

6. COSTS AND BENEFITS

The benefits of better collaboration between health agencies and local communities reach into every aspect of the health system. Here however we examine the investment purely from the viewpoint of saving costs of treatment.

Costs

The cost of community development (CD) is the cost of intervention in two existing systems: the residential community and the local public services. The effects are largely about acting as a catalyst to these systems and enabling them to be more productive both separately and together. CD is therefore not so much a separate service as a dynamic change in existing services and communities. It can generate far-reaching change with relatively limited resources. But there are staff and other costs, and we calculate these below.

The direct practice of community development consists in supporting any and all people living in a given neighbourhood in developing joint activities, groups and networks, addressing their own shared objectives. These are likely to take the form of activity by self-determining groups of residents to obtain an improvement to their locality, whether through their own efforts (eg setting up a voluntary youth club) or through influencing delivery of services (eg negotiating to get a new surgery or dental clinic). Often they will entail a joint endeavour (eg local authority renovates a park, residents provide voluntary wardens, as in our Devon project). Some activities arising from CD may be specifically about health but all are health-giving by virtue of the fact that they increase social networks and cooperation, give people purposeful roles, optimism, new information, skills and social status.

CD is not the same as community engagement, which means the efforts made by a particular service or agency to engage the population in that service. But CD does create wider pathways for community engagement to take place. For example the development of the HELP project in Smiths Wood, Solihull, led to the local council making two unused shops available to the community and this in turn enabled health staff to reach more residents with sessions on weight loss, smoking cessation and healthy eating. For health purposes, therefore, community engagement and development are complementary. But our calculations here are for the CD element.

A time-limited intervention with a long-term perspective

The form of CD we demonstrated in our pilot projects is a time-limited intervention of up to two years to set in motion an organisational and local cultural change in a disadvantaged neighbourhood of approximately 5,000 people. In contrast with single outreach initiatives, CD activity on this model is self-renewing by setting in motion a long-term, self-governing multi-issue partnership. This generates new activities of its own because it is driven by residents and front-line workers, for both of whom it has direct value. Further CD intervention or support may be desirable after two years but the benefits we calculate here flow from the two-year intervention alone.

As one of several safeguards to ensure that our calculations of benefit are conservative, for costing purposes we assume expenditure of two years. The effects are designed to last well beyond the intervention period itself. Evidence from older projects is that CD intervention of this kind produces benefits over five or more years. Three precursor projects of the HELP method ('C2') have now lasted

respectively 21, 10 and 7 years and are still active. The CDF study of community development by ‘social return on investment’ (NEF, 2010) calculates benefit to the seventh year from one year of intervention.

To ensure, again, that our calculations err on the side of caution, we calculate benefits of just three years from the two-year intervention. The benefits would naturally emerge some time after the beginning of the intervention. The likely time-shift from inputs to outputs and outputs to benefits is illustrated in panel 6.1.

Panel 6.1: Time shift from intervention to benefits (6m periods)

	Y 1	Y1	Y2	Y2	Y3	Y3	Y4	Y4	Y5 and continuing
Planning CD project									
Intervention project									
Activity outputs									
Inform commissioning									
Results show up in health statistics									
Cumulative health benefits									
Investment									
Return									

Basic unit of costs

For a neighbourhood of 5,000 people, for the first year of a two year intervention at 2011 levels the likely costs would be:

YEAR ONE	£000
Project strategy and guidance	12.5
1 X FTE facilitator inc on-costs	37.5
Office/ admin costs	5.0
Training/mentoring for facilitator	5.0
Training / project visits for key residents and front line workers	7.5
Funding for local meetings and activities	5.0
Evaluation, surveys, focus groups	7.0
Start up for local community hub and part time coordinator	10.0
	<u>£89,500</u>

The costs in the second year would be less, the intensity of the facilitation tapering off as the community partnership becomes increasingly self sufficient (and continues independently in subsequent years):

YEAR TWO	
Project strategy and guidance	10.0
1 X 50% facilitator inc on-costs	19.0
Office/ admin costs	3.0
Training/mentoring for facilitator	3.0
Training / project visits for key residents and front line workers	5.0
Funding for local meetings and activities	5.0
Evaluation, surveys, focus groups	4.5
Support to local community hub and part time coordinator	7.5
	<hr/>
	<u>£56,000</u>

The total cost for the two-year intervention is therefore £145,500.

The average cost per year is £72,750.

