

Making the case for self care education.

1. Introduction

- 1.1. There have been numerous published articles that show that the use of self care training for people with long term conditions is effective both in terms of saving money and increasing quality of life. However, these savings are expressed in terms of the trial on which the evidence has been found.
- 1.2. This model allows the published findings to be calculated for given GP practices, PCTs, SHAs or GP commissioning pathfinders with their own characteristics in terms of current service levels, prevalence of the long term condition and costs. It does not give a guarantee savings will be achieved, rather an indication of the costs and benefits that research suggests are likely.

2. Functionality

- 2.1. This tool contains default assumptions for the following long term conditions:
 - Asthma;
 - Arthritis;
 - Diabetes;
 - Parkinson's Disease;
 - Generic Long Term Conditions.
- 2.2. As well as these conditions which have readily available published evidence, there is also the option to use evidence about a local course or other intervention (where any savings from this can be defined).

3. Opening the Tool

- 3.1. This tool is Microsoft Excel based and is partly driven by Visual Basic for Application macros. In order to use the model, the security setting on Microsoft Excel should be set to Medium, or Low.
- 3.2. To do this, open Excel and select Tools > Macros > Security from the toolbar. This will bring up the following screen:

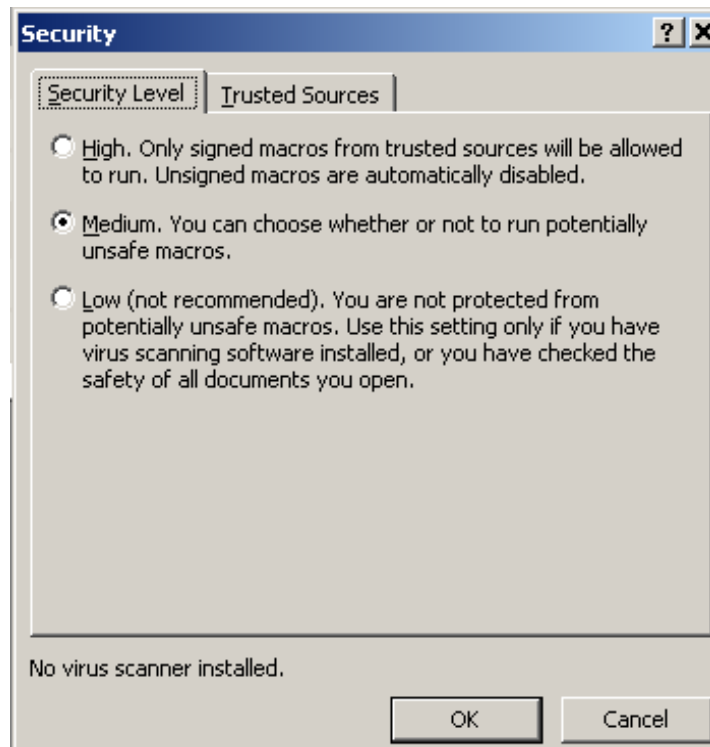


Figure 1 - Security Level

3.3. Select the Medium setting, this will enable the macros to be run, once the user has enabled them.

3.4. When opening the tool with the security settings set to Medium, the user will be presented with the following dialog box.

