Purpose of this document within package of resources

**Impact and cost: summary of the economic modelling tool for commissioners**

Gives a full introduction to the tool for commissioners, explains how it fits into the context of the Realising the Value programme, and sets out some findings from the tool.

**User Guide: Economic modelling tool for commissioners**

Gives a brief introduction to the tool and explains how commissioners can use it.

**Downloadable Tool**

Enables the exploration of different scenarios for commissioning person- and community-centred approaches for health and wellbeing.

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**Realising the Value resources**

All of this is underpinned by the tools and recommendations from the [Realising the Value](#) programme.
Glossary of terms

Realising the Value (RtV)
Over the last 18 months, the Realising the Value consortium has brought together the perspectives of people with lived experience, the voluntary, community and social enterprise (VCSE) sector, practitioners, academics, commissioners, providers and policymakers to consolidate what is known about person- and community-centred approaches for health and wellbeing and make recommendations on how they can have maximum impact. The Realising the Value programme has also developed practical resources to support implementation of these approaches at the frontline. Full details of the resources produced by the Realising the Value programme can be found on the programme website.

Person- and community-centred (P&CC) approaches for health and wellbeing
These encompass a very broad range of practice, ranging from support that complements and enhances clinical care for people with long-term conditions (such as peer support) to everyday community activities that enable people to improve their health and wellbeing (such as a local football team or gardening club). Many of these activities can be enjoyed and engaged in by all citizens, whether or not they have health conditions.

Local partner sites
Five local partner sites supplemented data used in the assessment tool, each broadly covering one type of P&CC approach: 1) Positively UK (peer support); 2) Penny Brohn UK (self-management); 3) Being Well Salford (health coaching); 4) Creative Minds (group activities to promote health and wellbeing); and 5) Unlimited Potential with Inspiring Communities Together (asset-based approaches in a health and wellbeing context)
As part of Realising the Value, PPL has developed an economic modelling tool for commissioners. The tool consists of an economic model in the form of an Excel spreadsheet, and a user guide which explains how to use the model.

The economic modelling tool has been designed to:

- Help commissioners (the intended users of the tool) evaluate the potential impact of investing in person- and community-centred approaches for health and wellbeing in their local area;
- Facilitate the incorporation of person- and community-centred approaches into commissioning plans, such as Sustainability and Transformation (STP) plans.

The five approaches explored by the Realising the Value programme and tool for commissioners are:

- **Group activities**
  - Community-based approaches that promote good health and wellbeing and strong social connections.
  - Group activities that support health and wellbeing, such as exercise classes or cookery clubs.

- **Health coaching**
  - Helps people set goals and take actions to improve their health or lifestyle.

- **Self-management education**
  - Helps people develop the knowledge, skills and confidence to effectively manage their own health and care.

- **Peer support**
  - People with similar conditions or experiences support each other to better understand their condition and aid recovery or self-management.

- **Asset-based approaches**

This report sets out some of the key findings from the economic model. It also explains how the model works, how it was developed, and how commissioners can help enhance the evidence base for person- and community-centred approaches for health and wellbeing.
The modelling has shown the benefits of people taking an active role in their health and care.

The economic modelling tool for commissioners has been designed to help the benefits of person- and community-centred approaches to reach local communities. This involves giving the people in charge of local health and care budgets the information they need to gain a better understanding of the value of these approaches.

In addition to evidence from academic literature, the model uses data collected from five Realising the Value local partner sites across the country. These sites are all mature practitioners in the area of person- and community-centred approaches.

Peer Support
- Peer support for individuals who have been diagnosed as HIV-positive

Self-management education
- Residential courses and ongoing support for people who have been diagnosed with cancer

Health coaching
- Health coaching for people who want to make improvements to their health and wellbeing, such as by giving up smoking

Group activities
- Group activities for people with mental health issues, including an arts café which provides an evening support network and creative outlet

Asset-based approaches
- Asset-based approaches including a community-based project in which fathers are encouraged to support each other
The modelling has been a collaborative process involving a range of groups and partners.

**Five Realising the Value local partner sites**
- Five sites based across the country have contributed data, qualitative evidence and learning to the Realising the Value programme.

**Sites’ communities of interest**
- The five Realising the Value partner sites each established a ‘community of interest’ in their topical area of practice. The communities of interest had three overarching aims:
  - Shape programme outputs
  - Harness in-depth thematic expertise
  - Set up a network for the future

**Expert Challenge Group**
- In collaboration with Nesta and The Health Foundation, an Expert Challenge Group was established. The group provided guidance throughout the modelling process (from design through to final development).
- The group consisted of experts in economic modelling, healthcare, and person- and community-centred approaches.

**NHS England and a consortium of partners**
- NHS England and a consortium of partners have been closely involved throughout the modelling process, with a view to creating a tool which informs national and local planning.

**Commissioning for Person-Centred Care Working Group**
- The person-centred care group is a national group which meets on a quarterly basis. Patients, commissioners and providers from across England come together to share learning and provide challenges to each other and to policy makers. The group disseminates examples of innovation and good practice so that local populations have the chance to benefit from new ways of working.
- Other commissioners from Clinical Commissioning Groups and Local Authorities around the country were also involved in designing and testing the tool.
The model estimates the potential impact of commissioning P&CC approaches

The economic model estimates the potential impact of commissioning person- and community-centred approaches for health and wellbeing by combining two elements: data which is programmed into the model and variables the commissioner can alter (e.g. by selecting their local area and adjusting how strong they think the evidence is).