Reducing costs

There are three ways in which this cost can be (and in many cases has been) considerably reduced:

(i) appointing as CD facilitator a professional already working in the locality whose job specification, objectives and skills already lend themselves towards this role and who can therefore be seconded to it at less than full cost. The facilitator role can also be suitable for job-sharing for mutual support. It is important however that the need to ensure the right skills and aptitudes is not compromised;

(iii) sharing costs with other agencies on a place-based budgeting or bilateral basis. As we show below, the benefits of this kind of intervention accrue to policing, education and other fields as well as health.

(ii) carrying out the CD intervention in several neighbourhoods. There could be substantial economies of scale in an expanding programme, where the skills gained in the first year in a single neighbourhood were spread to several neighbourhoods over succeeding years. This pattern began to emerge in our Solihull project.

We estimate that three concurrent neighbourhood programmes could be run at 60% of the basic single neighbourhood cost, ie at £43,650 per neighbourhood per year.

Linking outputs and benefits

Evidence of outcomes must be linked to the outputs of the intervention. The outputs are visible in the form of:

The seven steps taken to establish the neighbourhood partnership (described in chapter two)

New community activities (described in chapter three)

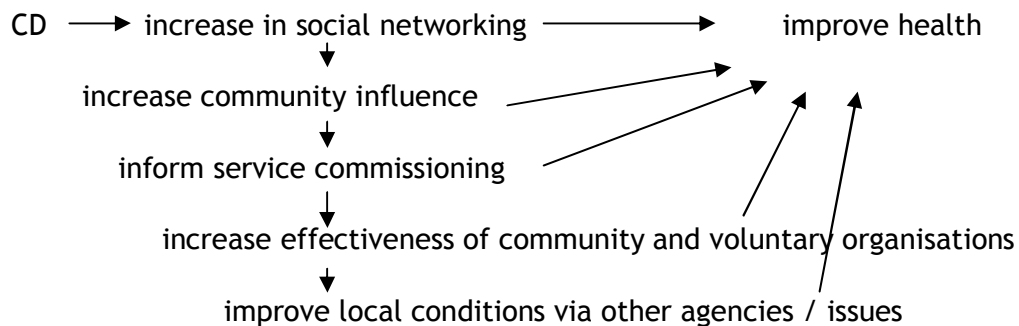
New problem-solving initiatives jointly between residents and public agencies (described in chapter three)

New or changed decisions by agencies and their commissioning officers as a result of the partnership process (described in chapter four)

All these entail previously inactive residents becoming active and previously active residents becoming more active.

An image for the range of mutually reinforcing pathways would be as in panel 6.2:

Panel 6.2: Mutually reinforcing pathways



Types of evidence ideally required

The evidence of benefit from the outputs would ideally be collected from the five sources below.

1. An annual survey of a sample of residents, to capture their sense of wellbeing, awareness of the intervention, level of participation and volunteering.
2. Survey of the condition of the local community and voluntary sector. This should be based on selected questions from the 2008 National Third Sector Survey in England (see Appendix C).
3. Testimony (via survey, key informants or focus groups) of public agencies about the effects of the CD intervention on the issues they deal with, the conditions for their work and the achievement of their agencies' objectives.
4. Health statistics. These are ultimately the crucial form of evidence for health commissioners and the business case. Success will show up as improvements in health and consequent reductions in health service costs.

There will inevitably be a time lapse between the intervention and the health effects, and health effects will also be affected by other factors taking place at the time. Full evaluation will therefore (a) have to take place after the two year intervention period and (b) have to judge the intervention effect within a broader picture.

5. Statistics from other relevant services, especially police and education.

If planned from the beginning, much of the cost of collecting evidence should be able to be absorbed into the intervention process. Agencies whose front-line staff are involved in the community partnership could be asked as part of the arrangement to comment periodically on the effect this has had on their staff's work and the achievement of their agency objectives - this need be little more than a footnote to their normal appraisal systems.

Maximum use should be made of surveys already planned by the local authority and other agencies. For surveys of residents it may be possible to piggyback on surveys already planned by local authorities, negotiating the addition of a few key questions (see Appendix C for sample questions). Our project costings, above, include a small element to carry out or boost evaluation.

In the 18 months' operation of HELP reported here we have begun work on all these measures and used them in these findings but not completed them.

Benefits

The projects described in chapter three show the kinds of activities and outputs generated by a focused form of community development over 18 months. The research review in chapter five illustrates the widespread evidence that these kinds of output have beneficial health outcomes, linking community activity both to health gain and reduction in demand of health services.

