefit realisation schemes of implementing the chosen BCF schemes. The financial analysis:

- Considers the baseline current and future financial position of commissioners across health and social care settings (usually the CCG, social services and NHS England as commissioners of primary care)

- Seeks to understand the impact of the selected schemes on the segmented population using the evidence base

- Includes one-off and capital costs, for example, for investments into information technology (IT) or 'double-running' of old and new services

- Includes the costs of implementation such as clinical and leadership support and the cost of a programme office

Why is it important?

The financial analysis allows the HWBB to understand the:

- Benefit realisation plans including when the predicted effects of integrated care schemes (such as reduction in avoidable non-elective activity) kick in and by how much they will affect the baseline activity figures

- Cost effectiveness of different schemes and the overall cost effectiveness of plans (that is whether the benefits from the scheme are worth the cost of the scheme)

- Contribution of the schemes to the overall financial position of commissioners within the HWBB (i.e. whether it will contribute to savings plans)

- Level of financial risk associated with the plan and where that risk is held (e.g. with health or social care commissioners, with commissioners or providers)

- Baseline of projected costs against which the HWBB can monitor expenditure to make sure that schemes remain cost effective during and beyond implementation

What is essential for your plan?

The step-by-step methodology for financial modelling that is "essential" for your submission follows the "recommended" methodology outlined below. If you do not have adequate available data (e.g., a patient linked dataset) some of the calculations may have to be heavily based on assumptions. In places where this is the case, it is advisable that a plan of action be included in the submission that outlines how the HWBB will improve the accuracy of their financial analysis. As well, please clearly identify and explain the assumptions in the plan, including justification for the assumed figures.

What is recommended for your plan?

The ultimate objective of the financial impact modelling/analysis is to "bring it all together": understand what savings ranges and what costs (both on-going and one-off) are associated with the proposed schemes (based on studying the clinical evidence, case studies and benchmarked performance and weighing them against each other to get a best estimate), and applying those estimates to the "business as usual" baseline.

The financial analysis goes through the following steps: understanding your baseline, estimating the size of the population segments amenable to integrated care, estimating both savings and investments associated with targeted integrated care schemes and finally applying those estimates to the baseline to calculate the net impact.

While it is important to estimate the costs associated with specific schemes as precisely as possible, it is often very difficult (if not impossible) to estimate the separate impact of each scheme: integrated care works as a system, and the effects of separate schemes are largely co-dependent.

The following text aims to specify in detail each step of this journey.

Step 1. **Understanding your baseline**

Understand baseline spend by mapping current spend across all settings of care (primary, acute, community, mental health and social care) and projecting it into the future. This step should use the existing 5 year plans which are in place for CCGs and Local Authorities

The first step in understanding the overall effectiveness of the schemes chosen to target the "elderly with one or more LTC" segment is to project the baseline over the next five years - this should have already been done as part of the 5 year strategic plan submission, and can be re-used.

ALL NUMBERS £m

| Setting	Service line	Baseline forecast				
		14/15 spend	15/16 spend	16/17 spend	18/19 spend	19/20 spend
Acute	Total acute	431	453	475	499	524
	Non-elective	110	116	121	127	134
	Elective	132	139	146	153	160
	Outpatients	105	110	116	122	128
	A&E	22	23	24	25	27
	Non-PbR	63	66	69	73	77
Primary		125	131	138	145	152
Community		75	79	83	87	91
MH		124	130	137	144	151
Prescribing		67	70	74	78	81
CC		18	19	20	21	22
SC		204	214	225	236	248
Other		48	50	53	56	58
TOTAL		1524	1600	1680	1764	1852

Note: Numbers may not add up due to rounding

The initial mapping is to settings of care: acute, primary, community, etc. Within each of these settings, spending is further broken down to understand the different areas where money is spent. Exhibit 1 shows how this works for acute spending, which is divided into non-elective, elective, out-patient, A&E and Non-PbR. Breaking spending down this way helps to focus attention on the areas which are the biggest contributors to total costs. If there is limited time, it would be helpful to focus on doing these areas in depth and making simpler assumptions for smaller areas of spending.

Step 2. Target patient groups

Identify costs of care by patient group and settings of care through the use of the outputs of risk stratification and/or patient segmentation patient-linked data set (read more about this in Appendix 4b; also refer to section 1 on risk stratification).