- Population size in each location in England
- How many people have certain conditions in each location
- Evidence for the person- and community-centred approaches
- How much it might cost to offer those approaches
- Data about how much the health and care system and wider society could benefit by offering those approaches

The model shows how much the health and care system and wider society could benefit by offering person- and community-centred approaches for specific conditions in specific locations.

- The user can select their local area from a drop-down list
- The user can adjust various parts of the model to suit their needs (e.g. approach and condition)

The model calculates impact across three key areas:

- **Financial outcomes**: How much commissioners could benefit if they implement the approach
- **Health & Wellbeing Outcomes**: Non-financial positive impacts on the health and wellbeing of individuals
- **Wider social impact**: Financial and non-financial benefits that wider society could experience due to the approach, but that won’t lead to a direct saving for the commissioner
We have used a wide range of evidence to estimate the potential impact of the five approaches:

- **Literature review**: A wide collection of studies providing evidence of impacts on health and wellbeing across the five approaches.
- **Impact**: Integration of evidence from literature review and site data.
- **Proxies**: Financial measures for impacts such as ‘increased confidence’ and ‘being employed’.
- **Site data**: Data collected by the five local Realising the Value partner sites.

Below is an example of how evidence from the literature review and sites is combined with proxies to estimate benefits:

<table>
<thead>
<tr>
<th>Area</th>
<th>Condition</th>
<th>Impact type</th>
<th>Evidence</th>
<th>Benefit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer support</td>
<td>Mental health</td>
<td>Bed days reduction</td>
<td>48% reduction in inpatient hospital bed days (treatment vs control)</td>
<td>Financial</td>
<td>Sledge et al. (2011)</td>
</tr>
<tr>
<td>Peer support</td>
<td>Heart disease</td>
<td>Behavioural change</td>
<td>3% reduction in number of current smokers (treatment vs control)</td>
<td>Health &amp; wellbeing</td>
<td>Coull et al. (2004)</td>
</tr>
<tr>
<td>Peer support</td>
<td>HIV</td>
<td>Confidence</td>
<td>72% of participants reported increase &gt;2 points in Positively UK wellbeing score</td>
<td>Wider social</td>
<td>Positively UK (2016)</td>
</tr>
<tr>
<td>Proxy:</td>
<td></td>
<td></td>
<td>£13,080 = Value of high confidence in adults (using wellbeing valuation technique)</td>
<td>Wider social</td>
<td>Social Value Bank (HACT 2014)</td>
</tr>
</tbody>
</table>
The modelling process involved collecting evidence to input as data into the economic model.

**Data from the five Realising the Value partner sites**
- Evidence of health and wellbeing, wider social, and financial benefits
- Set-up and running costs
- Detailed information about the approaches

**Evidence review of the benefits of P&CC approaches**
- Newcastle University looked at the evidence base for P&CC approaches, prioritising randomised controlled trials and systematic reviews
- 37 studies from the review were included in the model

**Financial proxies**
- Some financial proxies were provided by sites and the evidence review
- Where financial proxies had to be found we prioritised: 1. Quality Adjusted Life Year proxies; 2. Social Value Bank proxies

**Additional sources of evidence for P&CC approaches, highlighted by partner sites**
- Sites and other partners were asked to highlight any further sources of evidence for P&CC approaches that could be used in the model
- These were followed up by the modelling team

*Financial proxies are a way of ascribing financial values to non-financial outcomes. For example, increased confidence is a non-financial value, but studies have tried to evaluate how much increased confidence is worth to an individual.*
We worked closely with sites, commissioners and experts in economic modelling and P&CC approaches

Area Assessment Report
• Before we started modelling the data, we sent this report to sites, their communities of interest, and our expert challenge group.
• The report detailed our plan for the modelling and information about where the data had come from.
• We used the feedback when developing the economic model.

Engagement with commissioners
• We met with commissioners from local authorities, CCGs, the person-centred commissioning group, and commissioners associated with the five sites.
• Their feedback on the model design was crucial in creating a model which is user-friendly and measures outcomes that commissioners care about.

Testing
• Once the model had been fully developed, we tested it with commissioners with whom we had previously engaged.
• This allowed us to iron out any technical issues, improve the usability of the model, and check that the estimates and savings produced by the model seemed realistic to commissioners.

Examples of our response to feedback:
• In order to avoid the risk of double-counting, we have not summed benefits across approaches and conditions
• To provide transparency of data, we have provided sources for all our data, and assigned a risk rating to each piece of data presented
• We have not attempted to monetise health and wellbeing impacts at this stage due to lack of available data
• We are providing a user guide for commissioners testing/using the economic model

Expert Challenge Group
• We established an expert challenge group which provided guidance throughout the modelling process (from design through to final development).
This process helped us develop a model which produces robust estimates within a clearly defined scope

Following discussions with our Expert Challenge Group, the Realising the Value consortium and NHS England, we reached conclusions about how the model could produce robust benefit estimations for commissioners. This meant being clear about what the model could and could not do.