To illustrate the value of these effects in a specific neighbourhood we add the following steps:

- (i) identify some of the main health conditions or risks which the research shows to be affected by the kinds of community development outputs exemplified by our pilot projects;
- (ii) using as an illustration one of our pilot projects, obtain actual figures on the number of people with those health conditions in a disadvantaged neighbourhood of 5,000 people
- (iii) estimate conservatively a proportion of those people whose conditions would be likely to be alleviated or pre-empted by the community activities
- (iv) identify the costs that would be saved by that proportion of avoided demand on health services

The actual figures are from Smiths Wood, Solihull, adjusted to 5,000 people (actual population 4,283 in 2009).

There are also likely to be benefits to other public services (eg policing, education, environment). Figures from the same neighbourhood allow us to postulate a similar modest level of saving on avoiding crime and reducing the number of young people not in education, employment or training. A supplementary calculation shows the additional value of these effects. This could be a basis for seeking joint investment in the community development project, thus reducing the demand on the health budget.

There are also probable savings in areas such as children with special educational needs (SEN) where we do not have full figures so these are left out of our calculations, again under-estimating rather than overestimating the value of community development effects.

The calculation of benefits is presented in **Panel 6.3**, followed by explanation and the calculation of cost-benefits.

A more detailed explanation of each item in the benefit calculation is given in Appendix B.

For the purpose of our illustrative calculation, we estimate conservatively that community development activity in each area can prevent 5% of these conditions in a disadvantaged neighbourhood. These are only a few, albeit some of the most common, of the health conditions that are likely to benefit from community activity.

Panel 5.3: Cost benefit model and illustration

A <i>Issue</i>	B <i>Examples of relevant activities generated by community development</i>	C <i>Research base</i>	D <i>Indicator/s</i>	E <i>Example from Smiths Wood, Solihull (5000 base)</i>	F <i>Average incidence in a population of 5,000</i>	G <i>Average cost of treatment over one year</i>	H <i>Estimated 5% p.a. additional saving attributable to CD</i>
1. Cardio-vascular diseases	Spread of greater trust, cooperation, social and physical activity amongst residents. Includes weight management sessions for mums; smoking cessation groups; buggy walking route; health trainer sessions (Smiths Wood, Solihull)	Higher social trust associated with lower CHD. Areas with higher social capital have lower CVD esp amongst people with lower income. Physical activity beneficial.	CVD admissions age <75	(08/09) 242 per 5000	09/10 England 91 per 5000	Average cost of admission £4,614	12 admissions @£4614 =£55,368
2. Depression	Wide range of social activities initiated	Social participation and relationships, and an active lifestyle, key to minimising mental health problems . Increase of community activity and social networks alleviates stress, strengthens identity and capabilities; creates positive alternatives to antidepressants	Depression diagnosed through primary care	355 per 5000 based on practice data projected (not coterminous) (09/10)	247 per 5000 (IMS Disease analyser) 'in contact with GP services per year, diagnosed as having either depression or mixed anxiety and depression'.	£1355 p.p service cost based on findings of Kings Fund Paying the Price (2007 costs); also £4694 p.p earnings lost	5% reduction of 18 cases, service saving £24,390

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<i>Issue</i>	<i>Examples of relevant activities generated by community development</i>	<i>Research base</i>	<i>Indicators</i>	<i>Example from Smiths Wood, Solihull (5000 base)</i>	<i>Average incidence in a population of 5,000</i>	<i>Average cost of treatment over one year</i>	<i>Estimated 5% additional saving attributable to CD</i>
3. Obesity	Spread of health awareness and literacy, more community and physical activity. New / improved open spaces/ sports facilities negotiated by community groups. Wide range of physical activity, recreational opportunity, provision or renewal of active lifestyle facilities, provision of healthy lifestyle advice and peer support. Renovation of play-park. Woodland activities for young people. Large scale young people's dance.	Obesity associated with wide range of health conditions. Exercise can reduce weight; overweight associated with poor social capital. Dietary advice cost-effective.	% obese, adult and child	08/09 Reception class 985/5000, Year 6 1,110/5000 Adults: ratio of Reception and Yr6 (equally weighted) SWANN / National =1.5 x adult rate for England 24.2% = 36.3% i.e. 1815/5000	08/09 Reception class 480/5000, Year 6 915/5000 Adults: England proportion 24.2% (2006-8), 9.46m (1210/5000)	Adults: derived from data on wider cost of raised BMI and obesity, adjusted proportionately to obesity alone; and estimated future cost of diseases related to BMI minus CHD (£7.32bn 2007); applied to UK adult population: £648.30 per obese person	Adults: rate of 36.3% applied to adult population estimate of 3181 = 1155. 5% is 58, @ £648.30p.a. = £37,601 Children to be added.
Subtotal of issues 1, 2, 3							£117,359