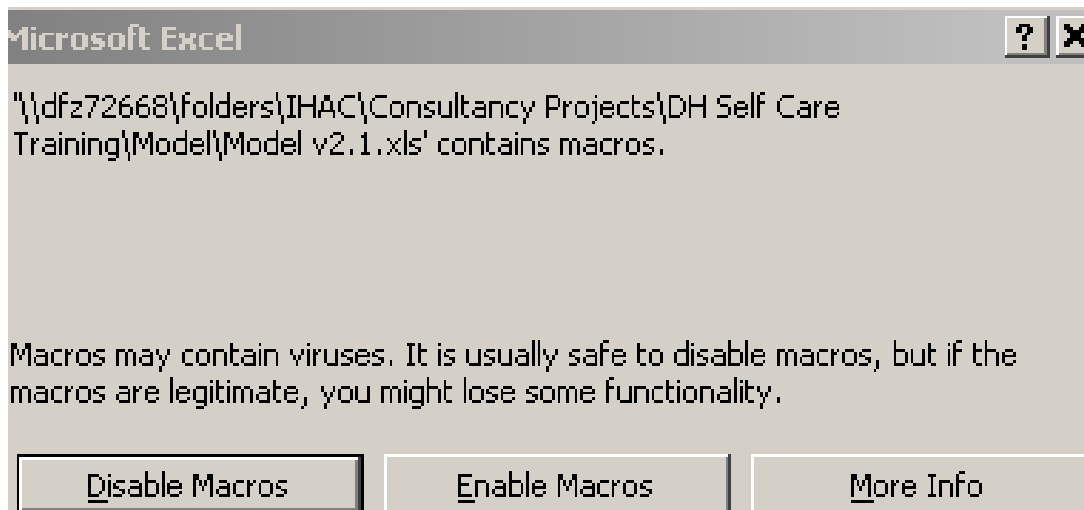


Figure 2 - Enable Macros

3.5. Select the Enable Macros button, the tool will then load.

4. Main Menu

Self Care Local Business Case Model

The Department of Health, in collaboration with Expert Patient Programme CIC, have developed this tool to make the local business case for self care education. The tool aims to stimulate demand for self care education courses, both generic and disease specific, by providing commissioners with an evidence based business case, tailored for their area – with information about costs and cost savings based on local circumstances.

The tool contains default costs and benefits of self care courses based on public research. It also allows data based on local knowledge and circumstances to be entered to check where the break even point is; and will suggest the most cost effective way of providing self care education based on local population characteristics and total budget available.

Details of the research used are available to view using the reference option to the left. More detail about how the references have been used are available in the user guide accompanying this model.

The tool uses information on GP consortia known to the Department of Health in autumn 2010, but allows the user to "Input a revised GP consortia configuration" using the button to the left of the screen

Figure 3 - Main Menu

4.1. The main menu offers three options, selected by pressing the buttons. These options are described below.

5. Defining the Configuration of GP commissioners

5.1. This option allows the user to update the configuration of GP commissioners. It should be selected if the configuration of GPs in each pathfinder/consortium changes. In order to select this option, press the button labelled 4 in Figure 3. This will bring up the following screen.

Sheet to identify the GP consortia

This sheet can be used to cluster individual GPs into different consortium.

The key on the right can be used to name the consortia and give them an identifier. The identifier can be used to place GPs into the correct configuration.

Once the consortia are agreed then use the 'Update the Consortium Configuration' button to apply the changes.

GP Code	GP Name	PCT	SHA	Pathfinder code	Pathfinder name
AB1001	DRS WILLIAMS & OLIVER	Stockton-on-Tees PCT	North East SHA	0	Other / Not Yet Defined
AB1002	QUEENS PARK MEDICAL CENTRE	Stockton-on-Tees PCT	North East SHA	0	Other / Not Yet Defined
AB1003	DR GALLAGHER	Hartlepool PCT	North East SHA	0	Other / Not Yet Defined
AB1004	WOODLANDS SURGERY	Middlesbrough PCT	North East SHA	0	Other / Not Yet Defined
AB1005	SPRINGWOOD SURGERY	Redcar and Cleveland PCT	North East SHA	113	Langbaurgh
AB1006	TENNANT STREET MEDICAL PRACTICE	Stockton-on-Tees PCT	North East SHA	0	Other / Not Yet Defined
AB1007	BANK HOUSE SURGERY	Hartlepool PCT	North East SHA	0	Other / Not Yet Defined
AB1008	ALBERT HOUSE CLINIC	Redcar and Cleveland PCT	North East SHA	0	Other / Not Yet Defined

Pathfinder code	Pathfinder name
0	Other / Not Yet Defined
999	Other / Not Yet Defined
32	Widloom
35	Lincoln West
54	North Norfolk Health Consortium
67	Foris Group, South Essex
77	Bascom
94	Bentley Clinical Cabinet

Figure 4 - GP Configuration Screen

5.2. The list on the left of the screen, labelled 1 shows the GPs and their information. The list on the right of the screen shows a list of the current commissioning pathfinders that are entered into the tool (where this is known). There are two operations that can be done from this screen. The first is to change the GPs within the currently defined pathfinder, the second is to add or remove pathfinders. Details of how to perform either of these operations is given in the following sections.