BetterCareTown HWBB case study exhibit 2: targeting elderly with one or more long term condition.
After projecting its baseline, BetterCareTown HWBB has to consider the segment it would like to target for its interventions (e.g. elderly with one or more LTCs). BetterCareTown HWBB did not yet have a full patient-level linked dataset in place so a basic patient segmentation was carried out using existing data, and a combination of data from QOF, JSNA and other sources to make an estimation of the number of people in the target category.
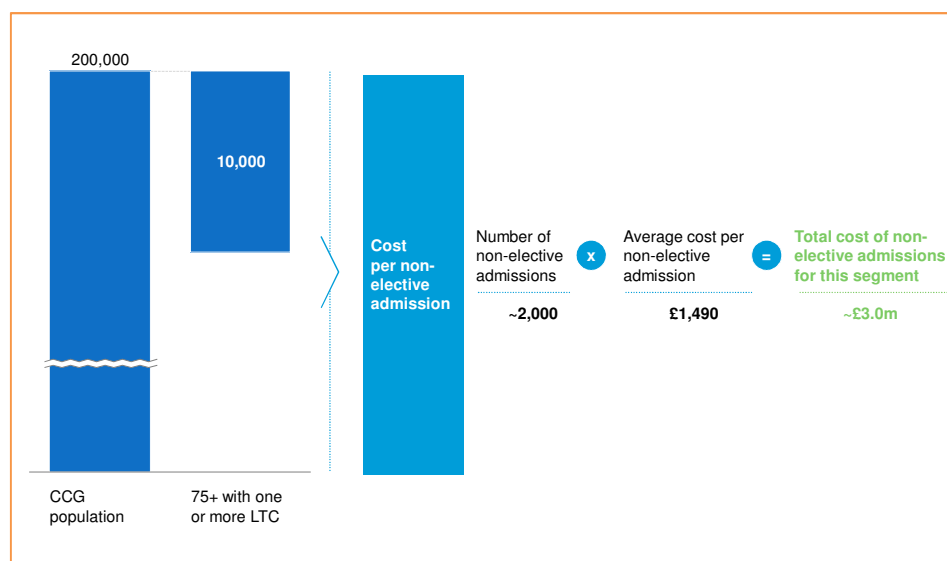
What is shown in the exhibit: The exhibit shows the total population of BetterCareTown HWBB is 200,000. After conducting their patient segmentation, BetterCareTown HWBB has estimated that there are 10,000 elderly with one or more long term conditions in their population. Using HES and other available data BetterCareTown HWBB has estimated that there are approximately 2,000 non elective admissions related to this patient segment. This is multiplied by the average cost of a non-elective admission to calculate the total cost of non-elective admissions in this patient segment.

How this is used in the financial modelling: This calculation estimates the size of the target population (i.e., 10,000 elderly) and the associated activity (i.e., 2,000 non-elective hospital admissions). This will allow impact from specific interventions (which is typically estimated as a percentage range, based on various sources of evidence) to be translated into outcome figures (e.g., a reduction of X non-elective admissions) for the HWBB.

Step 3a Calculating evidence based end-state impact

Based on expert interviews, international evidence, the clinical evidence base and benchmarking (described in section 2), calculate potential end-state (run-rate) impact of schemes on the baseline activity.

It is important to note that impact of many individual integrated care schemes is highly co-dependent on them working together as part of an integrated system. Therefore it is very difficult to calculate gross impact associated with one individual scheme. It would be an exercise in false precision to say that care planning will reduce admissions by X percentage points, assigning a care coordinator - by an additional Y percentage points, and creating multi-disciplinary teams - by Z percentage points, for a total impact of X+Y+Z. In fact, the impact of each of those schemes standalone will be much smaller when all of them work together. Therefore it is typically a common practice to estimate the gross impact of integrated care schemes as a range of numbers without trying to assign the portions of this impact to individual schemes. This range should be chosen by bringing together local knowledge and experience, in addition to the evidence base. A best practice financial model would use the evidence to estimate the impact of each individual intervention on overall outcomes, and then take account of the potential duplication between interventions to produce an estimate of the overall impact of the schemes. As a first step towards best practice, you might begin by using evidence and professional judgement to estimate the overall impact, but it is important to work towards an understanding of the impact of each individual scheme so you can understand which schemes are effective and value for money.

Schemes may focus on avoidable non-elective admissions, as well as elective, outpatient, A&E activity or on improvements around social care and any other outcomes selected, as described in section 3.

The assumed range of impact is typically triangulated based on a) benchmarking the current performance of the locality against its peers, b) reviewing case examples and clinical evidence base and c) conducting reviews of sample sets of activity logs with local clinicians/professionals (e.g., reviewing logs of non-elective admissions in a hospital in a given week with the on-call consultant) and determining which ones could be avoided via integrated care schemes and how.

BetterCareTown HWBB case study exhibit 3: estimating gross saving
BetterCareTown HWBB used an approach which involved benchmarking against other regions to consider the impact of moving all GP practices to perform at the level of the top quartile. They also looked at international case studies e.g. the ChenMed model identified in section 2. This was tailored using local knowledge gained from engagement with stakeholders from across the region

|		How is impact calculated	NEL	EL	A&E	OP
Bench-marking	1 Close gap in practice level variation controlled for IMD	• Close emergency admission rates gap to median or top quartile performance across various GP practices	12-19%	9-13%	19-23%	5-13%
	2 Benchmark CCG level performance with ONS and peer group	• Reduce emergency admission rates to median and top quartile performance of various peer sets (ONS, peer group, national)	5-15%	7-12%	7-17%	5-13%
Inter-national evidence	3 Use international case examples adjusted to local population	• Use international case examples to understand the impact of integrated care on different parts of the population • Adjust these to the local population and demographics	25-40%			
Interviews	4 Assess avoidable A&E and inpatient admissions	• Determine number of admissions that could have been avoided in a defined period. This will be achieved through interviewing GPs	38%		50%	
Number used	Range actually used in the financial modelling		15-30%	7-12%	7-17%	5-13%

What is shown in the exhibit: This exhibit shows the different methods of calculating impact from the available evidence base.

How this is used in the financial modelling: These impact estimates, taken from a review of the evidence, will be applied to our target population segment (as identified in step 2) (e.g., assume a reduction in non-elective admissions by 25-35% by year 5 as shown in the exhibit above).