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<i>Issue</i>	<i>Examples of relevant activities generated by community development</i>	<i>Research base</i>	<i>Indicators</i>	<i>Example from Smiths Wood, Solihull (5000 base)</i>	<i>Average incidence in a population of 5,000</i>	<i>Average cost of treatment over one years</i>	<i>Estimated 5% additional saving attributable to CD</i>
4. Elderly falls	Increased community and physical activity, tailored for older people, also linked with falls reduction pathway; Tai Chi classes; dance; activity buddies model to support less able and confident	Older people can regain 27% of muscle strength with exercise; Tai Chi recommended; falls programme can improve social capital.	Ambulance calls for falls (may add no. of older people engaging in social and physical activities; hip fracture)	Ambulance calls for falls / back 2009/10 total 120: estimated that 90% are falls (separate category for back pain)	422/5000 people aged 65 and over	Cost saving per fall less per year £800 p.p. in hospital costs, £82 in ambulance costs, and £1883 in avoided residential care costs	5 falls less, @£2765: £13,825
5. Emergency hospital admissions/readmissions	If health and wellbeing improve, use of acute services will reduce. Potential for using hotspots to inform targeted preventive intervention	Extreme small area variation in emergency admissions associated with deprivation; potential for substantial impact and saving	Emergency hospital admissions	(09/10) 589 per 5000 (509 cases)	440 (08/09)	£1592 (Smiths Wood dataset, Solihull NHS Care Trust)	25 cases, £39,800

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<i>Issue</i>	<i>Examples of relevant activities generated by community development</i>	<i>Research base</i>	<i>Indicators</i>	<i>Example from Smiths Wood, Solihull (5000 base)</i>	<i>Average incidence in a population of 5,000</i>	<i>Average cost of treatment over one years</i>	<i>Estimated 5% additional saving attributable to CD</i>
6. A & E attendance	Areas of high alcohol abuse can be targeted to take community, enforcement, cultural and environmental action to reduce. Equivalent with ambulance calls:	35% of all A&E attendances involve alcohol-related harm, rising to 70% at peak times. Emerging evidence that A&E intelligence can have an impact on targeting police and other resources to reduce violence. Cardiff model of A&E engagement with Crime and Disorder Partnerships has reduced alcohol-related crime significantly.	A&E attendance. Other associated social and health costs to be added.	09/10 1565 per 5000. Detailed analysis being undertaken by Solihull NHS Care Trust. Alcohol and substance misuse identified as major issue in SWANN area	1516 per 5000	Per A&E attendance £86.90	78 cases, £6,779
7. Emergency ambulance calls	Redruth (C2 project) work with ambulance service reduced 999 calls and under-age drinking (Stuteley, 2007).	We estimate that this saving would be a concomitant of the items above, but a research base has yet to be established	Emergency incidents (calls resulting in emergency response arriving at the scene)	09/10 967 per 5000 (not age-standardised)	624 per 5000	Unit cost £176.57	48 cases less: £8,475
Subtotal issues 4, 5, 6, 7							£68,879
Subtotal of issues directly related to health budget (1 - 7)							£186,238

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<i>Issue</i>	<i>Examples of relevant activities generated by community development</i>	<i>Research base</i>	<i>Indicators</i>	<i>Example from Smiths Wood, Solihull (5000 base)</i>	<i>Average incidence in a population of 5,000</i>	<i>Average cost of treatment over one years</i>	<i>Estimated 5% additional saving attributable to CD</i>
8. Crime and fear of crime	Stronger social networks; positive social and physical activity for young people.	Stronger social networks lead to less crime. Individuals with high fear of crime more likely to be depressed, and in poorer health.	Reported crime	2009/10 1,104 crimes, 1289/5000	2009/10, England: 394 per 5,000.	Est cost of individual crime in SW (based on local pattern) £1,318	Reduction of 55 crimes, £72,490
9. NEET (16-18s not in education, employment or training)	Work with young people to promote social inclusion, including work on confidence, resilience, social skills.	NEET is a major predictor of later unemployment, low income, depression, involvement in crime and poor mental health (Places Database, DfE)	Number of NEET (population denominator or problem in small geog areas)	Number: 52 in April 2011. 14% of number in N Solihull regeneration zone	6.7% of residents aged 16-18 (2008, England)	6.7% of residents aged 16-18 (2008, England)	Public finance cost of NEET, £7986 per head Reduce by 3: £23,958
10 Special Educational Needs (SEN)		Growing area of public expenditure. LAs in England and Wales spent £3.6bn on SEN provision in 2001/02, being 15 per cent of spending on schools. 69% is focused on the small minority of children with statements.		Smiths Wood Community Primary: all SEN (with and without statements): Feb. 2011, 30%, number 131	England Jan 2010, 19.9%; Solihull 15.1%		Reduce by 7 (but value not ascertained or included here)
Subtotal issues 8, 9, 10							£96,448
TOTAL, health and associated issues							£282,686

Explanation

Panel 5.3 is set out to show how we have derived an illustration of savings for the local health service from the impact of community development on a neighbourhood in terms of costs of treatments foregone:

Column A specifies a health condition known to benefit from better community conditions.