5.3. Changing the configuration

5.3.1. The blue numbers next to the individual GPs relate to the key on the right hand side of the screen.

A81053	WOODSIDE SURGERY	Redcar and Cleveland PCT	North East SHA	212	Langbaurch
A81054	THE SALTSCAR SURGERY	Redcar and Cleveland PCT	North East SHA	212	Langbaurch
A81056	MELROSE SURGERY	Stockton-on-Tees PCT	North East SHA	0	z Other / Not Yet Defined
A81057	KINGSWAY MEDICAL CENTRE	Stockton-on-Tees PCT	North East SHA	0	z Other / Not Yet Defined
A81058	COULBY MEDICAL PRACTICE	Middlesbrough PCT	North East SHA	0	z Other / Not Yet Defined
A81060	KOH & PARTNER	Hartlepool PCT	North East SHA	0	z Other / Not Yet Defined
A81063	THE HEADLAND MEDICAL CENTRE	Hartlepool PCT	North East SHA	0	z Other / Not Yet Defined

Figure 5 - GP configuration

5.3.2. In Figure 5, the first two GPs are in the same pathfinder, number 212, which relates to Langbaurch in the list on the right hand side. To change the configuration so that the second GP is placed in a different pathfinder change the blue number to correspond with the pathfinder that the GP has moved into. In the example below, Figure 6 it has moved to “Other/not yet known”, which from the key is represented by entering the number 196 into the blue text box.

A81053	WOODSIDE SURGERY	Redcar and Cleveland PCT	North East SHA	0	z Other / Not Yet Defined
A81054	THE SALTSCAR SURGERY	Redcar and Cleveland PCT	North East SHA	212	Langbaurch
A81056	MELROSE SURGERY	Stockton-on-Tees PCT	North East SHA	0	z Other / Not Yet Defined
A81057	KINGSWAY MEDICAL CENTRE	Stockton-on-Tees PCT	North East SHA	0	z Other / Not Yet Defined
A81058	COULBY MEDICAL PRACTICE	Middlesbrough PCT	North East SHA	0	z Other / Not Yet Defined
A81060	KOH & PARTNER	Hartlepool PCT	North East SHA	0	z Other / Not Yet Defined
A81063	THE HEADLAND MEDICAL CENTRE	Hartlepool PCT	North East SHA	0	z Other / Not Yet Defined

Figure 6 - Revised GP Configuration

5.3.3. Once this is complete for all changes, press the ‘make changes’ button, labelled 3 in Figure 4 and return to the main menu, using the button.

5.4. Adding / Removing Pathfinder

5.4.1. In order to a remove a pathfinder it is possible to delete the pathfinder, and the corresponding number from the list on right. Like wise, adding a pathfinder is a case of adding a unique number and the consortium name to the bottom of the list. You can then make any amendments to the configuration in a similar way to described above.

5.5. Once this is done, click on the calculate button and then return to the main menu.

6. Obtaining the Local Business Case

6.1. The main function of the tool is to apply the empirical evidence to individual local GP commissioning pathfinder. Each pathfinder has varying prevalence and service levels against which the savings should be applied. This tool facilitates this process.

6.2. View the local business case report sheet by clicking on the ‘Go to the Local Business Case’ button from the main menu, labelled 1 in Figure 3. The following screen appears:

Local Business Case

Choose SHA: East Midlands SHA

Choose organisation: East Midlands SHA

Choose organisation type: Strategic Health Authority

Choose LTC: Asthma Management Handbook

Of the population the total number affected by this LTC is: 225,745

The total number who have done this course before is: 9,030

Number who haven't done course before, but likely to do so is: 54,179

The number of people diagnosed with a new condition in year is: 15,802

Number of newly diagnosed people likely to attend course is: 4,425

Who do you want to offer the course to? Newly diagnosed

This will mean offering the course to 4425 patients per year, over 5 years.

Assumptions

The results in this report use the default assumptions that can be found listed in the accompanying documentation. However, the model allows the user to override some of these assumptions if more localised knowledge or up to date information becomes available. To override any of the assumptions shown on the left, please use the button below.