<table>
<thead>
<tr>
<th>The model is designed to:</th>
<th>The model is not designed to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable commissioners to estimate the likely impact of applying the five person- and community-centred approaches to specific sections of their local population (e.g. peer support for 20% of the local population that is HIV positive).</td>
<td>Extrapolate from condition-specific schemes to other health conditions – e.g. evidence for the benefits of using asset-based approaches in groups of fathers with mental health issues will not be given as evidence of asset-based approaches in groups of elderly people with mobility issues; however, commissioners can decide for themselves whether two conditions or populations might experience similar benefits.</td>
</tr>
<tr>
<td>Further work may look at estimating benefits at STP level to assist with broader transformational strategies.</td>
<td></td>
</tr>
<tr>
<td>Provide a bank of evidence which can stimulate discussion around the benefits of person- and community-centred approaches, and assist with decision making when paired with commissioner knowledge.</td>
<td>Articulate whether there is capacity within the system to invest in person- and community-centred approaches in specific area. This is a decision for local commissioners based on their understanding of local provision and competing priorities.</td>
</tr>
<tr>
<td>Be simple and easy to use and allow options for depth of use: i.e. commissioners can have limited input if they wish, or they can adjust many of the default settings and tailor the results using their local knowledge and expertise.</td>
<td>Articulate whether part of the total opportunity (‘size of the prize’) has already been realised. If commissioners are aware that any of the five P&amp;CC approaches have already been targeted at local populations, they should adjust the estimated benefits accordingly. The model assumes that none have been implemented.</td>
</tr>
<tr>
<td>Put financial values on outcomes where there is sufficient evidence to do so. Some approaches currently have more robust financial evidence than others (peer support, self-management, health coaching). For those with less financial evidence (group activities, asset-based approaches) we have focused on health outcomes and wider social impacts.</td>
<td>Put financial values on outcomes where there is not sufficient evidence to do so, or quantify/monetise things that cannot be quantified or monetised.</td>
</tr>
<tr>
<td>Help NHS England estimate the national impact of person- and community-centred approaches for health and wellbeing.</td>
<td>At this stage, there is not enough financial evidence to be able to put a monetary value on all health and wellbeing outcomes. However, this does not mean that those health and wellbeing outcomes do not lead to financial savings – lack of evidence does not mean negative evidence.</td>
</tr>
</tbody>
</table>
The benefits produced by the model are conservative estimates; the true benefits may be higher

The estimates produced by the model are at the lower, more conservative end of what we expect the benefits might be. There are a number of reasons why the true benefits of person- and community-centred approaches for health and wellbeing are likely to be significantly greater in some cases:

<table>
<thead>
<tr>
<th>Prevention can deliver savings over a long period</th>
<th>The five person- and community-centred approaches explored in the model are understood to have preventative effects. The model does not cite long-term impact, meaning that some benefits could be greatly underestimated or excluded from the evidence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The approaches may not need to be offered every year</td>
<td>The approach may not need to be delivered more than once in order for the benefits to be realised over a period of years (e.g. health coaching to reduce BMI may influence someone’s lifestyle for the rest of their life, without being repeated). Although costs may be high in the first year, the cost:benefit ratio improves if the approach is preventative.</td>
</tr>
<tr>
<td>The costs recorded by sites may be significantly higher than necessary</td>
<td>Costs of implementing the approaches were taken from the five sites. For some providers, there were large start-up, project design and evaluation costs associated with the projects, leading to them proving much more expensive per person than would be expected, e.g. £39.70 per person for a 2-hour asset-based session run by volunteers.</td>
</tr>
<tr>
<td>Some financial benefits may not have been recorded</td>
<td>The studies in the model measured and recorded specific outcomes, e.g. reduction in bed days. It is possible that savings would accrue through other outcomes which were not measured, such as reduction in medication use, reduction in GP appointments, decrease in smoking and alcohol use, and discontinuation of employment support allowance.</td>
</tr>
<tr>
<td>The model is risk-averse</td>
<td>We have been very careful not to overestimate benefits in the model. This may mean that benefits have been greatly underestimated in some cases – e.g. if a person with multiple long-term conditions is offered an approach, they may experience benefits across a number of those conditions (the model does not account for this impact).</td>
</tr>
</tbody>
</table>
A key reason for this was to avoid passing unnecessary risk on to commissioners.

In developing the model, we did not wish to pass unnecessary risk onto commissioners. This meant being transparent about the quality and strength of data on which any assumptions were made.

We have enabled commissioners to define their own appetite for risk. Commissioners are able to override programmed inputs, such as population and disease prevalence, and adjust aspects such as assumed efficiency, costs, and the value placed on specific risk ratings.

As a result, the model functions best when combined with the existing knowledge of a commissioner.

Why being transparent about the data was important:

- The evidence for person- and community-centred approaches is still emerging and is not yet as mature as some other approaches, such as clinical treatments for coronary heart disease.

- We have used the most robust evidence available, although since this is such an innovative area, the data does have some limitations; for example:
  - we have had to use some non-UK based studies;
  - some studies had relatively small sample sizes;
  - some studies were conducted on a specific population and the results may not apply to all people with the same condition;
  - studies conducted in a specific part of the UK may not produce the same results in other parts of the UK with different demographics.

- There is a risk of overestimating benefits since;
  - if you target twice as many people, you might not see double the benefits (since the most severe cases or most receptive people are often targeted first);
  - doubling the amount of support won’t necessarily double the benefits to the person and the health and care systems (24 peer support sessions are not necessarily twice as effective as 12).