Step 3b Calculating end state savings

Apply the chosen range from the evidence-based outcome estimates to your projected baseline. This will require an attribution of where the impact of the integrated care schemes is likely to lie. The majority of the interventions tend to have greatest impact on high risk patients who are prone to repeat multiple hospital admissions. For example, the elderly with long term conditions are a good candidate segment to be a focus for many integrated care schemes.
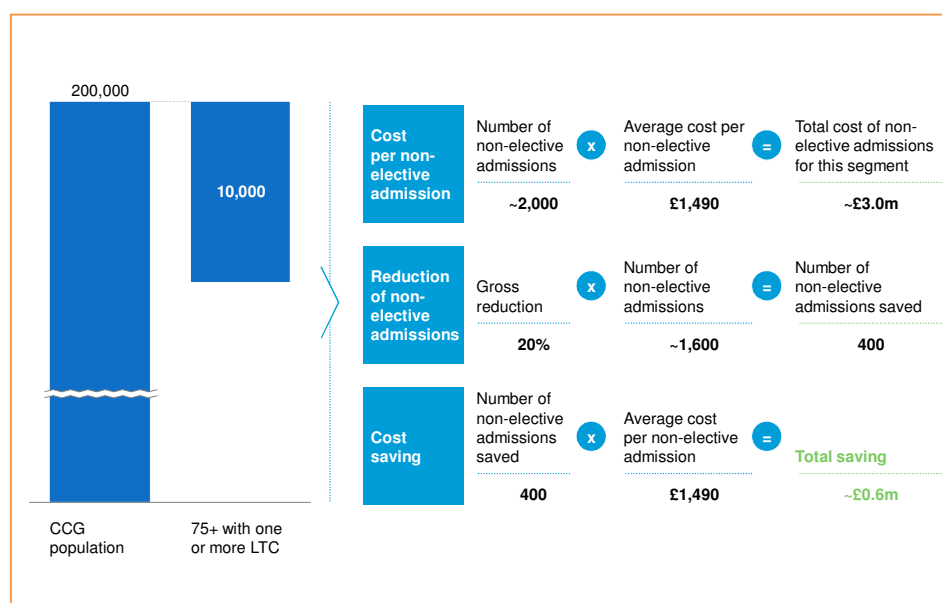
What is shown in the exhibit: This exhibit shows the series of calculations which can be done to estimate the impact of a 20% gross reduction in non-elective admissions in the target segment. It creates an end-state impact figure of 400 fewer non-elective admissions by end of year 5.
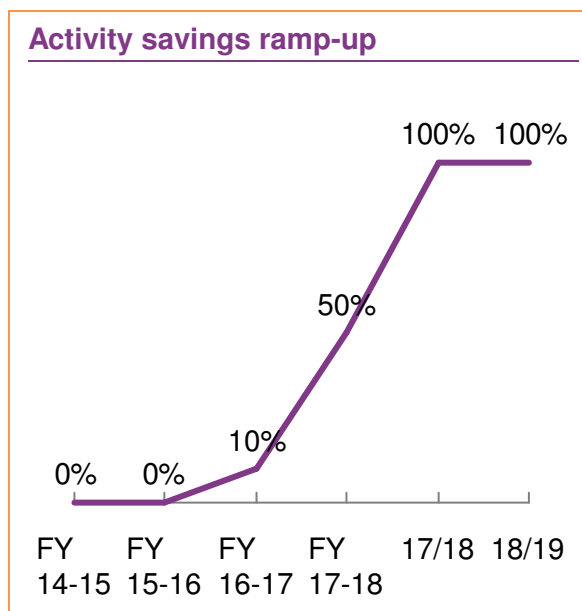
How this is used in the financial modelling: This calculation translated the percentage estimate of impact from the evidence base into the actual number of certain types of activity. Calculations such as this can also be done for other outcomes measures where there is evidence of impact (e.g., reduction in outpatient activity or reduction in A&E visits). These calculations can then be used in the financial model to show how the projected spend by care setting (as shown in step 1) is likely to change given implementation of the integrated care schemes.

Step 3c Calculating ramp up to end state savings

Many schemes will take a number of years to realise maximum impact (e.g., a ramp for savings may involve a ramp up profile as shown the case study example). International evidence typically shows that full ramp-up can take up to 3-5 years to fully realise the benefits of some integrated care schemes.

BetterCareTown HWBB case study exhibit 5: savings ramp up
BetterCareTown HWBB knew that the savings would not all be generated straight away therefore they had to estimate when these savings are likely to be realized. This will depend on the scale and speed of implementation as well as on the fixed/variable cost split of providers. A typical assumption is a steady ramp up rate that takes 3-5 years for full realisation of benefits.

Activity savings ramp-up

100% 100%

50%

10%

0%   0%

FY   FY   FY   FY   17/18 18/19
14-15   15-16   16-17   17-18

What is shown in the exhibit: This exhibit shows a potential example of the "savings ramp-up curve" - a profile for how the savings from integrated care "ramp up" over time.

How this is used in the financial modelling: This is used to refine the financial model so impact estimates can be adjusted according to the projected ramp up.