		Default assumptions
% already taken the course		4%
% of those eligible likely to attend		28%
Cost of the course	£	100
GP visit savings		59%
Nurse visit savings		59%
A & E Visit savings		54%
Inpatient activity savings		37%
Outpatient visit savings		59%
Medication savings		5%
QALY benefits per person		0.02
Social Return on Investment	£	1,254

Making the case for self care education in East Midlands SHA

Type of course: Asthma Management Handbook

Number of people to commission training course for: 4,425

To run this self care training course for this number of people would cost (per year): £ 442,460

This would result in the following financial savings and patient benefit:

	Saving in activity	Unit cost	Cost Saving
GP visits	13,094	£52	£680,874
Nurse visits	9,362	£11	£102,982
All GP practice cost savings			£783,856
A and E visits	192.4	£110	£21,166
Inpatient admissions	36.4	£1,427	£51,960
Outpatient visits	35.2	£126	£4,441
Medication costs			£95,719
All commissioner cost savings			£173,286
QALY gains	88.5	£30,000	£2,654,762
Social Return on Investment			£5,548,453
Total Patient Benefits			£8,203,215
Total gross benefits			£9,160,356
The net benefit of running this self care course is			£8,717,896

Which equates to £1970 per person with LTC

This equates to a return on investment of 20.7 to 1

The assumption made is that the saving will happen in the year following training. Evidence is mixed about effects after one year. However, for illustration, if 50% of the year 1 benefits were realised for a second year, there would be additional savings in year 2 of:

Primary Care	£	391,928
Commissioner	£	86,643

Figure 7 - Local Business Case Screen

6.3. The top half of the screen contains the inputs and information that produces the report that appears on the bottom screen. For ease, this screen will be discussed in two parts.

6.4. Inputs and Information

Local Business Case

Choose SHA: East Midlands SHA

Choose organisation: East Midlands SHA

Choose organisation type: Strategic Health Authority

Choose LTC: Asthma Management Handbook

Of the population the total number affected by this LTC is: 225,745

The total number who have done this course before is: 9,030

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The results in this report use the default assumptions that can be found listed in the accompanying documentation. However, the model allows the user to override some of these assumptions if more localised knowledge or up to date information becomes available. To override any of the assumptions shown on the left, please use the button below.

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Cost of the course	£	100
GP visit savings		59%
Nurse visit savings		59%
A & E Visit savings		54%
Inpatient activity savings		37%
Outpatient visit savings		59%
Medication savings		5%
QALY benefits per person		0.02
Social Return on Investment	£	1,254

Figure 8 - Local Business Case Information

6.4.1. The top part of the screen allows the user to select the consortium for which to obtain the business case. This is done by first selecting the Strategic Health Authority where the

organisation is based, then selecting the organisation type and organisation form the drop down lists, labelled 1 in Figure 8. Alongside this, the user can also select which education course to view the business case for, again by selecting this from the drop down menu. This is labelled 2 in Figure 8 There is also an option here to select a local course, this is discussed later in this Section 8 Including a different course.

6.4.2. Once the consortium and course have been selected, the group of people who are to be targeted for self care training is decided by the user. The options from the drop down list, labelled 3 in Figure 8 - Local Business Case InformationFigure 8 are:

- People who have been newly diagnosed with the selected long term condition;
- All people who currently have the selected long term condition;
- A combination of the above people.

Though note that only a proportion of these are included in the business case, as surveys suggest only around a quarter would do self care education if offered it.

6.4.3. A further input is, if a selection including all those currently having a long term condition is over how long the group is to be trained. Again this is in the area labelled 3.

6.4.4. The other area of information on this sheet is the assumptions that have been used in calculating the business case. These are labelled 4 in Figure 8. If these assumptions become outdated or superseded by future evidence, then they can be altered by using the update assumptions button – This is discussed in more detail in the section 7, Revising the Business Case with Local Knowledge.

6.4.5. There are also a number of buttons at the top of the screen labelled 5. Which allow you to print the report to your default printer, or copy the report to the clip board, ready to past into other applications such as word processing or presentation slides.