What we have done to reduce the risk to commissioners:

- We have risk-rated the quality of evidence and subsequent estimated benefits.

- We have programmed default adjustments to benefits to prevent overestimating potential benefits, but commissioners can adjust how much the benefits are reduced based on their local knowledge and experience.

- For example, commissioners can adjust:
  - how much importance is placed on specific risk ratings (e.g. whether the study was UK-based)
  - how much the approach would cost in their local area
  - how much activity they would like to provide
  - the reduction in benefit estimates to reflect benefits that would have occurred even if no P&CC approaches were offered
  - overall benefits based on the volume of person- and community-centred approaches which have already been commissioned locally
Commissioners are able to use the model to varying degrees of detail

Users are able to adjust various inputs in the model and we anticipate that users will broadly fall into three categories:

1) Those who seek a high-level summary without having to adjust anything
2) Those who have a particular approach in mind and want to know the effect of targeting different numbers of individuals
3) Those who have the capacity to perform a more thorough analysis

<table>
<thead>
<tr>
<th>Type of user</th>
<th>Inputs to change</th>
<th>What the results will show them</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those seeking a high-level summary of potential impacts of investing in P&amp;CC approaches in their local area</td>
<td>Location (CCG)</td>
<td>A summary based on the model’s default assumptions and available information about the CCG</td>
</tr>
<tr>
<td>Those who have a particular approach in mind and want to know the effect of targeting different numbers of individuals</td>
<td>Location approach % pop. targeted</td>
<td>Information about the impact of targeting an approach towards a certain population, again based on default assumptions</td>
</tr>
<tr>
<td>Those who have capacity to perform a more nuanced analysis and adjust the model’s default assumptions based on local knowledge</td>
<td>Additional inputs (e.g. risk weighting, cost efficiency and number of sessions)</td>
<td>Results tailored more specifically to commissioner’s local population, using their knowledge and requirements (e.g. cost of services and how many sessions to provide)</td>
</tr>
</tbody>
</table>
Commissioners should be aware of a number of caveats when interpreting the model’s results

<table>
<thead>
<tr>
<th>Category</th>
<th>Caveat</th>
<th>Rationale</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>Costs are based on the costs of approaches provided by sites. Within the same approach (i.e. peer support) we have applied the same cost per person irrespective of condition.</td>
<td>There is a lack of available data for costs of approaches in other conditions.</td>
<td>If the approach planned by the commissioner is significantly different to the approach provided by sites, they may wish to adjust the costs.</td>
</tr>
<tr>
<td>% pop targeted</td>
<td>Evidence from studies is based on a certain characteristic of population. For example, one of the studies for peer support shows benefits from targeting those with chronic mental health issues, primarily with long stays in hospital. We cannot assume those with less severe mental health issues would see the same benefits. Therefore, in the model we have suggested a % eligible population to target (in this case, 5%) for each approach/condition.</td>
<td>This allows us to appropriately assess benefits of approaches.</td>
<td>In the summary of results, the different approach/condition scenarios assume different numbers of people targeted. This can be changed by the user if required.</td>
</tr>
<tr>
<td>Timescales</td>
<td>Savings and benefits presented are for a single year.</td>
<td>Studies tend not to measure impact of approaches after one year.</td>
<td>Likely underestimates the true benefit of approaches due to the longer term, preventative nature of many approaches.</td>
</tr>
<tr>
<td>Co-morbidities</td>
<td>We have not summed benefits across approaches and conditions.</td>
<td>Avoids double counting of benefits.</td>
<td>Likely underestimates the true benefit of approaches, as there are likely to be some benefits to individuals’ other conditions if an approach is made in one condition.</td>
</tr>
<tr>
<td>Evidence</td>
<td>Where multiple pieces of evidence show the same activity benefit (i.e. two studies showing a benefit in bed reductions), we have averaged the benefits. Where there are multiple pieces of evidence for different activity benefits (i.e. one study showing a benefit in bed reductions, a separate study showing a benefit in outpatient appointments) we have summed the benefits.</td>
<td>This allows us to appropriately capture benefits across multiple outcomes.</td>
<td>A range of benefits are captured in the model.</td>
</tr>
<tr>
<td>Impacts</td>
<td>The model only shows positive impacts.</td>
<td>This allows us to show the potential benefits of investing in P&amp;CC approaches; studies do not generally report negative impacts.</td>
<td>Benefits may be overestimated due to negative impacts not being accounted for.</td>
</tr>
<tr>
<td>Evidence</td>
<td>There are limitations associated with the data used in the model:</td>
<td>P&amp;CC approaches are an innovative area and evidence is still emerging.</td>
<td>Users should consider the data limitations when reviewing the model’s results.</td>
</tr>
<tr>
<td></td>
<td>- we have had to use some non-UK based studies;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- some studies had relatively small sample sizes;</td>
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<td></td>
<td>- studies conducted in a specific part of the UK may not produce the same results in other parts of the UK with different demographics.</td>
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</tbody>
</table>
Absence of evidence does not mean evidence of absence

Some approaches currently appear to show low or negative net savings. This does not necessarily mean that the approaches are ineffective and not worth investing in.

One of the main reasons for this is that not all positive outcomes were recorded by the studies. The model cannot therefore give the full picture at this stage.