Step 4 Estimating costs of the schemes

The calculation of costs can be very difficult as a judgment should be made for the amount of costs which are already built into the system. Costs can be calculated "bottom up" at a micro level by looking at individual interventions where estimates about coverage of intervention, frequency of intervention and the skill mix required can help to build up a view of the costs. There may, however, be a lot of double-counting in calculating costs in this way. These issues need to be taken into account and considered when calculating net impact of any schemes.

There are three potential approaches to estimating costs of intervention, going from the most precise (but also the most time consuming) to a very rough top-down estimate:

1. Assigning individual costs of interventions – as shown in worked examples

2. Assessing the amount of commission budget which has been assigned to various interventions

3. Using a very top down estimate of costs based on reinvestment of gross savings (typically 50-70% of gross savings impact)

Ideally, all three of these methods will be used to varying degrees to triangulate the most accurate costing estimations. It is expected that you will use more than just the brute "top-down reinvestment assumption" described above.

Allocate the costs of implementation across various categories including:

■ Costs of the actual schemes (typically involving formation of multi-disciplinary groups and care coordination activities)

■ Programme office to manage implementation

■ Information systems and other necessary operational running costs

BetterCareTown HWBB case study exhibit 6: cost of care plans
To calculate the cost of providing care plans, one of the schemes they selected in section 2, BetterCareTown HWBB took the approach of calculating how many care plans are required and how much it would cost to create one care plan as shown in the example below
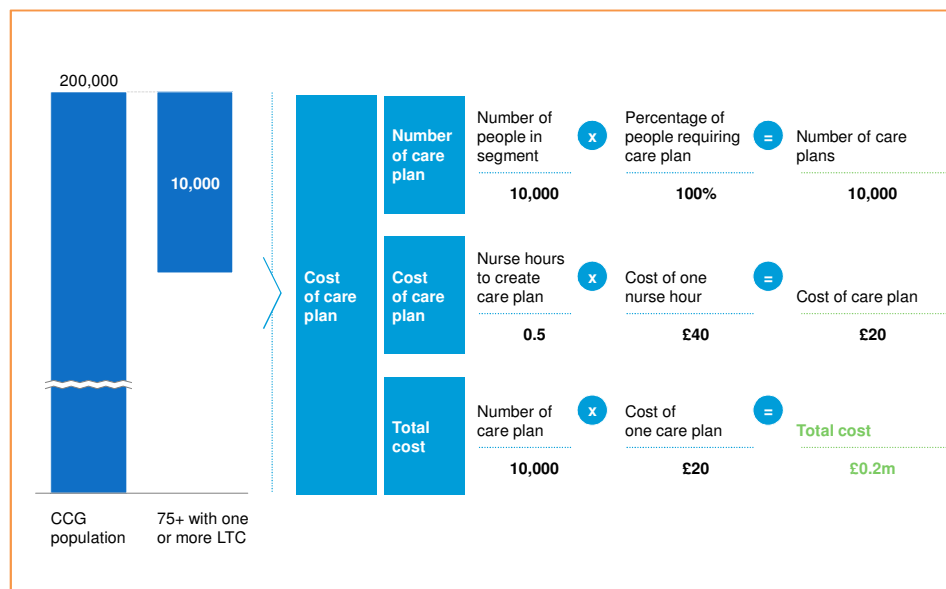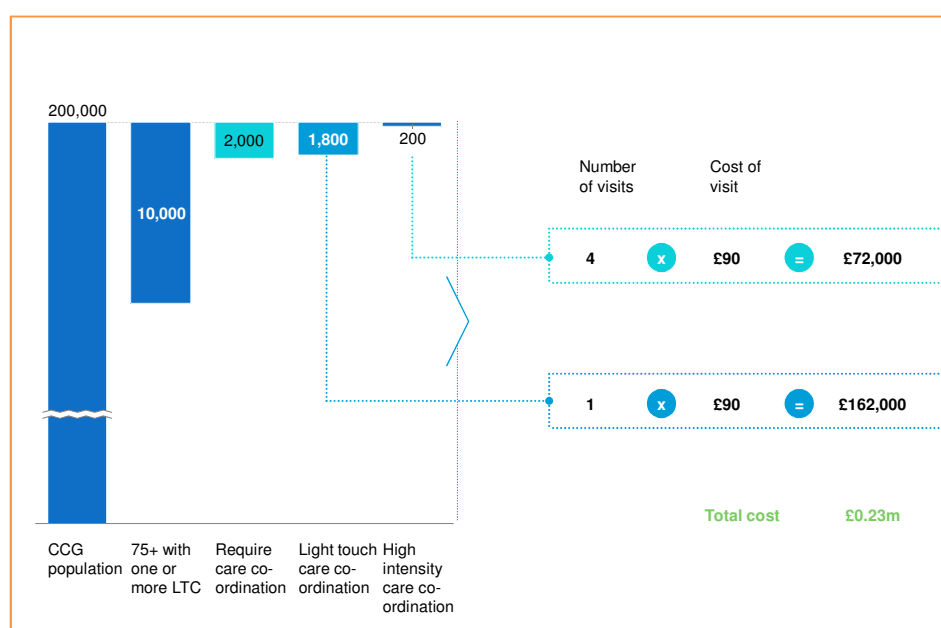

What is shown in this exhibit: This exhibit shows the series of calculations which could give an estimation of the cost of an example integrated care scheme (creation of care plans, in this instance). Firstly the number of people for whom

this scheme is relevant is identified (same as step 2), secondly the cost of delivering the scheme for the population group is calculated

How this is used in the financial modelling: This is a way of building up a cost base of individual schemes which will help to take a gross impact figure to a net impact figure once costs are accounted for.