6.5. Report Screen

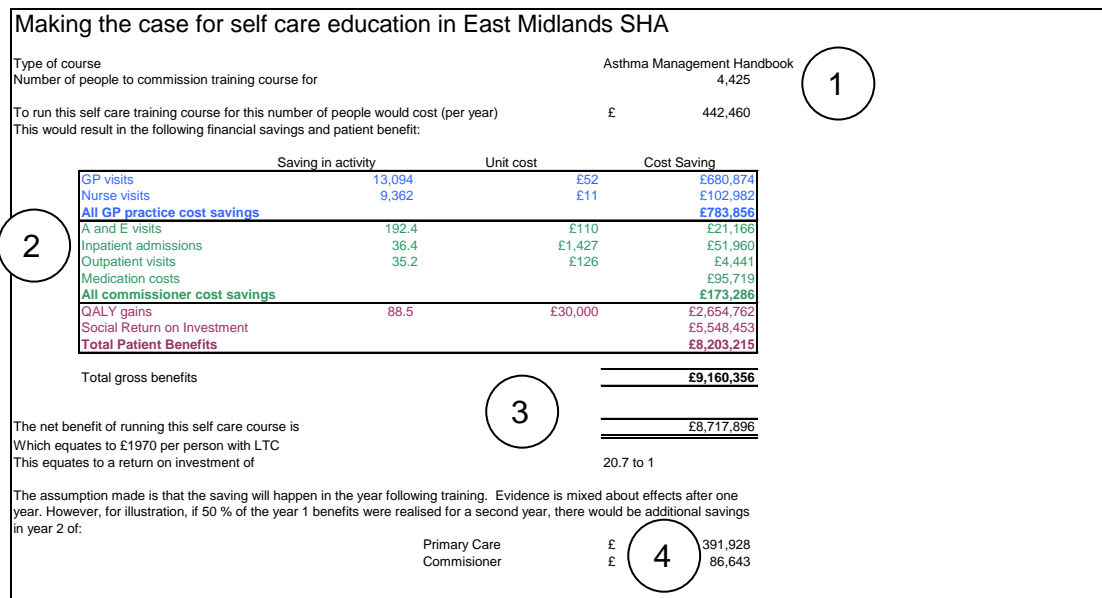


Figure 9 - Local Business Case Report

6.5.1. The bottom part of this screen shows the results of applying the evidence to the inputs that have been provided.

6.5.2. The information displayed in this part of the screen shows the course and consortium selected, the volumes of patients that would want to take the course given the assumptions and selections in the previous section. This is labelled 1 in Figure 9 Also the cost of running the course is shown here.

6.5.3. The savings of running the course are shown, these are labelled 2. These are broken down into three sections, namely the savings that fall to primary care providers, savings falling to commissioners and health gain for the patient. Each of these are colour coded and sub totals for each section calculated. Savings are shown in terms of activity savings and cost savings.

6.5.4. The total savings combining all of the savings is shown, labelled 3 in Figure 9, As is the net benefit / cost, taking into account the cost of the course along with the savings

6.5.5. For information, the cost / benefit is shown in a number of ways, as cost per patient with LTC and also the return on investment.

6.5.6. Finally, although there is mixed evidence that benefits are realised following the first year, an illustration of potential savings if 50% of the initial year savings are realised in year 2 is also given. This is labelled as 4 on the screen shot.

7. Revising the Business Case with Local Knowledge.

7.1. As discussed briefly earlier, there may be further evidence available in the future that supersedes the current published evidence currently used in the tool, or there may be localised knowledge of the population and the impacts that are different to the published data. The tool has the ability to overwrite the assumptions that have been made. In order to do this select the update assumptions button from the local business case. This is the button identified by the 6 in Figure 8

7.2. Selecting this option brings up the following screen.

Local Business Case (User Defined Assumptions)

Choose SHA: East Midlands SHA

Choose organisation: East Midlands SHA

Choose organisation type: GP Practice

Choose LTC: Asthma Management Handbook

Of the population the total number affected by this LTC is: 225,745

The total number who have done this course before is: 9,030

Number who haven't done course before, but likely to do so is: 54,179

The number of people diagnosed with a new condition in year is: 15,802

Number of newly diagnosed people likely to attend course is: 4,425

Who do you want to offer the course to? Newly diagnosed

This will mean offering the course to 4425 patients over the year

How many patients per year would you want to offer the course to? 4424,603435

Assumptions

The box to the right allows the user to vary some of the assumptions used in the calculations. The default assumptions used are shown in grey to provide a reference to the empirical evidence.