Because of this, the model should be considered a starting point for commissioners which highlights some of the potential benefits and savings from investing in P&CC approaches.

The model should be used by commissioners to help build their business cases. Commissioners should not base their business cases solely on the potential impacts indicated by the model.

As an example of this, there is only one piece of financial evidence for asset-based approaches in mental health in the model (31% of participants reporting a halt in use of mental health services). If asset-based approaches were tested with the specific intention of looking at their impacts on other service usages, such as inpatient and outpatient admissions, A&E attendances, GP appointments and bed days, they may well be proven to reduce these, and therefore estimated benefits would increase.

In contrast, for self-management approaches in asthma, there is currently evidence of reduced activity in A&E attendances, inpatient admissions (elective and non-elective), and bed days. While this is likely also not the full picture, this means the total financial benefit is significantly higher for this approach than for asset based. Further research may well alter the balance and present greater net savings for both approaches.
Based on the evidence used in the model, peer support appears to cost the least to provide per year. In terms of financial outcomes, the available evidence suggests peer support for mental health issues provides the greatest net gain. There is also strong evidence for health and wellbeing impacts among people with HIV who receive peer support approaches.

In terms of wider social impact, the available evidence suggests that self-management for people with cancer provides the highest net gain. This is due to the wide range of health and wellbeing impacts associated with the approach, including increased exercise, improved health behaviours, increased levels of patient activation, and increased levels of self-management.

There is evidence of a potential net saving to commissioners when providing health coaching to people with coronary heart disease. There is also evidence of impact for individuals with diabetes, other cardiovascular diseases and multiple health issues. This suggests that health coaching may be particularly appropriate for people with multiple long-term health conditions.

The model examines evidence for the benefits of group activities among those with dementia and those with mental health issues. UK-based studies have reported impressive outcomes in areas such as quality of life, anxiety, depression, communication, and feeling in control of life and able to cope with its challenges.

An ongoing study which provides a support group for fathers in a deprived area of the UK has shown promise across a number of outcomes. Participants have reported increased wellbeing and reduced use of mental health services. In addition, 62% of children surveyed reported being more confident in themselves as a result of the increased wellbeing of their parent.
Key findings from the economic modelling tool

1. Context around the economic modelling tool

2. Key findings from the economic modelling tool

3. Next steps
We have evidence for the financial and wider social benefits of offering peer support and self-management education.

Wider social savings are based on offering peer support to individuals with HIV, and self-management education interventions to people with cancer.

Savings to the health system are based on providing peer support to people with mental health issues and coronary heart disease, and self-management education to people with cardiovascular disease and asthma.

<table>
<thead>
<tr>
<th></th>
<th>Savings per person</th>
<th>Savings for one CCG</th>
<th>National savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential wider social savings</td>
<td>~£20,800</td>
<td>~£22m</td>
<td>~£4.5bn</td>
</tr>
<tr>
<td>Estimated savings to the health system</td>
<td>~£2,100</td>
<td>~£5.2m</td>
<td>~£950m</td>
</tr>
</tbody>
</table>

All five approaches show a range of positive effects for individuals, as well as great financial promise. The evidence is particularly robust for peer support and self-management.

If these initiatives were offered to people with the four long-term health conditions we have data for, they have the potential to offer commissioners a net saving of £2,100 per person per year.

If these interventions were provided at CCG level, we estimate that CCGs could save around £5.2m per year.

This would require the intervention to be targeted carefully, at those people who might see the most benefit, and implemented well.

It is harder to make robust estimates at a national level — e.g. we don’t know what has already been implemented.

The model suggests that, if implemented well and at scale across England, there may be potential for savings of up to £950m from targeted peer support and self-management education to people with specific conditions who are expected to see the most benefit.
We have limited financial evidence for the other three approaches, but we do have evidence of wider social benefits.

There is currently limited financial evidence with which to calculate the potential savings from offering group activities, health coaching and asset-based approaches to a population. However, we do have information about the costs of providing each intervention.

If we assume that these interventions are as effective as providing peer support to people with mental health issues and coronary heart disease, for each intervention we can predict a saving somewhere in the region of £1,000–£1,500 per person per year.

Though evidence is currently scarce for direct savings to commissioners, we do have evidence for wider social savings for asset-based approaches, group activities and health coaching. The potential wider social savings are based on the average of all three interventions.

As the evidence base increases, these estimates can be refined: a key purpose of this programme’s economic model is to allow the development of additional evidence with CCGs so that we can build the evidence base and make more accurate calculations.

<table>
<thead>
<tr>
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<th>Savings for one CCG</th>
<th>National savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential wider social savings</td>
<td>~£18,000</td>
<td>~£7m</td>
<td>~£1.3bn</td>
</tr>
<tr>
<td>Estimated savings to the health system</td>
<td>~£1,000 – ~£1,500</td>
<td>~£1.8m – ~£2.7m</td>
<td>~£380m – ~£550m</td>
</tr>
</tbody>
</table>
The savings we have modelled could represent the tip of the iceberg.

Our economic model has identified potential for direct savings to commissioners within one year of commissioning person- and community-centred approaches for some of its population.

Our research has shown that, in addition to offering significant direct benefits to commissioners, these approaches deliver **wider social benefits**, such as improved employment outcomes and reduced social isolation.