BetterCareTown HWBB case study exhibit 7: cost of care coordination
BetterCareTown HWBB took a similar approach to the costing of care plans to estimate the costs of care coordination. They know from their evidence base that not everybody requires the same intensity of care coordination and so have taken this into account in their calculation

What is shown in this exhibit: This exhibit shows the series of calculations which could give an estimation of the cost of another example integrated care scheme (the cost of assigning a care coordinator, in this instance). Firstly the number of people for whom this scheme is relevant is identified (same as step 2), secondly the cost of delivering the scheme for the population group is calculated

How this is used in the financial modelling: This is a way of building up a cost base of individual schemes which will help to take a gross impact figure to a net impact figure once costs are accounted for.

Special note on absorbing additional work within the current resources through productivity:

Many of the costs may already be in the system. Many of the costs may be achieved through clinical staff productivity. For the most part this does not mean releasing cash, but rather freeing up time for new ways of working which

eliminates waste and ensures that staff provide the appropriate activity, and ultimately enable the system to meet demand within existing resources – at the same or higher quality.
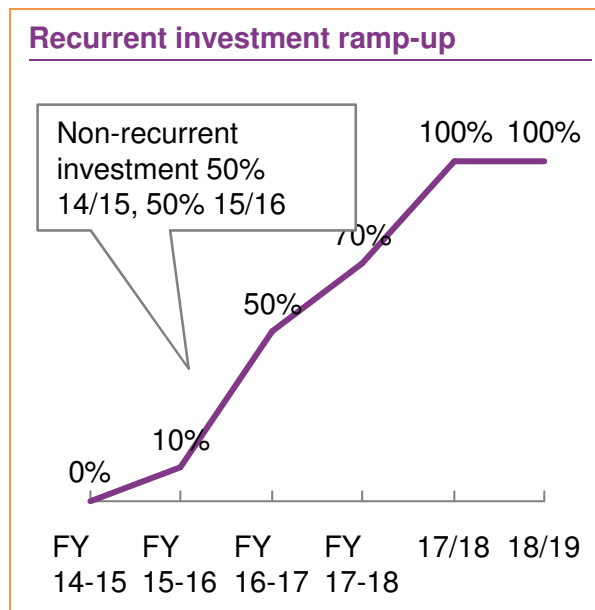
Potential productivity opportunities in out-of-hospital services can be estimated using benchmarks (e.g., "What if our primary care, community care and social care activity rates were to get to top quartile or to top decile performance of our peers? How many more nurse calls/visits could we have?").

Step 5 Costs ramp up

Similar to estimating the ramp up of gross savings, you can estimate the ramp up profile of costs of schemes which are likely to increase with increasing uptake of specific schemes. Typically it takes a few years to achieve the full ramp-up.

BetterCareTown HWBB case study exhibit 8: costs ramp up
Just like savings were not realised immediately, BetterCareTown HWBB knew that costs would go up as uptake of the schemes increased and so they used a similar principle to calculate the ramp up profile of investments required

Recurrent investment ramp-up

Non-recurrent investment 50% 14/15, 50% 15/16

100% 100%

70%

50%

10%

0%

FY 14-15   FY 15-16   FY 16-17   FY 17-18   17/18   18/19

Step 6 Investments and one off costs

Estimate investments required in one-off and capital costs (e.g. capital investment for IT and infrastructure, or double-running costs for old and new services).
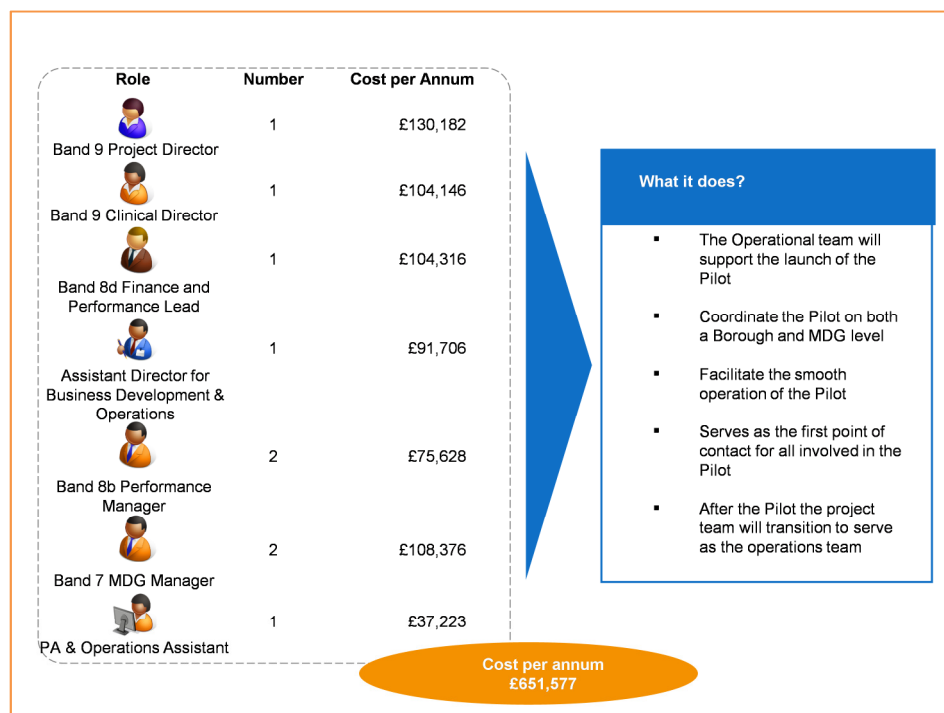
Experience shows that this is highly dependent on individual circumstances of various localities and will be dependent on individual levels of existing infrastructure already in place. Example below shows what a potential

programme management office overseeing the implementation could look like (and cost).