Changing the % of those already taken the course and likely to attend alters the figure here for reference for the user input patient volumes

	User defined assumptions	Default assumptions
% already taken the course	4%	4%
% of those eligible likely to attend	28%	28%
Cost of the course	£100	£100
GP unit cost	£52	£52
Nurse unit cost	£11	£11
A & E unit cost	£1,427	£1,427
Inpatient admission unit cost	£126	£126
Outpatient unit cost	£30,000	£30,000
QALY Worth		£30,000
GP visit savings	59%	59%
Nurse visit savings	59%	59%
A & E Visit savings	54%	54%
Inpatient activity savings	37%	37%
Outpatient visit savings	59%	59%
Medication savings	5%	5%
QALY benefits per person	0.02	0.02
Social Return on Investment	£1,254	£1,254

Making the case for self care education in East Midlands SHA

Type of course: Asthma Management Handbook

Number of people to commission training course for: 4,425

Default Results

To run this self care training course for this number of people would cost (per year) £ 442,460

This would result in the following financial savings and patient benefit:

	Saving in activity	Unit cost	Cost Saving	
GP visits	13,094	£52	£ 680,874	£680,874
Nurse visits	9,362	£11	£ 102,982	£102,982
All GP practice cost savings			£ 783,856	£783,856
A and E visits	192	£110	£ 21,166	£21,166
Inpatient admissions	36	£1,427	£ 51,960	£51,960
Outpatient visits	35	£126	£ 4,441	£4,441
Medication costs			£ 95,719	£95,719
All commissioner cost savings			£ 173,286	£173,286
QALY gains	88.5	£30,000	£ 2,654,762	£2,654,762
Social Return on Investment			£ 5,548,453	£5,548,453
Total Patient Benefits			£ 8,203,215	£8,203,215
Total gross benefits			£ 9,160,356	£ 9,160,356

The net benefit of running this self care course is £ 8,717,896

Which equates to £1970 per person with LTC

This equates to a return on investment of 20.7 to 1

The assumption made is that the saving will happen in the year following training. Evidence is mixed about effects after one year. However, for illustration, if 50% of the year 1 benefits were realised for a second year, there would be additional savings in year 2 of:

Primary Care	£	391,928
Commissioner	£	86,643

Figure 10 - Updated Assumption Screen

7.3. This screen appears similar to the previously discussed local business case screen, however the assumptions are of the screen is slightly different. There is now an area where the assumptions can be overwritten. These are the blue figures, labelled 1. The grey figures to the right of these are the default assumptions for the chosen long term condition. These assumptions are not used in the calculation, but are there for reference as to the published data.

	User defined assumptions	Default assumptions
% already taken the course	4%	4%
% of those eligible likely to attend	28%	28%
Cost of the course	£100	£100
GP unit cost	£52	£52
Nurse unit cost	£11	£11
A & E unit cost	£110	£110
Inpatient admission unit cost	£4,051	£4,051
Outpatient unit cost	£126	£126
QALY Worth	£30,000	£30,000
GP visit savings	19%	19%
Nurse visit savings	19%	19%
A & E Visit savings	10%	10%
Bed day savings	55%	55%
Oupatient visit savings	19%	19%
Medication savings	5%	5%
QALY benefits per person	0.02	0.02
Social Return on Investment	1.85	1.85

Figure 11 - Assumptions

7.4. As well as the assumptions, there is provision to change the volume of patients that the course is offered to Label 2 in Figure 10 . Some of the assumptions will affect this, namely the proportions of the people with a long term condition who have already done the course, and the proportion who are likely to do the course. Changing these assumptions label 1 in Figure 11 will not affect the calculations, but they will change the figures in the cell showing the calculated volumes in Figure 10. Therefore, in order to make these changes, enter the number displayed to the entry box labelled 2 in Figure 10.

7.5. The results part of the screen shows the revised results based on the input assumptions. For reasons of comparison the results using the default assumptions are shown, in grey, labelled 3 in Figure 10, to the right of the revised results.

8. Including a different course

8.1. There may be a situation where a course is offered locally that isn't covered in the model, if this is the case then there is an option to select local course from the drop down menu within the local business case.

8.2. This option will take you through to the user defined assumption sheet discussed in the previous section. However, in this case, all assumptions are set to 0 and there is a prompt for the user to input their own assumptions, costs and volumes for the calculations.