We currently have quantitative, financial evidence for a very small number of conditions and approaches. If person- and community-centred approaches were offered for more conditions, to a wider population, and in different forms, the savings could be greater.

We have modelled the impact of investing in person- and community-centred approaches over one year, since most studies have only followed participants for one year. However, prevention can deliver savings over a longer time period.
Our examples of potential savings are based on a number of assumptions

- Per person savings are calculated using results from a real CCG with a population of approximately 250k (the average CCG population is 259k)
- For CCG and national results, we have assumed that there would be no overlap between peer support and self-management benefits, especially as they are targeted at different conditions
- For net financial savings, we are only showing benefits for conditions we have evidence for, and for conditions which show positive net savings:
  - CHD & mental health issues for peer support
  - CVD & asthma for self-management
- For net wider social benefits, we are only showing benefits for conditions we have evidence for, and for conditions which show positive net benefits:
  - HIV for peer support
  - Cancer for self-management
  - Mental health issues for asset-based
  - Mental health issues for group activities
  - Multiple health and wellbeing issues for health coaching
- All results use the economic model’s ‘suggested targeted population’ rather than the total eligible population. This is because we recognise that a CCG is unlikely to provide P&CC approaches to all of its residents with a health condition such as cancer or diabetes. Instead, we assume that CCGs will target the proportion of the population that is most likely to benefit; for example, those patients with severe health conditions and the ability to commit to an approach.
- The results assume that P&CC approaches have not yet been implemented in CCGs and that there would be capacity in the system to scale up (i.e. providers would be able to offer the approaches). These are significant assumptions, and therefore these figures should be treated with the utmost caution. However, for reasons discussed in this report, we believe that these remain conservative estimates, despite the fact that some CCGs will have already implemented P&CC approaches and reaped some of the potential benefit.
- **Note:** There is considerable uncertainty about how these potential savings might scale up at a population level. Further work is needed to provide a robust estimate.
The model estimates benefits based on a range of low-, mid- and high-impact scenarios

Below is an example of how benefits are presented for a CCG (across a single condition and approach)

- The table and chart below are a simulation based on NHS Somerset CCG. In this case, they are estimating how much benefit there could be in offering peer support to 15% of the total eligible population with coronary heart disease.
- The chart shows gross financial benefits, wider social benefits and gross costs.
- The benefits are based on low-, mid- and high-impact scenarios (mid-impact is the default setting in the model).
- Commissioners can select one of these scenarios, or they can adjust the settings to their custom requirements.

Summary of Outcomes for:

Location: NHS SOMERSET CCG
Population: 541,609
Approach: Peer support
Condition: Coronary Heart Disease
Total approach eligible population: 21,232
Total approach targeted population: 3,185
% of targeted population (over total population): 0.6%

The table to the right shows some examples of assumptions which have been altered to create the three impact scenarios (there are also activity assumptions and benefit assumptions).

These are not the best- and worst-case scenarios; they are designed to show a range of optimism.

Please see the appendix for a worked example of this scenario and explanation of how the results were derived.
The model gives a summary of estimated financial and wider social impact benefits

The table below shows how benefits are presented in the model for a CCG (across all approaches and conditions)

- The table shows estimated gross benefits and costs for NHS Somerset CCG, based on a medium-impact scenario and using the pre-set options for which proportion of the population is targeted.
- For ease of interpretation, the coloured bars are a visual reflection of the numbers:
  - The longer the green shading, the greater the gross benefits are estimated to be
  - The longer the red shading, the greater the gross costs are estimated to be
- In the model, all impact scenarios can be presented at once for comparison.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Financial Outcomes</th>
<th>Wider Social Impact outcomes</th>
<th># studies showing benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost saving from approach</td>
<td>Cost of approach</td>
<td>Net savings</td>
</tr>
<tr>
<td></td>
<td>£000</td>
<td>£000</td>
<td>£000</td>
</tr>
<tr>
<td>Asset based</td>
<td></td>
<td>£140</td>
<td>(£639)</td>
</tr>
<tr>
<td>Group activities</td>
<td>Not available</td>
<td>(£609)</td>
<td>Not available</td>
</tr>
<tr>
<td>Health coaching</td>
<td>£1,192</td>
<td>(£1,533)</td>
<td>(£341)</td>
</tr>
<tr>
<td>Peer support</td>
<td>£1,192</td>
<td>(£81)</td>
<td>Not available</td>
</tr>
<tr>
<td>Self management</td>
<td>£5,259</td>
<td>(£1,666)</td>
<td>£3,593</td>
</tr>
<tr>
<td></td>
<td>£999</td>
<td>(£149)</td>
<td>£850</td>
</tr>
</tbody>
</table>

Please note:
A negative net saving means there will be a cost to the commissioner which is not offset by savings
The following health and wellbeing benefits are presented in a risk-rated but non-financial manner

Below is an example of how health and wellbeing benefits are presented in the summary tab

- The table shows where there is qualitative or anecdotal evidence for health and wellbeing impacts that cannot currently be quantified or monetised.
- Where there is no evidence recorded, that does not necessarily mean the approach would not have an impact in that area.
- Condition-specific health and wellbeing impacts are shown in a separate table in the model.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Anxiety &amp; depression</th>
<th>Behavioural change</th>
<th>Bio-medical improvements</th>
<th>Communication</th>
<th>Independent</th>
<th>Individual wellbeing</th>
<th>Patient activation</th>
<th>Self efficacy</th>
<th>Self management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset based</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health coaching</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Peer support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each impact is colour coded to show the quality of the evidence behind it (based on year of study, UK based study, sample size, and on its study type).