IT investments will be highly variable depending on the level of aspirations and could range from £500k all the way to several million (both upfront and ongoing).

BetterCareTown HWBB case study exhibit 9: calculating the cost of the operational team

BetterCareTown HWBB will need an operational team as part of its infrastructure to run any pilots. This team will be responsible for running all of the various integrated care schemes and will comprise of a number of people with defined roles as shown in the exhibit below

Role	Number	Cost per Annum
Band 9 Project Director	1	£130,182
Band 9 Clinical Director	1	£104,146
Band 8d Finance and Performance Lead	1	£104,316
Assistant Director for Business Development & Operations	1	£91,706
Band 8b Performance Manager	2	£75,628
Band 7 MDG Manager	2	£108,376
PA & Operations Assistant	1	£37,223

What it does?

- The Operational team will support the launch of the Pilot
- Coordinate the Pilot on both a Borough and MDG level
- Facilitate the smooth operation of the Pilot
- Serves as the first point of contact for all involved in the Pilot
- After the Pilot the project team will transition to serve as the operations team

Cost per annum
£651,577

Step 7 Bringing it all together

Now that a baseline has been projected and gross and net impact has been calculated as a run rate including ramp ups for savings and investments, you are in a position to bring this all together. This will involve shifting your projected baseline by the impact calculated across the board.
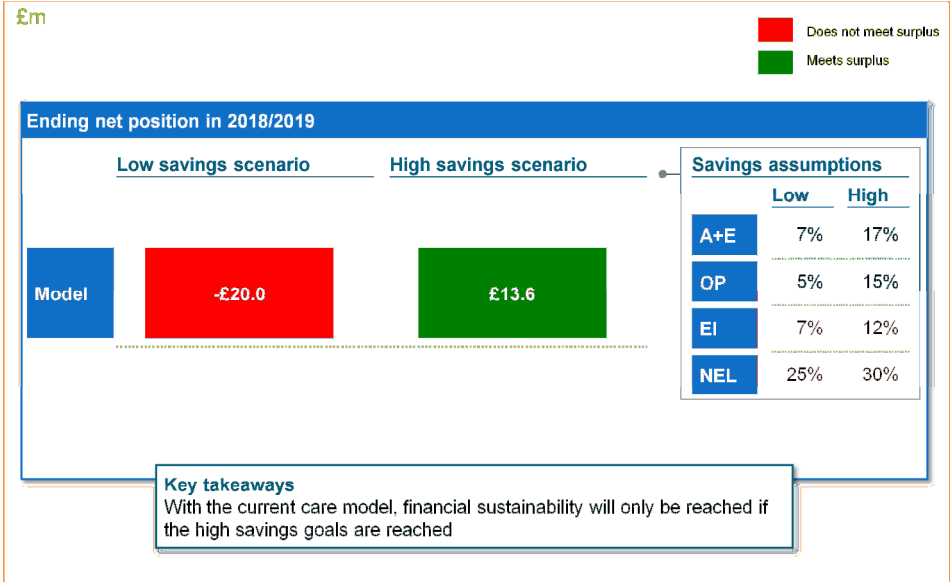
Sensitivity Analysis

With any financial model the impact estimations should be constrained to within certain limits. One way of doing this is to carry out a sensitivity analysis. This

involves adjusting assumptions which are being used to calculate impact for multiple potential scenarios (e.g., bold and conservative). The bold case would show the highest level of impact achievable and the assumptions associated with that figure. The conservative case would do the same for an estimated low level of impact.