8.3. Once these assumptions have been input then the results will be shown for the input data.

8.4. Due to not having any other data, the same service levels are presumed to apply for any local course as occur for all long term conditions.

9. Obtaining the Optimum Return for a Given Budget.

9.1. The final option within the tool is to look at optimising the benefits for a given budget. From the main menu select the option 'Go to Optimum Choices for a Given Budget'. This is labelled 2 in Figure 3. This will bring up the following screen.

Sheet to Calculate the Optimum investment 3

Choose SHA: East Midlands SHA

Choose organisation: East Midlands SHA

Choose organisation type: GP Practice, Primary Care Trust, Strategic Health Authority, GP commissioning pathfinder

Enter the Annual Budget: £ 10,000 1

Choose whether to optimise financially or on health benefits: Financial Optimisation

Include a user defined course in the optimisation 2

For the specified budget, the most value for money would result from investing in the following courses (per year):

Course	Number of Patients	Cost of running the course	Savings from the course	Net savings	QALY benefits
Expert Patient Programme (Generic)	40	£ 10,000	£ 30,069	£ 20,069	£ 96
Total	40	£ 10,000	£ 30,069	£ 20,069	£ 96

Figure 12 - Optimum Investment

9.2. This screen contains similar inputs to previously regarding how the consortium is selected. This is done using the drop down boxes. There are three other inputs that are required to produce the results.

9.3. The first is the budget against which the optimum investments will appear, enter the annual budget in the blue text box, labelled 1 on the screenshot. The second input is whether the tool should optimise on financial optimisation or health benefit optimisation labelled 2 on the screen shot– essentially if you want maximise the financial savings or if the user wants to increase the health benefit to the consortiums patient list.

9.4. The final input is if the user wishes to include a user defined course in the optimisation. This is input using the check box labelled 2.

9.5. If the box is selected then the following screen appears prompting the user to input the local course information.

Please Enter the Local Course Data for Comparison of the Optimum Investment

Leave this section blank if you do not want to include the local course information in the comparison

GP visit savings	10%
Nurse visit savings	10%
A & E Visit savings	10%
Bed day savings	10%
Outpatient visit savings	10%
Medication savings	10%

Return to the Optimal
Calculation

Course Cost	£100
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QALY Benefits	0.02
QALY cost	£30,000

Proportion of patients already completed the course	4%
Proportion of patients likely to complete the course	28%

Figure 13 - Local Course Information

- 9.6. Once the information is entered click on the return to optimisation screen.
- 9.7. To calculate the optimum return once all parameters are input, use the calculate button, labelled 3 in Figure 12. The results on the best courses to invest are shown. Including information on cost and savings for each course.
- 9.8. It is possible to alter the inputs on the local course by selecting the 'Adjust Local Course Details' button, making the adjustment and recalculating using the calculate button.
- 9.9. The calculate button needs to be used every time any parameter on the optimisation screen is altered.

10. References and Assumptions

10.1. The following is a list of the references that have been used in the self care tool.

Data / Assumption		Reference
General References		
Newly Diagnosed People with LTC		British Household Panel Survey
Service Level Data:		HES 2009-10
		Table 4 Trends in consultation rates in General Practice
Prevalence Data		General Lifestyle Survey (2008)
		Quality and Outcomes Framework 2008-09
		GP patient access survey 2007-08
Health Care Costs		PSSRU
		Tariff Costs (PBR)
Social Return on Investment		EPP CIC Evaluative SROI (YE Mar 2010)
Course Specific References		
Asthma		Choy DK, Tong M, Ko F, Li ST, Ho A, Chan J, Leung R and Lai CK (1999) Evaluation of the efficacy of a hospital-based asthma education programme in patients of low socio-economic status in Hong Kong. <i>Clinical and Experimental Allergy</i> , 29(1), 84-90
Arthritis	QALY data	Richardson G, Hawkins N et al (2006) Cost-effectiveness of a supplementary class-based exercise program in the treatment of knee osteoarthritis. <i>International Journal of Technology Assessment in Health Care</i> 22;1 (2006) 84-89
	Service Reductions	Fries JF and McShane D (1998) Reducing need and demand for medical services in high risk groups. <i>West J Med</i> 169:201-207
Diabetes	QALY data	Gillet M, Dallosso HM et al (2010) Delivering the diabetes education and self management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: cost effectiveness analysis. <i>BMJ</i> 2010;341;c4093
	Service Reductions	Fries JF and McShane D (1998) Reducing need and demand for medical services in high risk groups. <i>West J Med</i> 169:201-207
		Jacobs-Van der Bruggen (2009); Cost-Effectiveness of Lifestyle Modification in Diabetic Patients; <i>Diabetes Care</i> 32:1453–1458,
		A. Shearer, A. Bagust, D. Sanderson, S. Heller* and S. Roberts (2004); Cost-effectiveness of flexible intensive insulin management to enable dietary freedom in people with Type 1 diabetes in the UK;