Within the model, users can view more information – e.g. time spent on exercise in previous seven days (mean in minutes) increased by 147 minutes in the study behind this health and wellbeing impact. The worked example in the appendix explains this in further detail.
Next steps

1. Context
   Context around the economic modelling tool

2. Findings
   Key findings from the economic modelling tool

3. Next steps
   Next steps
As more people commission P&CC approaches, the evidence base can be enhanced

Person-and community-centred approaches for health and wellbeing are a new and innovative area of research and practice. This means that the evidence base is currently less mature than it is for other, more traditional disciplines.

However, the evidence base is growing. There is good evidence that person-and community-centred approaches do improve people’s wellbeing and can benefit the health and care systems in the short and long term. The Realising the Value programme offers an exciting opportunity to expand the evidence further and allow us to better understand the positive and negative impacts of implementing these approaches in the UK.

It will be easier to collate emerging evidence in the future if commissioners and providers evaluate the approaches in a consistent way, measuring similar outcomes.

We recommend measuring:

- Cost per person (per session and overall approach)
- Health and wellbeing outcomes, plus associated savings where possible
- Financial savings to the system, over one year and a longer period, and which systems benefited
- Any wider social impacts (participants might report that they gained employment following the approach, for example)
- Any negative impacts from the approaches (such as increase in GP appointments or increased stress among peer supporters)
The following suggestions may help commissioners measure the impact of P&CC approaches, but are not exhaustive.

<table>
<thead>
<tr>
<th>Type of impact</th>
<th>Measurable outcome</th>
<th>Suggested metrics for measuring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-elective admissions</td>
<td>Number of urgent health care visits per year</td>
</tr>
<tr>
<td></td>
<td>In-patient admissions</td>
<td>Number of hospital admissions in 1 year</td>
</tr>
<tr>
<td></td>
<td>Service usage</td>
<td>% of people that reported a reduction in use of primary and secondary health services</td>
</tr>
<tr>
<td></td>
<td>Appointments</td>
<td>Total outpatient appointments/GP appointments</td>
</tr>
<tr>
<td></td>
<td>Rehospitalisations</td>
<td>Number of rehospitalisations</td>
</tr>
<tr>
<td></td>
<td>A&amp;E visits</td>
<td>Mean A&amp;E visits in past 3 months/year</td>
</tr>
<tr>
<td></td>
<td>Bed days</td>
<td>Reduction in bed days per individual admitted</td>
</tr>
<tr>
<td><strong>Health and Wellbeing</strong></td>
<td>Patient activation</td>
<td>% patients with a meaningful improvement in Patient Activation Measure (PAM) scores</td>
</tr>
<tr>
<td></td>
<td>Specific health measures</td>
<td>Reduction in HbA1C level (diabetes); medication adherence; improvement in blood pressure mmHG (CVD); % reduction in CHD events (over 10 years)</td>
</tr>
<tr>
<td></td>
<td>Smoking</td>
<td>% of individuals reporting to have quit smoking after the programme</td>
</tr>
<tr>
<td></td>
<td>Body Mass Index (BMI)</td>
<td>% of individuals reporting a reduction in weight of at least 5%; BMI reduction</td>
</tr>
<tr>
<td></td>
<td>Exercise</td>
<td>Time spent on exercise in previous seven days (mean in minutes)</td>
</tr>
<tr>
<td></td>
<td>Anxiety and depression</td>
<td>% of people that reported a reduction in anxiety/depression/geriatric depression scale</td>
</tr>
<tr>
<td><strong>Wider Social</strong></td>
<td>Social connectedness</td>
<td>% more confident in groups; % reporting improvement in close relationships</td>
</tr>
<tr>
<td></td>
<td>Individual wellbeing</td>
<td>% being better able to cope with life’s challenges/more in control of their lives</td>
</tr>
<tr>
<td></td>
<td>Confidence/self worth</td>
<td>% of people reporting that they felt more confident after the approach</td>
</tr>
<tr>
<td></td>
<td>Employment</td>
<td>% of people that reported acquisition of work skills that led to employment</td>
</tr>
<tr>
<td></td>
<td>Financial prospects</td>
<td>% of people that reported improved financial prospects following approach</td>
</tr>
<tr>
<td></td>
<td>Volunteering</td>
<td>% undertaking development of formal/informal skills through volunteering</td>
</tr>
<tr>
<td></td>
<td>Work attendance</td>
<td>Work days missed in past 30 days/year</td>
</tr>
<tr>
<td></td>
<td>Self-management</td>
<td>% reporting ability to self-manage their health more effectively</td>
</tr>
<tr>
<td></td>
<td>Alcohol and drug use</td>
<td>% of people that reported a reduction in rates of substance misuse/alcohol consumption</td>
</tr>
</tbody>
</table>
Appendix: How impacts are calculated in the model
Worked example (1:3)

Below is a worked example for evaluating the potential impact of investing in peer support for coronary heart disease, based on Somerset CCG targeting 15% of the total eligible population.