BetterCareTown HWBB case study exhibit 10: Net position in 2019/20 under different scenarios
BetterCareTown HWBB knew that it had many assumptions built into its financial modelling. In order to show the how the range of impact changes if the assumptions are bold or conservative BetterCareTown HWBB calculated two scenarios, one with bold assumptions generating high impact estimates and one with conservative assumptions generating lower impact estimates. The example of low and high savings scenarios and how they relate to the financial position of BetterCareTown HWBB is shown below.
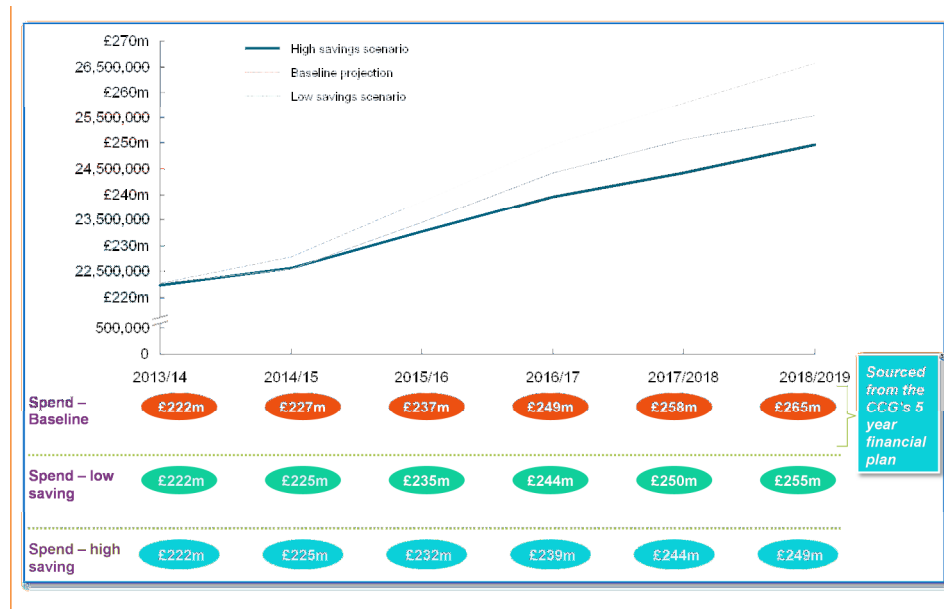
Financial Risk

The development of the financial analysis will allow the HWWB to understand where the financial risk sits within the system and will support discussion with providers and the development of risk-sharing agreements. The HWWB need to understand:

■ Scheme risk: The level of financial risk of each scheme. This will be related to the overall cost and size of the scheme, the robustness of the evidence underpinning the scheme and the complexity of the scheme and how many providers are involved.

■ System risk: Where the risk sits within the system. This can further be divided into volume risk (which under PbR is mainly a risk to commissioners) and cost risk (which is under PbR is mainly a risk for providers). The balance of risk between commissioners and providers can be changed through different payment mechanises e.g. capitation, but the system risk remains the same. A best practice approach involves measuring the probability of these risks and designing risk/gain sharing plans that optimise incentives across the system. For example, some financial risks (such as non-elective admissions not reducing as expected) sits with healthcare providers who may not have much control over the implementation of schemes. If risks are

not appropriately shared, the providers may fail or there may be unintended consequences (such as providers acting to protect income elsewhere).

In the submission it is expected that a list of the most significant risks, their likelihood and impact, description of mitigating actions and plans to deal with them if they become issues is laid out.

Once the financial analysis has been completed, the plan should be reviewed for financial risk and appropriate risk sharing agreements should be put in place.

- See Appendix 4a for example assumptions from an example CCG
- Information published by NHS England on future planning assumptions can be found within Everyone Counts: http://www.england.nhs.uk/wp-content/uploads/2013/12/5yr-strat-plann-guid-wa.pdf

How do you use this information in the planning template?

Part 1, Annex 1 outlines a template for impact calculation of individual schemes. Assumptions used in the financial modelling of impact should be included here, along with the sensitivity analysis.

ANNEX 1 – Detailed Scheme Description

For more detail on how to complete this template, please refer to the Technical Guidance

Scheme ref no.
Scheme name
What is the strategic objective of this scheme?
Overview of the scheme Please provide a brief description of what you are proposing to do including: - What is the model of care and support? - Which patient cohorts are being targeted?
The delivery chain Please provide evidence of a coherent delivery chain, naming the commissioners and providers involved
The evidence base Please reference the evidence base which you have drawn on - to support the selection and design of this scheme - to drive assumptions about impact and outcomes
Investment requirements Please enter the amount of funding required for this scheme in Part 2, Tab 3. HWB Expenditure Plan
Impact of scheme Please enter details of outcomes anticipated in Part 2, Tab 4. HWB Benefits Plan Please provide any further information about anticipated outcomes that is not captured in headline metrics below
Feedback loop What is your approach to measuring the outcomes of this scheme, in order to understand what is and is not working in terms of integrated care in your area?
What are the key success factors for implementation of this scheme?

Part 2, tab 4 HWB benefits plan

This section of the template allows input of impact figures for integrated care schemes. The impact can be aggregated to provide a total benefit of a number of schemes together or given individually. The savings are calculated by changes in activity and unit cost and there is a box for further elaboration of the savings calculations. The end column also requires information on how any estimated savings will be monitored.

Health and Wellbeing Board Financial Benefits Plan

Blackburn with Darwen

If you would prefer to provide aggregated figures for the savings (columns F-J), for a group of schemes related to one benefit type (e.g. delayed transfers of care), rather than filling in figures against each of your individual schemes, then you may do so.

If so, please do this as a separate row entitled "Aggregated benefit of schemes for X", completing columns D, F, G, I and J for that row. But please make sure you do not enter values against both the individual schemes you have listed, and the "aggregated benefit" line. This is to avoid double counting the benefits.

However, if the aggregated benefits fall to different organisations (e.g. some to the CCG and some to the local authority) then you will need to provide one row for the aggregated benefits to each type of organisation (identifying the type of organisation in column D) with values entered in columns F-J.

2014/15

Please complete white cells (for as many rows as required):

				2014/15				
Benefit achieved from	If other please specifiy	Scheme Name	Organisation to Benefit	Change in activity measure	Unit Price (£)	Total (Saving) (£)	How was the saving value calculated?	How will the savings against plan be monitored?