Column B gives examples of the kinds of activity or change generated by community development which improve community conditions in the relevant ways

Column C gives highlighted points from the research which show that this health condition benefits from better community conditions. The full details are given in Appendix B

Column D gives the main indicator by which the incidence of the specified health conditions is judged

Column E gives the actual incidence of that condition in our illustrative neighbourhood. (As expected, the incidence in this disadvantaged neighbourhood is alarmingly higher than the England average)

Column F gives the average incidence of that condition in a population of 5.000 across England

Column G gives the average cost of treatment of the condition for one person for a year

Column H gives the cost saved in one year if 5% of the cases in the illustration neighbourhood are prevented.

Subtotals of savings are then given for:

(i) **the first three conditions** (cardiovascular, depression and obesity). Amongst the most costly conditions for the health service throughout the country, these are also, the research shows, amenable to prevention through generally better community atmosphere and conditions, even without specific targeting;

(ii) **four further conditions** (elderly falls, emergency hospital admissions, A&E attendance and emergency ambulance calls) which research and CD experience shows are amenable to prevention through better community conditions if specifically targeted by community development and engagement;

(iii) **three further factors** (crime, young people and special educational needs) which research and CD experience shows to also be alleviated by the same community improvement factors which improve health.

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The combined savings from (i) and (ii) would accrue to the health service. Savings from (iii) would accrue to policing and education.

We calculate cost benefits for the health service solely on the basis of (i) and (ii), and present the additional savings for policing and education separately. A health agency could reasonably point to this to suggest joint funding for developing a neighbourhood partnership.

It is very possible there would also be savings in other health areas, such as mental health and teenage conception, and other non-health areas such as housing and employment.

The health improvements would take some time to show up in local health statistics but could then be expected to continue some time beyond the period of intervention. Both because of this and because the community partnership generates new activities in subsequent years, our calculation assumes benefits for three years. However, these benefits may be spread over a longer period. The effects may start modestly and then accumulate as individuals benefit from several types of activity.

Given that we assume benefits only to 5% of people with a given condition in a population of 5,000, the numbers of beneficiaries are small, but as the calculations show, these accumulate to considerable amounts, well beyond the cost of investment

Community development benefits for the first three conditions alone are:

Benefit for one year: £117,359

Benefit for three years: £352,077

The cost of producing the three year effects in a single neighbourhood is the two-year CD intervention costing £145,500. The return on CD investment in one neighbourhood for three years is therefore:

$£352,077$ (three year benefit) over $£145,500$ (two year cost) = 1: 2.4

In three neighbourhoods, with the reduced cost due to economy of scale the ratio is:

$£1,056,231$ (three year benefit, three neighbourhoods) over $£261,900$ (two year cost, three neighbourhoods) = 1: 4

If the CD method also targets the four additional health factors, the figures are:

Benefit in one neighbourhood:

For one year: $£117,359 + £68,879 = £186,238$

For three years: $£558,714$

Return on CD investment in one neighbourhood for three years:

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£558,714 (three year benefit, one neighbourhood) over £145,500 (two year cost) = 1: 3.8

Return on investment in three neighbourhoods, with economy of scale:

£1,676,142 (three year benefit, three neighbourhoods) over £261,900 (two year cost, three neighbourhoods) = 1: 6.4

Applying this model in three neighbourhoods, a health agency could therefore expect to save £1,414,242 over three years or £471,414 a year.

Investment in the 20% most disadvantaged neighbourhoods in a local authority or CCG area (say nine neighbourhoods out of 45) would produce a health saving of £4,242,726 over three years, or just over £1.41m a year.

Adding conservative estimates of public expenditure benefits through reductions in crime and NEET in one area produce an additional saving of £96,448 over one year in one neighbourhood, or £289,344 over three years in one neighbourhood.

These calculations show that investment in neighbourhood partnerships by a health agency is highly cost-beneficial even purely in terms of reducing the cost of a number of specific treatments in a limited number of residents. As we have stressed, however, neighbourhood development is about the whole community and all the agencies that serve it. The wider effects and long term changes are harder to quantify but are part of deeper changes.