<table>
<thead>
<tr>
<th>Location</th>
<th>Condition</th>
<th>% approach eligible population targeted</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS SOMERSET CCG</td>
<td>Coronary Heart Disease</td>
<td>15%</td>
<td>Peer support</td>
</tr>
</tbody>
</table>

**Total approach targeted population: 3,185**

The model shows evidence for three types of benefit:

1. **Financial impact**

   Evidence from a 2004 UK study (Coull et al, 2004) has been used in this estimate. It considered the impacts of a peer support approach on inpatients and outpatients over 60 with Ischaemic Heart Disease.

   The benefits found in this study which are used to estimate the financial impact are:
   a) Reduction in outpatient appointments (total: 3%, CHD, 21%)
   b) Reduction in bed days (total: 26%, CHD, 21%)

   The model sums the benefits of reduced activity in these two outcomes. The table below shows the calculation for bed days.

<table>
<thead>
<tr>
<th></th>
<th>26% reduction in total bed days</th>
<th>21% reduction in CHD bed days</th>
<th>[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted population</td>
<td>3,185</td>
<td>3,185</td>
<td>[2]</td>
</tr>
<tr>
<td>Activity for targeted pop. prior to intervention</td>
<td>10,612 total outpatient appointments</td>
<td>3,136 CHD outpatient appointments</td>
<td>[3]</td>
</tr>
<tr>
<td>Reduced activity for targeted pop. due to intervention</td>
<td>2,804 total outpatient appointments</td>
<td>646 CHD outpatient appointments</td>
<td>[4] = [1] * [3]</td>
</tr>
<tr>
<td>£ saved per reduced activity</td>
<td>£400</td>
<td>£400</td>
<td>[5]</td>
</tr>
<tr>
<td>% reduction due to deadweight</td>
<td>20%</td>
<td>20%</td>
<td>[6]</td>
</tr>
<tr>
<td>Adjusted £ saving across cohort</td>
<td>£320</td>
<td>£320</td>
<td>[7] = [5] * (1-[6])</td>
</tr>
<tr>
<td>Total £ saving from intervention</td>
<td>£1,192,121*</td>
<td>[9] = SUM [8] + £88,209</td>
<td></td>
</tr>
</tbody>
</table>

*The estimated net saving from the reduction in outpatient appointments is £88,206*
2. Health and wellbeing impact
Evidence from two studies has shown health and wellbeing impacts of peer support approaches for those with CHD:

- a 2004 UK study (Coull et al, 2004) - it considered the impacts of a peer support approach on inpatients and outpatients over 60 with Ischaemic Heart Disease
- a 2003 USA study (Lorig, 2003) - it considered the impacts of a peer support approach on Hispanic individuals with IHD.

The model groups health and wellbeing benefits into a number of ‘buckets’. Of these, the study above mentions evidence for ‘behavioural change’, and ‘individual wellbeing’ benefits:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Condition</th>
<th>Anxiety &amp; depression</th>
<th>Behavioural change</th>
<th>Bio-medical improvements</th>
<th>Communication</th>
<th>Independent living</th>
<th>Individual wellbeing</th>
<th>Patient activation</th>
<th>Self efficacy</th>
<th>Self management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer support</td>
<td>Coronary Heart Disease</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Behavioural change:** Mean increase of 147 minutes spent on exercise in the previous seven days

**Behavioural change:** Mean decrease of 3% of number of smokers

**Individual wellbeing:** Improved health status as a result of the approach

These are given a ‘yellow’ data risk rating, because of their characteristics in terms of:

1) UK or non-UK based study
2) Year of study
3) Sample size
4) Type of study
3. Wider social impact
There is no evidence in the model of wider social impacts for providing peer support to individuals with CHD. However, there is evidence for the wider social impact of providing group activities to this cohort, so we present these below.

Five studies show evidence of wider social impact for providing group activities to individuals with mental health issues.

To calculate wider social impact, the model combines evidence for impact with financial proxies.

**Evidence:** 66% of people reported a reduction in anxiety/depression
→ **Proxy:** Average cost of contacts saved (3*£97) = £291

**Evidence:** 7% of people reported a reduction in rates of substance misuse
→ **Proxy:** Cost of third sector substance misuse service = £1,720

**Evidence:** 73% of people reported to feel more in control of their lives after the approach
→ **Proxy:** Independent living course cost = £125

**Evidence:** 71% of people reported improved mental wellbeing; 84% of people reported improvement in well-being (well-being questionnaire)
→ **Proxy:** Value of quality adjusted life year (QALY) for a moderate mental health problem = £2,940

**Evidence:** 3% of people reported acquisition of work skills that led to employment
→ **Proxy:** Annual minimum wage = £11,126

**Evidence:** 73% Improvement in self-worth / self-esteem
→ **Proxy:** Average cost of professional services replaced (6*£50) = £300

**Evidence:** 71% of people reported increased satisfaction with their relationships with family, friends and carers
→ **Proxy:** Cost of annual socialising per annum (service users) = £220

**Evidence:** 81% of people reported that they felt more confident after the approach
→ **Proxy:** Cost of confidence and assertiveness training = £1,300

Assuming 25% of the eligible population of those with mental health issues in Somerset are targeted (1,052), this evidence and proxies lead to an estimated wider social impact benefit of £3,441,378, with a cost of £608,509.