Further reading

Monitor will shortly release a document outlining best practice for creating and updating patient linked data sets. Please check their website periodically for this update.

APPENDIX 4A: EXAMPLE FINANCIAL MODEL ASSUMPTIONS

Figure 2. Model assumptions from an example CCG

Preliminary list of assumptions

Each of these assumptions listed below have either come directly from the from the 5 Year Financial Plan.

1. Population growth rate over next 5 years
2. Demographic changes over next 5 years
3. Proportion of overall savings captured during each year
4. Rate of implementation of services
5. Savings ramp up over 5 years
6. Investments ramp up over 5 years
7. Activity growth rate (probably driven by population growth rate and changes in demographics/prevalence rates)
8. Cost inflation over 5 years
9. Tariff change percentage
10. QIPP achieved in year
11. Hours per annum per WTE
12. Utilisation rate per WTE

In addition to this list, each component of the care model has a number of assumptions that are input into the affordability model, e.g., length of case conferences, travel times averages, etc. These have been validated individually by the CMDGs

SOURCE: Example CCG

APPENDIX 4B: PATIENT-LINKED DATA SETS

What is a patient linked data set?

A patient linked dataset tracks patients from a given population through different healthcare settings. The level of sophistication of the dataset is guided by its intended purpose as outlined below.

This section presents a few examples of how person-level linked data sets can be used to benefit patients, and support clinicians, commissioners and providers. These examples are not exhaustive and the limits of the uses to which a data set can be put are defined by its quality and the innovativeness of those who use it. Early discussions with clinicians, commissioners and providers regarding how linked data could facilitate new ways of working is strongly recommended.

Person level linked data can support considerable improvement in patient care. While the greatest benefits are associated with the linking and sharing of person identifiable data, there are potentially significant clinical benefits even with de-identified data:

Linked person-level data can be used to test new innovations in the delivery of care. It can be used to identify whether a new drug is correlated to a reduction in admissions, or a diagnosis of certain side effects. A GP practice that has started a new programme caring for suffers of heart conditions can see if there is a reduction in acute heart related admittances. These kinds of pilot tests work best with data that is linked over multiple time periods, or especially data which is person identifiable – since it is easier to control for irrelevant factors and infer causal links. For example, acute admittances might have a downward spike in the 3 years after a patient is prescribed a specific drug. Using identifiable data, active control groups can be set up and tested and tracked as a comparator group.

Linking data also allows rollout of best practice with regards to new methods and innovations. Clinicians can identify where outcomes are significantly different among their peers, and control for possible causes. If a certain GP clinic has a much lower rate acute admittances among clinically and demographically similar patients, discussions can happen as to whether this might be driven by controllable factors, like a different operating model.

Linked data can also be used to **improve treatment across settings** – for example where social care and community care providers are providing similar nursing services. Where providers in different settings are able to provider different services at a better level or lower costs, they may be able to co-operate to improve outcomes in a mutually beneficial way. Each can provide a more limited range of specialised services to a larger group, while still providing the same or greater service overall. For example the community provider with access

to more nurses could take on all users with generic geriatric needs, while a social care provider with more experienced or more heavily trained nurses could specialise in providing care to those with more specialised or severe needs.

The data set can also be used for outcome tracking; core for implementing outcome based commissioning and linking payment to performance.

Outcomes tracked can be:

For a provider overall: e.g. the number of acute admissions in a given GP practice

For a patient cohort: e.g. improving diagnosis of dementia payments, based on the number of patients with an acute dementia admission but no GP diagnosis.

Using patient linked data in financial modelling [1]

A linked view of care across the locality gives a clear view of where use, spend and cost are focussed by setting and sub-setting, which helps to inform where pressures might arise and where efforts at improving efficiency might be focussed.

Data can also be used to build up pictures of the patterns of spend or cost by different segments. For example, after creating a segmentation like the one shown in section 1, charts can be developed on how spend is split across types of care for each segment (Figure 13).

This enables both providers and commissioners to **assess where the highest areas of demand and cost are**, and hence where efforts to improve efficiency can be targeted. Providers can see for example, whether focusing on improving treatment times for a small number of high cost patients or a larger number of lower cost ones offers a larger potential win.

Figures for spend based on tariffs and cost figures based on provider accounts can be compared to **see how the costs of provision compare to tariff reimbursement** for the provider. Providers can improve their sustainability by identifying where expansion of a treatment line will improve their financial position. It also allows providers to enter into more informed dialogue with commissioners over the reimbursement they receive for their services using a common set of data.

[1] Monitor PILS

A data set linked across multiple providers in the same care setting can allow providers and commissioners to **compare financial performance to peers** at a very granular level – observing where variations in the cost of treatment for certain patients might be lower. Mutually beneficial arrangements that help both providers and improve efficiency overall can be found. For example, patients could be transferred to receive an elective operation in a larger hospital with better facilities more cheaply than a smaller nearby hospital spending more per patient on treatment than it receives in tariff. Findings like this can also stimulate dialogue between providers to understand how treatment quality and cost can be improved and facilitate spread of best practice.

Figure 13: Example resource map based on an example CCG's data set, showing for a specific segment total spend or cost by setting, the percentage breakdown by sub-setting, and costs for the segment relative to the overall population

1 Includes spend accounted for in FIMS not attributable to a specific interaction

Source: Patient level data 2012/13