		Diabetic Medicine, 21, 460–467
Parkinson's Disease		Montgomery EB, Lieberman A, Singh G, Fries JF (1994) Patient education and health promotion can be effective in Parkinson's disease: a randomised control trial. The American Journal of Medicine Vol 97:429
Generic Course		Kennedy A, Reeves D et al (2007) The effectiveness and cost effectiveness of a national lay led self care support programme for patients with long-term conditions: a pragmatic randomised control trial J. Epidemiol. Community Health 61;254-261

10.2. As well as the references above, some assumptions had to be made within the model, where data was not available. These are explained in the table below.

GP and Outpatient Service Levels	This information is not available at by long-term condition for each GP practice. However, total number of GP appointments and outpatient appointments by GP practice for people with a long-term condition is know. There is also national data showing people with asthma has 30% more appointments than people with a long-term condition overall. Similarly, people with arthritis have 20% more appointments and people with diabetes have 61% more appointments than general long term conditions.
A and E admissions	A&E admission figures are not available separately for all GP practices in England. In this model total A&E admissions for England are distributed between GP practices by using the distribution of total non elective admissions for each GP practice.
Medication Usage	Long term condition medication costs were available at GP level, but not individual long term condition level. The costs were apportioned based on the GP appointments.
Nurse Visit cost savings	Unless specified in the evidence, savings in nurse visits are assumed to be the same as GP visits
A&E visit cost savings	Unless specified in the evidence, savings in A&E visits are assumed to be the same as the generic course.
Outpatient visits cost savings	Unless specified in the evidence, the savings in outpatient visits are assumed to be the same as the GP visits.
Medication cost savings	For each specific course the medication savings are assumed to be the same as for the generic course.
QALY	Where individual condition QALY data is not available the generic QALY saving is assumed.

10.3. Course costs may vary across England, though the model assumes costs for each course included. These are calculated or estimated using the methods given below.

Asthma management handbook	Assumed to be £100 based upon costs of printing the handbook and on GP/practice nurse time to talk through the handbook and follow up progress
Knee class	Based upon cost of community physiotherapist for 16 hours (source: PSSRU 2009 unit costs of £39/hour of contact time). Assumes an average class size of ten people and materials account for an additional 50% of costs.
DESMOND	Calculated in "Gillet M, Dallosso HM et al (2010) Delivering the diabetes education and self management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: cost effectiveness analysis. BMJ 2010;341;c4093"
X-PERT	Calculated in "Jacobs-Van der Bruggen (2009); Cost-Effectiveness of Lifestyle Modification in Diabetic Patients; Diabetes Care 32:1453–1458", updated to 2010-11 prices
DAFNE	Calculated in "A. Shearer, A. Bagust, D. Sanderson, S. Heller* and S. Roberts (2004); Cost-effectiveness of flexible intensive insulin management to enable dietary freedom in people with Type 1 diabetes in the UK; Diabetic Medicine, 21, 460–467", updated to 2010-11 prices
PROPATH	Cost of course was calculated in "Montgomery EB, Lieberman A, Singh G, Fries JF (1994) Patient education and health promotion can be effective in Parkinson's disease: a randomised control trial. The American Journal of Medicine Vol 97:429" as \$100 in 1994. Assuming current exchange rate and discount rate of 3.5% since 1994, this becomes £111 in 2010.
Expert Patients Programme	Taken from "Kennedy A, Reeves D et al (2007) The effectiveness and cost effectiveness of a national lay led self care support programme for patients with long-term conditions: a pragmatic randomised control trial J. Epidemiol. Community Health 61;254-261"